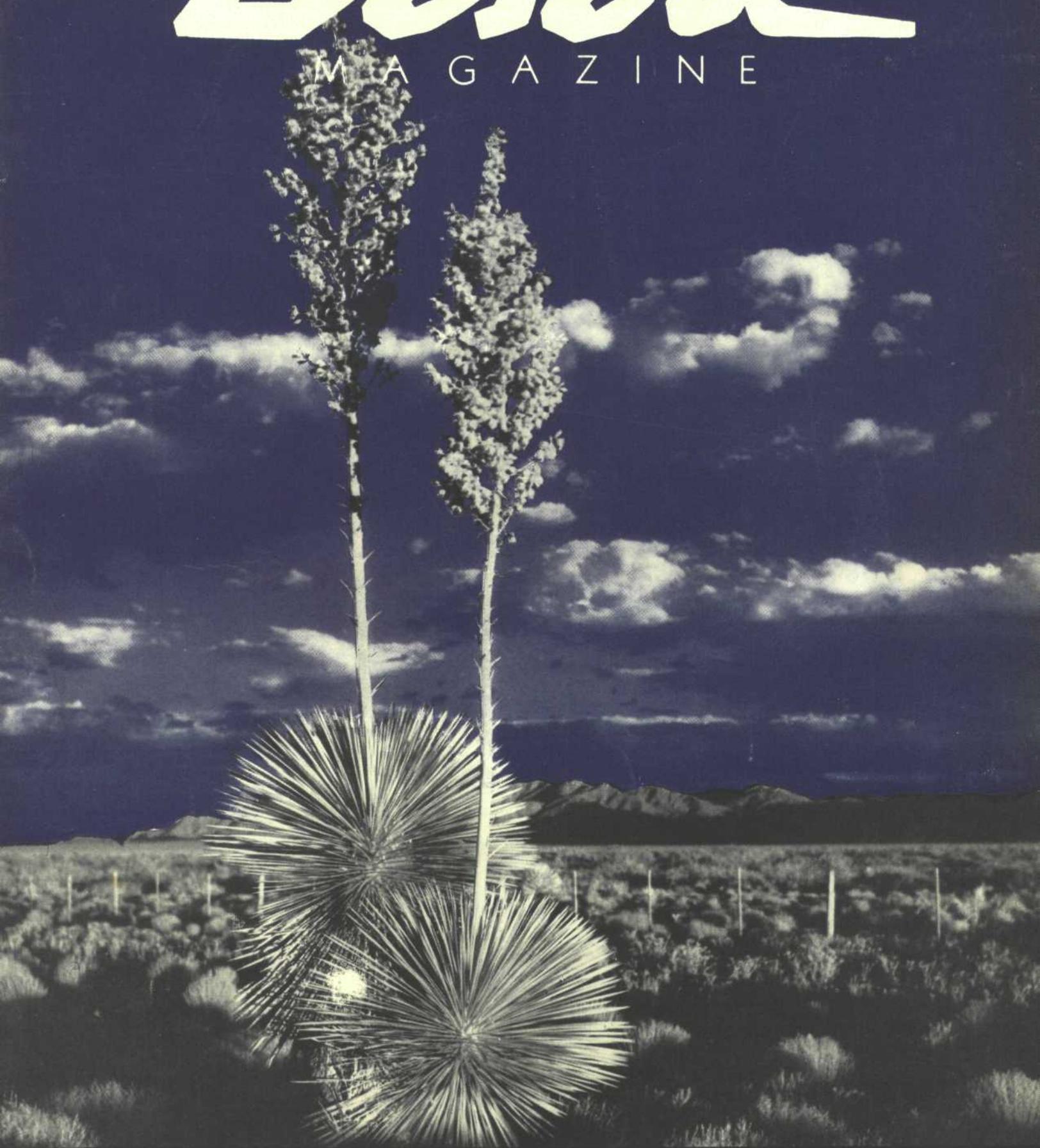


THE

Desert

M A G A Z I N E



MAY, 1947

25 CENTS



OUT OF WARTIME RESEARCH— **THE OIL YOU CHANGE ONLY 2 TIMES A YEAR!**

HOW CAN TRITON LAST SO LONG?

