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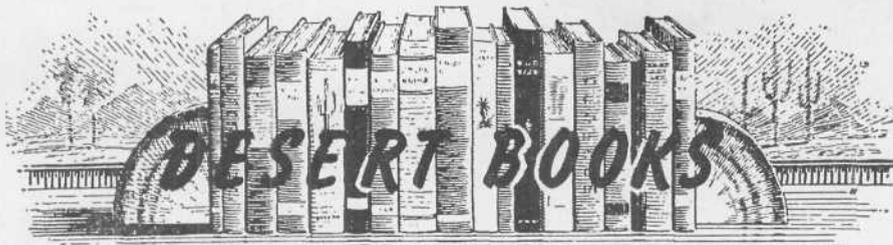
Desert

M A G A Z I N E



JANUARY, 1946

25 CENTS



**MANUAL WILL HELP YOU
KNOW SOUTHWEST PLANTS**

One of the most useful and best illustrated works on Southwestern plantlife was published for distribution in August, 1945, by University of Arizona, Tucson. A **MANUAL OF SOUTHWESTERN DESERT TREES AND SHRUBS**, by Lyman Benson and Robert A. Darrow and collaborators, continues the university's series of flora of Arizona and the Southwest. The first publication of the group is **THE CACTI OF ARIZONA**.

This is a classification and description of trees and shrubs roughly from Palm Springs, California, to El Paso, Texas—from what the authors call the creosote-desert to desert-grasslands, embracing a wide variety of growth. More specifically the area includes the Mojave and Colorado deserts of California; southern Nevada including portions of Nye and Lincoln counties and all but the higher mountains of Clark county; in Arizona the lowest level of Grand Canyon and all the area west and south of the Mogollon Rim and White mountains; in New Mexico the territory from Albuquerque south, and west of the White and Sacramento mountains, and in Texas the El Paso and Big Bend country.

Lest anyone think the portion of plantlife included here is not much on the "flowering" side, one glance through the colored plates or at the table of contents

would convince him otherwise. For in the desert many of the most brilliant flowers are found on the more shrubby plants, as well as on the trees. And unlike the ephemeral annuals which are seen for a comparatively short period, these are found blooming over much of the year. Here at random are a few of the "shrubs and trees" treated—so just see if they do not include some of your favorite desert "flowers." Yuccas (about 10 of them), Nolina, Agaves, Cliffroses, Apache Plume, Redbud, Palo Verde, Smoke tree, Ocotillo, Pentstemon, Desert Willow (*Chilopsis*), many of the Sunflowers and Asters. And for the true desert rat there are the Salt Bush, Desert Holly, Wild Apricot, Catsclaw, Mesquites and Palo Verdes, Ironwood, Creosote, Crucifixion Thorn, Elephant Tree, Washingtonia palm, Tamarisk, Burrowweed and Rabbit Brush.

Introduction contains a fine discussion of the characteristics of desert vegetation, the distinctive appearance of the various Southwestern desert regions, flower structure and a guide for using the botanical key to identify plants.

There are 22 photos in full color, over 80 black and white photos, 43 plates of line drawings. One of the best features is the series of 110 geographical distribution maps, one color showing location of the main species through the Southwest states. Appendix, index, paper bound, 411 pages. \$3.00.

**"PINCUSHION" GENUS
COMES INTO ITS OWN**

To the one whose knowledge of the Mammillarias is confined to a little "pincushion" cactus carefully nourished in a window box, Dr. Robert T. Craig's book, **THE MAMMILLARIA HANDBOOK** will be a revelation, and to the collector it will be a welcome addition to cactus literature. For to describe or name all the known Mammillarias requires almost 400 pages of a 7x10½ book! It is illustrated with 300 excellent photographs.

The author, who lives in Baldwin Park, California, first became acquainted with this genus of the cactus as a child in the prairie country of western Kansas, when he was warned "not to touch" the pincushion cactus but just to "look at the pretty flowers." Later when he became familiar with their beauty on the rocky hills of southern New Mexico and the rugged mountain sides of Guatemala, his interest became deeper, finally culminating in the present impressive monograph.

Although Dr. Craig has been able to claim cactus collecting only as an avocation, being a dentist by profession, he has spent much time the past 16 years in research of the literature, field collections and correlation of all available data on this genus. His explorations through the Southwest states and into Sonora and other states of Mexico have brought adventures as well as a rich collection and much valuable original data. Of the result, Paul C. Standley, Chicago Natural History Museum, says, "Here in a single volume and in a single series is presented the most comprehensive account that ever has been attempted on a single group of cacti. Dr. Craig's splendid account of the Mammillarias is an admirable example of what can and should be done for all groups of cacti."

Published by Abbey Garden Press, Pasadena, 1945. Bibliography, index. Cloth bound, coated pre-war paper. \$7.50.



BOOK BRIEFS . . .

One of the recent biographies of Mark Twain is that written by DeLancey Ferguson and published by Bobbs-Merrill company, Indianapolis. *Mark Twain: Man and Legend*, while a serious and scholarly biography, is full of flavorful anecdotes and colorful incidents.



In 19 pages Edwin F. Walker has written an introduction to the Indians of the United States, *America's Indian Background*, Southwest Museum bulletin No. 18. It is accompanied by a 20x26 inch folding map showing distribution of native tribes of North America. Price 30 cents.

**"I might have become a millionaire, I chose to become a tramp."
—JOHN MUIR**

Son of the Wilderness

By **LINNIE MARSH WOLFE**

A biography that is a living portrait of a man who combined in one lifetime the work of a great naturalist, mechanical genius, mountaineer, glaciologist and apostle of conversation.

This is a book for the lover of the outdoors because it is the story of one of America's greatest outdoor men. John Muir did not aspire to fame, but it came to him nevertheless because he lived close to Nature—and Nature develops the best in men.

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DESERT CRAFTS SHOP . . . El Centro, California

DESERT Close-Ups

• "A detailed account of the means plants have developed for seed dispersal would read like the records of some supernatural Patent Office," says Jerry Lauder-milk. His next story for DESERT, although sounding nothing like the records of a patent office, reveals some of the ingenious and devious ways which have been developed in the world of nature to perpetuate the species. The snares and barbs and stratagems which Jerry describes make such plants as the Devil's Claw and Krameria seem possessed of a conscious striving for immortality.

• Next month you will learn about the man whose work shaped the destiny of Coachella Valley, when Roy W. Nixon, of the government experimental date garden at Indio, introduces Bernard G. Johnson, who first envisioned this valley as a date growing center. His enthusiasm for dates was so great and his dealings with natives of Algeria and other Old World date regions so successful that he was known as the American Arab. And his personality was no less interesting than his importance to the American date industry was significant.

• Evonne Henderson, who has been directing the circulation department of Desert Magazine since her brother Rand, enlisted in the marines early in 1942, on November 4 was married to Charles A. Riddell of the U.S. Marines, at Yuma, Arizona. Corporal Riddell and the bride's brother were buddies in the service before Rand's death in action at Saipan July 7, 1944. After a brief honeymoon Riddell left for North Carolina where he will be on duty pending his discharge. Evonne will remain at her post in the Desert Magazine office until after the holidays.

DESERT CALENDAR

- Jan. 18-19—Annual convention New Mexico Press association, Albuquerque.
- Jan. 19-20—First Gem show, San Jose Lapidary society, San Jose, Calif.
- Jan. 24-26—Minerals and Production meeting of Western mining industry, Shirley-Savoy hotel, Denver, Colorado.
- Jan. 28-Feb. 28—International Nature Photography exhibit, Chicago Natural History museum, including plant life, animal life, geology.
- Feb. 23-24—Two ski events at Genoa, Nevada: "Snowshoe" Thomson Memorial cross country ski races; Nevada-California state jumping championship.
- Feb. 28-Mar. 2—International Desert Cavalcade, pageant and fiesta, Cal-exico, California.

Circulation of this issue of
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Number 3

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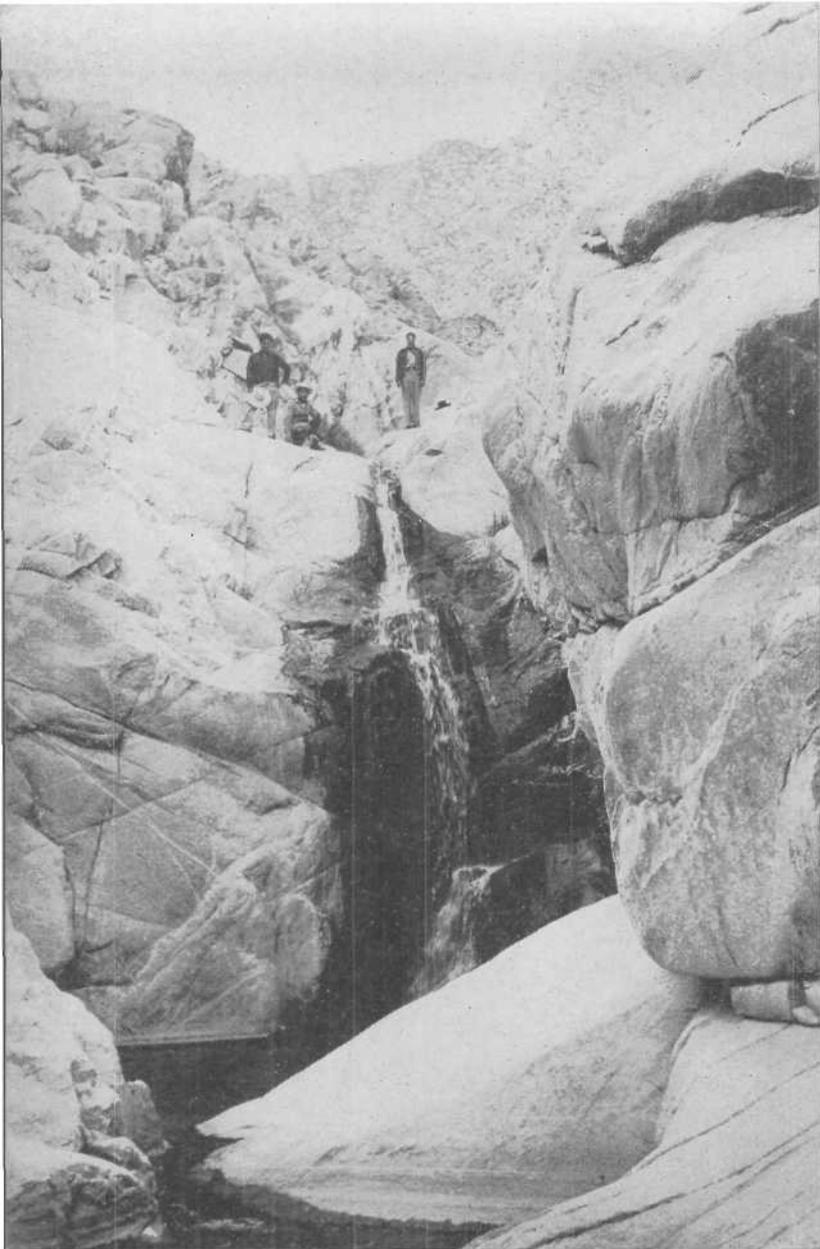
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One of the most spectacular of the waterfalls in Guadalupe canyon. A hand-and-toe detour was necessary to reach the top of these falls.



Clear pools in almost white granite rock are one of the lures of Guadalupe. Above this pool was an ancient Indian camp strewn with broken pottery.

Guadalupe Canyon in Lower California

This month Randall Henderson takes Desert readers across the border into Mexico for a glimpse of one of the many beautiful palm canyons in Lower California. And here also are some suggestions for a delicious camp dinner—cooked Mexican style.

By RANDALL HENDERSON

A MEXICAN first told me about Guadalupe canyon. He said that many miles south of the border, on the desert side of the range which forms the backbone of the Lower California pen-

insula there was a deep gorge with hot water coming down one side of the canyon and cold water down the other.

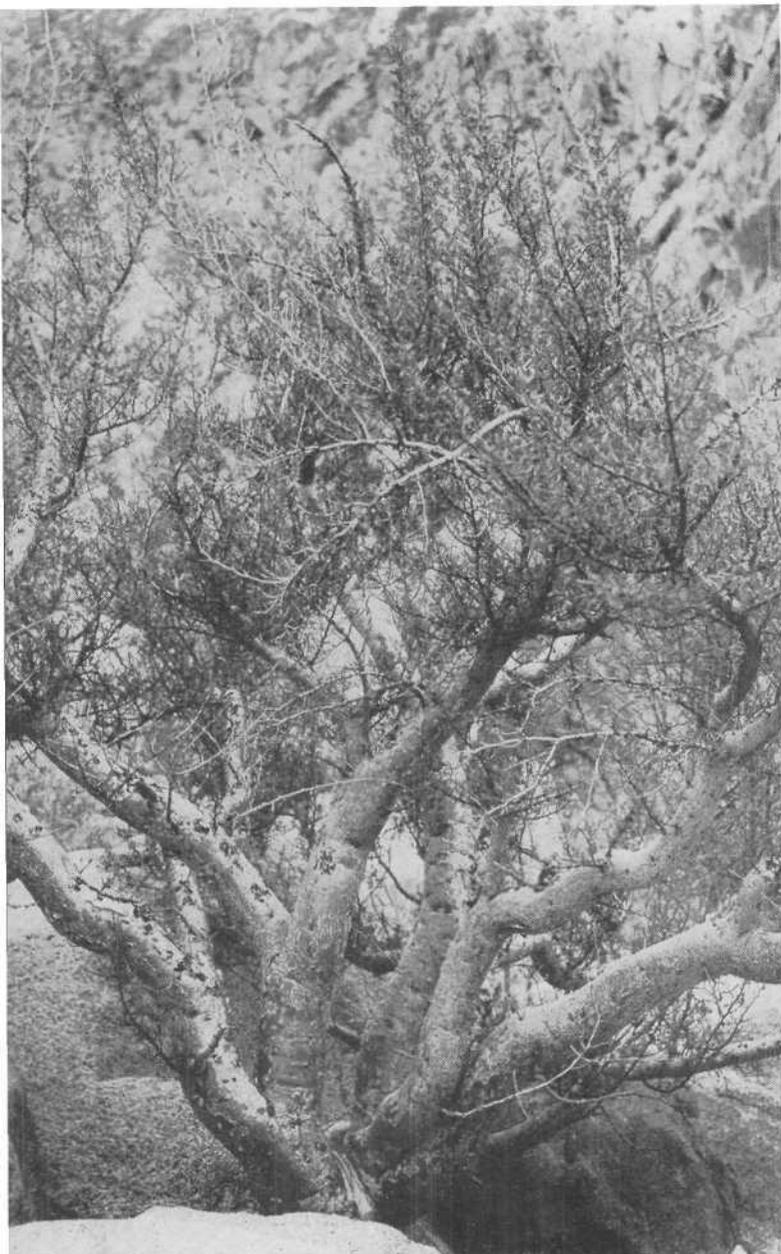
According to reports current in the border town of Mexicali, the hot water springs

had fine curative powers, and old Mexicans often went there for relief from rheumatism and other ailments.

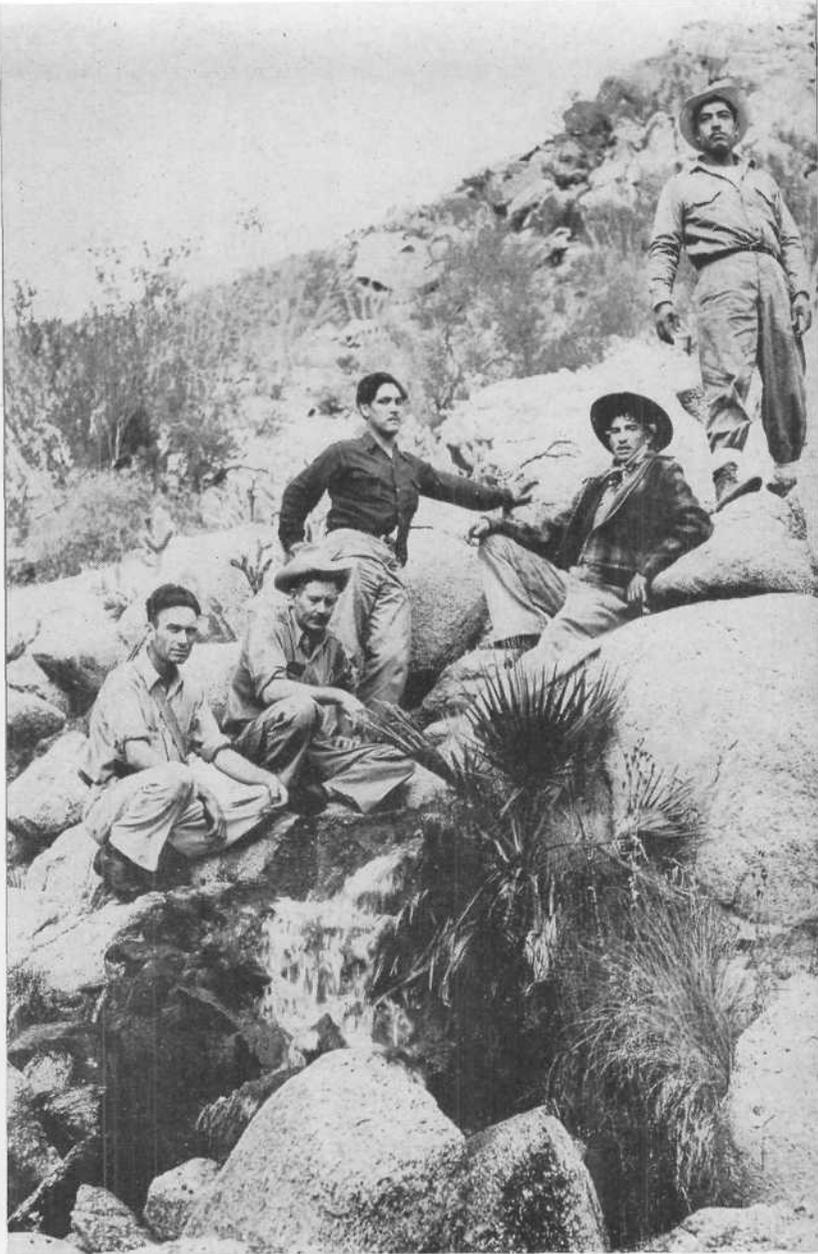
But none of the Mexican nationals whom I knew in Mexicali could tell me how to reach the springs. Finally, with vague directions from someone who knew someone who had been there, a party of us crossed through the Mexicali port of entry and spent much of two days trying to locate the canyon in which the springs were located.

We hiked many miles up canyons and over ridges, and found two cool springs and many palms—but no canyon that answered the description of Guadalupe.

The canyon derived its name, we were told, from a pinnacle of rock—a granite gendarme that stood in bold outline against the sky on the ridge near the head of the canyon. One of the early day explorers in that region had seen in the 200-foot spire a resemblance to the Virgin of Guadalupe—and thereafter it had been



One of the many elephant trees that grow on the slopes overlooking Guadalupe canyon. The sap of this tree is almost blood red.



At one of the Guadalupe hot springs, left to right: Arles Adams, Walter Gatlin, Salvador Campos, Maclovio Vasquez and Daniel Marquez.

known as Guadalupe canyon. The pinnacle was a landmark which would identify the canyon we were seeking.

Eventually, I found one who knew the road to Guadalupe—and so great is the fascination of that wild region that I have returned there four times in the past 12 years, despite the fact that I always get mired in the sand somewhere along the 7-mile pull up a sandy wash to reach the canyon entrance.

My last trip to the canyon of the virgin saint was in October. It had been five years since I had bucked that sandy wash. But Arles Adams wanted to go, and was sure his jalopy could make the grade. So we arranged the trip.

Generally it requires tourist permits to cross the Mexican border for an overnight trip. But the inspectors at the international gate at Mexicali waived this requirement when they learned our companions on the outing were to be three of their own citizens.

Members of the party in addition to

Arles and myself were Walter Gatlin of El Centro, Daniel Marquez, Salvador Campos and Maclovio Vasquez who reside in Mexicali and cross the border daily to work in the flax mill where Arles is superintendent.

Mexicali, a city of 15,000, has added many paved streets and fine residence and business buildings during the war period, and hardly would be recognized today by those who knew the town years ago when it was a village of adobe huts, cantinas and dirty streets.

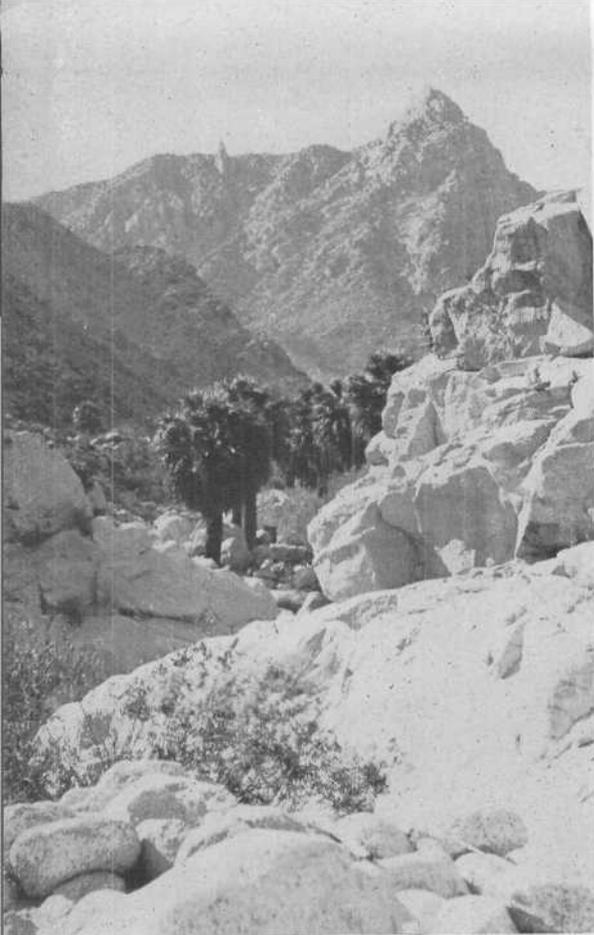
Leaving the city pavements we followed dusty roads across the fertile delta lands where the cotton harvest was in progress. Cotton is the main output of this Mexican valley. Our route was the road which former Governor Cantu built many years ago to connect Mexicali with the coast at Tijuana, paralleling the border on the Mexican side. Twelve miles out we left the cotton fields behind and began the gentle climb over the pass which separates Mt. Signal from the Cocopah range. From the

summit of the pass we looked down on the great dry lake bed of Laguna Salada, called Laguna Maquata on old maps. If you can imagine the Salton Sea basin before the Colorado river broke through and filled it with water in 1905-06, you have an excellent picture of Laguna Salada today.

When I first saw this shallow basin in 1922 it was filled with water. Then a few years later, one hot summer, the water evaporated, leaving the floor of the lagoon covered with dead mullet. Enterprising Mexicans recovered hundreds of tons of these fish and sold them for fertilizer.

Then in 1939, without warning, the basin filled with water again. And now it is dry, with a floor so hard and smooth one can drive 40 miles across its surface at top speed.

There is no mystery about the recurring floods which fill the Salada basin. The water comes from one of the many delta streams of the Colorado river. When driftwood or silt accumulate in certain of the delta channels, the water backs up and



The whitish grey granite and the dark fronds of the palm form striking contrast. The Virgin of Guadalupe is the guardian saint of this canyon.

overflows into the Laguna basin for weeks or perhaps months or years. The silt and sand of the delta are constantly shifting, and eventually the blockade gives way, the channels to the gulf of California are reopened, and Laguna Salada is left without a source of supply. The basin is so shallow that when this happens the water will evaporate in a single season.

The phenomenon of Laguna Salada is an exact parallel to the cycles of flood and drought which recurred in the Cabuilla basin—now Salton Sea—over a period of thousands of years before American engineers brought irrigation water from the Colorado to Imperial valley and erected dikes to keep the river permanently out of this below-sea-level basin.

There are many Americans living today who saw the Salton basin dry in 1904 when Imperial valley lands were being reclaimed—and who recall the catastrophe that threatened when the protective works gave way in 1905 and the river poured in and formed the Salton Sea we know today.

No engineers have yet tampered with the Laguna Salada terrain—and so the sea comes and goes in irregular cycles, according to the natural fill and erosion of the millions of tons of silt which normally come down the Colorado river annually. However, it hardly is accurate to refer to this as entirely a "natural" process today—

for the construction of Boulder and other dams in the Colorado have lowered the silt content in the lower river, and this will have a bearing on the status of Laguna Salada. Just what the effect will be, no one can say with certainty.

Fray Francisco Garcés recorded that Laguna Salada was full of water when he reached that spot in 1771, and Juan Bautista reported a lake there when he passed that way on his scouting trip in 1774. James Pattie found the lake dry in 1824 and he and his party suffered critically from lack of water in their trek from the Colorado river over the Cocopah mountains and across the great salt flat and on to San Diego.

This year the lake is dry, and as smooth as a paved road. There are patches of salt crust where the tires make a slight indentation, but much of the surface leaves only a faint car trail.

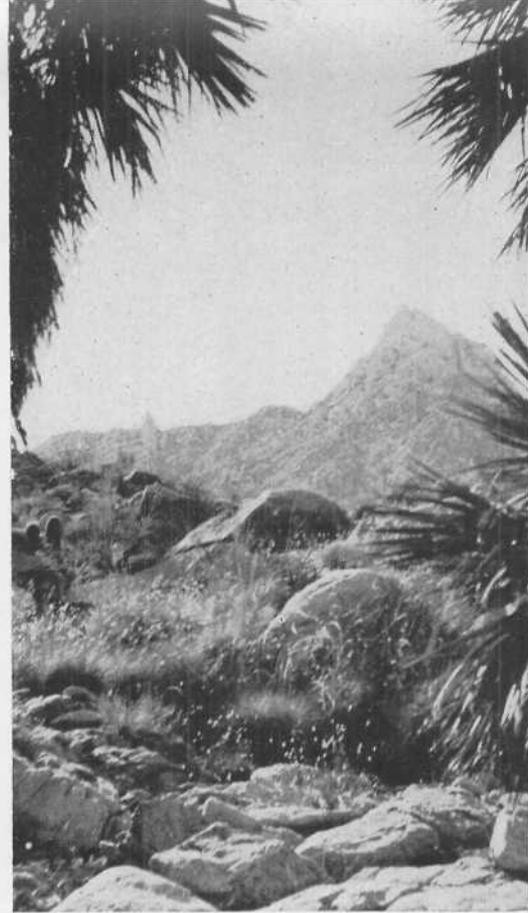
We followed the tracks which woodcutters had made when they go into that area for dead ironwood and mesquite and palo verde for the stoves of Mexicali. Halfway the length of the lake our trail swung in toward the precipitous mountain range on the west—the range that separates the Pacific from the desert.

At the edge of the dry lake we came to the arrowweed shack and the well of Señor Demara who has run cattle in that area for many years. The animals find fairly good grazing on the wide bajada that extends from the lake shore to the toe of the mountains, and in the canyons. There are streams in nearly all the canyons which gash the eastern slope of this range, but the water disappears in the sand before it reaches the floor of the desert.

There is a belt of sand dunes along the western shore of the old lake. Many shards and an occasional metate are found in these dunes, relics of a prehistoric period when Indians, perhaps ancestors of the vanishing Cocopahs, lived along the lake shore and fished and made bread of mesquite bean meal.

There is a route—not a road—through the dunes, marked by the wide tires of the woodcutters' trucks. It was heavy going for the jalopy, but we made it through, and then started the seven-mile trip up across the gently sloping bajada to the mouth of Guadalupe canyon.