THE THINGS THAT MAKE ORDINARY OILS BREAK DOWN AFTER 1,000 MILES OR SO ARE ACIDITY, SLUDGING AND OXIDATION. DURING THE WAR, UNION OIL SCIENTISTS DEVELOPED SPECIAL COMPOUNDS FOR THE ARMED FORCES TO OVERCOME THESE WEAKNESSES. THESE COMPOUNDS HAVE BEEN INCLUDED IN NEW TRITON MOTOR OIL.

WHAT DO YOU MEAN— DIRTY OIL MEANS A CLEAN MOTOR?

NEW TRITON CONTAINS A SPECIAL DETERGENT COMPOUND THAT CLEANS YOUR ENGINE AS YOU DRIVE. LOOSENED DIRT IS HELD SUSPENDED BY THIS COMPOUND SO IT CAN'T HARM YOUR ENGINE. IN OLDER ENGINES THIS MAY CAUSE THE OIL TO DARKEN BUT IT DOESN'T MEAN THE OIL SHOULD BE CHANGED.

WHAT ABOUT OLD CARS?

NEW TRITON WORKS EQUALLY WELL IN OLD CARS OR NEW. BUT NEW CAR OWNERS WILL ESPECIALLY BENEFIT BY USING IT. SINCE TRITON CLEANS AS IT LUBRICATES, NEW MOTORS STAY FAR CLEANER.



UNION OIL COMPANY
OF CALIFORNIA

WHAT DO PEOPLE WHO USE IT THINK? SALES ARE BOOMING. THOUSANDS OF PEOPLE HAVE TESTED NEW TRITON AND FOUND THEY CAN DRIVE FOR MONTHS WITHOUT AN OIL DRAIN IN COMPLETE SAFETY—AND GET BETTER ENGINE LUBRICATION THAN EVER!



CHANGE TO TRITON THIS WEEK AT ANY UNION OIL STATION— ADD OIL AS NEEDED— BUT **CHANGE ONLY 2 TIMES A YEAR!**



DESERT CALENDAR

- May 1—Pioneer centennial celebration, honoring living Utah pioneers, Tabernacle, Salt Lake City, Utah.
- May 1—Green corn dance, annual fiesta, San Felipe Pueblo, New Mexico.
- May 1-4—Junior Navajo and Hopi art show, sponsored by Museum of Northern Arizona, Flagstaff, Arizona.
- May 1-15—Annual exhibition, students U. S. Indian school, Museum of New Mexico, Santa Fe, New Mexico.
- May 2-3—Regional high school music festival, Price, Utah.
- May 3—Pioneer May day, Twentynine Palms, California.
- May 3—Green corn dance, ceremonial races, Cochiti and Taos pueblos, New Mexico.
- May 3-4—Sierra club, Desert Peaks section, climb of New York butte, Inyo range, opposite Lone Pine, California.
- May 3-4—Ramona pageant, Ramona bowl, Hemet, California.
- May 3-4—Sierra club hike up Black mountain, San Jacinto mountains.
- May 3-4—Sierra club visit to Trona and Searles lake as guests of Searles Lake Gem and Mineral society. Campsite at Valley Wells.
- May 3-25—Annual Desert and Mountain Wildflower show, sponsored by Julian Woman's club, Julian, California.
- May 4—Verde Valley pioneer picnic, Camp Verde, Arizona.
- May 4—Opening of exhibition of New Mexico color prints, traveling exhibition of Museum of New Mexico, at Las Vegas, New Mexico.
- May 4-11—Music week, Santa Fe, New Mexico.
- May 5-7—Cinco de Mayo celebration—Nogales, Arizona and Nogales, Sonora, Mexico.
- May 5-31—"Message of the Ages," pageant of Church of Jesus Christ of Latter-day Saints, Tabernacle, Salt Lake City, Utah.
- May 7-10—Boulder City May festival, Boulder City, Nevada.
- May 12-13—Fiesta de la Pesca, Guaymas, Sonora, Mexico.
- May 15-18—Hellorado, rodeos, parades, pageants, Las Vegas, Nevada.
- May 16—Parade and pageant, "The Desert Blossomed as the Rose," Ogden municipal stadium, Ogden, Utah.
- May 16-31—Exhibition, work of James Humatewa, Indian artist, and Yucatan photographs of Laura Gilpin, Museum of New Mexico, Santa Fe, New Mexico.
- May 17-18—Sierra club, Desert Peaks section, climb of Telescope peak, Panamint mountains.
- May 18—State pistol meet, Phoenix, Arizona.
- May 24—Arizona trout season opens.
- May 28-June 1—Western Zone trap-shooting carnival, Salt Lake City, Utah.
- May 30-June 1—Thirtieth annual Beaumont, Cherry Valley Cherry festival, street dance, barbecue, parade, Beaumont, California.
- May 30-June 5—Albuquerque Market week, Albuquerque, New Mexico.
- May 30-Sept. 20—Exposition, state fair grounds, Salt Lake City, Utah.
- May—Utah state drama festival, Salt Lake City, Ogden, Provo.