Mexican engineers had surveyed a road straight back to the mountains, and the right-of-way had been cleared, since I last visited Guadalupe. In former days we merely followed the winding course of the arroyo, dodging and turning to avoid the smoke trees which grow thickly in this wash. It calls for fast decisive thinking, driving up one of those smoke tree washes at 20 to 25 miles an hour, knowing that if you take the wrong lane or lose momentum you will spend hours of shoveling and pushing to get the car out of trouble.



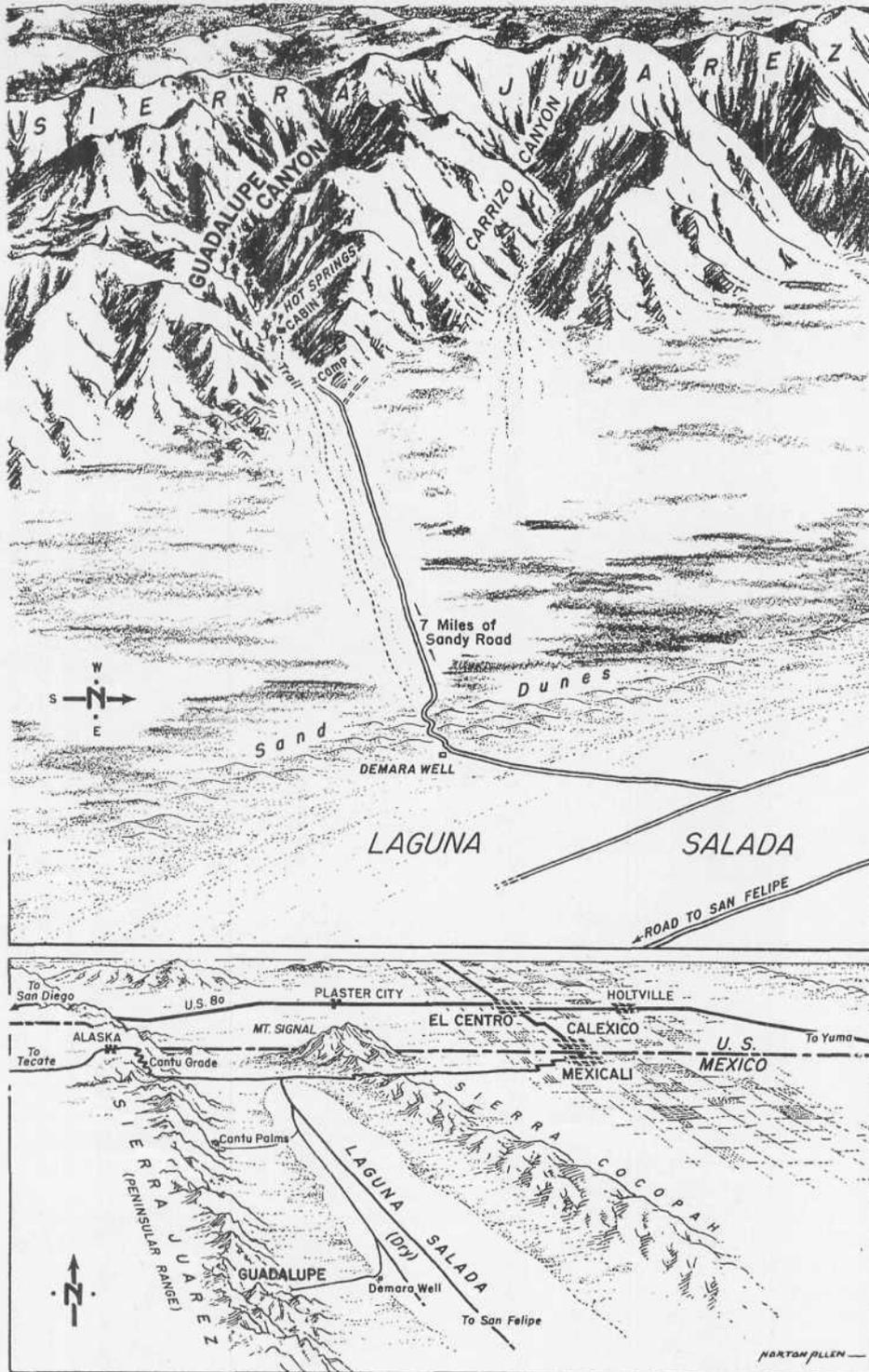
Framed between the palm fronds, the pinnacle to the left of the cone-like peak is Guadalupe rock, for which the canyon was named by an early visitor.

There's a thrill in the sport—but at the end of an hour one feels a sense of mental fatigue. Skiing over a new route on rough tree-dotted terrain is the only sport comparable to it.

On this trip we followed the right-of-way, and while there wasn't much of a road, it was a simple matter to drive straight ahead and keep up the necessary speed. At the toe of the mountains the road branched to the right, while the entrance to Guadalupe was on the left, so Arles swung the car into a sandy wash and we spun around trees and dodged rocks at a dizzy pace for another mile. Then we hit sand too soft even for this big-tired desert car, and before Arles could swing around and head downstream we were down to the hubs.

But we had plenty of manpower, and it was only a 15-minute task to get the car turned around and on a solid base. And there we made camp for the night. We could see the palms a mile up the canyon. And back on the ridge beyond was Guadalupe rock silhouetted against the sunset sky.

The Mexican boys served the camp dinner that night. It was a new kind of camp cooking for me, and what a feast it was! We ate chicken tacos, then frijole tacos, then chicken and frijoles mixed, and then went back and finished up on straight chicken. Yes, we ate a lot of tacos. The



We spread our bedrolls on clean white sand, and were up at daybreak for the hike up the canyon.

We met the stream where the last trickle seeped into the sand, before we had gone a half mile to the canyon. Then young palm trees began to appear along the water course, and soon we were in a forest of mature trees. It was in Guadalupe canyon that I first made the acquaintance of the blue palm — the *Erythea armata* which grows wild in Lower California and Sonora. I have been looking for this palm in its native state on the American side of the line for years, without success. Apparently it marches up within 25 miles of the California border, and stops there. *E. armata* is of the fan palm type, but not as tall and rugged as the *Washingtonia* species which grows on the California desert.

Of the 1155 palms growing in Guadalupe canyon—I counted only those three feet high and over—about 85 per cent are *Washingtonia filifera*, and the remainder blue palms. Nearly two thirds of the palms in this canyon are young—under 25 years. Several hundred of them have sprouted and grown since my first visit to this canyon 12 years ago. I have no explanation for this sudden appearance of so many young palms. Normally, I would say they were taking the places of an older generation of trees which had been swept away by cloud-burst torrents. But when that happens, the bajada below the mouth of the canyon is strewn with dead palm trunks lodged against the boulders. There were a few old trunks scattered over the Guadalupe fan, but not in such numbers as to indicate that the canyon had ever known such a forest of trees as is developing there now.

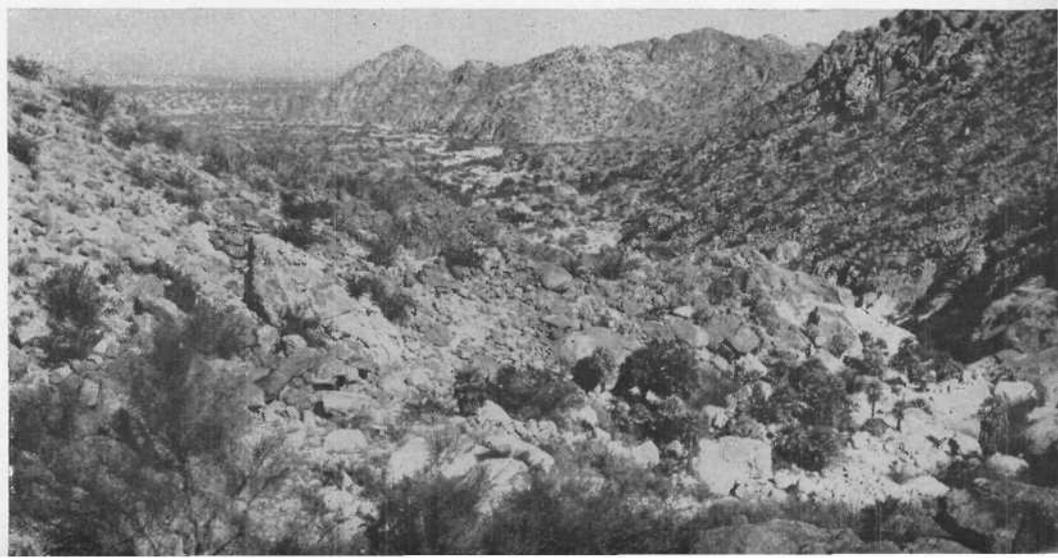
Three-fourths of a mile after encountering the first of the palms we climbed to a bench on the right side of the canyon and reached the first of the hot springs. One can smell the water before reaching its source, for it is highly mineralized with

Looking down canyon toward the Laguna Salada lake bed from the bench on which the hot springs are located.

chicken had been stewed previously, but the boys put it on the fire again and crisped it in hot butter.

Mexican cooks somehow get a flavor into frijole beans that no other chefs ever achieve. We had corn tortillas, great stacks of them. The tortillas had become somewhat wilted since they were cooked the day before. But I learned about tossing them on a bed of redhot embers to crisp them again, and when we rolled our tacos they were so hot they almost burned our fingers.

That's a Mexican camp dinner for you, and I can recommend it.





This is the blue palm, *Erythea armata*, which grows alongside the *Washingtonia filifera* in Guadalupe canyon. The palm derives its common name from the whitish blue cast of its fronds. The fruit is the size of a small marble.

sulphur. It gushes from the boulders so hot one cannot hold a hand in it. On cold mornings steam rises from the spot. A second large spring a hundred yards away actually gurgles from a hole in the middle of the huge boulder. Vari-colored algae cover the surface of the rocks over which the water pours. Hot springs in such a setting of palms and pools and waterfalls as one finds in Guadalupe canyon long ago would have been the site of a million-dollar health resort, in a more accessible region.

We continued up the canyon, climbing falls and gaining altitude rapidly for 2½ miles, until the last of the palms were seen at an elevation of about 1500 feet. It is another 1500-foot climb up a steep slope to Guadalupe rock, but we lacked the time for the ascent. And besides, it was more fun discovering new pools and figuring routes around the rocky barriers which blocked the route along the floor of the canyon. Once, making a detour around a waterfall, I came upon a natural cave-like shelter where former Indian dwellers had left great quantities of broken pottery. Well-worn depressions in the flat rocks in front of the overhang were silent witnesses of the days when Indian women knelt

here and ground mesquite beans and palm seeds into meal.

The rock in Guadalupe is granite, some of it almost white, and worn smooth by ages of running water. The floor of the canyon and the slopes were covered with much the same vegetation as one finds on the Colorado desert north of the border—ocotillo, agave, palo verde, catsclaw, wild mint, bisnaga, buckhorn, and an occasional chuparosa in blossom. The next most conspicuous stranger in this area was the elephant tree. Many of them grew on the slopes.

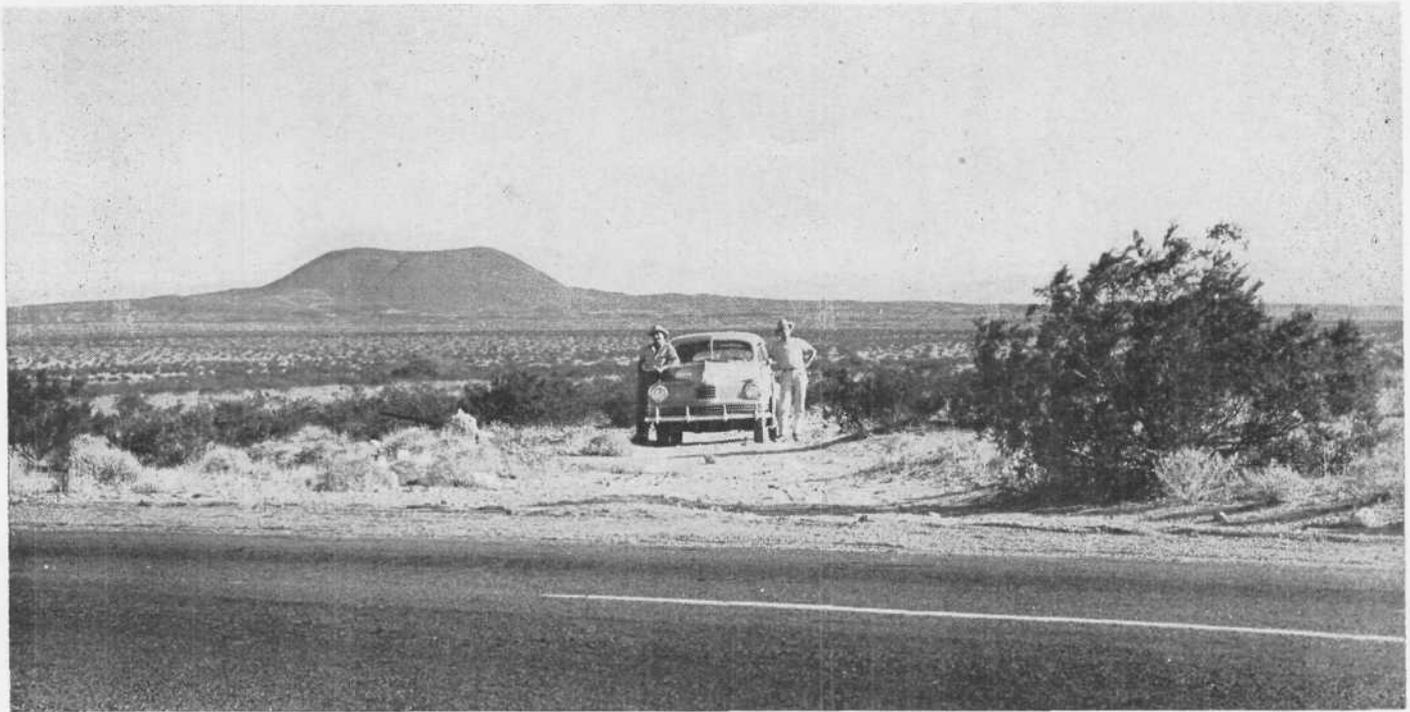
The lone dweller in Guadalupe canyon—and he was there only on a temporary mission—was José Redondo. He was camping beneath an overhanging rock and gathering herbs for the *boticas* in Mexicali. On a tarpaulin in front of his shelter were spread juniper twigs, yerba santa and a shrub he called uata. It resembles rabbit bush.

There is a mud and stone hut near one of the springs, used only when ailing visitors come to this canyon for the healing power of its mineral water. Mexican prospectors and hunters visit the canyon occasionally, and *vaqueros* seeking cattle that have strayed up among the rocks may be

met along the trail that leads to the springs. But most of the time the Virgin of Guadalupe keeps a lonely vigil over a domain that knows no human trespass.

The only regret in connection with such a trip is the necessity for leaving the tranquil beauty of this landscape. One could loiter for days among the palms and beside the clear granite pools. A stream of cold water comes down the canyon from somewhere above and eventually joins volume with the streams of mineral water which trickle down from the springs on the bench. The hot water has lost both its temperature and its odor before it reaches the bottom of the gulch, nor is there any taint in the flavor of the water below where the streams meet.

I would like to pay a tribute to the memory of the early day explorer who gave this canyon its name. It is fitting that such a lovely canyon should have so saintly a guardian angel as the Virgin of Guadalupe. For the present, it is unlikely that this retreat will be overrun with tourists. It is to be hoped it never will be profaned by other than those who will look up at the lonely Virgin on the ridge above and sense their responsibility to keep this place clean and beautiful.



This is where the side-road takes off from Highway 66 near mile post 114. The power line may be seen on the left, and Pisgab crater in the background.

Jasper Enough for Everybody

We don't know what the book on etiquette says about the good old custom of licking your rocks to determine their polishing qualities. But here are some interesting slants on the subject. This is another of John Hilton's field trips—into an area where there is jasper enough to supply the cabochon-cutters for many years.

By JOHN HILTON

THIS STORY starts with an ordinary post standing beside a lonely stretch of desert highway. The post is about four feet high and six inches wide, and is painted white. It bears the number 114 in black figures. I have been passing these roadside posts for years without ever bothering to find out who put them there and why.

Then a letter from Kenneth J. Hines of Puente, California, was passed along to me by the editor of *Desert*. Kenneth ranges far and wide over the desert country, and his letter suggested that the rockhound fraternity might be interested in a field trip out along Highway 66 in San Bernardino county, California, to some jasper and agate areas he had discovered.

The sketch accompanying the letter showed a side-road leading from the highway at mile post 115. The mileposts, he explained were located along the road a mile apart, starting at the San Bernardino courthouse with No. 1.

We had driven over the pass through Sheep Hole mountains from Twentynine Palms — Barney Barnes, Calvin Stillwell and myself. Our goal, as indicated by the

sketch, was milepost 115. It would be easy to locate because a power line crossed the highway at that point.

We already had passed Amboy crater with its lava flows which look like comparatively recent scars on the desert landscape. Now ahead loomed another black lava cone—Pisgab crater. Here again was a rough dark mass of twisted flows and crumpled lava fields which contrasted with the soft contours and tan shades of the surrounding desert. These craters have not yet had time to become part of the landscape. It will require many thousands of additional years before they will blend with their background. The face of the earth does not absorb its scar tissue at a very rapid rate.

We were riding along talking of these things when we saw the high steel towers of the power line ahead. And there was milepost 115, the place where we were scheduled to leave the highway. But something was wrong. There were two roads—and we had no clue as to which one to follow.

While we debated the question, we saw the metal framework of a sub-station and

a cottage out along the power line to the north. We decided to drive in there and see if the people at the power station could straighten us out. We met a young man coming out of the station. He smiled and introduced himself as Bob Bloomingdale. When we told him we were on a *Desert Magazine* trip his welcome became even more cordial. It turned out that Bob and his family not only are *Desert* readers but rock collectors as well. It was a pleasant surprise all around and in a few minutes we were meeting the rest of the family and discussing rocks and the other things of the desert.

Suddenly I remembered our mission and asked Bob and his father about the jasper field that we were hunting.

"You're right in the middle of it," they told me. "It extends several miles in every direction from here. There are good gem stones to be had practically in the front yard."

This was a new experience to me. I have found desert folks living in or near gem fields on other occasions but often they were quite indifferent to the interesting material under their feet. These people were different! They not only knew about the gems close to them but took an interest in the many other mineral deposits in the area and had dabbled some in cutting gems on their own.

Bob took us over to a pile of rough rocks in the yard and we saw that there must be



Barney Barnes still holds to the old desert custom of licking your rocks to see how they will look when polished.

a great deal more than jasper in this area. Manganese and copper ores, agates, crystals and other interesting specimens were there in profusion. I reached down to pick up an especially interesting piece of flowered green and red agate when I saw something move in the failing light. We all recoiled instinctively as the tiniest sidewinder rattler I have ever seen emerged from under the rock I had just picked up. He was not quite as long as a lead pencil nor as big around but still a sidewinder and poisonous. The little fellow wasn't mean like some of his elders, however, and never so much as attempted to strike as I herded him into a glass jar to take to a friend.

The Bloomingdales seemed a bit apologetic about the sidewinder incident and assured us that this sort of thing didn't happen every day. In fact they agreed that this was the first snake they had seen

around the place for several years. We made a rather careful search for the balance of the brood but this one must have been a rugged individualist who had his own ideas about migration, for no others turned up.

That night we camped out on a dry lake north of Ludlow because we wanted to take a short run up into the slopes of the Cady mountains in the morning to check a theory that had developed in the conversation of the afternoon. The subject of the source of all this jasper had come up and I remarked that some of it looked a good deal like the jaspers that I had collected years ago in the Cadys. Bob and his father said that there were agates and jaspers in a place on the south side of this mountain range so we decided to see if there might be a provable connection. It was dark and moonless when we stopped on the lake, but soon we had our steak supper cooking and

our camp set up. Steaks and hot coffee on the desert for the first time since 1941, seemed to bring home to all three of us that the long years of doing what we didn't want finally were over and a thrilling new era lay ahead.

After supper was over and the dishes washed, Barney got out his Mineralight and cast its rays on some of the samples we had picked up near the Bloomingdale yard. To our pleasant surprise, some bits of chalcedony fluoresced a brilliant light green. Then we started walking over the lake bed to see if anything there reacted to the light. Presently we came upon some wind blown gravel on the floor of the lake and sure enough there were small bits of stone that fluoresced the same green. In ordinary light we found that they were also bits of chalcedony. This was interesting and while not a final proof, did point to the possible source of the gems in the flats and rolling hills below. The Cadys are heavily eroded and undoubtedly were a much higher range at one time. It would appear that from them came many of the stones we found in the foothills the next morning.

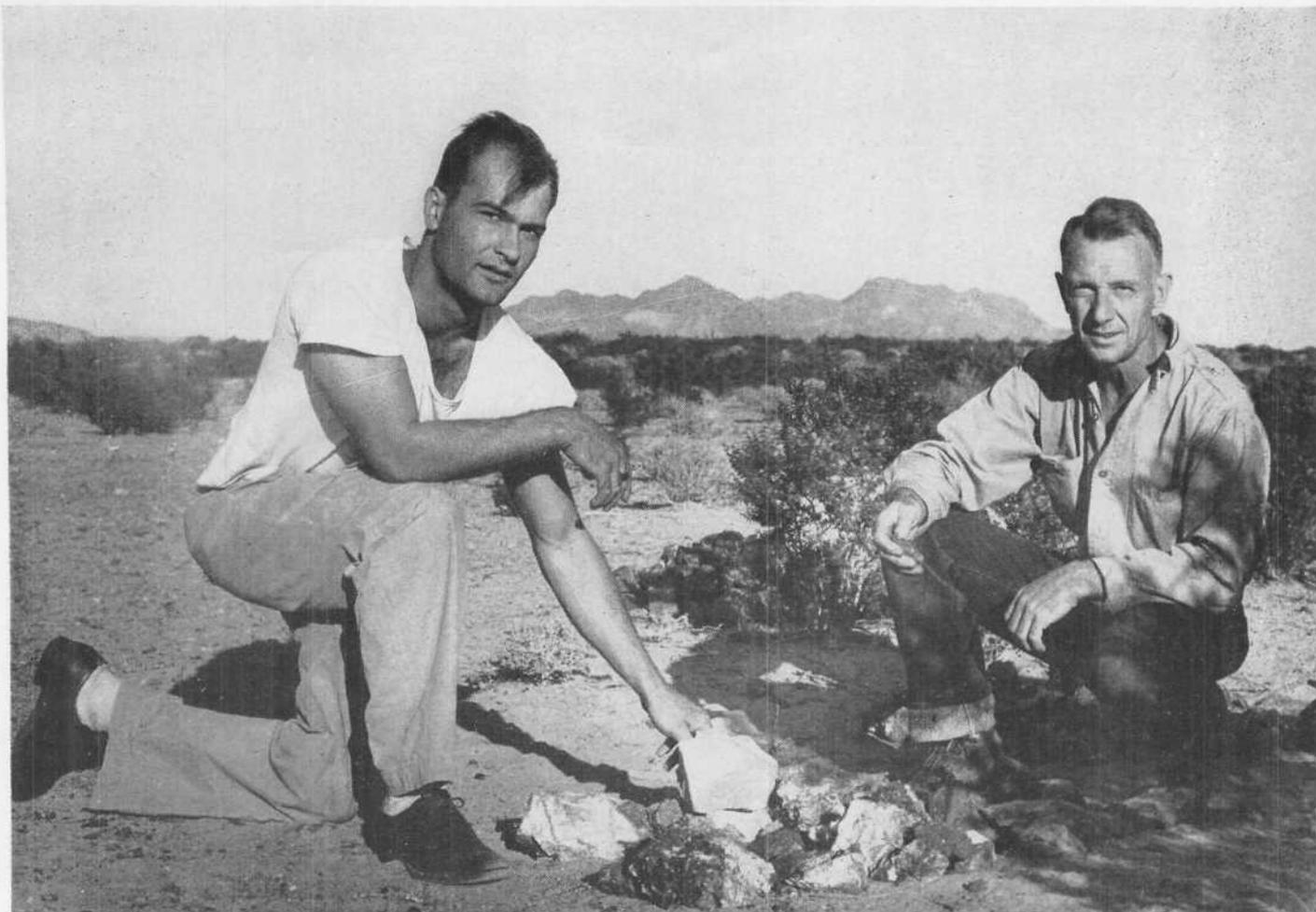
We were getting towards the edge of the lake and the bits of chalcedony were interspersed with grey limestone that fluoresced ruby red to orange. Then we saw headlights coming down the lonely road where our car was parked. We knew that there was very little travel on such a road and certainly not at night. To our surprise the cars came abreast of ours and turned out into the lake and stopped about a quarter of a mile away. Then we understood why they were out at this time of night. The headlights of one of the cars were focused on a small red plane that had made a forced landing that afternoon. The boys in the plane had walked to Ludlow. But they saw our lights in the approximate location of the plane and became worried.

We had more trouble explaining our presence on the dry lake to them than they had to us. The light fascinated them, however, and presently the aviators and the folks who had brought them out from town were wandering around over the desert following Barney and his ultraviolet light, exclaiming over the beauties of the rocks underfoot.

The next morning as we were about half way to the foot of the mountains from the lake and had stopped to examine some agate and jasper along the trail the little red plane took off from the field. They circled and dipped their wings as they came overhead.

It didn't take us long to find out that this part of the Cady mountains was no place for field trippers. Our car struck high center several times and we decided that the jaspers near the highway would do as well.

Back at mile post 114 we turned on the



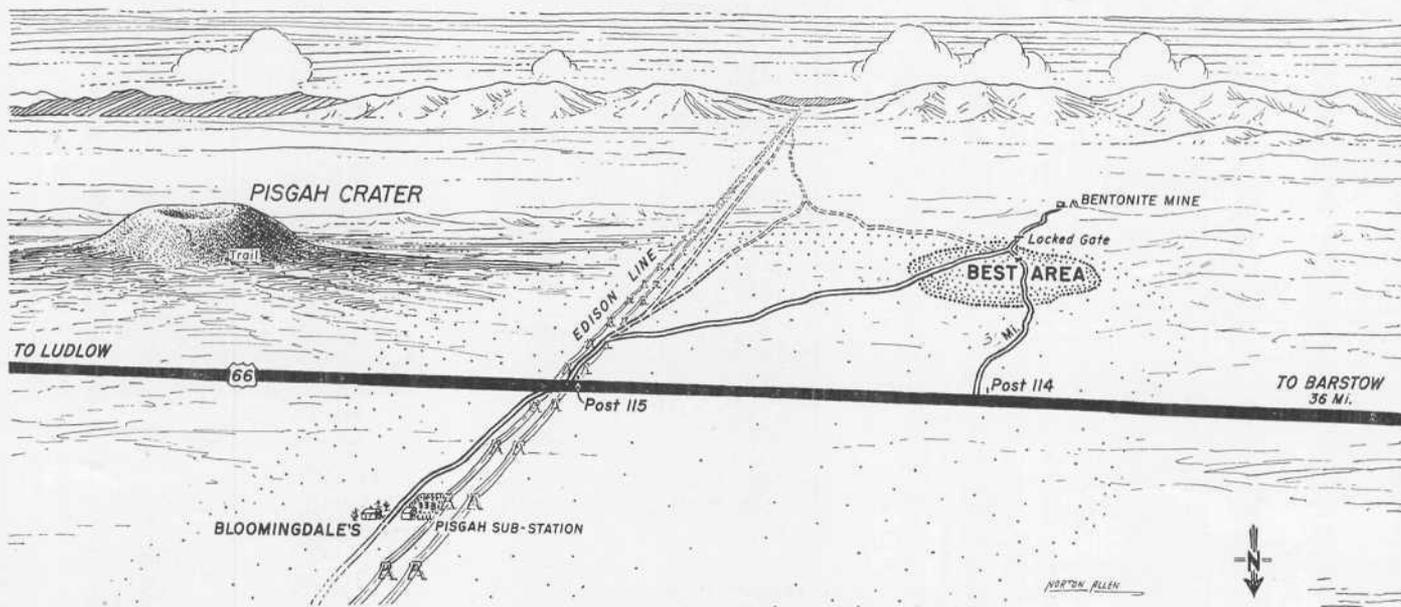
Bob Bloomingdale (left) and his father with some of the jasper and agate specimens they have brought in from the Pisgah area.

dirt road and traveled three-quarters of a mile. There in a shallow depression among the low rolling alluvial hills, we found a veritable wonderland of multicolored jasper. There were some agates and chalcedony roses and a few pieces of bloodstone but by far the most outstanding gems of the field were jaspers in just about every color known to the mineral. I even found

a jet black piece with cherry red markings. It wasn't a matter of finding jaspers, it was a matter of deciding which ones not to take along. I think that I am safe in saying that about one per cent of the rock covering the surface of that basin and the surrounding hillsides was jasper or agate.

We would gather gems for a while and then sit down, dump our sacks out on the

ground and sort out the best. It was during one of these sorting periods that I looked up and saw Barney Barnes licking a jasper with a vim and expertness that could only stem from long practice. This brought up the age-old rockhound's question of "lick or not to lick" and we found that the three of us were unanimous in the belief that licking a stone will tell a collector more



about its polishing possibilities than any other hasty field test yet devised. We also agreed that the new fangled idea of dribbling water on them from a canteen was a mild form of sacrilege not to be considered by serious desert rockhounds. We discarded the idea of an "artificial licker" designed from a mucilage bottle with a rubber spreading tip as fantastic and too sissy for words (probably the idea of some fastidious woman who, if she could have her way, might force people to eat fried chicken with a fork).

Finally after discussing the various arguments against licking and balancing them against the joys and advantages, we came to the following conclusion:

First—The sanitary angle shouldn't hold one back, for doctors agree that desert sunlight and heat kill germs. A smooth fine grained rock isn't much of a germ hatchery at best, for germs, like all other life, have to eat to multiply. That much for sanitation and health.

Second—The accusation that it doesn't look nice for folks to go around licking pebbles: In our opinion, it's all a matter of what folks are used to. Arctic explorers soon cease to see anything indelicate in the way Eskimos eat blubber with their fingers, because this is the custom of the land. Licking rocks to see if they are fit to polish is a well established custom on the desert.

Third—The average non-licker of rocks sees only that the rockhound wets the rock with saliva and wonders why water wouldn't do as well. But a real rockhound learns a good deal about the grain and texture of the rock when he licks it. The tip of the tongue is extremely sensitive to touch and will tell a person more than his finger tips about grain and structure.

Then there are the various safety factors. Rockhounds are notoriously absent minded when in a good gem field. They become temporarily unaware of the passage of time, the temperature, hunger, thirst or the little woman waiting in the car. A dyed-in-the-wool licker will never die of thirst due to absent mindedness of this sort for when the saliva runs out he suddenly will come out of his trance and look up a canteen. Another thing we agreed might save the life of an absent minded rockhound is the fact that when the temperature really starts to rise and the rocks get so hot they sizzle when licked, he probably would snap out of it and realize that the temperature is too high—thus averting a heat stroke.

We didn't stay in the field long because in spite of our discarding, we soon had a representative collection of the area and had determined that it extended far enough to keep a lot of rockhounds licking and picking for a very long time.

One of the things about this trip that stands out is the fact that it can be reached by many who might otherwise seldom get a chance to gather rocks for themselves.

TRUE OR FALSE

There are several ways to improve your acquaintance with the Great American desert. One way is to travel and explore.

Another is to read books. And a third way is right here in front of your eyes—the desert quiz. You'll not get all the answers right. If you score half of them correctly you'll know more than the average person. A score of 15 is excellent. More than that puts you in the class with the sand dune sages. The answers are on page 44.

- 1—The coyote is entirely a vegetarian. True..... False.....
- 2—The bite of the chuckawalla lizard is poisonous. True..... False.....
- 3—The Bill Williams river in Arizona was named after a famous trapper, scout and mountain man. True..... False.....
- 4—The saguaro cactus withstands long periods of drought by storing water in its roots. True..... False.....
- 5—An arrastre is a primitive mill for crushing ore. True..... False.....
- 6—Cochiti is the name of an Indian pueblo in New Mexico. True..... False.....
- 7—Winnemucca was a former chief of the Paiute Indians. True..... False.....
- 8—Ocotillo grows a new coat of leaves only in the late winter or spring. True..... False.....
- 9—When a Navajo woman dies, it is tribal custom that the husband inherit her flock of sheep. True..... False.....
- 10—Billy the Kid was a noted outlaw in Utah. True..... False.....
- 11—Wasatch mountains may be seen on a clear day from Palm Springs, California. True..... False.....
- 12—The only poisonous lizard found on the deserts of the Southwest is the Gila Monster. True..... False.....
- 13—The book *Death Valley in '49* was written by William Lewis Manly. True..... False.....
- 14—Desert drivers should carry chains to put on their car wheels when driving through dry sand. True..... False.....
- 15—Iceland spar is the name given to a certain type of quartz crystals. True..... False.....
- 16—White Sands national monument is located near Alamogordo, New Mexico. True..... False.....
- 17—Antelope still run wild in certain parts of Nevada. True..... False.....
- 18—Nogales, Arizona, is a port of entry from Sonora, Mexico. True..... False.....
- 19—Jacob's Lake in northern Arizona was named for Jacob Hamblin, Mormon missionary. True..... False.....
- 20—The Mojave river of California is a tributary of the Colorado. True..... False.....

The field is so accessible, the ground so firm and the material so plentiful that even a patient in a wheel chair could gather rocks here. It is with this in mind that I am asking the more active readers who go on the trip to refrain from picking up material within the first few hundred feet of the road and leave it for the less fortunate who might get a great deal of joy from the thrill of actual collecting.

We stopped in to say goodbye to the Bloomingdale family. They were hard to leave. There were more rocks to look at, the fine telescope that brings out all of the details of the crater and many other things. They are proud of the sturdy Arizona ash trees that are growing so well in their yard. When all the water has to be

hauled, the growing of a shade tree is a real accomplishment, worthy of pride.

The Bloomingdales told us, too, of their plans when the other son comes back from the service and they aren't so short handed at the station. They will again take family trips into the surrounding desert and collect more stones, get the cutting machine going again and in other words, do what a good many of us plan to do—get a kick out of our desert like we used to before world's turmoil clamped down on most everything worthwhile.

As we drove homeward past post 114 we felt a wave of thankfulness to whoever started setting out those mile posts along the highway and to K. J. Hines for calling our attention to them.



From the Sky City the ancients looked out across a sea of black lava—where piñon and cedar have now found root.

Lost City of the Sky

Who were the ancients who dwelt on this well-fortified butte? From where did they come? When did they leave, and why did they abandon a home where Nature had provided so well for their comfort? No one knows the answers to these questions. But Cleo Woods has given a graphic picture of the ruins as he found them on a recent trip into the lava-bed country of New Mexico—a story that will stir your imagination.

By CLEO WOODS

IT WAS almost dusk. Betty and I puffed hard up the old trail that was gutted these hundreds of years by hard July and August downpours. We'd spent too much time down at the huge square stone house talking to George Hanna and his big family.

George had said, "But you've never seen a ruin till you see this one," and he'd jerked his head back toward the trail we now were on.

As we neared the top our anticipation grew keener. Too bad we didn't have more time. But we'd come back again. Funny how you always think that, isn't it? That

you'll come back. Sometimes you do. More often you never do, but that desire to return keeps on haunting you all through the years—to go back to this or that spot on the desert where some of your heart has been left.

"Look! How do you get over that?" Betty asked, pointing up ahead.

She indicated a stone wall four feet high squarely across our already straight-up-and-down trail. But with a little searching we found a hole broken through this wall, apparently by some shepherd so that his sheep could get to the rich black gramma grass beneath the acres of piñon and cedar

trees which spread a needled umbrella over the mesa.

We struggled through this breach in the wall, and found ourselves on flat tableland. And there but a short distance away lay the great ruin just as they had left it, except for what hundreds of years had done with wind and sun and rain and decay. A whole little city high on an almost impregnable New Mexico mesa.

Probably four-fifths of the rimrock thrust up from the plain was so straight and sheer that no primitive man ever could have scaled it at any time. At the few places where attacking forces might have climbed up we found rock-walled battlements still in place. A narrow neck or isthmus of land connected this protruding thumb with the main body of Putney Mesa, thus affording potential enemies one spot where they could assault the place on level ground. But all the way across this narrow neck is a row of rooms, with no doors or windows on the outside. This line of rooms, all of



*This part of the mesa needed no battlements for defense.
Betty Woods contemplates the defense wall on the south side.*

solid masonry, sealed off the one highly vulnerable spot of the whole mesa.

Although much of the stone has tumbled down, you know as you look at that fortified section of the defense works that atop the outer edge of these rooms there had been a rock wall from behind which the inhabitants might defend the city with ample advantage. You know, too, that the bravest and most able men lived in that row of houses, ready any hour of the day or night to leap to the walls with their arrow-crammed quivers, their bows and spears and clubs and stone missives. The story is all quite plain, even today.

As dusk deepened that evening in April, 1938, my wife and I hurried from one point to another. Every so often Betty would shout, "Come and look at this!"

Night drove us away, and we were forced to climb down that steep, gullied trail in the darkness. But we would come back. Next fall, sure. Then we'd have more time.

But during the next three years we never found the time to come back. Then the war stopped our travels for four years. But this year we did go back! Early in the morn-

ing, too, fortified with lunch and all the time we wanted.

We'd turned to our right off Highway 66 eight miles east of Grants, New Mexico. That puts us on a roughly graded dirt road which runs south along the east side of New Mexico's great lava beds. There was no mistaking the road because we had the lava beds on our right constantly. Putney Mesa kept squeezing the road down against the malpais on our left until sometimes the car fenders almost scraped the tar-hued lava walls. Often we had to resist the desire to stop and climb up onto some rolling malpais ridge where the lava lies in jagged black masses, and where a few Ponderosa pines and many piñon trees grow up through the cracks in the lava. The mesa walls on our right thrust up hundreds of feet. Sheer sandstone bluffs of pink and red and grey, with great arches on their faces in that odd way sandstone cliffs in the Southwest have of outdoing architects in the beauty and majesty of their creations.

A few Navajo hogans squat within sight of the road. The Indians find grassy stretches between mesa walls and malpais. The Navajo sheep are also herded for miles

into the lava, because everywhere that sand and decayed vegetable matter settle in the lava, there the sheep find grass and brush—rubber bush, rabbit bush, poñel shrub and temita.

As we rode along we spied two Navajo girls, perhaps 12 and 14, running up over the sharp biting lava like wild creatures seeking cover. Now they crouched between a bluebush and a big slab of lava that stood on end like a tombstone. Cautiously, the girls peered down at us, with a backward glance now and then as if to make sure there would be room for further flight in case we stopped. Their sheep grazed through the lava. A herd of sheep in the Navajo country is usually evidence of the presence of hiding Indian children when no herder is in sight.

We let the girls believe themselves undiscovered, and hurried on. We knew this morning where we were going. Back to our ruins!

Thirteen miles from Highway 66 we came in sight of the big square stone house. But George Hanna didn't live there any more. His dry-farm fields now were covered with tumbleweeds and poppies. We by-passed the white man's crumbling

house, drove up through the narrow opening between great barn-sized sandstone rocks, and took to the steep trail afoot.

Now, reaching the gap in the once unassailable wall, we could examine every corner of the ruins in detail, even to stepping off measurements. We had the time to stroll along the rimrock fortifications. To look down a long talus and see, in imagination, a hostile tribe sulking up through the scrub oak, cedar and piñon, to take the place by storm.

We saw, too, the defenders on the walls. Small, red-bodied men with flat heads and blunt, rugged faces. Their uniforms nothing but G-strings. Their arsenal at their feet. How they slithered arrows down at the crouching bodies that exposed even a few inches to view. How they heaved those stone-barbed spears when some daring enemy succeeded in fighting his way too near the stone wall. How they yelled their derisive defiance down at the wavering besiegers. How they shouted with joy as the attackers began to drop back, convinced that it would be too costly in lives to attempt the last fifty yards up that steep draw and there to meet a stone wall and valiant warriors on top of the wall.

The stone parapets you find there today sometimes are rather crudely laid. But when you go to the pueblo itself, the masonry is the equal of any pre-Columbian stone work in the Southwest. I would class it above anything I've ever seen at Mesa Verde, Chaco Canyon or Aztec.

The striking thing about these ruins is that they give the definite impression that they were built on a pre-conceived plan, and a plan of high order. There is a main communal pueblo fronting on a large plaza, with two smaller inner plazas completely

surrounded by rooms. The large plaza is enclosed on the east only by a stone wall. This pueblo is about 525 feet long by 225 wide.

The main pueblo contained between 300 and 400 rooms. Most of the rooms are about 8x12 feet in dimensions. The mesa top covers between 12 and 15 acres, at a rough guess. Scattered out from the main pueblo are a number of smaller room clusters. The largest of these has something less than 30 rooms. Down over the mesa rim and below the defensive walls, where the cliff walls are not straight up and down, a few isolated cliff-dweller type of ruins perch. The one similar room on the north side is in a perfect state of preservation. You imagine that these rooms stuck around on the more vulnerable sides of the cliff were the barracks for men detailed to the outer defense of the mesa.

The entire city appears to have been constructed over a comparatively short period of time. I saw no indication, except perhaps in one cluster of inferior rooms, that the pueblo was built progressively, with improvement or regression in evidence in the type of construction, as so often is the case with a large ruin like Chaco Canyon's Pueblo Bonito. Here the masonry all appears to be of the same remarkable excellence. The builders must have been at the zenith of their culture when they came to the mesa, since it appears they built all of the pueblo within a generation. Extensive excavation might contradict this tentative conclusion. I am judging only by surface appearances of the ruins.

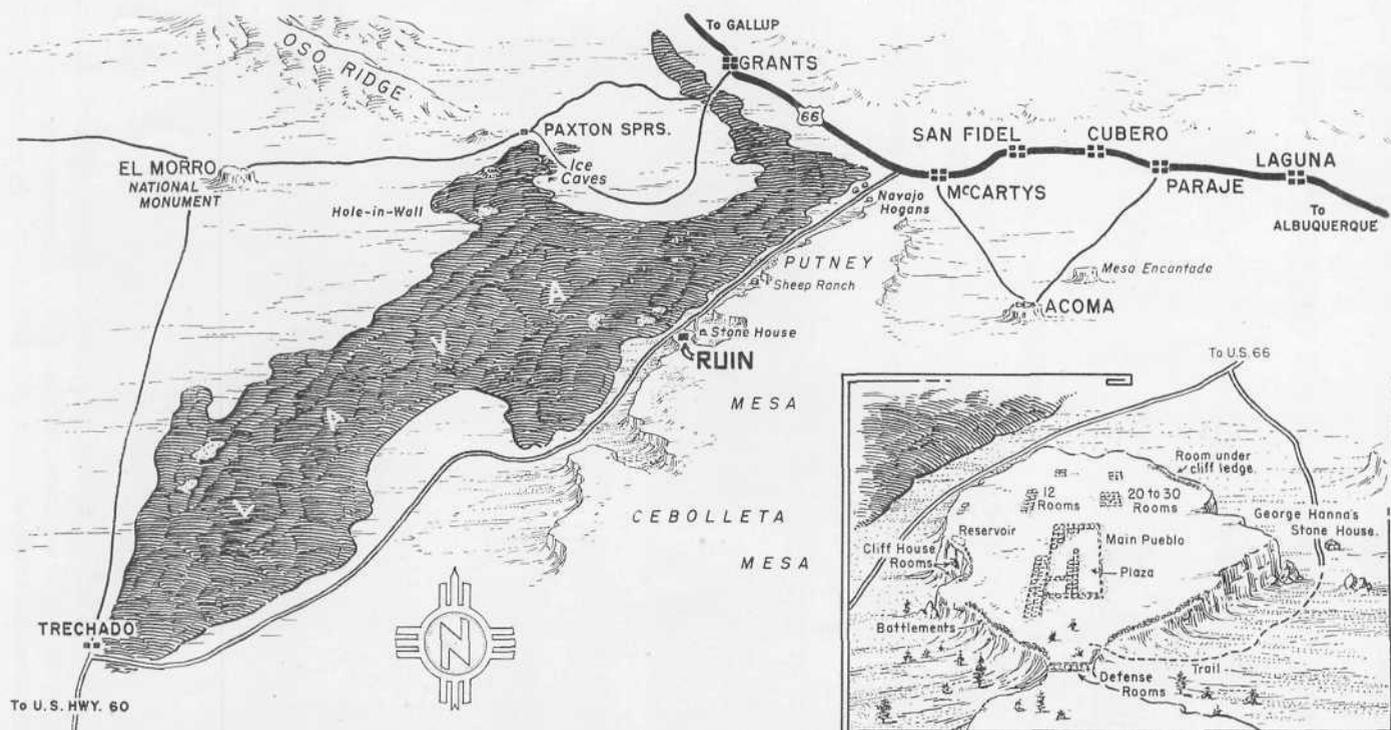
In some spots the walls stand six feet above the accumulated debris, and in perfect alignment. This may suggest a fairly recent culture, possibly Pueblo IV. On a

high, wind-swept mesa, however, dust and sand accumulation might be so retarded as to make this evidence misleading.

The only definite suggestion of the age of the ruins which I found on the surface, other than the masonry, was in the pottery sherds. The decorative figures of the pottery often show a distinct glaze and a bold, free stroke of the paint brush characteristic of Pueblo IV peoples within the Keresan linguistic cultural horizon, which would include nearby Acoma. What little observation qualified archeologists have made of this lava-bed section would point tentatively at least to the belief that these ruins along the eastern perimeter of the lava beds were left by tribes akin to the Acoma people, if not actual Acoma ancestors. There is, too, the added suggestion of Acoma kinship in the proclivity to build pueblos upon rock-walled mesas. Acoma's present perch is atop a very similar impregnable rock. We do know definitely that Coronado recorded no inhabited pueblo here on the east side of the lava beds, when he crossed the northern tip of the malpais in 1539. His historian does mention an inhabited town or two a little west of the lava.

That brings us to the long trail across the lava, beginning at the very foot of our ruin mesa.

"Yes," George Hanna had said that afternoon in 1938, "there's an ancient trail that starts in here and crosses the lava. There are more ruins on the west side, not to mention Zuñi itself. These people," again jerking his massive head toward the ruins, "likely made that trail. They even cleared loose malpais out of the trail, and filled in cracks big enough to swallow that car of yours several times over. I reckon



they traded and visited back and forth with the pueblos on this side."

No sounder conclusion could have been reached. But why did they leave their pottery sitting in some of the ten thousand caves in the malpais? Occasionally, pottery has been found in a cave—three, five, ten vessels. In other instances the pottery vessels have been found concealed behind pieces of malpais within the caves.

On this trip we visited one cave, three miles deep in the lava, which had evidence of ceremonial occupation, possibly of a temporary dwelling. It had deep ash pits, metates and a smoke-blackened roof. In a lower room were found nine pottery vessels, most of them perfectly preserved. In my collection this moment I have a flattened wooden implement three feet long and tooled to the shape of a sickle. This I found in this cellar room, after it had been overlooked by the original discoverer.

I also have three excellent pottery vessels which came from another cave a short distance from the big ruin on the mesa. One of these is a rarity, a gallon-sized bowl in a deep-red slip with crude outside lines in white and a very fine inside design in black, including a figure which resembles an Apache devil-dancer. Don't ask me what

significance such a figure has in a bowl that may have been made before the Apache ever reached New Mexico. I know only that very few pottery vessels have been found anywhere with the distinctive outside markings of crude white lines on red and very good inside decorations in black on red.

That's all the background we were able to bring to our big ruin there on the mesa on our return visit. The story of those ancient dwellers remains an unsolved mystery—whence they came, who they were, where they went, and why.

It was an odd coincidence that as we lay beside an ant hill within the ruin and looked for beads—getting a few, too—a B-29 passed five or six thousand feet above us. Perhaps there we had encompassed for us the story. War. Some enemy tribe had found a superior weapon or a superior mode of attack, just as that B-29 had proved itself superior over Germany and Japan.

Or perhaps disease hit this beautiful little city so gloriously located. Then, in their wisdom slowly acquired from the ages, the old men of the tribe knew it was time to get away from the death that kept striking night and day. Time to leave every-

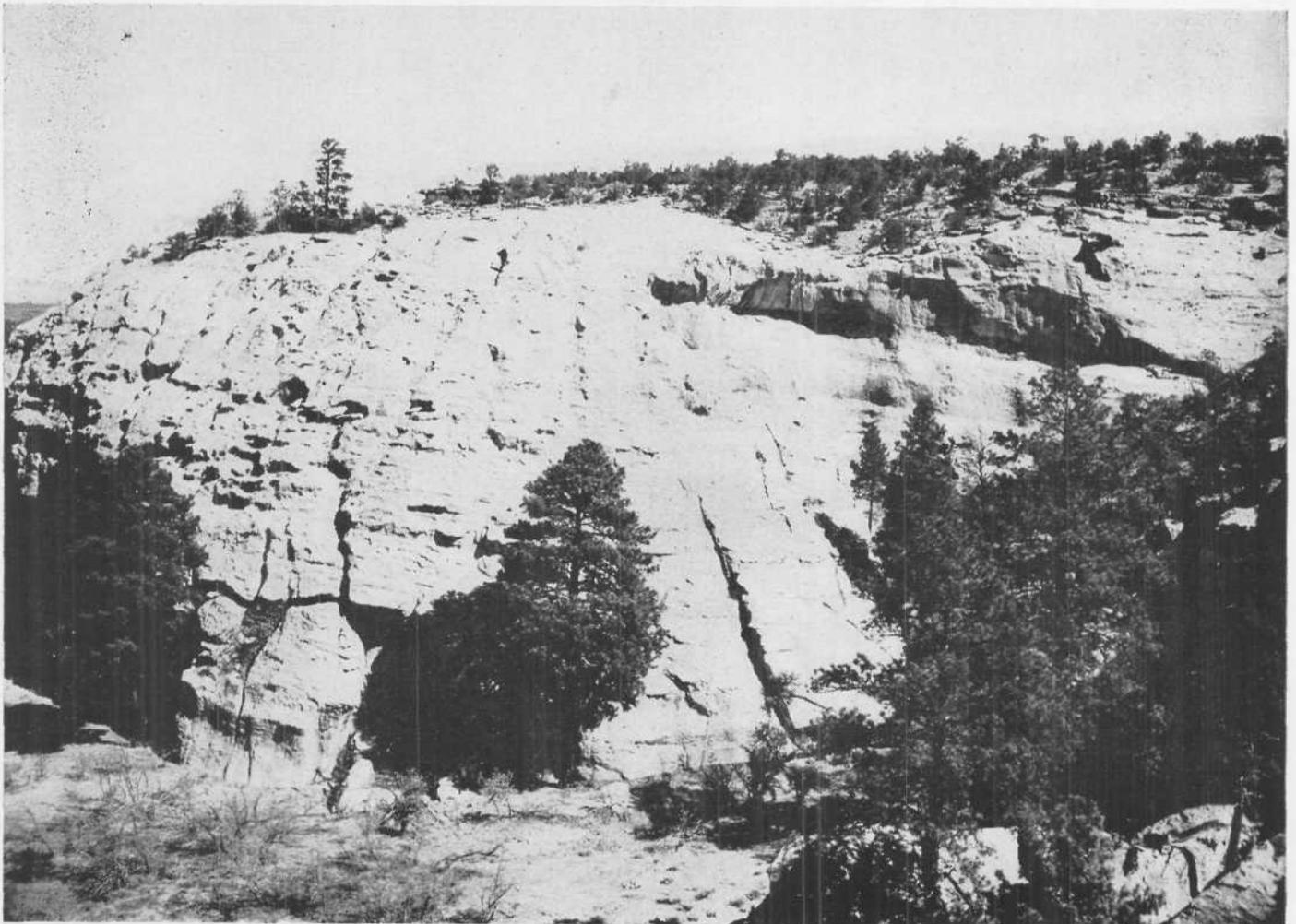
thing where it stood and go found a new city, one clean and not cursed with the devils of death.

What a pity, too. Up there they had everything. Reserve water naturally stored in a big reservoir on the western rim of the mesa. Ice-cold springs down in the lava at the foot of this mesa. Sub-irrigation for their corn and squash and peppers down in the bottom land. Game in great abundance for 50 miles to the east. More game out in the lava, where deer and big-horn sheep still thrive.

And here they had majesty. Beauty. An awesome and strange and stupendous world to look out upon, in that mighty sea of black malpais west and north and south.

We love it now, this ruin-dotted country beside the lava. We love the black, rosy, writhing malpais itself, with its mysterious caves, its lost trails, its vast sweep of black, black, black. And sitting on the battlements high above that lava world, we think a thousand thoughts, ponder a thousand questions about our big, unspoiled ruin which even today speaks to us so eloquently of an industrious, intelligent people who intended when they built our sky city that their children's children should live here forever in security and happiness.

On the steep gullied trail to the top the climbers encountered this stone wall.





Following a clue given by a Papago Indian, Richard Van Valkenburgh climbed a peak in the Guijus range in southern Arizona and found the top strewn with petroglyph-covered boulders — one of the finest Indian "picture galleries" in the Southwest according to his report to *Desert Magazine* readers.

Johnny Mallas sketches some of the glyphs which cover the boulders on the top of the Guijus peak.



We Found the Glyphs in the Guijus

By RICHARD VAN VALKENBURGH

ONE DAY after a trip to the well known Picture Rocks at the northern end of the Tucson mountains I mentioned the visit to my friend Miguel, a Papago Indian from the rancheria of *ali'chuk'shaun*, or Little Tucson, 70 miles southwest of Tucson, Arizona.