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RANDALL HENDERSON, Editor. BESS STACY, Business Manager.
HAROLD and LUCILE WEIGHT, Associate Editors.

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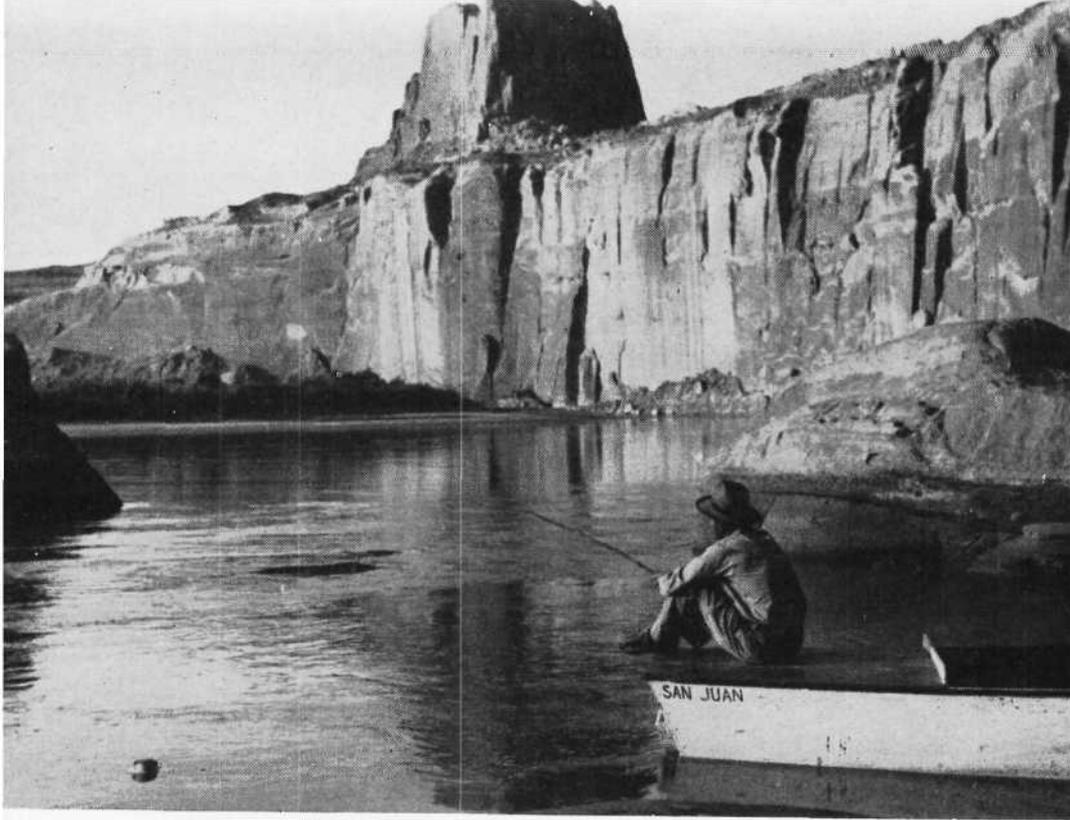
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COVER CONTEST