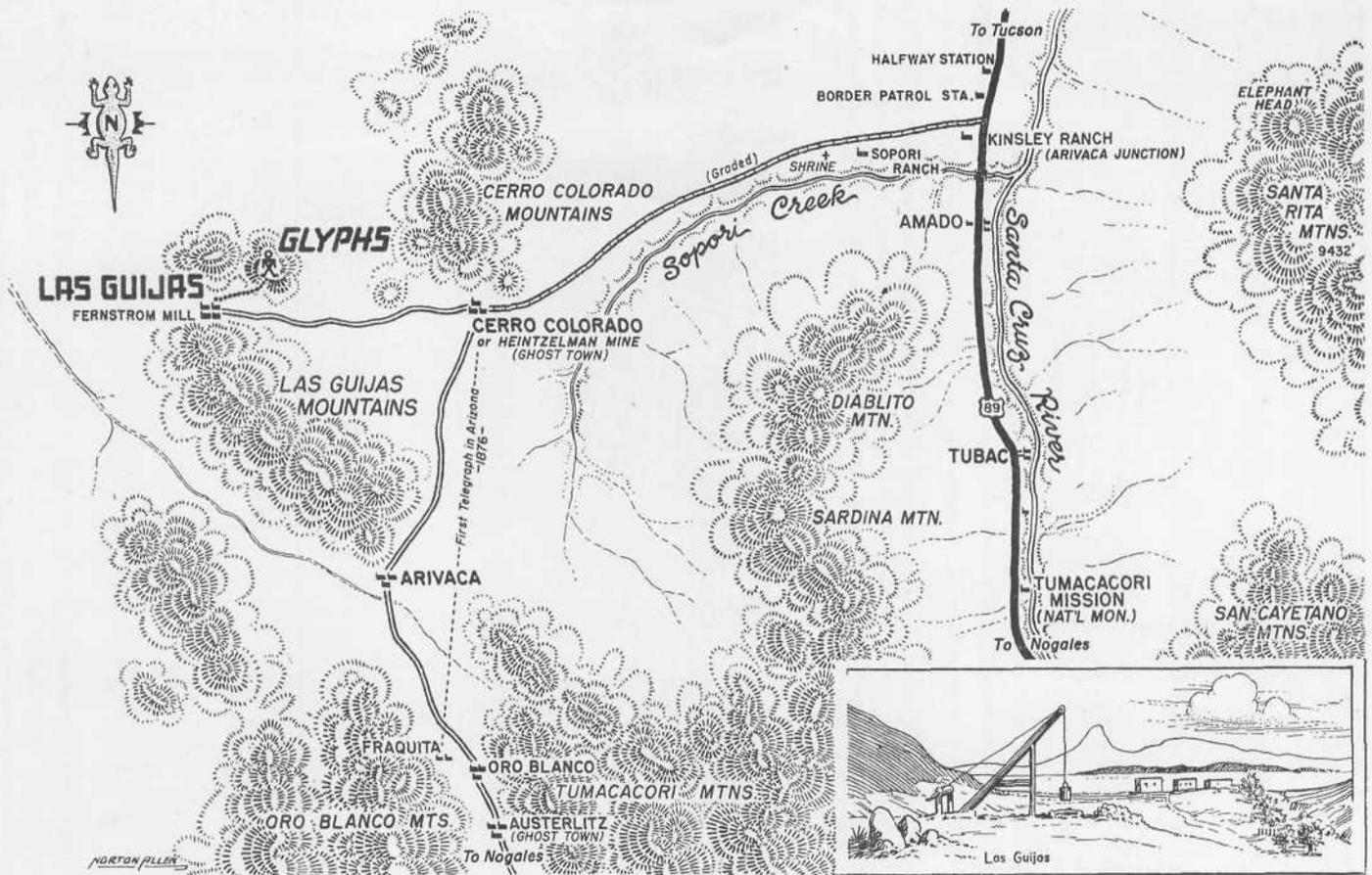
"Yeh, they're pretty fair. But pretty scarred up," he grunted. "Let me tell you about some better than those. My grandfather told me. Down near the old Papago campground at *ali'bac*, 'where little ones dug a hole,' and which the Mexicans call Arivaca, there is a whole mountain top covered with these Indian writings. The place is north of the village in the Las Guijus mountains."

Tucking away the odd but rhythmic name in the back of my mind it was not until late spring that I heard it mentioned again. One day Shorty Thorne, a former sailor turned prospector, mentioned that he owned some claims down at Las Guijus. He was going down there the following Sunday to visit an old compadre, Jesús Cañez.

It took a little convincing to assure Shorty that what little gold I might obtain was from writing, and not by digging. He agreed to take me along. So on the following Sunday morning we left Tucson just as the sun was coming up from behind the Rincons. John Mallas, an artist, was the third member of the party.

Our route lay southward over U. S. Highway 89. A few miles out of Tucson we could see in the distance the white towers and domes of San Xavier as they gleamed like jewels in the emerald green of the desert. As we traveled farther south the growth became more rank and the mesquite and palo verde replaced the saguaro.

Around Sagarito and Continental cultivation and the virgin desert had created their own kaleidoscope of color. Along the river bottoms the bright green fields were bordered by cottonwoods. At the river terraces the olive green of the desert cut sharply from the fields and swept upward to the rose-tinted mountains that ended in the pale blue of the spring sky.



At Kinsley Ranch, 37 miles south of Tucson, we turned off at Arivaca junction. The graded road led to the west. After four miles we reached the famous old ranch of Soporí. Once a populous Sobaipuris Indian village in the time of Father Kino, and the later scene of many Apache raids, Soporí is now a peaceful spot with its shaded white buildings and green fields.

On a small spur overlooking Soporí we stopped at a roadside shrine. Inside a small rock grotto there stood a diminutive religious figure. At its feet were candle butts and scattered about were real and imitation flowers. Later we learned that this sacred place was called *La Boveda de Santa Rita*, "The Grotto of Santa Rita."

Our road wound up the historic valley of the Soporí. Deserted adobes, some dating back into the Spanish era, lay tumbled into the bloodstained earth where many a settler had fallen victim to the savagery of Apache forays. Poking its red head up in the background of the west lay the famed rendezvous of the Apache — the Cerro Colorado.

Fourteen miles west and slightly south of Kinsley Ranch, we came to a road fork. The sign on the mail box read Mary G. and Emma Mine. Before us spread the 'dobe ruins of what had once been a large mining camp. Taking the side road we stopped at the top of the hill beside an old cemetery.

While we counted the 26 lonely graves Shorty commented, "This is the mass cemetery where lie a number of Yaqui who

died in a cave-in. Over on that slope is another burying ground. There rest the people who were killed during the Apache raids. For this is the famous old Cerro Colorado."

The American history of the Cerro Colorado began in 1856, a few years after the Gadsden Treaty. According to Hiram C. Hodge, an early observer, the first telegraph line in Arizona ran between this mine and the Frowita (Fraquita) 15 miles to the south.

There is no question that the Spaniards worked the rich silver lodes of the Cerro Colorado long before the coming of Anglo-Americans. For it was at Arivaca, some ten miles to the south, that the Mission San Angeles de Quevavi was located in 1739. This Kino mission was on the upper Santa Cruz river in the vicinity of present Nogales, Arizona.

The first American development was begun in 1857 by the Sonora Exploration and Development company. Sometimes known as the Heintzelman mine after one of the stockholders, Major Heintzelman, the Cerro Colorado was reported by Sylvester Mowery in 1859 as destined "to become more famous than any of the great mines of Old Mexico. From a late letter it is claimed that the ores thus far smelted yield the astonishing average of \$950 per ton."

Up to the outbreak of the Civil war the Cerro Colorado produced over \$2,000,000 in silver. The Union owners were driven out. For a time Raphael Plummely, early author and secessionist took over. But with

the removal of Arizona's garrisons the Apaches went on the rampage. In a short time the mines, buildings and hoisting works were destroyed. The place was abandoned.

During the confusion the rich deposits were high-graded by all who dared come into the Apache infested country. Large quantities of ore were taken by Mexicans, and Patrick Hamilton in 1884 stated that the town of Saric, Sonora, was built from the proceeds of the plundered Cerro Colorado.

I soon realized that days could be spent prowling the Cerro Colorado and the surrounding region. As the objective of the trip was the Indian glyphs we moved on toward the Guijos. Our winding road was slow but good. Gradually we climbed into a grass covered valley that was bordered by two slate-colored ridges.

After passing a sign reading Arivaca Placers we began to see the ruins of adobe buildings, the evidence of the once populous mining camp of Las Guijos. In English this translates "rubble or conglomerate." Shorty commented on the long since removed residents of the dwelling, "That's Pauley's place—he fell down a shaft and died."

We found Jesús Cañez's shack under the mesquites bordering the draw below the tungsten mill and airfield of Arizona's biggest producers of the metal, Fernstrom and Co. The old miner was busy crushing tungsten float in an old iron crucible when we drove up. After introductions Johnny and

I wandered around his place while he and Shorty caught up with their gossip.

Cañez still operated in the methods of his forefathers. Near his well was an old style *arrastre*. His power for moving the shaft, to which two heavy grinding stones were attached, were his burros. I had seen the remains of old *arrastres* in the La Placerita region of Newhall, California, but this was the first time I actually had seen one working.

After Shorty and Cañez had their visit I learned something of the old miner's life. He had been born in Arivaca in 1876 and as a child had known the time when the Apache were ravaging the region. Very little of his 70 years had been spent away from the Arivaca and Guijus region.

I steered the conversation to Indians. He said, "Sí. The old Apache trail came down through the high country from the Tucson range. At the Guijus it swung east. From the Cerro Colorado they raided down into the Sopori, across the Santa Cruz valley and into the Santa Rita range."

According to Cañez, the Guijus and Arivaca country originally had been inhabited by the Papago. History records that at the time of Kino, around 1600, the Sobaipuris, a Piman speaking people dwelt in the region. Research is yet insufficient to tell much about these people other than that they spoke the same language as the Pima and Papago.

My query as to pottery sherds brought out that they were to be found on every wash in the region. Cañez's nephew José



Shorty Thorne, sailor turned prospector, Jesús Cañez and his nephew José Juan.

Juan had even dug up a whole pot in which there was the skeleton of an infant. Cañez had been disturbed about that and had made the boy re-bury the bones.

Taking me to the edge of the wash where there was a gap in the trees Cañez pointed out northeast to a high barren mountain. "On top of that mountain there is the proof that Indians were here. For up there are picture writings in abundance."

This was the clue I was seeking. Possibly these were Miguel's glyphs?

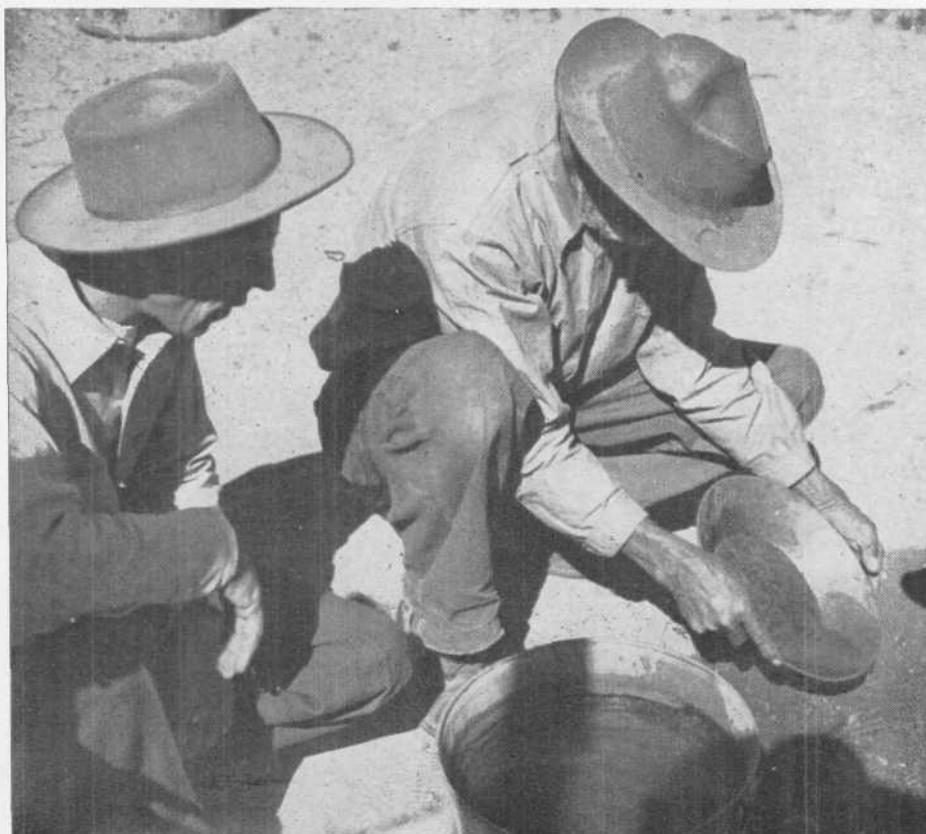
Shorty and Cañez planned to go up to Pescara Vieja, the gap in the Guijus range that leads to Arivaca, to look at some gold claims. So Johnny and I decided to search for the Indian writings. We already had named it Glyph peak.

After crossing the wash we traveled northeast from Cañez's place. As a quartz vein lay in the direction we traveled, we had to be careful that we did not tumble into the prospect holes. Going was fair if one kept a watch out for Spanish bayonets, opuntia, and bisnaga. There were also rainbow cacti, ocotillo, and other species in abundance.

An hour's hike up ravines and over low hills brought us to the base of the mountain. We took time out in a shady canyon. While we had found a small series of glyphs on the hill southward there was no evidence of Indian occupation along the banks of the draw.

We heard a rustle in the dense thicket up the ravine. With a crackling of branches four *javelina*, the wild hog of the Southwest, trotted out into the open. With hair bristling a large boar unhurriedly led the

Shorty Thorne looks on as old Jesús Cañez pans gravel from a nearby placer.



others up the far side of the canyon and out of sight.

The climb up the side of the mountain was rugged. The andesitic float and slick glass made footing bad on the steep sides. At every bench we thought we had reached the summit and looked for glyphs on the outcroppings. But finally we did reach a wide bench that sloped upward to the rocky summit.

Johnny reached the summit before I did. He let out a howl, "This place is covered with Indian writings!"

When I puffed up to reach him I saw that this was no over-statement. The entire area for some 100 square yards was spotted with petroglyph bearing brownish-grey andesitic rock. They ranged in size to boulders and slabs 30 feet in diameter.

Close examination indicated that the glyphs had not been too deeply incised and were well weathered. But their condition was excellent. There was a profusion of mazes, meanders, scrolls and swastikas. Of animals there were definitely mountain sheep and deer. In addition to tarantulas and gila monsters there were hundreds of lizards and snakes.

But the most important clue to their origin were the human figures. One of the most interesting was that of a kneeling man blowing a scroll from his mouth. But the key pictures were those of men playing flutes. For these were similar to those painted on the early red and buff pottery of the ancient desert people whom the Pima call the Hohokam, "people who have gone."

Of course one immediately wonders when he starts studying a series of petroglyphs, Who made these? How old are they?

The flute players and general technique identified the glyphs as Hohokam. With this identification we were able to guess at their approximate age. According to the present system of chronology used by archeologists in the Hohokam area, they could not have been pecked on the rocks less than 700 years ago.

Johnny's first reaction to the glyphs was justified. There is only one place in Arizona where I have seen glyphs in number and condition equal to those in the Gujus. And that is at Willow springs on the old Hopi salt trail 14 miles northwest of Tuba City, Arizona. The beauty of it all at Gujus is that there is no evidence of vandalism.

The shades of evening were creeping down the sides of the canyons when we left our great picture book on the rocks. Westward the sun-tanned valley of the Altar, all shadow and light, gracefully dipped and then rose in a great sweep to the Papago's sacred Baboquivari, the mountain of *baovac kivol*, the Belted Cliffs.

Prizes to Photographers

The camera clan is loose on the desert again with plenty of gas, and a fair supply of films, shooting some pictures that are very good, some not so good, and others—well you know what happens when you forget to turn the roll or expose 'em too long.

Anyway, Desert wants to get some of those good pictures—so we can share them with all our readers. We are going to make it worth your while to send a few of the best ones to us—with prizes for the winners every month in 1946.

So the photographers will know well in advance what shots to take for this contest, following is the complete schedule for 1946:

- JANUARY — (Contest closes January 20) — Lights and Shadows. Landscapes, dunes, cliffs, etc., with fine shadow effects.
- FEBRUARY—Water on the Desert. Any subject pertaining to water, from a canteen to a cloudburst, including lakes and waterholes.
- MARCH—Desert Camping. Any phase of camp life.
- APRIL—Desert Characters. Every old-timer on the desert is a possible subject.
- MAY—COVER CONTEST. Must be vertical 9x12's. First prize is \$15.00; 2nd prize \$10.00. \$5.00 for each acceptable picture submitted by the non-winners.
- JUNE—Desert in Blossom. Either landscapes or close-ups of the wildflowers in place.
- JULY—Burros. The best burro picture.
- AUGUST—Rock Climbing. Action shots of those who venture in high places.
- SEPTEMBER—Reptiles. That includes lizards, snakes and tortoises of the desert.
- OCTOBER—Signboards. Shots of unusual signs located in the desert country.
- NOVEMBER—Sunsets. Best sunsets in black and white.
- DECEMBER — Animals. Foxes, rabbits, deer, mountain sheep, cougars, antelope, beaver, etc. Must be denizens of the desert Southwest, caught in the open.
- PRIZES—With the exception of cover awards given above, the monthly prizes will be \$10 for 1st place; \$5.00 for 2nd place, and \$2.00 each for non-winning photos accepted for publication.

HERE ARE THE RULES

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

ADDRESS ALL ENTRIES TO PHOTO EDITOR, DESERT MAGAZINE.

THE *Desert* MAGAZINE
EL CENTRO, CALIFORNIA



Wood's roadside cactus shop near Tucson, Arizona.

Craftsman of the Cactus Desert

Herb Wood began making tables and chairs of cactus wood because he did not have the money to provide store furniture when he and his family built their home on the Arizona desert. Herb is still making cactus furniture—but today there are customers eager to buy his products. For he is a master craftsman.

By NANCY LUNSFORD

Photos by Bill Sears for Western Ways Picture Service

HERB WOOD, the cabinet maker of the desert, was once a stonemason in Pennsylvania. But a series of incidents transferred him to the Arizona desert, and now he is using his talents fitting together bits of cactus wood and making sturdy, beautiful furniture.

The first time I visited his shop, located at the cross roads just outside of Tucson, he showed me a tabletop which he was just

completing. The beautiful mosaic design, made from different varieties of cactus wood, and worked into an intricate pattern of texture and color was one of the most unusual and lovely things I had ever seen. I was curious about how he had started his unusual industry.

He is one of the few craftsmen who make real furniture from the natural wood of the arid Southwest, and he began by necessity.

He needed furniture for his own home; the cactus wood was available, so he set to work. Neighbors admired the furniture in his house, wanted some of their own, and so a business started.

Herb Wood now makes furniture for many of the rambling ranch-style homes which dot the mountain foothills surrounding Tucson. But he still lives in the rock house he built for his family when they came to the West many years ago. And in the house are all of his original pieces of desert furniture.

For many years tourists have been buying ash trays and other small objects of cactus wood to take home with them. They are charming little novelties to take east. Herb Wood makes these too, but his chief work is constructing the beautifully polished, intricately made pieces of furniture from aged wood that is polished by sun and sand and time.

Many eastern visitors stop at Herb Wood's little crossroads shop. They stop to buy a small novelty and stay to admire the tables, chairs, coffee tables, lamps, bookcases and other heavy objects he has



One of the inlaid tabletops made by fitting small pieces of cactus together in an original pattern.

made from the wood of the saguaro and the cholla cactus. Individual pieces of the cactus wood are not strong enough or thick enough to build furniture. But by working tiny bits into a pattern of inlay, he has combined both beauty and strength.

He has developed a paste which hardens, matches the cactus wood perfectly, and fills in the tiny holes which grow in the cholla wood. The paste formula is his secret, worked out after months of experiment. It is made partially from the dust of the wood itself.

Herb Wood came to Arizona many years ago. He arrived with very little money and a lot of family. He was a contractor and a stonemason in Pennsylvania, but an injured back forced him to give up his work and seek a favorable climate. The doctor said no more heavy work. He arrived with his

wife and five children and the little money he had left after spending nine years in a plaster cast.

He spent his capital for land in the desert, and started to make a home with his own skill and the five dollars still in his pocket.

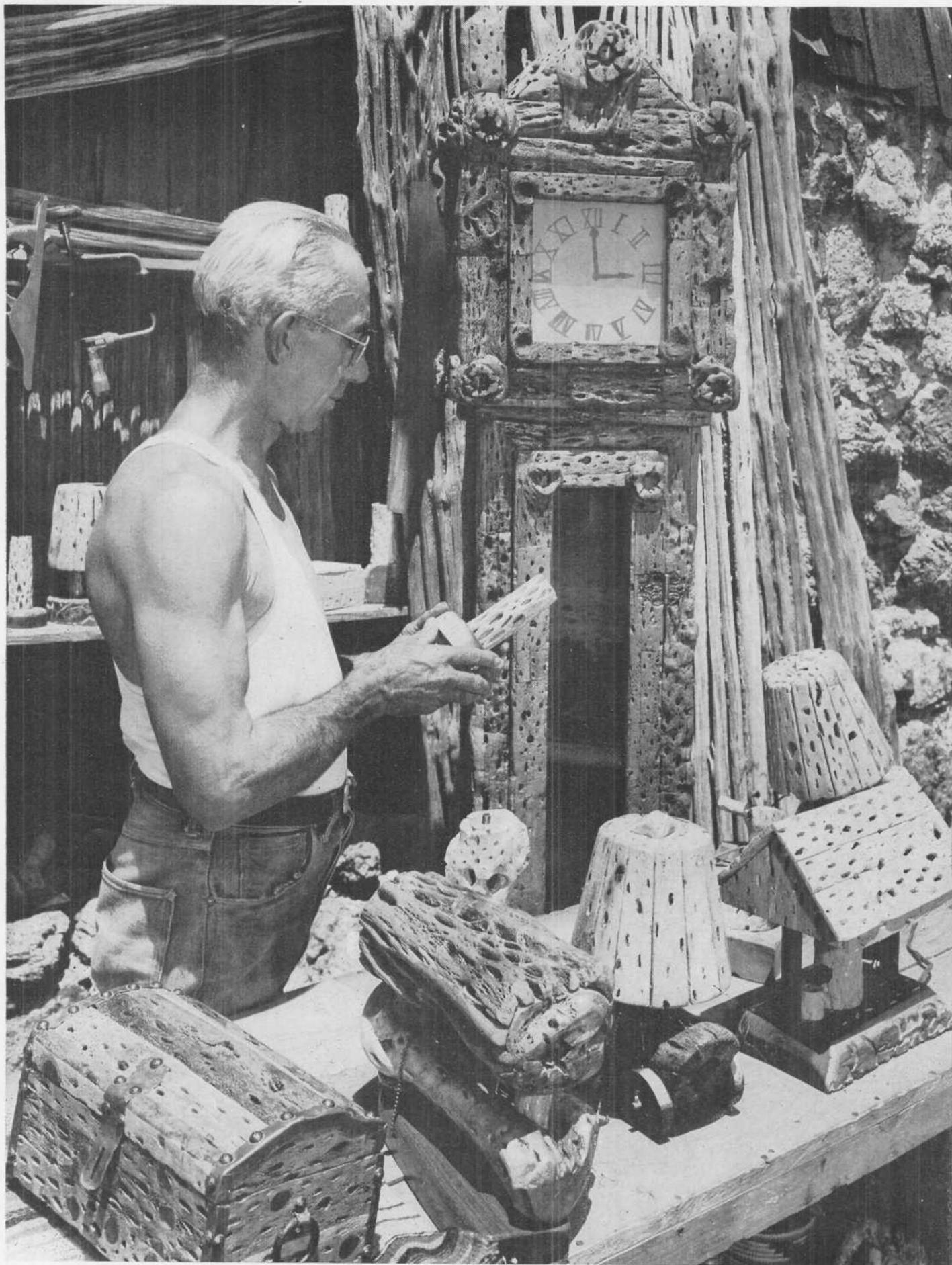
The family camped on the desert while their home was being built. The face of the land was covered with rocks, and so, with the help of his family, the former stonemason built a house.

After the house was finished, it gave shelter, but there was yet a need for furniture. Herb Wood again looked around for native materials. As he wandered over the desert land, he saw the skeletons of the giant cactus. He tested the wood. The first piece he picked up fell apart in his hand, rotten and crumbling. A bit farther on he found a dead plant which had not fallen to the ground. The weather had stripped off its protective layer of spines and flesh, exposing the wood to the elements. It was firm and well cured.

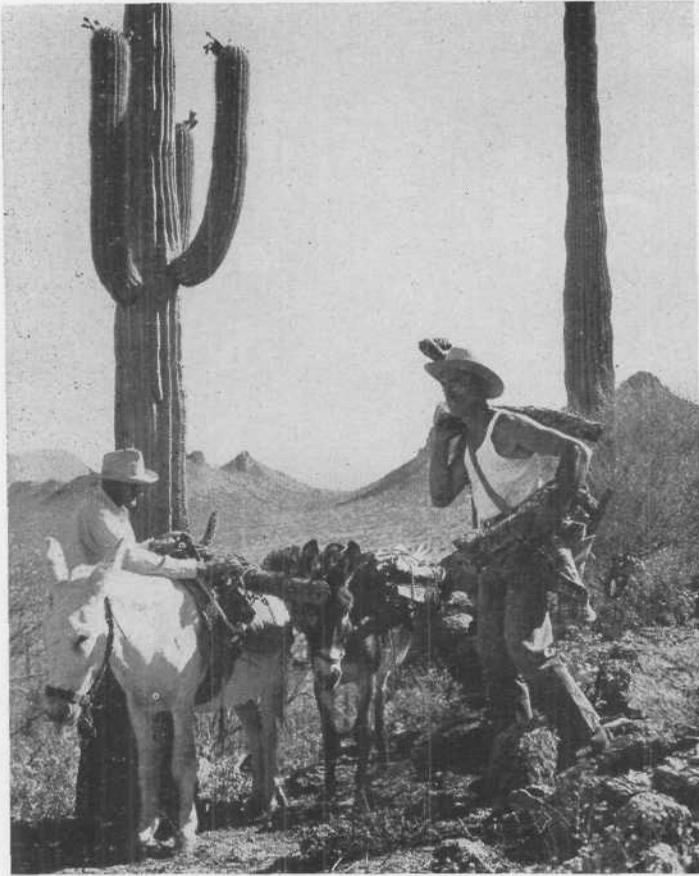
That evening he worked on the cactus skeletons he had gathered during his walk. No one piece was large enough. But no one stone is big enough to build a house, so he

The ribs of the saguaro remain firm and hard long after the fleshy part of the trunk has decayed away.

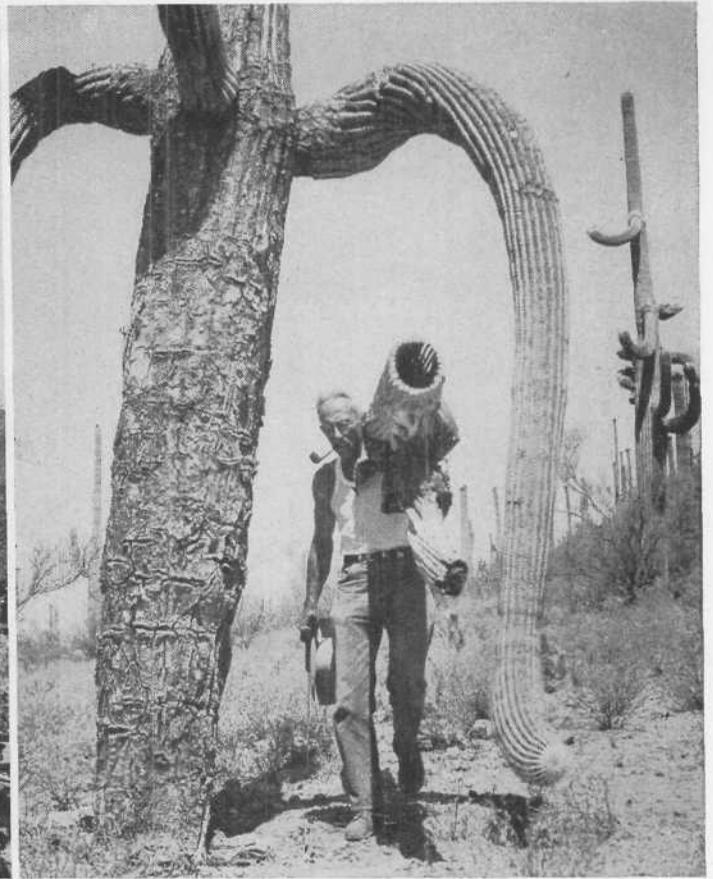




Herb Wood in his workshop. Cholla and saguaro wood are combined in this huge grandfather clock.



When the wood-hunting trips are not too long, Wood takes a couple of burros to bring in his loot.



In the saguaro forests of southern Arizona there are always dead saguaro trunks to be found.

started making his furniture as he had always built with stone, fitting it together, piece by piece.

He worked steadily after that first night, going into the desert every day and gathering the cured wood, and at night making it into articles of furniture for his rock house. Chairs and tables were completed, but he needed a lamp.

The base was simple—a section of cactus, cut to the proper size and rubbed smooth. The lamp shade he fashioned from sections of thin cactus wood, fastened to a frame.

Neighbors asked if he would make some for their own homes, and he consented. More and more orders came until he opened a shop near his home and began to devote all his time to furniture making.

I met Herb Wood at his shop. The walls were lined with his tools, but after looking at the fine inlay tops of the tables I knew the most important one was invisible—the patience which was necessary for fitting together the tiny pieces into their beautiful designs.

The valleys and the low places where water is closer to the surface are his best hunting grounds for wood. He starts out on a wood gathering trip early in the morning, before the sun comes up over the eastern mountains, and heads out into the desert in his ancient pick-up truck. Or, if the distance is not great he may take a burro. His truck is well equipped for desert travel. It can find its way through washes filled with

sand, over hills, and even up the sides of mountains. He sees a towering saguaro skeleton. The long, reaching arms have rotted and dropped to the ground, where they sprawl grotesquely around the base. The outer flesh and spines of the plant have long since fallen away, and the bare ribs of the giant plant's skeleton reach up toward the sky. The ribs, standing stark and bare, are nature's version of the structural steel used in modern skyscrapers. Herb takes out his saw, cuts down the giant frame, and puts it into his truck.

He also searches for the skeleton of a cholla, or jumping cactus. This variety grows from the desert floor in a single stalk, and then branches out into several arms. When the plant is alive it is covered with jointed sections bristling with long springy spines. After it dies and the outer flesh and spines weather away, the exposed wood is punctured with tiny holes, like Swiss cheese.

Before the day is gone, Wood's truck is loaded with all varieties of desert woods, and back he goes, churning through the sand to town.

The finest portions of the wood are selected for the furniture, and the oddly shaped pieces are put aside to be made into novelties for the tourist trade.

The real industry of the shop is making the heavy pieces of furniture. The sections are carefully fitted together in a tabletop and the entire surface is sandpapered and

rubbed to a satin smooth finish. The mosaic is so smooth that the top looks as if it had been made from a single piece of curiously marked wood.

In making the tabletop he uses a piece of heavy plywood as a base, and fits the bits of cactus wood together, carrying the complicated pattern in his head as he works, much as does a Navajo rug weaver.

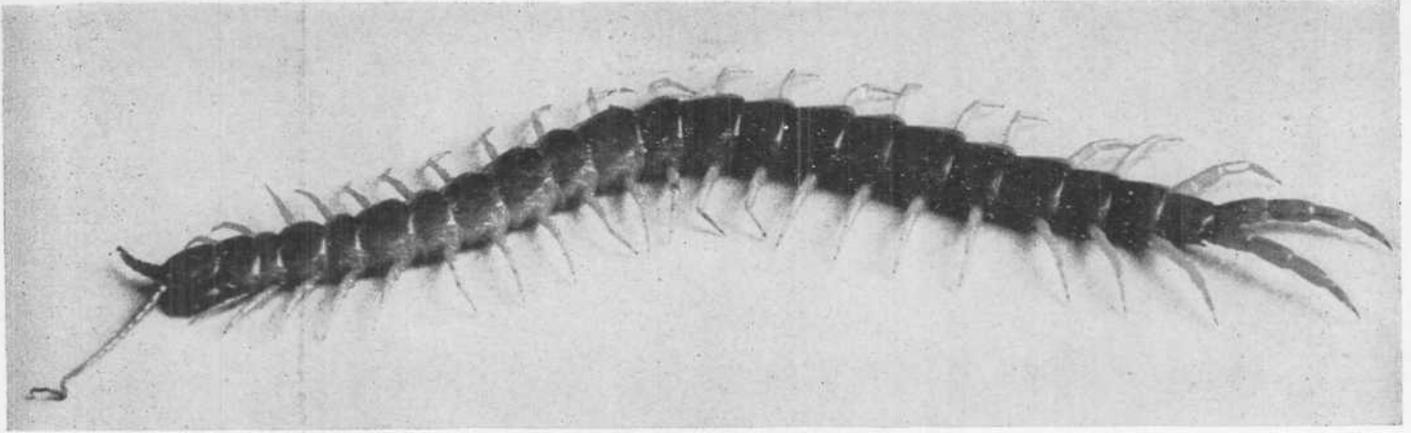
The first section of the saguaro rib is put on the board and fastened in place with glue and tiny brads. To this is fitted another piece, little bits of the wood being carefully chiseled off until they fit together like the pieces of a jigsaw puzzle. It takes him a week to make the top for a very small stool.

Next to the workshop is the store where the articles of cactus wood are for sale to townspeople and eastern visitors. Mrs. Wood works in the store while her husband gathers his materials and makes his furniture.

In the shop are articles ranging from ash trays to large tables. You can see wastebaskets made of saguaro ribs, lamps whose bases are oddly twisted bits of cholla.

In one corner is a huge grandfather clock, made entirely of carefully fitted pieces of cholla wood.

"Lady from England ordered that piece," Mr. Wood remarks. "Before the war. Afraid maybe she hasn't much place to put it now, but I'm keeping it for her. She'll be back after it someday."



Desert centipede. Although the word means "hundred feet," this one, as you will count, has less than half that number. Note there is a single pair of legs for each body segment. The millipede is distinguishable because it has two pairs for each segment.

Mark of the Centipede

By WELDON D. WOODSON

I WAS ALONE out in a stretch of country near Baker, one of my favorite hunting grounds for insect life in Southern California's Mojave desert. I had turned over scores of stones that ranged from six inches to two feet across, with the hope that the moist sand underneath would yield something of interest. But my half-hour search had been fruitless.

As a final gesture I pushed over with the toe of my boot an old pine four-by-four a couple of feet long. But I could not make out a single creature. I stood there idly for a few moments and debated where to travel to next. Then, abruptly, a three-and-a-half inch brown centipede, with cross bars of blue, emerged seemingly from out of the earth itself. Its numerous legs worked up and down like the oars of a galley slave ship. Its long antennae quivered as it felt its way around and around the tiny plot of ground. It was now here, then there, always on the move.

The first thing that struck me was the profusion of wriggling legs. I tried to determine the order in which they moved, but could make little headway. I recognized the species as *Scolopendra heros*, however, and knew it had 21 pairs of legs, a single pair to each segment. Its name, centipede, means hundred feet, yet no species possess precisely that number. Some have as few as 15 pairs of legs, others up to 175 pairs.

They are found in the deserts of New

Mexico, Arizona, Utah, Nevada and Southern California. Their color may be yellow, brown, red, blue or black, or a combination of these. They range in length from about an inch to over six inches. Randall Henderson tells me of a six-inch specimen, "a huge, agile fellow with a vicious disposition," that he captured in the Kofa mountains of Arizona several years ago. Joseph M. Thuringer states that in 1924 while crossing the desert stretches between Lordsburg and Mesilla Park, New Mexico, he and a companion noticed in the roadway a large number of centipedes from five to seven inches in length. They all headed north, and he concluded it was a migration.

Regardless of where they are found or under what condition, most people from pioneer to contemporary times have regarded them with horror. As early as 1856, an American journal described each leg as a poison claw, capable of inflicting a wound. "It does not undulate like a snake," the contributor wrote, "but moves with a remarkable zig-zag weave from left to right. An irritable fever follows its bite, delirium ensues and danger for human life is sometimes in the balance."

Then in the 80's two travel writers named Sweet and Knox told of their encounters with the centipede. "As I was lying flat on my back gazing up at the clear blue sky from under the broad brim of my

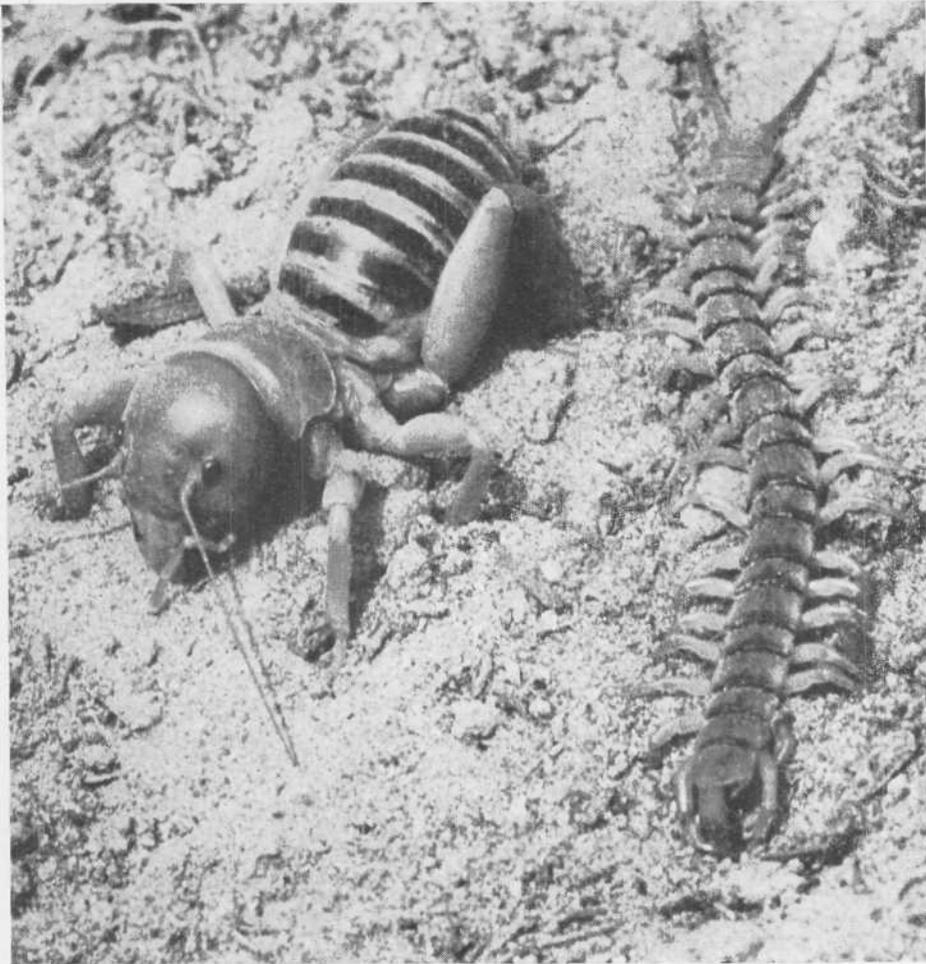
Many stories are told about the venomous character of the desert centipede. Most of them are pure fiction. This little creature with a hundred legs more or less, does have a pair of fang-like weapons, and under provocation he will use them to inject a mite of poison into his annoyer. But his offensive equipment is designed primarily to insure his food supply—and he'll not bother you if you accord him the same treatment.

sombrero," relates one, "something seemed to take form in that otherwise cerulean expanse. Upon removing the headgear, I was not very agreeably surprised to find hanging thereto, on the brim which had overshadowed my forehead, a giant centipede." He concluded that he was most fortunate to escape the bite of such a poisonous creature.

Finally, T. S. Van Dyke, one of the early explorers of the deserts of Southern California, in 1886 wrote concerning the centipede. He explained that they are hideous-looking things, with each leg terminating in a hard, sharp point like the tail of a scorpion. He describes two species, one nearly white, the other a greenish color. "The touch of their feet upon bare flesh," he states, "is said to be incurably poisonous." A careful investigator, he reported that he had never been able to find any definite case of anyone injured from it, though making many enquiries.

The belief that each leg constitutes a fang fed by poison glands has been held not only by persons of the last century, but by many people of today. They say that when it crawls upon a person, it leaves in livid spots the outline of its whole body. Another heresay is that wherever it treads, the flesh falls out and decays. This in fiction is known as "The Mark of the Centipede."

Laboratory tests prove the fallacy of all



The Jerusalem cricket and the centipede. The cricket, although not poisonous, can overcome the venomous centipede. It chops it up into small sections with its powerful jaws.

this. Let us take a look at a typical desert centipede. It is disclosed that poison glands are situated solely in its head-part and not at the base of each leg. They feed only the second pair of legs which have been modified into fangs. The fangs are hollow and there is a tiny opening near their tip ends. The venom flows through them and into the cut made in the flesh by their sharp points.

I have been bitten only once by a desert centipede. I was near Daggett to capture insect life for laboratory study. I lifted up a stone and discovered underneath it a 4-inch creature. I unscrewed the lid of a quart jar and placed it in front of the bustling creature. It veered to one side, however, just as the tips of the antennae touched the rim of the receptacle. I picked up a stick and repeatedly tried to steer it into the container. But it swerved and dodged and parried everyone of my shoves.

I lost patience. Reaching down, I snatched it up in my right hand and tossed it into the jar—but not until it had dug its fangs into the soft flesh of the palm of the hand. The pain was sharp, like that from a needle. An examination revealed two tiny incisions, those from the fang points. The subsequent symptoms were a little swell-

ing, a slight headache. There were no after effects. This is about the maximum injury from the desert species.

One wonders, then, how did the idea start that wherever it crawls upon a person, it leaves the imprint of its body. Are the many stories of its victims disfigured for life to be discounted entirely?

There are several possible explanations. The tendency is for mankind to exaggerate the poisonous nature of unfamiliar creatures, even to the extent of bestowing upon scientifically recognized non-venomous life virulent properties. I have heard persons mistakenly assert that such innocent desert denizens as the chuckawalla, red-spotted toad and spotted bat are dangerously poisonous. The centipede nevertheless has chalked up against it the fact that it actually has a pair of fangs and that medical records are on file that chart the symptom picture from its bite. This, coupled with a lively imagination, has led those who do not know the truth to accept the oft-repeated story that its multiple legs are used not only for locomotive purposes, but also as lethal weapons.

There is another possible explanation. The tip ends of the legs of centipedes are brittle and readily break off. It is possible

that in some instances as it crawled upon a person it left embedded a few of these germ-laden tips and caused an infection. This would account in part for the legend of "The Mark of the Centipede." In 1882, W. M. Thomson confirmed this hypothesis as he wrote of the species that inhabits the deserts of central Palestine and Phoenecia. "The bite of the centipede is not fatal, but is said to be extremely painful and very slow to heal," he stated. "The Arabs say that it strikes its claws into the flesh, and there they break off and remain, thus rendering the wound more troublesome."

Actually, nature has equipped it with poison not to use against man, but in order that it might be able to subdue its insect prey and defend itself against natural enemies. It strikes a human being only when it inadvertently crawls upon him and is molested, either accidentally or deliberately. At night it forages for food. Should it come upon a crab spider, soldier beetle or silver-spotted grasshopper, for example, it grabs hold of them with a portion of its forelegs and gives them the quietus with an injection of poison.

Against larger opponents, however, it often comes out the loser. The Jerusalem cricket chops it up into small sections with its powerful jaws. The scorpion delivers the death blow by means of a single swing down of its poison-tipped tail. The tarantula pins it down with its stout legs and paralyzes it into submission with its own poison. Put two centipedes together and they will intertwine in mortal combat, their multitudinous legs so mixed up the observer will be unable to determine which legs belong to which. Their most formidable foes are certain species of birds, against which they are unable to cope.

To minimize the poisonous propensities of the centipede, however, is not to discount the part that it has played in the lore and tradition of the desert. As a concluding example, W. H. Robinson (*The Story of Arizona*, 1919) tells of an incident that occurred in 1889. A stage coach en route to Phoenix had as one of its passengers an old-timer who was making clear to those unfamiliar with the desert the nature of some of the venomous creatures. "Now when you git to the Lemon House," said the Arizonan, "and you take off your shoes to go to bed you wanta put 'em tops down. If you don't, by mornin' they'll be half full of them centipedes. You see, they crawl in after dark to get away from the night air."

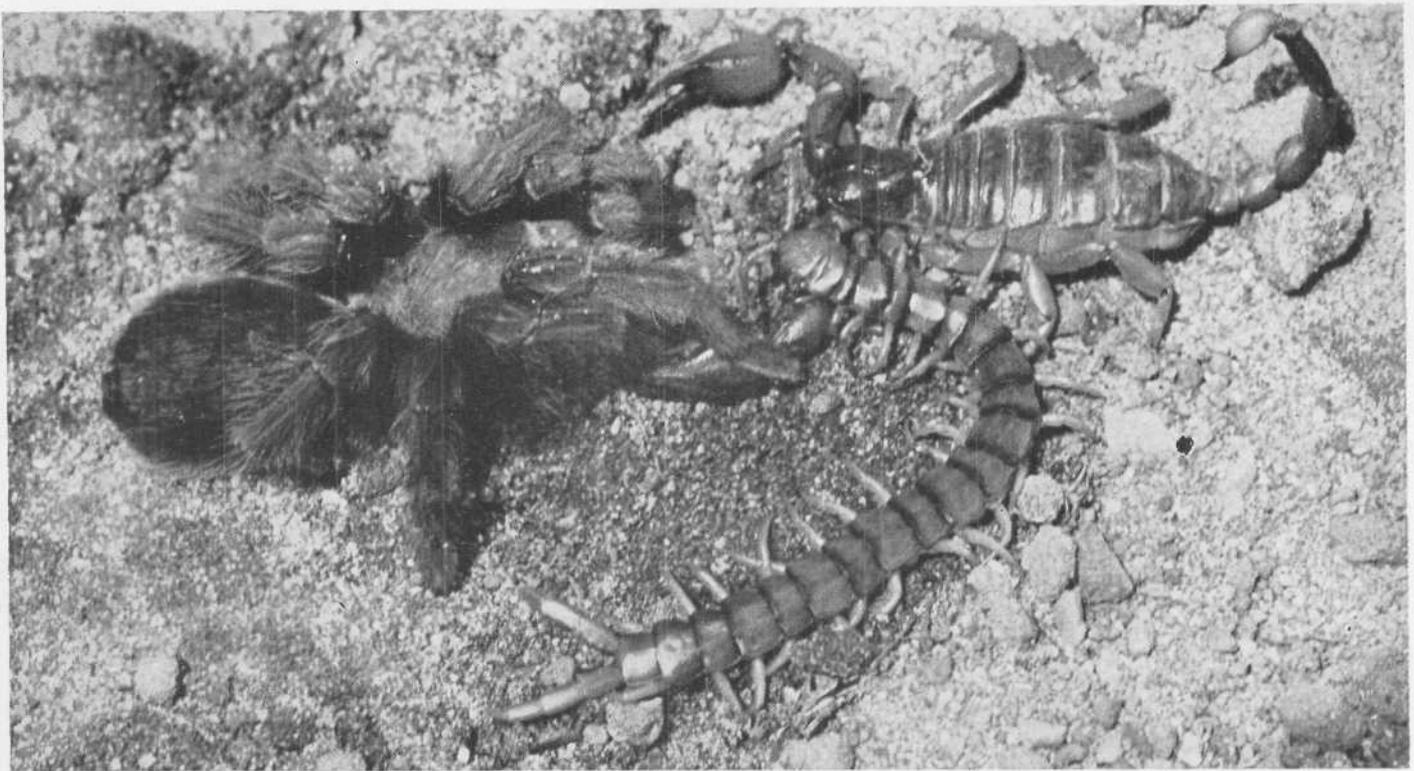
Thus does the centipede acquire a reputation it really doesn't deserve. The next time your old prospector friend explains the four-inch scar on his left jaw as the work of the centipede, don't indicate in any way that you disbelieve him. To do so might hurt his feelings. But you can walk away with the knowledge that it is merely one of his tall tales.



The tarantula comes upon a pair of centipedes. They sense its presence and start to flee.

But the spider is too quick for them. It pins them down with its stout legs and paralyzes them through its poison-fed fangs.





Three denizens of the desert—a tarantula, a centipede and a scorpion. The latter has a stinger at the tip of its tail, the others each have a pair of fangs. With the exception of certain rare species of scorpion, none of their stings is serious.

WORK TO BE RESUMED ON DAM IN PYRAMID CANYON

Bids were scheduled to be opened December 21 for the construction of Davis dam, located in the Colorado river 20 miles above Needles, California.

Preliminary work was done at the dam-site before the war, but following Pearl Harbor the project was shelved.

The dam is to be 180 feet high from bedrock, is to be constructed primarily for power development. Cost of the project is estimated at \$47,000,000 for dam, spillway, power plant and appurtenant works, and \$30,000,000 for power transmission system. The successful bidder will be allowed 1200 days to do the job, which means completion by mid-1949.

The damsite is in Pyramid canyon 34 miles by improved highway from Kingman, Arizona. It is approximately 67 miles downstream from Boulder dam. Davis will be the sixth dam in the lower Colorado river, the other five being Laguna and Imperial diversion dams above Yuma, the Indian diversion and Metropolitan storage dams above Parker, and Boulder dam at Las Vegas.

Davis dam is to be an earth and rock filled embankment rising 138 feet above the bed of the stream, with a reservoir capacity of 1,940,000 acre feet of water. Its power plant is designed for five generating units with a total production of 225,000 kilowatts.

The following figures cover some of the major items in construction:

Concrete in the dam, spillway, power

plant and appurtenant structures: 445,000 cubic yards.

Excavation of earth and rock, 5,530,000 cubic yards.

Earth and rock fill in the dam embankments: 3,800,000 cubic yards.

Reinforcement bars in concrete: 15,500,000 pounds.

Sez

Hard Rock Shorty of Death Valley . . .



"Yep, the laziest man that ever come to Death Valley was ol' Packrat Pete," opined Hard Rock Shorty.

"The ol' cuss was too lazy to earn a livin' and too stubborn to live on charity. At one time 'r' nuther he wuz grubstaked by every tenderfoot that come to this country—but he never did bring in no gold. He'd jes take his burros and mosey out to the nearest spring and camp there 'til the bacon and beans wuz gone.

"I ain't swearin' it's true, but they say Pete put popcorn in his flapjacks so they'd flop themselves over.

"Pete figered out a way to live without workin'. An' that's how he got his name. There was a nest o' packrats livin' in the rocks up by Pete's shack, and he made friends with 'em. Then he began teachin'

'em the difference between gold and other metals. Finally got 'em so they would raid the miners' cabins swap-pin' nickles for five dollar gold pieces. Them was the ol' days afore we had this foldin' money. Pete really educated them little traders. Pishah Bill's daughter that lives in the east once sent him a box of chocolate candy for Christmas, but when Bill got around to eatin' the candy, the box was full of rocks, and Pete got all the chocolates.

"But them packrats didn't know everything. Once Pishah Bill put out some poisoned beans to kill the varmints that was gettin' his chickens. An' them packrats brought the beans home to Pete's grub box.

"Yep. We buried 'im with his boots on."

Living in the wilderness, away from the temptation of easy gadget-buying, the South family have improvised most of their necessities from what the desert has provided. This month Marshal tells how he used primitive materials to fashion an artistic cruet from a "civilized" bottle found along the trail.

Desert Refuge

By MARSHAL SOUTH

IT WAS on one of our infrequent trips to "civilization" that Rider saw the bottle. It lay in the partial concealment of a clump of dry desert grass at the base of a cluster of vicious cholla. Over it, in the slanting rays of the sun, a wiry mesquite tree cast a lacy pattern of shadow. Between the spots of sunlight and shade, as our car movement altered their position, the bottle flashed gleams of fire like some gigantic diamond.

"A bottle!" Rider shouted excitedly. "A most beautiful bottle! Stop! Stop!"

So we stopped. And he and Rudyard, with Victoria at their heels, spilled from our ancient conveyance and went racing away among the creosote bushes.

They came trailing back, exclaiming and chattering excitedly. Rider was carrying the bottle. "Look," he said, holding it up. "It's slender and graceful. We might make something out of it."

So the bottle, which once had held in its heart the glowing vintage of Virginia Dare, went home with us and was carried carefully up the precipitous trail to the summit of Ghost mountain.

"Now, what are you going to do with it?" I asked. "It can't just lie around here. You've got to find a use for it or we'll have to banish it to the dump."

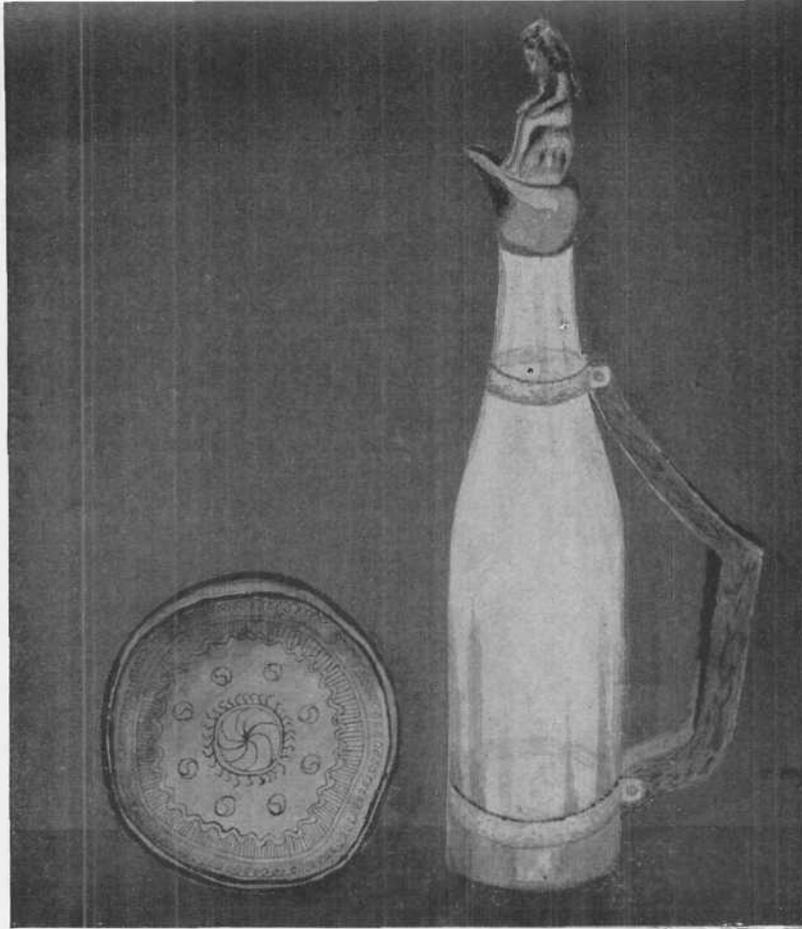
All three of them went into a huddle. "We might make a vinegar cruet out of it," Rudyard suggested finally. He wrinkled his nose and squinted fiercely at the bottle from various angles.

So a vinegar cruet it was to be. We took stock of our resources—and of the bottle—and fell to work.

The first thing was to disguise and embellish the bottle mouth, which, though it had spilled forth in its hey-day the poetry of joy-producing amber drops, was nevertheless woe-fully prosaic in its utilitarian screw top. Beauty must weave some sort of a spell over this eye-sore. We invoked the desert goddess of Necessity—who, as everyone knows is the mother of Invention. And she did not fail us. In a surprisingly short time the job was done and the bottle, haughty now with a brand new top and lip of homemade plastic, derived chiefly from the useful catsclaw, was laid aside to await the fashioning of its handle.