Desert Magazine's annual cover contest—which produces many of the beautiful cover pictures used from month to month—is scheduled for May. All photographers, both amateur and professional, are invited to send in their best 9x12 vertical prints for this cover event. Closing date is May 20. First prize \$15.00. Second prize \$10.00. For each non-winning picture accepted for publication \$5.00.

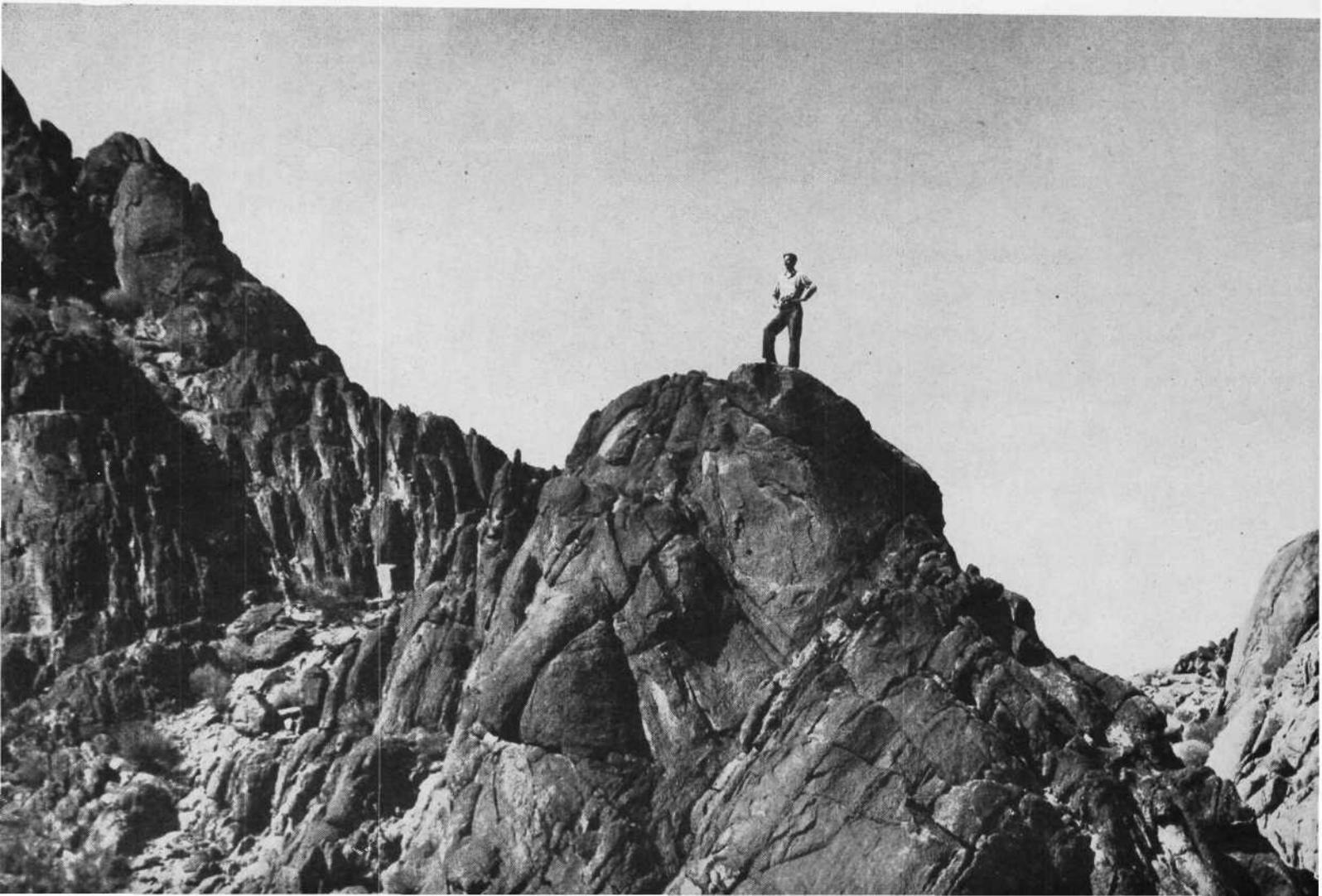


LAZY DAY . . .

First prize winning picture in the Desert Magazine's March photographic contest under the subject of "Recreation" was this print taken by Walter H. Koch of Salt Lake City. The San Juan is one of Norman Nevills' boats and the scene is the Colorado river near the Crossing of the Fathers. Taken at 1/25 second, f.16.

HIKER . . .

The photograph below was taken in the Devil's Playground near Baker, California. The photographer, Don Ollis of Santa Barbara, California, was awarded second prize for this picture made at 10:00 a. m. with a clear sky, Verichrome film, 1/25 second at f.22. The camera was a postcard size Eastman—3A.



Dr. Harvey Nininger believes that meteorites are widely scattered over the earth's surface—waiting to be found by folks who know a celestial rock when they see one. For many years, through lectures