We hunted around quite a while before we found a piece of wood to suit us. Finally we hit upon a long-seasoned section of desert growth that had lain for years in dry storage awaiting the possibility of just such a need. This was a bit of catsclaw wood also. Very, very old and rich and red. It was quite a job to saw it down and cut out a piece of heart-wood that was suitable for our purpose. But at last the task was done. And the new handle, shaped, rubbed down and polished, was ready for attaching. This we contrived by the aid of a couple of bands of scrap sheet copper, discovered among the odds and ends in the storeroom. Hammered down, polished, fitted and riveted, these did the job nicely. Our bottle had by now begun to take on all the airs of elegance.

But we still needed a stopper. "A splendid stopper," according to the specifications of Victoria, whose ambitions now were fired to the point that she demanded I should make one representing "flittering angels." However I did not feel, at the moment, quite equal to this order—and anyhow I was



Ghost Mountain craft work. Ocotillo, creosote bush and catsclaw all contributed to the fashioning of this little engraved dish and vinegar cruet. From watercolor by the author.

a little vague in my mind as to what a "flittering angel" might look like. So I compromised by whittling a nice white section of ocotillo wood into the shape of a little figure seated upon a stump. This, after some persuasive sales talk, Victoria accepted, and it was installed as a stopper—the completing item of our salvaged and glorified bottle. Thus, with desert scraps and odds and ends Rudyard's vision of the vinegar cruet came into actuality. It has been a good vinegar cruet. And if the liquid which now glows in its crystal heart has at all soured its disposition, it at least says nothing and gives no sign.

"But the dish," says Rudyard, peering over my shoulder at what I have written. "Haven't you forgotten to tell about the dish?"

I was coming to that. But the dish isn't important. I put it together with the bottle because I thought that the bottle, by itself, looked austere and lonely. And the little dish has an entirely different disposition, calculated to keep anything in good humor. For one thing its inside, where the tracery of engraving is, is a cheerful tartar red. And the outside of it—the part you can't see in the picture—is a rich walnut color. What do you suppose the little dish is made of? No, you'd never guess. It's fashioned from the creosote bush. The desert is a good mother. She will give you almost anything if you stay there long enough and have patience to try to understand and love the things which she holds in her heart.

We are still in exile. And now the winds roar down among the bleak foothills and wrench savagely at the high-sloped roof of our little dwelling place. Sometimes we tremble for the fastenings of that roof—fearing for the safety of our little friends the cheerful skunk family who live up under it in the mysterious recesses of the attic.

We doubt, however, if the skunks ever give the wind a thought. In the very height of storms they gaily prance up and down along the board ceiling which stretches above our heads and hides their activities from our view. Weird, these tramp-lings. One would think that darksome ghosts paced to and fro

or played tag up there among the shadows and cobwebs of the beams. Sometimes the big packrat who lives out in the porch, among the picks and shovels and tools, pauses in his busy stacking and shifting of sticks and nails and seems to listen to the "ghost dancers" overhead. But they don't hold his interest long. He still has a great quantity of nails and spikes to move and pile. And as he does not yet seem quite sure where they ought to go, and is always changing his piles, it probably will take him a long while to finish the job.

Away back in the hills from where our little dwelling dreams beside its splashing spring there is a gorge where the shadows of the slopes and mighty rocks crowd close upon the ribbon of growth that winds down from the higher levels toward the sun-glared whiteness of the desert floor. It is cool here, even in the hot days of summer. A cool, branch-shadowed silence that is broken only by the soft singing of the wind as it goes wandering down toward the lowlands. There is a murmur of trickling water too, if you go up high enough. And places where the grass grows and the willows arch and wild grapes hang in thickets over tiny waterfalls whose music is like that of a silver flute to those whose days have known mostly the glare of sere rocks and the scorch of waterless sand.

So, perhaps, it is not surprising that as often as it can be managed, and when the weather is favorable, we gather a little food into a basket or carrying sack and tramp off up the ravine to spend a day listening to the whispered stories of the wind and those marvelous tales of fantasy and imagination which only a little brook, on its way to lose itself in the desert sands, is capable of telling.

The children love these excursions. For one thing the holiday usually represents for them the successful outcome of many days of eloquent argument for a one day vacation from lessons. And, for another, the outing offers all sorts of adventurous possibilities—from the discovery of coon and coyote tracks in the

trail dust to the chance that good fortune will put them in the way of an undiscovered Indian cache or some arrowheads or attractive pottery sherds.

Then, too, there is always the chance of meeting again the Hermit Horse.

Now the Hermit Horse is an institution around these parts. It was not long after we had been deposited by the U.S. Navy in our little "St. Helena" (maybe Napoleon would have been more contented in the desert) that we first met him (the horse, not Napoleon). He was wandering over the landscape with a peculiarly independent air which all free things have. It was something not quite natural in a man-dominated horse.

But he saw us and made off. "Ha," exclaimed Rudyard, reacting to a generous priming of Buffalo hunts and George Catlin stories, "—See! See! A wild horse!"

But the rest of us knew better. There were too many signs of past years of enslavement about that vanishing brown splash among the bushes to admit of any such romantic explanation. "He's hiding out," Rider observed shrewdly. "He's run away and he's come to the desert, like we did, to find freedom."

And so it proved. For after many days we came to know the Hermit Horse very well. Yes, he had run away—that we soon came to know by close observation. For it was not long before the Hermit Horse accepted us as friends—or at least as part of his domain. There is not much, even to a suspicious horse, to suggest civilized cruelty and saddle-and-bridle slavery in the sight of naked sun-browned figures slipping silently through the bushes. And not much in the sight of the tracks of bare feet in the trail dust to suggest the toilsome hauling of heavy loads. So the Hermit Horse—with his pitiful sway back and the white marks of ancient sores—accepted us. Sometimes when we rounded a sudden bend of the trail we would meet him, almost face to face. On such occasions both the Hermit and ourselves would stop abruptly. And he would survey us for a moment or so from his soft, deep brown eyes. Then quickly and quietly he would step aside and vanish like a shadow among the brush tangles. He trod softly. He moved with the stealth and skill of a deer. More than once we offered him handfuls of grain. But he would have none of them. Memory of slave days was still too fresh. He respected us, but he was taking no chances.

There were wild grapes still upon the vines in the deep canyon when we made our last excursion. Not many, to be sure, for the birds had feasted for a long while on the fruit. But still the few that remained were sweet and wholesome and made a nice dessert to our simple meal. There is this about wild grapes—as about all other wild fruits and food. They are like the true children of nature in that they have little artificial polish but a great deal of sterling worth. The particular complaint that the wild grape is nearly all seeds and skin, with but little juice, is true. But on the other hand the "civilized" grape is a blown up product of pulp and water in which real nourishment and food value has all but vanished. The wild product has the strength of the earth in it. Harder to eat, yes. But there is infinitely more health and strength in it than in its glorified relation. Sadly one is forced to the conclusion that show and real worth no more consort together than do comfort and health.

Now the wind is rising and there is a hint of snow in the air. "But that," cry our three merry hearted youngsters, dancing expectantly, "only means that Christmas is coming."

TO RISE

*Dawn always comes, however long
The night has been.
Right always wins, however wrong
And scourge and sin
First seem to conquer. Let us then
With enterprise
Meet every step we would attain.
Thus shall we rise.*

—Tanya South



Capture the Rainbow

IN 1946

... take the thrilling trip on mule back down Rainbow Trail 'mid colorful scenes so vivid no artist could portray ... to the most spectacular of all national monuments ... RAINBOW BRIDGE.

Rest at picturesque RAINBOW LODGE, backed by the breathtaking span of Navajo Mountain ... where comfortable lodging, excellent food and hospitality are, as before, directed by Bill and Mrs. Wilson.

WRITE BILL WILSON, TONALEA, ARIZONA, FOR RATES AND A BROCHURE DESCRIBING "THE RAINBOW."

LETTERS . . .

Golden Rule for Rockhounds . . .

Hollywood, California

Dear Mr. Henderson:

Mr. Leland Quick touched upon a subject of great importance in the December issue of Desert Magazine and I hope it will not be allowed to drop without further discussion. Farsighted men and women have worked for years for forest conservation, wildlife conservation and soil conservation, as well as for the preservation of our natural beauty spots. The time has now come when those of us who are interested in western gems and minerals should awaken to the fact that unless we can have a movement to conserve such things, our hobby will soon become so limited that it will offer little inducement to beginners. The joy of collecting is vastly greater when one can go out into the hills and find things for himself, but today the desert hills are rapidly being swept bare of everything of a mineral nature worth carrying off, not to mention tons of worthless rock.

Perhaps I feel more strongly in regard to the matter because of my personal experience as a mineral dealer. A single instance will serve as an example. In 1913 we discovered a deposit of handsome cutting material which we visited about once a year, often in the company of a group of friends, bringing out what we could carry easily to the nearest road a mile away. Then one day the locality was described in detail in one of the Los Angeles papers and the next time we went up there we found a good road all the way to the deposit and trucks had hauled away enough material to supply all the amateur gem cutters in Southern California for years. Soon this material was being sold for rock gardens and fish ponds and the locality was permanently ruined.

Mr. Quick suggests that organizations might file on desirable localities and thus protect them. Our own experience does not lead us to think that this will solve the problem, although it might help. It would not be possible to stand guard over the claim with a shotgun, and nothing else seems to be effective. We tried filing once and as soon as our back was turned, vandals tore our monuments down and went off with everything in sight that appeared to have the least value.

We feel that every earth-science organization should undertake a campaign of education that would tend to make the rock-hogs ashamed of themselves. Perhaps we should take a little more time to preach the doctrine of the Golden Rule, because after all what better teaching has ever been given to us?

W. SCOTT LEWIS

Tragedy in the Turtles . . .

Orange, California

Friend Henderson:

On a recent trip into the heart of the Turtle mountains, I discovered that the saguaro, which Walter Ford reported in Desert Magazine, November 1944, has been destroyed. It is broken off about eight feet from the ground, broken as square as possible to break a cactus. The remaining trunk has soured to the base, the larger limb fell to the southwest and one small limb fell to the northeast. The saguaro was alive when the accident happened, the limb that fell to the northeast is still green while those which have fallen to the southwest have soured. This is indeed a real loss to the desert.

C. E. SQUIRES

A Watch for a Compass . . .

Boulder, Colorado

Dear Desert:

I note in the November issue of Desert Magazine, in your article on "Emergency Kit Suggested for Vacationers, Rock Hounds" you emphasize the importance of carrying an extra compass just in case that "you have lost that fancy floating-dial job with its radium markings."

If one carries a watch it is unnecessary to carry a compass. Just hold the watch face up, with the hour hand pointing toward the sun. The point on your dial half way between the hour hand and the figure twelve on the dial is straight south, varying only as the standard time of your watch varies from the movements of the sun.

Try it, any place, any time of day and at any season of the year.

J. Q. BLUE

"Him Heap Good Boy" . . .

Oxnard, California

To Desert Magazine:

In 1904 or 1905 I was employed by the Santa Fe railroad to operate the pumping plant at Peach Springs, Arizona. There I became acquainted with several of the Hualpai Indians. I was fortunate to gain the confidence of several members of this tribe, who related to me some of their tribal customs. I was told of the old war between the Mojaves and the Hualpais and about the peace treaty that followed and has been strictly adhered to for several generations.

My job at Peach Springs was to operate the pumping plants on the shift from 6 p.m. to 6 a.m. One morning an Indian stepped into the boiler house and critically watched my every movement. Later told me he was Havasupai.

When I had finished my work and was

getting a little nervous from the close scrutiny I was getting, this Indian stepped up to me and asked, "You a good man?" This question coming from an Indian rather stumped me, but seeing his seriousness I finally convinced him that according to my own ideas I thought I was a pretty good man. He then stepped out to a deep dry wash and jabbered a few minutes to some one who finally came out of the brush. It was his squaw. Well, I underwent another half hour's scrutiny from both. They exchanged a few words occasionally and finally he stepped up to me and patting me on the shoulder produced two letters, still sealed, addressed to this Indian at Peach Springs. (I regret that I have forgotten his name.)

He said, "You read 'em letters. My boy he go Carlisle. Me and squaw no savvy how read letters." So I opened the letters and found their son's two-week report card enclosed. I found it rather difficult to translate the letters so they were fully understood, but regardless of my poor attempts they continued to pat me on the shoulder and repeat, "Him good boy. Him my boy."

About once per month after that this old couple would come in early in the morning with a couple more letters for me to read. Each time they brought me a present, a basket, and once a Navajo rug which has seen constant service since that time and is now on my bed room floor. I soon began to look forward to these visits and now wish I had made notes so I could tell the full story.

As time passed the boy was finally allowed to play in the school band. Then the band went to Washington to play for the President. You can imagine the difficulty I had trying to get this story to the parents in its full significance. A very lonesome boy, according to his letters, but very proud to tell his mother and father of the honor shown him by permitting him to play before the President of the United States—the Big Chief of all the white people. Both parents shed tears and then asked me to "read um again." This had to be repeated several times.

After perhaps a year of reading these letters, I was transferred to some other station but I spent some time explaining to the man who relieved me what I had been doing and asked him to continue should the old Indians return.

I don't suppose these old folks are still alive, but it is possible that "him heap good boy" is alive and it is possible that he remembers that his letters were read to his parents by a man working nights at the Peach Springs pumping plant.

Seems rather pointless to write this to you, I have no reason other than it might fit into some one's story some time.

ROBERT N. ATMORE

But, We May be Wrong . . .

Casa Grande, Arizona

Dear Mr. Henderson:

The first thing I do upon receiving a copy of The Desert Magazine is to test my "desert-brush lore" in the Desert Quiz.

Usually the questions are well presented, but in the December 1945 issue two questionable statements came to my attention. Question number five reads as follows: Most poisonous among the members of the desert insect world is the Vinegaroon, Blackwidow spider, Tarantula, or Centipede. I believe my elementary biology informed me that the above mentioned individuals are not insects but arachnides. How about it? Question number seven: Amethyst is quartz which gets its violet color from iron, manganese, copper or zinc. Your answer is manganese.

Perhaps California amethysts do have manganese as a coloring agent, but to date I cannot find a mineralogist who will say that the coloring in the mineral is due to this statement. Analysis of the gem will not show the presence of manganese.

I do not have the reference at hand but remember reading in the book "The Quartz Family of Minerals" that in Germany amethysts were subjected to X-ray bombardments and were caused to lose their color. By rebombarding the crystals the color could be restored. The contentions were that the color in the stone is purely a physical property.

Do you have information that shows without a shadow of doubt that amethysts contain manganese?

Attention Mr. Henderson:

Who knows, perhaps the coloring of our

gems is due to the Arizona air or sunshine, at least most of our clan of the desert rats are in the pink of condition.

CHARLES B. FLEMING, JR.

Friend Fleming: The questions you raised are debatable. However, in support of our answers, I will quote the following, for what they are worth: (1) Frederic Brewster Loomis in FIELD BOOK OF COMMON ROCKS AND MINERALS writes "Amethyst is quartz with a violet color, due to the presence of small quantities of manganese." (2) Webster gives this definition: "Insecta—In the broadest sense, a class of arthropods comprising the true insects, the Myriapoda, and the Arachnida."

—R. H.

Letter to Mr. Tenderfoot . . .

Los Angeles, California

Dear Sir:

Actually, this letter should be addressed "Dear I. Ama Tenderfoot," for I am answering his letter in the December issue of Desert.

I was once a tenderfoot, Mr. T., who had never been initiated into the desert—not until I met the Orr boys and their friends in Los Angeles.

Well, being of the fair, gentle and so-called weaker sex, I wasn't much interested in dust and wind, nor did I care to get chummy with rattlers, lizards and other desert wildlife. But, reluctant to be a wet blanket, I tagged along one weekend just to see what it was like.

For some reason, Mr. T., I saw all differently than you did. True, I too was

greeted by a wind. To me it was a bit annoying, but gradually I realized that it was only caressing me—welcoming me to a new experience.

Well, I married one of the Orr boys, and by now the trips to the desert are something we all look forward to. We never get enough of it. Now I go snake hunting, and I have found the lizards to be very harmless little fellows.

I am very sorry, Mr. T., that you did not find the "hospitality, charm, fascination, rapture and ecstasy" of a trip to our desert. But don't you sort of envy us folks who can?

LEE ORR

We, Also, Wonder Why . . .

Pasadena, California

In one of your 1944 issues I found an ad of the Borrego Lodge, Borrego, California. I have written to them and gotten a courteous answer and a very nice folder. We plan to drive down there for a stay in December. I wonder why more of the desert resorts do not advertise in the D.M.

If you have a list of the available resorts, I will appreciate your sending me one.

FASSALIER FERRON

For the Indian Service to Ponder . . .

Gambier, Ohio

Dear Mr. Henderson:

I have been watching with interest and much concern the controversy that has arisen as to whether the Indian crafts imitations shall take over the market of tribal handiwork.

Some of the manufactured Indian jewelry has been on the market here in the middle west, but I don't believe it has sold too well, as one doesn't see much of it worn, yet the hand made artifacts from Mexico have a terrific sale. There is a small gift shop in Gambier which sells a huge amount of Mexican jewelry and other wares and would sell more if it could be had.

You say, "the Indian is a good craftsman, but he isn't much of a salesman according to high pressure American standards—" Don't you think right there is where the United States Indian Service is slumbering? Certainly this department has the facilities and the means for advertising Indian wares and there are hundreds of gift shops and stores throughout the mid-west and the east that would be very happy to have jewelry, blankets, baskets, and pottery. I don't believe price would be too great a factor if the buying public could be sure the merchandise was authentic.

I sincerely hope the Indians can be encouraged to continue their crafts. I dislike to think that on my next trip west I shall be confronted by manufactured Indian crafts.

SARA C. SULZER

CALEXICO — On the Border . . .

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DESERT CAVALCADE

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- The Butterfield stage lines and the desert freighters.
- Reclamation of Imperial valley and the disaster that threatened when the Colorado river went wild in 1905.

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HERE AND THERE .. on the Desert

ARIZONA

Creator of Grand Canyon's Yavapai Station Dies . . .

FLAGSTAFF—The man who added much to the enjoyment and information of visitors to Grand Canyon passed away in Oakland, California, October 30, aged 76. He was Dr. John Campbell Merriam, distinguished scientist, president emeritus of Carnegie Institution, for many years professor of paleontology at University of California, one of the founders of Save-the-Redwoods League, director of early excavation at La Brea pits, Los Angeles, regent of Smithsonian Institution, author of *The Living Past* and *The Garment of God*, executive of many scientific bodies and holder of many honors. It was in 1927 that Dr. Merriam became interested in giving the Canyon visitor accurate scientific information on its chief features. As a result of his extended studies, famed Yavapai Point observation station, with its telescopes, exhibits and daily lectures, was opened in 1928 and financed by the Laura Spellman Rockefeller Fund. As president of Carnegie Institution he stimulated scientific studies in many areas, including Grand Canyon, where he sent special expeditions to solve geological problems.

First Indian "Pioneer" . . .

TUCSON—Arizona Pioneers Historical society, at its 61st annual meeting here November 17, elected new officers, admitted 77 new members and discussed plans for financing a building of its own. The first Indian ever admitted to the society's membership was unanimously elected. He is José Alvarez, 75-year-old Papago who for more than 30 years was a laboratory assistant in University of Arizona soils chemistry department. Gerald Jones, Tucson attorney, was elected president for a two-year term, replacing Mrs. Tom Davenport. John C. Etchells, Tucson, was re-elected treasurer. Mrs. Margaret Strong, Tucson, was named recording secretary, and Mrs. George F. Kitt, Tucson, was re-elected historical secretary.

Some Salt Too? . . .

AJO—Three Ajo boys brought it alive—a struggling coyote with his legs tied to a ten-foot pole, each end of which the boys shouldered with their wriggling captive dangling between. Ernest James, Hansel Odom and Harold Dickson explained their technique: "Oh we just took a forked stick and held its head while the others tied its feet."

Projects Funds Recommended . . .

YUMA—House appropriations committee on November 27 reduced from \$67,335,000 to \$42,765,000 the amount for reclamation projects coming out of general treasury funds. General fund projects left in the bill and amounts recommended were Gila project (east of Yuma), \$2,000,000 and Davis Dam project (Arizona and Nevada), \$5,000,000. The committee also approved \$3,000,000 from Colorado River Dam Fund for Boulder Canyon All-American Canal project, and \$250,000 from Colorado River Development fund for investigation of use of waters of Colorado river and tributaries.

Flying Service Due in Yuma . . .

YUMA—According to announcement in November by Marsh Aviation company of Phoenix, Yuma soon will have a commercial airport within walking distance of the business section. Included in the service will be private planes for lease, commercial crop dusting, flying instruction and chartered plane service.

US-Mexico Treaty in Effect . . .

YUMA—Treaty between United States and Mexico which governs use of water in three rivers running through both countries, took effect as of November 8. Rivers affected are Colorado and Tijuana rivers and the Rio Grande between Fort Quitman, Texas, and Gulf of Mexico.

Desert Lodge RANCHO BORREGO



In the restful Borrego Valley at the foot of the San Ysidro and Santa Rosa ranges, is preparing to open December 15th for its 8th season.

An informal American Plan guest ranch with the open hearted hospitality of early California days.

Reservations are being accepted for December and January.

Write

NOEL and RUTH CRICKMER
Borrego — Julian P. O. — California

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of Nellie N. Coffman,
Earl Coffman and
George Roberson



PALM SPRINGS, CALIF.

War Memorial Center Planned . . .

PHOENIX—A cultural center as a living memorial to Arizona's war dead will be built in Phoenix soon, according to plans of 400 Salt River Valley civic leaders. A campaign to raise \$1,250,000 for construction of a library, art building, community theater and outdoor hall to accommodate 4000 persons, got underway in December under the leadership of Barry Goldwater, Phoenix merchant and

World War II veteran. Featured in the plans is a hall of heroes bearing names of all Arizonans who served in the armed forces.

Relic of a Desert Battle . . .

YUMA — An unexploded six-inch shell was found on the desert northeast of here. A. E. Shepard, the finder, reported it to Sheriff J. A. Beard who notified military authorities to come and get it.

THE DESERT TRADING POST

Classified advertising in this section costs 7 cents a word, \$1.00 minimum per issue

MISCELLANEOUS

INFORMATION: What do you want to know about the Colorado desert, SW Arizona, SE California? Rocks, minerals, mines, travelways, waterholes, flora, wildlife, etc. Also Colorado River fishing information. An old Desert Rat will give you reliable information. Personal letters \$2.00. Address Desert Rat, Box 356, Winterhaven, Calif.

DESERT SUNSHINE makes healthy poultry. Hampshire Cross pullets ready to lay shipped anywhere 6 for \$15.00. Crating free. Grail Fuller Ranch, Daggett, Calif.

WANTED: Used Silversmith tools. Write to Maude F. Kibler, Mina, Nev. Box 164.

STRANGE, Rare and Unusual Books—big illustrated catalogue and sample book both for 10c. "West-Of-The Rockies," Needles 9, California.

DESERTATIONS: Now that all ratchioning sich as gas, eats, et cetera are all over, nearly so, we kin all go desarttrekking with Im Puntee, onlessen he is too bizzy to go along. An' when y'u do go, dun't fergit that THE DESERT SHOP at 329 College Street, in Santa Fe, N. Mex., kin make the best enlargifications uv yer best kodak negatives in size 5x7 at 3 fer a buck, er in size 8x10 at three fer two bucks, slick er dull, 'n' will do 'em jist like y'u want 'em. All kinds o' photo wurk did at reasable prices, also, too. Special finishing services fer desart fotogs who is too bizzy t' do the'r own, at reasable prices. Prompt services, and hiest quality. Ryte 'em fer yer needs and desires. Azzever yourn, Art of the Desert.

PHOTOGRAPHS WANTED: Reasonably priced. Must be sharp, glossy finish. Rodeo, mining, flowers, animals, etc. Not over 5x7. Also 35 mm. negatives in strips of 12 or more. Rogers Studio, P. O. Box 134, San Diego 5, California.

DIAMOND SAW SPECIAL. Brand new 7" Copper blades, equipped with either 5/8" or 3/4" arbor holes, only \$4.50 each. Do not delay order now. Mail orders only. Gaskill, 400 North Muscatel, San Gabriel, Calif.

TEN FINE Indian arrowheads, \$1.00. Catalog. Geo. Holder, Glenwood, Ark.

LARGE NAVAJO RUGS: In hard to get sizes, nice grey background, red white and black designs. They are beauties. Following sizes: 13 1/2 ft. x 16 1/2 ft.—10 ft. 9 in. x 15 ft. 9 in.—7 ft. x 13 ft.—6 ft. 6 in. x 10 ft. 9 in.—5 ft. 10 in. x 12 ft.—large variety 4x6 and 4x7 on hand. Open SUNDAY p.m. and week days. Hubbell's Indian Trading Post, 2331 Pico, Santa Monica, Calif.

WE ARE AGAIN RECEIVING real hand-hammered Indian jewelry from the reservation all made by top silversmiths. For our rock customers we have bought another collection of rock, making this one of the largest collections of rocks and minerals in this part of the country. Our collection of rugs, baskets and jewelry is still large despite the shortage. Come in and see us. Daniels Indian Trading Post, 401 W. Foothill Blvd., Fontana, Calif.

HAND CARVED, personal Leather Wallets. Top grade tan hide, decorative design and three initials. \$7.50 with order. Gwendolyn Davies, Box 93, Alamo, Calif.

ARIZONA HIGHWAYS, Deserts, National Geographics, other magazines, bought, sold, traded. John Wesley Davis, 1611 1/2 Donaldson St., Los Angeles 26, Calif.

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GIFT BOOKS of the Southwest. For outstanding titles on the desert country—Travel, History, Desert Plants and Animals, Gems and Minerals, Indians, Juvenile—write Desert Crafts Shop, 636 State St., El Centro, Calif. Free catalog.

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EL CENTRO ——— CALIFORNIA

"No Vacancy" Signs are out . . .

GRAND CANYON—October visitors to Grand Canyon national park broke all previous records with a total of 34,212 during the month. More than 33,000 of this number arrived by private automobile. Checking stations on Highway 66 also report that their figures exceed any previous month in history. Holbrook, Arizona, checking station clocked 30,800 westbound cars and 23,500 eastbound cars during the month. The most common, and unpopular signboards along the route read "No Vacancy."

Construction was underway in November on buildings which will cover five square blocks beginning at the western boundary of Holbrook city limits. Cost will total more than \$250,000. All are private enterprises.

California Electric Power company in November was authorized to cut agricultural and general wholesale electric rates in the Yuma area by about 30 per cent beginning January 1.

George Babbitt, Jr., Flagstaff postmaster, was elected president of Arizona chapter of National Association of Postmasters at November conference in Phoenix.

Walter D. Rouzer, manager of Fred Harvey restaurants in Union Station at Kansas City for the past 15 years, was due in Arizona in December to assume management of Fred Harvey hotels at Grand Canyon national park.

Isaac Barth, member of first New Mexico state senate and prominent lawyer, died suddenly November 15 at his home in St. Johns where for the past ten years he had published the Herald-Observer.

CALIFORNIA

Valley Grows More Sugar . . .

HOLTVILLE — About 20 Imperial Valley growers have signed up approximately 3000 acres to be planted to sugar beets in cooperation with Union Sugar company of Betteravia, near Santa Maria, California. Ralph E. Meyers company, El Centro, is temporary headquarters for interested growers. Beets, all of which will be harvested by machine, will be shipped in June.

Let 'Em Sleep First . . .

JOSHUA TREE—Somebody in this community, 40 miles from Palm Springs, forgot about the sleeping habits of desert tortoises. A "turtle sweepstakes," which was to become an annual event, was scheduled for December. Then officials discovered the desert tribe had already gone into hibernation for winter. Now contest is set for spring. Man o' War is the giant tortoise who will be a leading contestant.

Keep Your Desert Magazines

The information they contain—the maps, the travel information, the history, the gem fields, the lost mines, the lore of the desert country—will help you enjoy your motor trips now, or a year from now. Desert never grows old.

To meet the constant demand for old files of Desert Magazine, the following copies are wanted. They may be sent direct to Desert Magazine office or delivered to Harrison Magazine and Book store at 7912 S. Vermont St., Los Angeles, and the following prices will be paid for issues in good condition.

November '37 (first issue)\$3.00
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A very limited number of complete files of Desert are now available in permanent loose-leaf binders, and will be shipped prepaid at the following rates:

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The magazines in these volumes are not all new, but they are guaranteed to be complete copies in good condition.

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It takes just a few seconds to insert your magazine in those handsome gold-embossed loose-leaf binders the Desert Magazine office sends well-packed and postpaid.

The binder opens flat, and at the end of each volume—the October issue—is a complete alphabetical index for finding any item that appeared during the year.

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includes packing, postage and tax.

DESERT MAGAZINE
El Centro, California

Spots Worry Date Growers . . .

INDIO—Dates will be completely eliminated from the market this year if a proposed adjustment in the agricultural code allowing 100 per cent tolerance of alternaria (side spot) is not effected, William Cook, president of Indio Date Growers' association, told members of the agricultural board panel at an open hearing in Indio November 13. Cook, ascribing prevalence of alternaria this year as due to an unusually humid summer, said he supported the proposed modification of the code which would allow packers to use dates having spots of not more than 3/16 inch in width and length. He assured the committee such presence of alternaria in no way affected flavor of the date and that only an expert could find a side spot smaller than 3/16 inch. He also said such spots were in no way harmful to the consumer. From 50 to 60 per cent of the total output this year is alternarius, Cook estimated. Wyn G. Jenkins, also testifying, concurred with Cook's conclusions.

Farming Increases in Borrego . . .

BORREGO—Mechanical potato planting machines are being utilized in Borrego Valley to sow hundreds of acres with seed potatoes, San Diego county supervisor James Robbins recently reported, upon completion of an agricultural survey of the valley. He disclosed that a number of ranchers, taking advantage of a recent law, have exchanged non-productive lands within Anza state park for more suitable agricultural areas on the floor of the valley.

Land Prices Are Zooming . . .

PALM SPRINGS—While land prices everywhere are at high levels, the realty business in Coachella valley is zooming beyond even the wildest dreams of real estate men. Despite an off year in the date harvest, prime date gardens continue to sell as high as \$3,500 an acre. Vacant land which later will come under the All-American canal extension have climbed from \$10 and \$25 an acre to figures approaching ten times that amount. There is also an active demand for building sites for city dwellers who plan to spend their post-war weekends on the desert.

To Honor Chemehuevis Tribe . . .

NEEDLES—Chemehuevis Park—honoring the Indians who once lived in the valley now occupied by Lake Havasu—is the name suggested by State Senator Ralph Swing for the proposed 24,000-acre desert park along the shores of the lake formed by the Metropolitan dam in the Colorado river. Senator Swing is endeavoring to secure part of the five million dollars allotted to state parks by the California legislature, for the development of this proposed desert park which will include bathing, boating and fishing facilities along the lake shore.

Herdin' the Skyways . . .

BRAWLEY—Menace of crop-eating waterfowl is on its way out. At least Imperial county supervisors have provided the ways and means which should protect the farmers' crops in the future. Supervisors in November adopted an urgency ordinance creating a duck depredation trust fund, which would be used to pay owners of airplanes to herd waterfowl from farm areas and from growing crops to feeding areas in the Salton Sea district.

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For Information and Rates
Write Chamber of Commerce,
Las Vegas, Nevada

Bid has been awarded for construction of surfaced road between Beatty road and east boundary of Death Valley national monument, a part of route 127, section K.

Holtville Tribune was sold in November to M. F. and J. R. Sherlock of Corona, California, by W. L. and Lamont Odett.

NEVADA

Senator Moves for Boat Landing . . .

LAS VEGAS—Plans for a new boat landing and a road leading to it in the Overton district were revealed in November by Senator Pat McCarran. He reported present facilities were not sufficient and he hoped to have something to report in the immediate future.

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DESERT SOUVENIR

A four-color picture suitable for framing shows the Covered Wagon Train of '68 crossing the desert; now on display at Knott's Berry Place, Highway 39, two miles from Buena Park out of Los Angeles 22 miles. This remarkable oil painting 20x60 feet took over one year to complete. A copy will be mailed you together with the special souvenir edition of our Western Magazine jampacked with original drawings and pictures and complete description of Ghost Town and Knott's Berry Place. Both will be mailed with current issue of our 36-page magazine for 25 cents postpaid in the U.S.A. Thousands have already viewed this great work of art and acclaim it a wonderful contribution to the history of the West. Admission is without charge whether you stay for the chicken dinner and boysenberry pie or not. Send 25 cents for all three: picture, souvenir and current issue to Ghost Town News, Buena Park, California.

Skiing in the Desert . . .

GENOA—Twin skiing events scheduled to be held here February 23 and 24 are expected to attract national attention. First annual "Snowshoe" Thomson Memorial cross country ski race and the Nevada-California state jumping championships. The race will start near Echo summit and end at Genoa, the longest race to be staged in this country and the same distance as Norway's annual classic. Several Norwegian skiers as well as national ski champions, are expected to be among the entries.

Soldiers-in-Business . . .

LAS VEGAS—Five soldiers stationed at Las Vegas army air field put together a lot of nerve, imagination, skill and some borrowed equipment, and started a wholesale toy manufacturing industry which is going to help out Santa Claus in this corner of the desert and incidentally be quite a little business for Staff Sgt. Leo Peterson, Staff Sgt. Charles Wright, Staff Sgt. Warren Overman, Staff Sgt. Don Glass and Sgt. Howard Pieper. Their sturdy playthings are known as Wright Built Tuffy Toys, after Sgt. Wright who is a cabinet maker by trade. The soldiers work during evenings, free time during the day. Off the assembly line by the first of November were trailer trucks, bath toys, doll beds.

Let's Go Meteor Hunting . . .

RENO—A brilliant flaming object believed to be a meteor, which disappeared after alarming northern Californians November 29 was believed to have crashed to earth somewhere in the Nevada desert. Prof. G. Blair of University of Nevada said according to stories of observers, the object apparently was slowing down and probably shot to earth in the barren wastes of eastern Nevada during a storm.

Shall We Say—Venus-like? . . .

RENO—Recent poll revealed Nevada coeds are almost two inches taller and 15 pounds heavier than the average. In contrast with John Robert Powers' figures, which place average feminine height at 5 feet 3½ inches and weight between 110 and 115, average University of Nevada girls are 5 feet 5 inches tall and weigh 127 pounds.

Ghost Town Jewelry . . .

VIRGINIA CITY—Establishing its first new industry in many years in an attempt to rise from the ghost town stage, this historic city has now become the site of a custom-made jewelry business, employing only Nevada silver and stones. City businessmen have collaborated in setting up the plant, which so far is filling only local orders, although future plans call for mail order business.

NEW MEXICO

It Really Happened, They Say . . .

ALAMOGORDO—Stories going the rounds now, as aftermath of the atomic bomb test near here last July 16, are destined to become part of New Mexico's legendary history. Here are a few samples: A state livestock inspector asserted that hair on cattle's backs had changed color since the explosion. The Hereford cattle, about 60 miles from site of bomb test, appeared to have a heavy frost across their backs, the hair turning a smoky grey the length of the back in a strip about one foot wide. Then there's Will Wrye, rancher at Bingham, New Mexico, who said his beard first appeared to have been seared on the sides of his face. Now the hair is growing back white while his chin beard remains brown, he declared. Ranch hands near Carrizozo declared one side of a black cat had turned white since the blast.

It's Just a Coyote, Girls . . .

SANTA FE—The gals in this town will have to listen closely next time they hear a wolf call—it may be a coyote. According to State Game Warden Elliott Barker, coyote population hereabouts has grown by leaps and bounds. Several of the animals have been seen within city limits and a number of them trapped a few miles away.

Indian Cooperative Mart Opens . . .

CANONCITO—Approximately 200 persons attended the recent opening of the Navajo Cooperative store here. John G. Evans, superintendent of United Pueblos agency, in speaking at opening program, declared prospects bright for the all-Navajo store. At the open house a noon-day meal cooked Navajo style was served to all visitors, including some from the Santa Fe and Albuquerque Indian schools. An all-Navajo rodeo was held during the afternoon. Manager of the new store will be Richard Platero.

Early Stage Driver Dies . . .

LORDSBURG—Thomas Albert Woods, 86, pioneer express agent and stage coach driver, died in Los Angeles November 23. He was express agent and stage coach driver, died in Los Angeles November 23. He was express agent at Lordsburg and at Benson and Tucson, Arizona, and drove stage for Wells, Fargo & Co. He headed one of the posses that trailed the Indian chief, Geronimo.



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This Is a Nutty Year . . .

GALLUP—Reports indicate this year's piñon nut crop will be a good one in this area, the chief piñon section of New Mexico. Even though piñon pine trees are fickle producers, this tiny sweet nut has won national markets and returns sizable revenue to its Indian pickers. For first time in several years excellent crop is reported on Fort Defiance plateau and in vicinity of Chee-Chil-Getetho trading post southwest of here. Traders are paying around 25 cents a pound. In normal times Indians take time off from other work to harvest the piñon crop—not because it's easy work (it isn't) but it spells cash.

Turn Thought to Indian Vets . . .

ALBUQUERQUE—Maladjustment is ahead to mar Indian citizenship in the pueblos unless ways can be found to ease adjustment strain on Indian war veterans, warns John G. Evans, Pueblo Agency superintendent. Seeking to preserve what is best for the individual and community at large, Evans urged all Indian Service employes to aid in re-adjusting the veteran to civilian life, both in the pueblos and in white communities.

UTAH

Druggists Aid Navajo . . .

SALT LAKE CITY—Shocked to learn that 5,000 Navajo Indians in the wild San Juan country lack not only a hospital but even a single physician, Allied Drug Travelers November 21 voted donation of \$100 worth of medical supplies. Plight of the Indians, who live in the bleak rugged plateaus of Navajo Indian reservation near Bluff, was called to attention of the Travelers by Rev. H. Baxter Liebler, Indian missionary, said R. E. Ferris, Travelers' president. Indians in this area are nomads, moving from desert to canyon country to find forage for their sheep and horses, living only briefly in mud and log huts.

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Road to Open Mining Area . . .

VERNAL—Approval of \$145,000 highway from U.S. 40, 28 miles east of here, 22 miles south to Bonanza, after winning approval of state road commission and Ogden district office of U. S. public roads administration, now awaits final approval from Washington before contract bids are submitted. Road will aid Barber Asphalt corporation in developing communities of Little Eureka and Bonanza to extent of about \$10,000,000 and in erecting processing plant, which will act at distributing center for numerous products manufactured by the corporation.

River Program Made Public . . .

SALT LAKE CITY—Ultimate expenditure of more than two billion dollars in the development and utilization of the waters of the Colorado river is proposed in a comprehensive plan made public by the U.S. Bureau of Reclamation. Of the total amount, \$930,142,000 is to be spent in the upper basin above Boulder dam, and \$1,255,300,000 in the lower basin. The figures are based on pre-war costs. The complete program calls for 128 projects, but E. A. Moritz, regional director of the Bureau, has suggested an initial program embodying only 30 of the projects. Thirty-eight potential hydro-electric power plants with total capacity of 3,500,000 are included in the program.

Now You Can Fly to Bryce . . .

PANGUITCH—Bryce canyon airport, 20 miles southeast of here, has been leased to civil aeronautics authority by Garfield county and plans are being made to increase landing space and facilities to handle transcontinental traffic coming to the national park. Main runway will be extended to 6000 feet long and 500 feet wide and oiled to width of 300 feet. Radio station already has been installed.

Million Dollar Store Planned . . .

SALT LAKE CITY—Plans of Sears, Roebuck and Co.'s new store here, revealed November 19 by district manager E. W. Jenkins, will make it one of largest and most complete shopping centers in intermountain West. Building, which will cost more than \$1,000,000, will have floor space of about five acres, and be located along 8th South street between State and Main.

Not Mark Twain's . . .

MOAB—A giant fossilized frog, two feet in length, has been found in San Juan county by a group of explorers led by Ansel Hall of Colorado, it was reported in November. Dr. Charles Camp of University of California was said to be removing the ancient amphibian to the California university museum. Frog was found in Beef Basin, little known area, according to Walter Herz, Reno photographer, who spent a month with the group.

Inventory of Mother Earth . . .

SALT LAKE CITY—Under cooperative agreement between University of Utah and U. S. geological survey, long-range project calling for systematic geological mapping of entire state of Utah will be started in near future. Charles B. Hunt, who will head local regional office, declared that only about seven per cent of U. S. is mapped geologically on a scale as large as one inch to the mile. Purpose of mapping is to provide inventory of land available to government and private interests.

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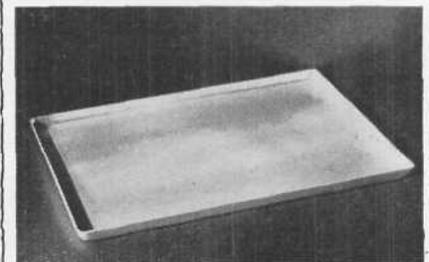
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California

Mines and Mining . . .

Phoenix, Arizona . . .

Important mineral discoveries probably will be made in the future by radar, according to the opinion of Charles H. Dunning, director of mineral resources for Arizona. Dunning stated that the geological map of Arizona shows approximately 97 per cent of the surface covered by sedimentary and volcanic flows that occurred later than the mineralizing actions. There is no reason to believe that much of this area may not be as highly mineralized as the three per cent of exposed surface. Not all of it is accessible due to an overburden that may be more than a mile thick, but there are many places where the overlay is thin, and the underlying formation is known to be favorable to mineral deposition.

Trona, California . . .

Exploration and research work involving the increasing of recovery from the Searles Lake mineral deposits and the development of new products are to be undertaken by the American Potash and Chemical company which has announced that \$1,000,000 will be spent for research alone in the next 10 years.

Winnemucca, Nevada . . .

Operations are to be resumed at the Goldpoint gold and silver property in the Hornsilver district, according to F. W. Immasche, vice president of the company. Capitalization of the company is being increased to provide additional capital.

Randsburg, California . . .

Formerly a good producer, the Culbert group of 16 quartz claims has been reported sold to Edward Herkelrath and a group of Long Beach associates. The new owners plan to start development work as soon as preliminary surveys have been completed.

Winnemucca, Nevada . . .

Turquoise that formerly sold from \$22.50 to \$45.00 a pound is more likely to be offered by the carat in the future, according to federal report. A pound contains 2,260 carats, but turquoise never comes from the ground in large chunks of pure gemstone. By the time matrix material is cut away the miner may not have as much as 500 carats of marketable stone. Extra highgrade turquoise is quoted at \$1.00 a carat.

Lone Pine, California . . .

A bill that would give mine operators a right to file claims against the federal government for damages resulting from the WPB's order closing gold mines for the duration, has been introduced by Congressman Clair Engle of California. The operators would be entitled to all damages and costs attributable to the gold closing order, but not for loss of production. Claims would be filed with the Secretary of Treasury, and the decision, if adverse, may be appealed.

Washington, D. C. . . .

Free circulation of gold will be restored if a bill introduced by Senator Taylor of Idaho and Senator Murray of Montana is passed. The bill would permit the coinage of a \$50 gold piece and would authorize the mints to pay for gold bullion in either gold coins or currency.

Tonopah, Nevada . . .

A tiny piece of blue float about the size of a pea led to the discovery of a new turquoise deposit in the hills near Warm Springs, 50 miles east of Tonopah. The locators are Charles Joseph and E. M. Booth. Small quantities of turquoise have been taken from this district in years past. Development work on the property has disclosed gem stone of extra good coloring.

Thousands of Miles of Power Lines . . .

KEEP THE LIGHT BULBS BURNING IN THE IMPERIAL AND COACHELLA VALLEYS . . .

17,618 Consumers Depend on the District Power System to Keep Lights, Machines, Farms and Industrial Plants Going.

Where does this electrical energy come from?

From two hydro-electric plants on the All-American canal.

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From a contract with the U. S. Bureau of Reclamation for use of its transmission line from Parker Dam.

From an exchange agreement with the California Electric Power Company, made at the time the Imperial and Coa-

chella Valley properties of that company were purchased by the District.

From these sources power flows into miles of lines, through scores of substations and transformers, into homes and offices and factories.

Since 1936, the people of these valleys have built the basic pattern for a power system as efficient, as modern, as profitable, as any in the country. They have a right to be proud of it.

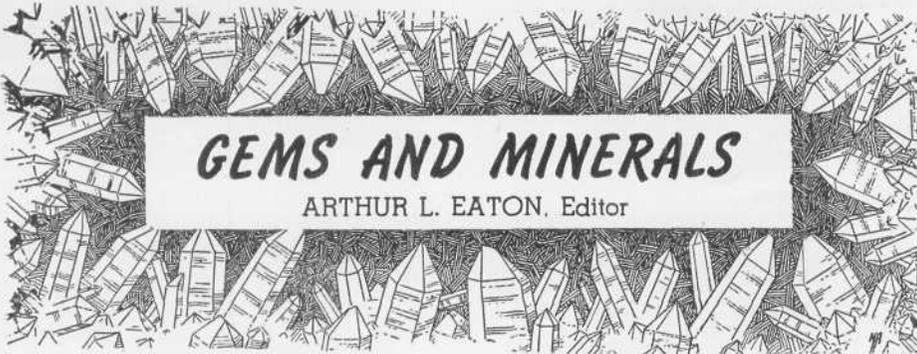
All This Has Been Acquired in Nine Years, and It Is Paying for Itself Out of the Revenue It Brings In!

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GEMS AND MINERALS

ARTHUR L. EATON, Editor

SAN JOSE CLUB SETS FIRST GEM SHOW FOR JANUARY

San Jose Lapidary society in November announced plans for their first gem show, to be held January 19-20. In summarizing progress of the committee members, President Russell Grube stated, "It will be up to us to have the best show in the State of California."

Specimens in the following classes will be shown: Cabochons, Facets, Cameos, Novelties, Jewelry, Santa Clara county material, Fluorescent material, Mineral display, Equipment display, Flats. Entry fee is \$1.00. In charge of floor arrangements are Charles Murphy, Santa Cruz, and Arthur Maudens, San Mateo.

MIDWEST FEDERATION HOLDS CONVENTION AT JOLIET

Midwest Federation held a successful convention October 13-14 at Joliet, Ill. Officers elected for ensuing year are: Algar Syme, president; Maynard Leesler, vice president; Frank Nelson, secretary; Wm. Menzel, treasurer.

Delegates enjoyed a trip to a factory at Sandwich where quartz crystals are cut into radio wafers. At the evening session president Syme talked on land-sea relationships of North America from Cambrian times to the present. He illustrated his talk with excellent geological maps made by himself. Other speakers included Drs. Ball and Fleener.

Sunday the group visited a silica-sand pit at Wedron, Deer Park and the lower canyon. Dr. Fleener described nature and extent of La Salle anticline on which Deer Park is situated, and outlined Indian history of the area.

URANIUM ELEMENTS

Atomic bombs and atomic research have increased interest among mineralogists and collectors in specimens of uranium ore. Most of the world's supply of uranium (element 92), also known as uranium 238, as well as radium, platinum and many other rare elements, comes from pitchblende or uraninite, a heavy, blackish, metallic ore from northern Canada, or from carnotite, a mustard yellow substance found in the United States. Carnotite can easily be distinguished from sulphur by use of fire. Sulphur burns readily; carnotite does not.

Until recently, all scientists believed that there were 92 elements and no more. Elements 91 and 92 often were called uranium one and uranium two. Elements 93 and 94, neptunium and plutonium, were first made artificially in the laboratory, but later found native in uraninite as natural elements. Now numbers 95 and 96 have appeared, still unnamed, in the chemistry laboratory. All of these seem to be variations of uranium, formed by bombarding element 92 with extra electrons from high powered machines.

TENTH ANNUAL CONVENTION OF FEDERATION ANNOUNCED

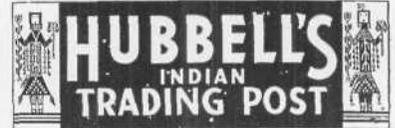
California Federation of mineralogical societies will hold its tenth annual convention June 15-16 in Pasadena, California. This will be an important event for all western rockhounds.

Committee chairmen are as follows: Competitive displays and judging—Chapman; Commercial displays—Rodekohr; Program—Hill; Lapidary demonstrations — Kirkpatrick; Publicity—Van Amringe; Finance—Vance; Reception—Mrs. Wheeler; Auction—Dietz; Invitations—Linville. Address all correspondence to Mrs. Lillie Rhorer, 581 Summit, Pasadena 1, California.

AMONG THE ROCK HUNTERS

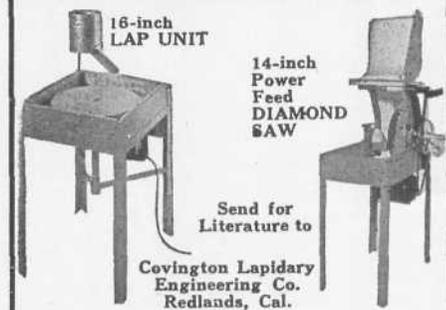
At November 20 dinner meeting of Seattle Gem Collectors club in chamber of commerce building, Mrs. Lucile Saunders McDonald, feature writer for Seattle Times, spoke on the romance of gems, telling the story of her book *Jewels and Gems*. The talk was of keen interest to the 79 persons in attendance. Mrs. J. Frank Murbach, secretary, reports plans for a Christmas party at their December meeting.

Desert Gem and Mineral society, Blythe, California, nominated officers for 1946 at November 12 meeting held at home of Norman Brooks. Named without opposition were: Norman Brooks, president; Dale Braman, vice-president; Glenn Vargas, secretary-treasurer. Election was to be held at December 10 meeting.



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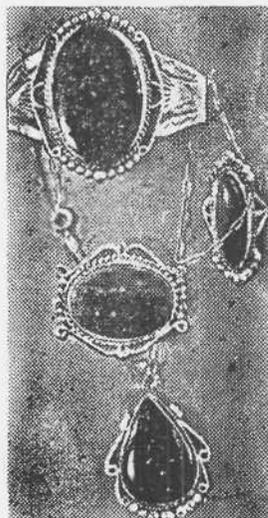
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FOR SALE: High grade Agatized Chalcedony, good grade Turquoise, Opalized Wood, etc. Let us know your wants—prompt delivery. Booth and Joseph, Box 826, Tonopah, Nev.

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MONTANA MOSS AGATES in the rough for gem cutting, \$1.00 per lb. plus postage. Elliott's Gem Shop, 26 Jergins Arcade, Long Beach 2, California.

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CHRISTMAS GIFTS: Excellent small size 1"x 1 1/4" mineral specimens from middle west and eastern states. Just the thing for beginners, schools, and collectors with limited space. One dozen \$2.00; two dozen \$3.75; three dozen \$5.25 postpaid in United States. H. STILLWELL & SON, Rockville Centre, New York.

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MONTANA MOSS AGATE in rough for gem cutting and specimen. 50c to \$1 per pound, plus shipping cost. Also can supply Jade, Jasper and Petrified wood. E. A. Wight, P. O. Box 1318, Billings, Montana.

Marquette geologists association held annual auction November 3 in Chicago academy of science building. Dr. John Ball gave another in his series of lectures on short lessons in geology. The Marquette club has an inquiring reporter, Hulda Ruthowski, whose duty it is to contact all visitors so that they may be introduced at the meeting, their names entered in the minutes and monthly bulletins mailed to them.

George D. Hough was scheduled to talk on a trip to Alaska at November 1 meeting of Mineralogical Society of Arizona. A motion picture—sand and flame—was to be shown at November 15 gathering.

All members of New Jersey mineralogical society who took summer trips were requested to bring examples of specimens collected and make reports at November meeting. Session opened with reports by P. Robinson, E. Conrad and J. D'Agostino on a trip through Vermont, New Hampshire, Maine, Massachusetts and Connecticut. Membership booklet is about ready to go to press. November bulletin discusses topaz.

Marquette bulletin extends to other rock minded publications the privilege of reprinting any article appearing in the bulletin requesting only that names of author and bulletin be included in juxtaposition.

Captain Robert A. Moses discussed quartz crystals at November 15 dinner meeting of Los Angeles mineralogical society. He described cutting and polishing of quartz crystals for use in radio and radar. Dr. Gordon B. Oakeshott went as instructor on the society's November 18 field trip to the vicinity of Iron mountain and Mill creek. Geology of this area was covered by Dr. Oakeshott (Compton college) in conjunction with state division of mines.

Be sure, advises Marquette geologists bulletin, that the head of your rock hammer or pick is securely attached to the handle.

An hour of motion pictures of volcanic action brought volcanoes of the world to November 19 meeting of Mineralogical Society of Southern California, Pasadena. Ernest Chapman led field trip discussion on Palo Verde hills area. Members displayed specimens resulting from volcanic action as well as material from Palo Verde hills.

Long Beach mineralogical society heard a talk by Mrs. Mayhew on topaz at November 14 meeting held in Belmont recreation center, 4104 Allin street. A grab bag was one feature of the evening's entertainment. Fritz W. Schmidt was appointed field trip chairman at the board meeting. Five new members were admitted.

Dr. Groesbeck of Porterville explained the art of cameo cutting at October meeting of Kern county mineral society, illustrating her talk with examples of her handiwork. At each meeting of this group a few members give five minute talk on "My most interesting specimen." F. W. Willis talked on a bauxite specimen and John Kennedy on petrified wood. Hugh Stephens, Jacob Oster and Gilla Kennedy were scheduled to speak at November meeting.

George Hudson, president Kern county mineral society, opened October meeting with a period of silence in observance of the passing of past president King.

Elmer Eldridge talked on rare minerals at October meeting of Sequoia mineral society. Mr. Buel, cartoonist with Fresno Bee, entertained with tales about Death Valley Scotty, Nevada gold mines and Klondike gold fields. The Eisenbises were in charge of November program. First postwar field trip for Sequoians was later than those of other groups because many members had to tend their drying raisins and the weather man was inconsiderate enough to send unseasonable moisture.

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Recently organized Chicago Lapidary Craftsmen, whose purpose is to further the study of gems and to foster gem cutting and jewelry crafts for the amateur, announces the following officers: William E. Menzel, chairman; Mrs. C. Zobel, recording secretary; Iva Robertson, corresponding secretary; Arch. Nisbel, treasurer.

Los Angeles Lapidary society held its Christmas party and dinner meeting December 3 at Royal Palms hotel, Los Angeles. Gift packages of gemstones were exchanged. Other features were a gem quiz (Leland Quick, quizmaster), spelling bee, door prizes.

Story of quartz was subject of J. Bryant Kasey's talk at November meeting of Yavapai Gem and Mineral society, Prescott, Arizona. Alvin A. Hanson described agate formations of Michigan, Montana, Wyoming, South Dakota, Oregon and Washington, and told of their distribution by Ice Age glaciers.

Pacific mineral society did not schedule a regular November field trip because of the Thanksgiving holiday, but a group under leadership of Mr. Hoghinian planned a four day jaunt to Goodsprings, Nevada.