and magazines and pamphlets he has been urging people to "keep your eyes open" for meteorites—and telling how they may be identified. As a result, he has acquired one of the largest personal collections in the world. Recently he has opened his own museum near Meteor Crater in northern Arizona where visitors may see and learn about the "star dust" which has been pelting the earth for millions of years. This story about Dr. Nininger begins many years ago when he was a teacher of geology in a little Kansas college.

Star-dust Hunter

By JOHN HILTON

SOME weeks ago, during a trip into northern Mexico, I was told that a large chunk of natural iron was being used by one of the *rancheros* as an anvil in his blacksmith shop. After further inquiries I visited the ranch, and there I found what I suspected—a meteorite. For me, this discovery ended a long search that began on the campus of a small Kansas college when I was very young.

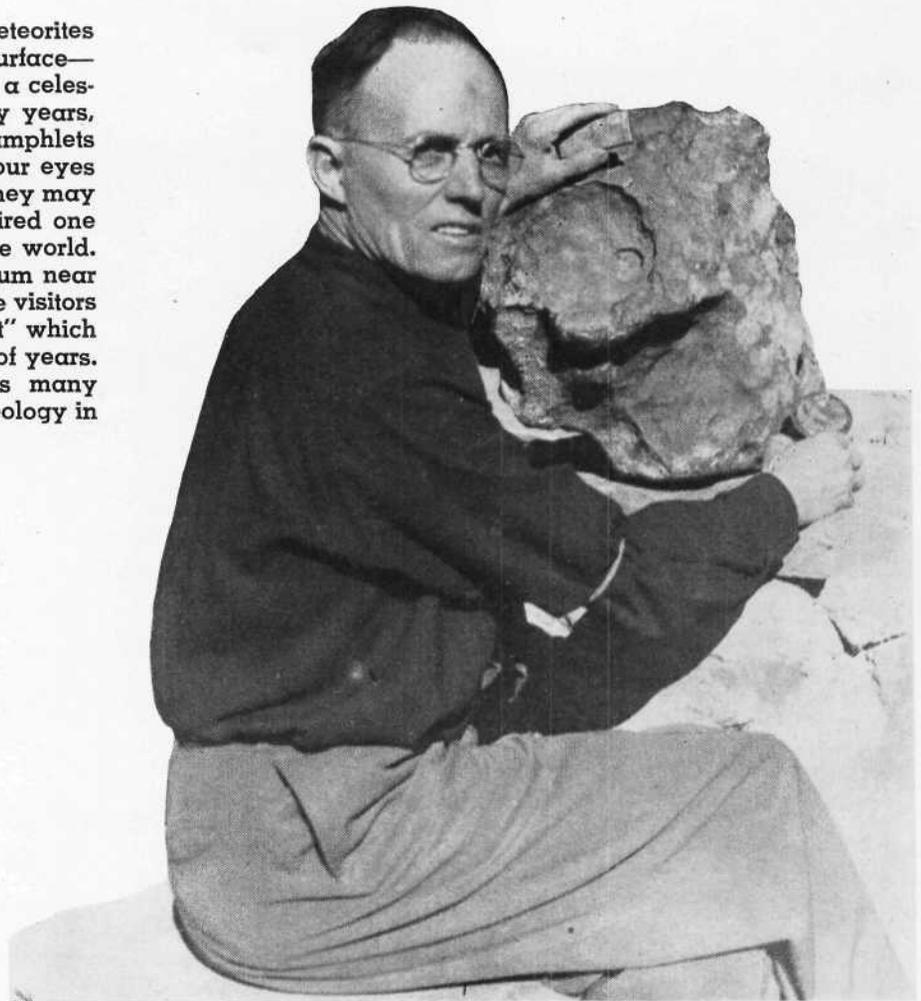
That day, long ago, I was down on my hands and knees watching the traffic on a hill of ants when the professor of biology stopped and stood over me for a moment. It was Dr. Harvey Nininger, who was to influence my entire life, and who eventually became one of the outstanding authorities on meteorites.