William W. Fox and Vladimir S. Aronovici, soil service men, were guest speakers at November 17 meeting of Imperial Valley gem and mineral society, the below sea level club. Fox talked on the geologic history of the valley, its present soil composition and the importance of soil analysis. Aronovici described the petrographic microscope, demonstrating how rocks are identified by their crystal composition. Aronovici showed microphotographs of Imperial Valley sands.

J. H. Moon reports that October meeting of Sacramento mineral society opened with two motion pictures, one on Mexican basket weaving, the other showing a trip through Death Valley. J. B. Nichols, speaker of the evening, talked on structure of the atom. A fluorescence exhibit and demonstration concluded the program.

Barstow mineral society invites any rockhound interested in the district to communicate with Cecil E. Goar, secretary, Box 133, Barstow, California, for information about Barstow and the surrounding areas and for guidance to visit the area. The society draws its membership from Daggett, Yermo and Barstow districts.

President and Mrs. Hollis Page were hosts to Pomona Valley mineral club in November. Feature of the evening was a motion picture trip through Utah. Mr. Pearson, local gem authority, gave pointers about gem quality minerals. Mr. Page recounted his recent trip to Coyote and Fish Creek mountains where he obtained fossils and fluorescent material.

Imperial Valley gem and mineral society gave a specimen shower for Mr. and Mrs. Harry Seaman who lost all their rock equipment and cutting material in an unexplained fire.

T. Sgt. Basil Andrews of U. S. weather bureau, talked on Greenland at November 20 meeting of Pacific mineral society, Los Angeles. Sergeant Andrews spent two years at an isolated weather station in Greenland, cut off from the world by ice floes. Supplies were parachuted to him. He brought home colored slides of the region and an exhibit of Greenland rocks and minerals.

Monterey Bay mineral society has adopted a neat letterhead—an etching of the bay topping a group of quartz crystals.

Word has been received that Chuckawalla Slim's trailer was damaged by fire.

E. E. Teagle was scheduled to tell some of his experiences in Searles Lake vicinity at November 21 meeting of Searles Lake gem and mineral society. Teagle, owner of the Stockwell mine northeast of Valley Wells, is an old timer in the district. In 1900 he and his brother owned and operated a store at Garden City. Field trip committee plans a December trip to the mountains south of Inyokern. Recent hobby show was an outstanding success and netted the society \$178.51.

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CALCITE in superb crystal groups.

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CLEAR CALCITE RHOMBS (Iceland Spar)—Fluoresces a beautiful red under the Mineralight. 35c to \$1.00 according to size and quality.

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R. J. Harris, chief engineer, gave an interesting demonstration and talk on chemically treated wood and metal at November meeting of Orange Belt mineralogical society held in San Bernardino junior college. Plans were made for a field trip to Barstow district November 10. Jay Wilson of Corona reported on a 6000 mile journey in the east that he and Mrs. Wilson recently completed.

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Cogitations . . .

Of a Rockhound

By LOUISE EATON

It's sort uv amuzin' to hear folkes say that th' desert is new an' raw country. It may be stark an' uncompromizin', but not new. Definitely not. It is literally older than th' hills. Sum rox on th' desert has bin there 25,000,000 years an' sum 250 millun. It takes eons to produce petrified tempska fern or palm or evun a limonite soodomorf after pyrite — let alone to weather th' latter outta th' mother rok. Also probally considerable time elapsed while weather condishuns changed frum what it took to grow tree fernz to what th' desert has now. It's only people what are new.

Too bad there has to be rok hogs clutterin' up field trip territory. True rockhouns cleans up their camp sites by burnin papers an' berryin tin cans. Furthermor, rockhouns doesn't wantonly destroy specimens. An' they takes home only as mutch as a self respektin burro could lug—not truckloads uv material they doesn't particularly want. Rockhouns is sumtimz tempted to be hammerhouns, but NEVER rockhogs.

R. S. Grube, president of San Jose lapidary society, spoke on mineral collecting field trips near at hand at November 12 meeting of Monterey Bay mineral society. Honorary membership cards were presented to Roy Hohberger for his sponsorship, and to R. S. Grube in appreciation of effort and time spent in behalf of the society. The constitution was discussed and adopted. William M. Farr was elected treasurer; K. W. Taylor, R. L. Day and H. M. Samuelson, directors. Three new members joined the fast growing group.

Lloyd Richardson, xpresident of Imperial Valley gem and mineral society, Chuck Holtzer and Ira Huffman, while scouting eastern Imperial county for locations for future field trips, report the discovery of real bloodstones. The material seems to be of a good green color, liberally speckled with small red spots.

Mr. and Mrs. M. L. O'Bleness of Fox City Geode Trails, Kahoka, Missouri, spent Armistice holiday looking over the interesting collection of Mr. and Mrs. J. E. Speck, Red Bud Ranch, Warsaw, Missouri, former residents of Phoenix, Arizona. They have some 3000 m/m and t/n, mostly from desert localities of Arizona and California.

Preliminary plans for a public gem and mineral show were discussed at November meeting of Desert Gem and Mineral society, Blythe. Show is to be held early in 1946, date to be announced in next issue of Desert. Guy Emery spoke on materials collected on his recent trip to Montana. Dale Braman exhibited specimens he recently traded with a rockhound in Johannesburg.

During November Yavapai Gem and Mineral society, Prescott, Arizona, took a field trip to the onyx mines near Mayer. At one time this onyx was mined to manufacture spheres for gear shift handles, but when expense became too great project was abandoned. Mines contain beautiful yellow, brown and banded onyx, according to Ida Smith, club secretary.

At November meeting of Sacramento mineral society, Member Doyle Rishel talked on Desert Chalcedony, mineral of the month, exhibiting beautiful cabochons from his extensive collection. Member R. J. MacClanahan demonstrated art of facet cutting, exhibiting some of his excellent specimens.

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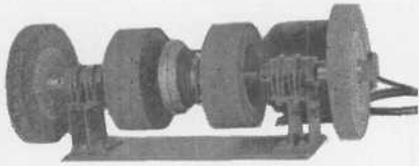
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Travelers driving from Las Vegas to Reno, Nevada, will see the gem and mineral display of W. Dart, Goldfield mineralogist. He recently moved his collection from the Hurry Back hotel out to a new location facing Highway 95, where he invites Desert readers to inspect his "ten tons" of material, including opals, turquoise, chrysocolla, jaspers, agates, woods, silver, gold, copper, lead, zinc, tungsten ores. He reports he has about 400 kinds of minerals in his rock gardens.

• • •

Mineralogical Society of Arizona, Phoenix, was all set to celebrate tenth anniversary December 5, with a big party, special program, eats and an exchange of gifts.

• • •

Despite strict censorship, news has trickled out of Soviet Russia, during the past three years, of the discovery of 19 new diamond deposits, mostly on the eastern slopes of the Ural mountains, in Siberia. This is particularly interesting to the mineralogist, as this same district is the original home of many fine gem stones, such as the alexandrite, various other forms of chrysoberyl, and sparkling, emerald green demantoid garnets.

• • •

Dr. Kaare Munster Strom, president of the Geological Society of Norway, has sent a communication to the Geological Society of America that arrangements now are being made for a geological research expedition into the mountainous areas of central Norway to study the records left there by the remnants of the last great ice age glacier. Under the leadership of Dr. Strom, the party will remain in the field from June 25 to July 5. Two or three American geologists will be included in the party, in spite of the fact that numbers will have to be limited because of lack of proper shelter and other supplies in the rough mountain country.

TRUE OR FALSE ANSWERS

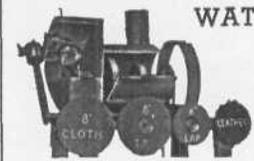
Questions are on page 12.

- 1—False. The coyote eats desert rodents and lizards, and will even raid a camper's meat supply.
- 2—False. The chuckawalla is harmless.
- 3—True.
- 4—False. The saguaro stores its water mainly in its fluted trunk.
- 5—True.
- 6—True.
- 7—True.
- 8—False. Ocotillo will put on a new coat of leaves after a heavy rain at any time of the year.
- 9—False. The wife's children or her family inherit the sheep.
- 10—False. Billy the Kid operated in New Mexico.
- 11—False. The Wasatch mountains are in northern Utah.
- 12—True.
- 13—True.
- 14—False. Chains only serve to bury the car deeper in the sand.
- 15—False. Iceland spar is a calcite crystal.
- 16—True.
- 17—True.
- 18—True.
- 19—True.
- 20—False. Mojave river empties into a series of dry lakes.

Dr. John J. Grebe and Dr. William C. Bauman, two chemists employed by the Dow chemical company of Midland, Michigan, have just assigned their rights in patent number 2,387,898 to their employers. This patent covers a new method for extracting magnesium more efficiently, and thus more cheaply from sea water. The principle involved has long been in use in water softening systems, where some base exchange agent, such as sodium aluminum silicate separates the undesired minerals from the solution. The Grebe-Bauman method uses a similar base exchange agent in extracting the much wanted magnesium.

• • •

John Slack, editor-publisher of the Silver Belt, was speaker at November 8 meeting of Gila mineral society, Miami, Arizona. He discussed and displayed specimens from various sections of the world.



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and polishing equipment. Lelande Quick, who conducts this department, is former president of Los Angeles Lapidary society. He will be glad to answer questions in connection with your lapidary work. Queries should be addressed to Desert Magazine, El Centro, Calif.

By LELANDE QUICK

It is Christmas again but this time truly a blessed Christmas when the terms "Prince of Peace" and "Peace on Earth, Goodwill Toward Men" are not empty phrases. I have just returned from an extensive trip over half of America and although travel conditions are worse than they were during the conflict there was one very great satisfaction about it all and that was that the hosts of servicemen encountered were not going off to battle; they were coming home. This should be the happiest Christmas in many a moon.

It should be the happiest Christmas certainly for the growing world of amateur gem cutters to whom these pages belong. For at last freedom has been restored to come and go. Machinery for all phases of gem cutting can be freely obtained. Long deferred plans for assembling shops can proceed. The ill winds of war have blown much good our way for new developments have occurred that have resulted in much labor-saving machinery. The new diamond saw blades developed by industry will give five to ten times the length of service of the best blades obtainable before the war. And then during the past five years a whole library of material about gem grinding and polishing has appeared so that it is easy for interested people to obtain adequate printed information.

The next step in helping people establish themselves in the rediscovered lapidary art is to provide organizations for the systematic education and guidance of those people. The Los Angeles Lapidary society, first such organization to be devoted exclusively to the lapidary art, is now almost six years old. Since its birth there have been about a dozen similar societies established, all of them in the West. Now Chicago has accomplished a long contemplated society in the Chicago Lapidary Craftsmen. Anyone in that area who is interested in learning about gem cutting is welcome to attend their meetings at Austin Town Hall, Lake and Central avenues. Meetings are held at 8:30 p.m. on the first Tuesday of each month. The San Jose Lapidary society, now nearly a year old, has made great strides and is now planning its first show. Visitors also are welcome at their meetings (held on the first Tuesday) at the De Anza Hotel, San Jose, California. If secretaries of existing gem and lapidary societies will inform me by postal of their meeting time and place I will soon publish a list of all the organizations.

In every community there seems to be someone following lapidary procedure seriously as an art form or semi-seriously as a hobby. Inquiry among friends would probably develop the fact that there were a sufficient number of interested people to organize a local society for learning the craft. If there are such groups anywhere I shall be happy to supply them with a copy of the Constitution and By-Laws and sample Bulletins and Shop Notes of the Los Angeles society as a guidance in helping them organize.

Some time ago I announced that I would help organize societies in the Glendale and Beverly Hills areas of Los Angeles county and about 70 persons wrote to me expressing a desire to become members. I still have these names and I intend holding organization meetings about February 1. Therefore if other readers in those areas are interested and will send me their names and addresses I will see that they are notified of these meetings at the time.

With further reference to viewing fluorescent displays (Desert Magazine for October) William Pitts, honorary curator of gem minerals at

the California Academy of Sciences at San Francisco, sends me details of his museum's solution to this difficulty. Pitts doesn't label his specimens at all except with a fluorescent number. Interested people can then identify the specimen by consulting a numbered list outside the case. The museum's new exhibit is mounted on a revolving table making 2 r.p.m. The case has a partition in the center with a white light on one side and a black light on the other so that the specimens move from the black to the white area instead of having the lights change. This arrangement greatly increases the life of the lights as they are not constantly being switched on and off. It would seem to be an ideal solution.

A few weeks ago I viewed the fluorescent exhibit in the San Antonio, Texas, museum and I realized for the first time how annoying it is not to be able to identify the specimens readily although I suppose 90 per cent of the public would know no more, or enjoy the exhibit any more, if they did know the mineral names. One great fault, that should be corrected, is that museum exhibits usually contain no polished specimens and the polished surface fluoresces beautifully. Another great fault is that in excluding light most exhibits also exclude air so that fluorescent rooms are uninvitingly stuffy. I possess one fond memory of the San Antonio museum that always will rate it near the top with me. As you observe the minerals, snakes and Indian baskets you hear the tinkling of a harp as it is beautifully and competently played by an old Mexican who sits obscurely in a corner adding delightful color to the place. How long has it been since you heard a harp?

Many of the advertisements appearing in the magazines are listing prices that seem very high indeed. When material is advertised at several dollars for a square inch cabochon blank that will ultimately yield a small finished cabochon it becomes apparent that the price per carat compares with some finished faceted gemstones. In addition to the cost there is the risk and time element in turning out a finished product. When preform cabochon blanks sell for more than 50 cents each or uncut material sells for more than 25 cents an ounce it should be very fine indeed. I refer to chalcedonies, woods, etc. and not to good gemstones like chrysocolla, turquoise, variscite, tiger eye, etc., all of which are becoming increasingly scarce for good specimens. These latter items are good investments at today's prices just as the opals offered five years ago are worth easily five times as much today.

Experienced collectors seldom are fooled but many inexperienced collectors have no doubt foolishly paid 50 cents an inch for recently advertised obsidian. On the other hand the columns appear to carry many more real values than they do inflated values. As with all businesses new firms should be accepted with caution until they have established the enviable reputations of the firms established long before the war. I would be interested of course in hearing of any gross inadequacies.

DID YOU KNOW . . .

- Cairngorm is smoky quartz.
- Yellow quartz is citrine. It is sold as "golden topaz" but reputable dealers term it "yellow quartz topaz."
- Peridot is green quartz and amethyst is purple quartz.
- A carbuncle is a garnet cabochon.

This page of Desert Magazine is for those who have, or aspire to have, their own gem cutting

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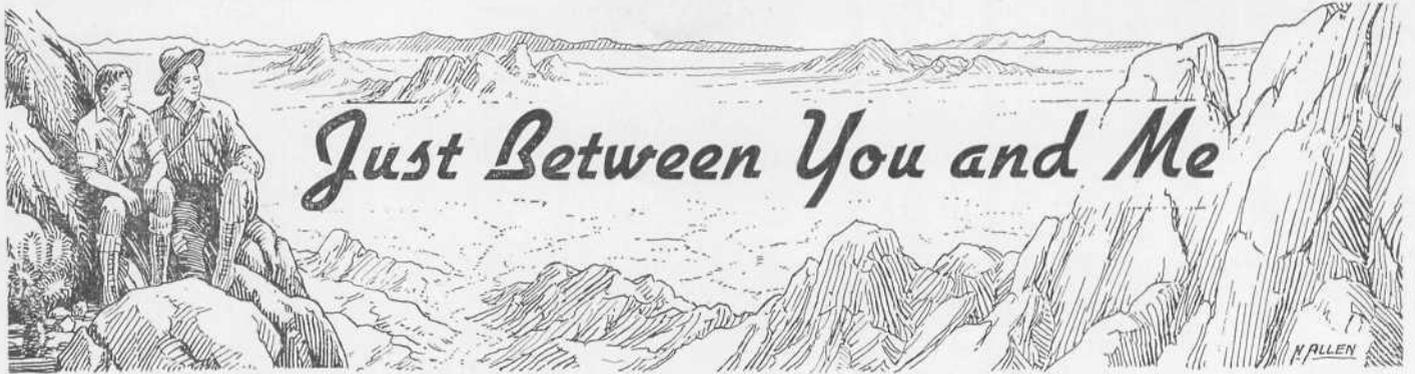
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By RANDALL HENDERSON

THANKS to the cooperation of Scout Executive Carl Helmick of Riverside county, California, and the Scoutmasters in his district, plans are in progress for some of the Scout troops to assume the role of sponsors for certain of the desert's palm oases.

Many of these oases are on public lands—which means that no one locally has any responsibility for their care and protection. But one of these days, if you visit Pushawalla canyon in the Indio hills—described in the October issue of *Desert Magazine*—you will be confronted with this inscription:

REMEMBER, VISITOR!

Nature spent 150 years building this beautiful spot . . . It could be spoiled or completely destroyed in as many minutes.

BUILD FIRES ONLY IN DESIGNATED PLACES!

(Signed)—Boy Scouts of Troop 50, Caretakers

Boy Scout Troop 50 of Indio has volunteered to become unofficial custodian of Pushawalla palm oasis. Under Scoutmaster W. T. Freeman the boys plan to clean out the dead fronds and dry brush that litters the floor of the canyon. Full-skirted Washingtonia palms are highly inflammable and this is one of the most important jobs to be done for the protection of these trees. The boys also have plans for rock work at the springs to provide better and more accessible water for visitors, and for the wildlife of this area.

Other Scout troops have indicated their willingness to become caretakers for other palm fringed springs in the desert country. It is the hope of those sponsoring this program that many of the desert's scenic waterholes, long neglected by county and federal authorities, at last have found competent and friendly hands to protect them against the careless and sometimes vicious destruction of under-educated human beings.

* * *

Arles Adams and I went out over the old Butterfield stage road last weekend—and became hopelessly mired in the sand. Well, it wasn't quite hopeless, but we spent a lot more time getting out than should be necessary for a couple of desert drivers with a big-tired jalopy.

But the experience wasn't a total loss. We settled a long-standing argument as to the best tools for getting a car out of the sand. Generally we carry a pair of old Model T steel running boards for such an emergency. We just gouge out the sand in front of the rear wheels, lay in the Model T boards, and roll out of trouble.

But on this trip we were equipped with a couple of rolls of discarded belting. It was 15-inch belting, heavy and substantial. Some of our friends have been telling us this is the perfect getter-outer for sand trouble. But Arles and I are going back to the Model T boards—at least until we find a better tool. The belting was cumbersome to handle, and the wheels kicked the belting out behind the car as fast as we put it under them.

For a mild case of stuck-in-the-sand the belting may be all right. But when a car is down to the axle the wheels need more substantial footing. Oh, we jacked 'er up and built a foundation

under the wheels after fussing around with that belting for an hour. But we are going back to the running boards next time.

* * *

A movement has been in progress for some time to have scenic Palm canyon near Palm Springs set aside as a national monument. Most serious obstacle is the fact that the most accessible part of the canyon is within the reservation of one of the Cahuilla tribes. The Indians derive considerable income from an admission charge to visitors.

All of which is entirely legitimate. The Indians learned that kind of enterprise from the white men. But unfortunately, while the Cahuillas learned to collect admissions at the gate, no one seems to have explained to them that when they set up a public service enterprise of this type they also assume an obligation to the public which pays the fare.

The Indians have failed in this obligation in two respects: They unlock the gate only when it suits their fancy—which makes it highly inconvenient for visitors who sometimes travel long distances to visit this gorgeous canyon. And they have so far failed to take adequate measures to protect the palm forest against fire hazards which increase in direct ratio to admissions.

Under an antiquated theory of "free enterprise" to which some of our citizens still cling, the Indians have every right to fence off that canyon and use it for a cattle range if they wish. A more enlightened viewpoint is that since Nature spent millions of years creating the beauty in this canyon, there is an obligation on the part of its custodians to regard it as a heritage of mankind, to be preserved for the benefit of present and future generations of Americans. Assuming the latter view, if the Indians will provide proper protection and management, that is fine. If not, then they should be amply compensated for their property and the title turned back to the public—which includes the Indians—for administration by the National Park service. We know the park rangers will do the job properly.

* * *

John C. Van Dyke wrote of the desert:

"It is a gaunt land of splintered peaks, torn valleys, and hot skies. And at every step there is the suggestion of the fierce, the defiant, the defensive. Everything within its borders seems fighting to maintain itself against destroying forces. There is a war of elements and a struggle for existence going on here that for ferocity is unparalleled elsewhere in Nature . . .

"It is stern, harsh and at first repellent. But what tongue shall tell the majesty of it, the eternal strength of it, the poetry of its wide-spread chaos, the sublimity of its lonely desolation! And who shall paint the splendor of its light; and from the rising up of the sun to the going down of the moon over the iron mountains, the glory of its wondrous coloring!"

And that, probably, is as close as man will ever come to expressing in words this strange paradox which is the desert. After all, what each of us sees in the desert is a reflection of something within ourselves. And that is equally true of every environment in which we may find ourselves. In a large measure, humans create their own beauty, and their own ugliness, in this world. I wish that our educational system gave greater emphasis to this simple truism.



From painting by Clyde Forsythe. Courtesy Biltmore Salon, Los Angeles.

The Desert Rat

By HARRY E. WILDER

Over the ridge from the played-out mine
 Where the juniper grows with the piñon pine,
 Winding on in the silence dead
 Down slopes of yucca and nigger-head,
 Crossing the mesa wild and free,
 Land of cactus and Joshua tree,
 Through the mesquite to the alkali flat
 Runs the trail of the desert rat.
 Punching his jacks through the shifting sand,
 Part and parcel of No-Man's-Land,
 The sort to die in the last grim ditch
 For a gambler's chance to "strike it rich,"
 Tanned and gaunt and grizzled and gray,
 He has walked the desert and learned its way;
 Chill of winter and summer's heat,
 Hope deferred and weary feet
 Are written under his old slouch hat
 When you look in the eyes of the desert rat.
 The false mirage that lures him on,
 Forever beckons and then is gone,
 Till to his troubled brain it seems
 Symbolic of Life's hopes and dreams.
 For sand-storm's blast and maddening thirst
 And poisoned waters that God has cursed,

And the lonely years have taken toll
 And left a scar on the wanderer's soul!
 But he knows the marvel of desert dawn,
 When the stars grow dim and the day is born—
 A flush in the east, a breeze from the hills,
 A rosy glow that spreads and fills
 The saw-tooth peaks till they melt as one
 At the magic touch of the rising sun!
 His to see the noon sun's glint
 On lofty cliffs of wondrous tint,
 Where green and yellow and purple blend
 Till the canyon wall seems the rainbow's end.
 He has felt the awe of the desert night's
 Fantastic shadows and ghostly lights;
 To him by the greasewood's waning blaze
 Have come the faces of other days,
 To vanish at the coyote's howl,
 Or the mournful cry of the Cuckoo owl.
 From youth to age he has tramped the trail
 From the peaks that win to the sinks that fail;
 Though he takes his gold to the haunts of men,
 Yet the Desert knows he will come again,
 And will "hit the trail" till he wanders Home
 And lays his bones where he loved to roam.

DESERT NIGHTS

By CORA C. WILLIAMS
 Alamosa, Colorado

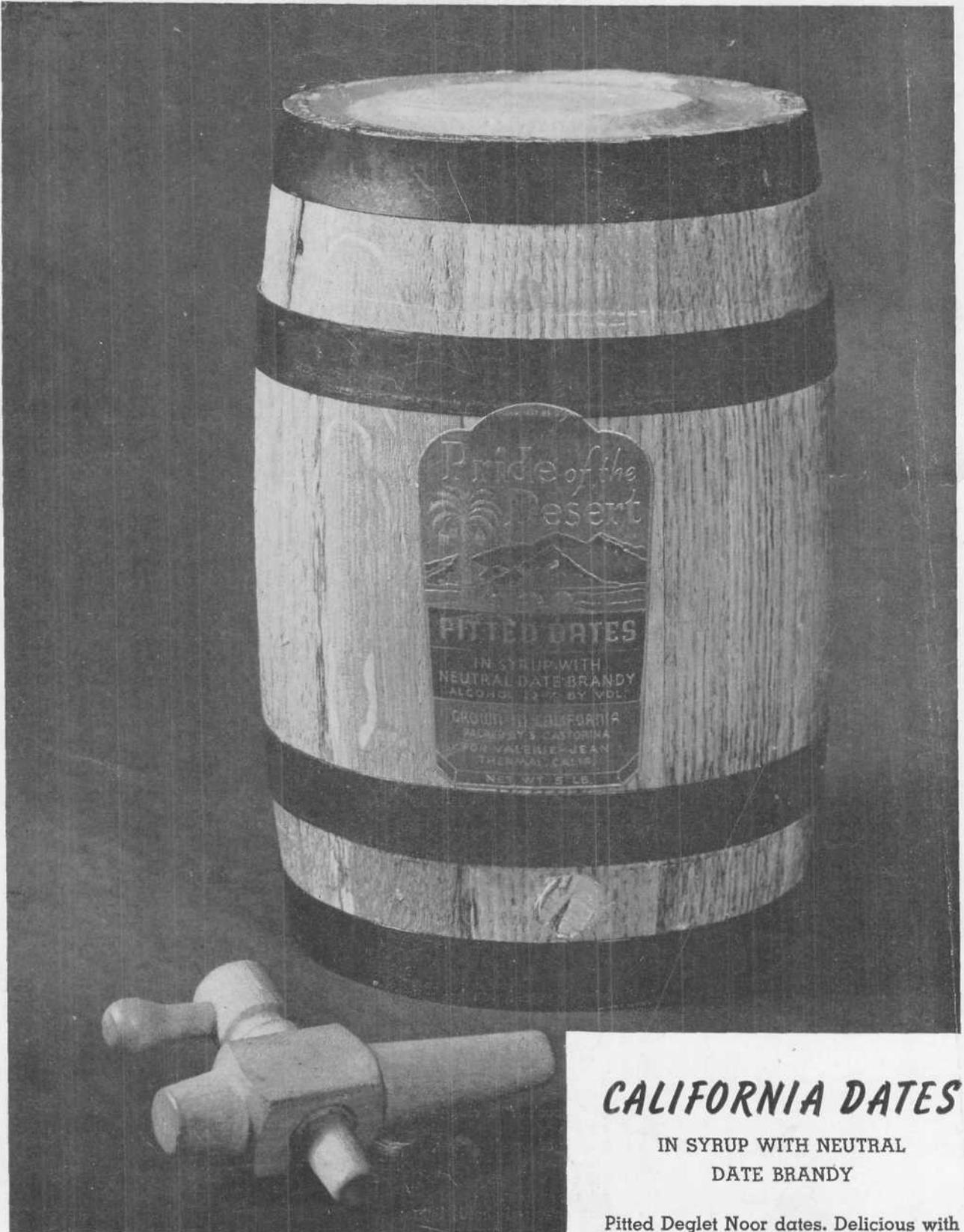
Moonlight drips from the Joshua trees,
 And pours over white-hot sand;
 It stabs my heart with the mysteries
 That I cannot understand.
 Imagination leads me afar,
 I see strange shapes and shades,
 A cactus bloom is a samovar
 That a passing cloudlet fades.

A lonely rock is a castle tall,
 With turrets high and wide,
 A sagebrush is a dancer small,
 With goblins by her side.
 There's enchantment in a desert night,
 And romance 'neath the moon,
 That fills me with a sweet delight
 Like a haunting, witching tune.

CREED OF THE DESERT

By JUNE LEMERT PAXTON
 Yucca Valley, California

Gypsy-like breeze, spring dancing breeze,
 That ripples the sanddunes and sings
 through the trees.
 That sings in the valley and wanders
 away—
 Gypsy-like breeze that comes every day!



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