His interest began to play a part in my life when he loaned me a reading glass and told me something about the habits of ants. A little later he took time from his busy day to show and explain to me various items of general science in the college museum. Everything thrilled me, from the stuffed birds to the collection of rocks. From that day to this my interest has extended to every branch of the natural sciences.

During the more than thirty years which have elapsed since our first meeting, Dr. Nininger has become a specialist. He probably knows more about meteorites than any other living person.

I have kept contact with him all these years, and when I saw the meteor-anvil in Mexico I knew my friend would be interested in it. I bought the 269-pound chunk of iron at a figure which would cover the cost of several much better anvils.

On my return to California I wrote to



Dr. Nininger with one of the many meteorites in his famous collection.

the doctor, telling him I had discovered a new meteorite fall, since there were none of record in that part of Mexico.

His answer was jubilant, but he warned me not to be too sure that my specimen was from a new and unrecorded fall. His records (he has bales of them) indicated there probably was one missing piece from a fall of meteorites discovered in 1896 at Arispe, Sonora, almost 200 miles from the place where I had gotten the "anvil." It seemed unlikely under the circumstances that a piece of celestial iron would have wandered 200 miles from the point of its impact with the earth—but "finger-printing" would settle the point.

In using the term finger-printing, I refer to the process by which meteorites may be classified and identified. This is the method: I sawed off a small corner about two inches in diameter, ground it down on a lapidary wheel to eliminate the marks of the hacksaw, then buffed it to a high polish. The next step was to apply a dilute solution of nitric acid to the silvery surface. Slowly, like the development of a photographic print, sharp geometric lines began to appear.

Dr. Nininger had furnished a specimen of meteorite from the Arispe fall for comparison. As the acid began to etch a design

in our newly-found meteorite we watched with eager interest to see how nearly the pattern would resemble the specimen from the Nininger laboratory. It took only a minute and a half. Dr. Nininger had been right. The width of the bands and the general pattern of the two slabs were so nearly alike as to remove all doubt. This was the missing meteorite from the Arispe fall. Somehow, it had wandered 200 miles over mountains and desert from its original location to serve as an anvil for a Mexican *ranchero*.

A few days later I arrived at Dr. Nininger's American Meteorite museum, located on Highway 66 near Winslow, Arizona. The museum is on a hill overlooking Meteor crater where at some prehistoric time had fallen the largest celestial visitor ever known to have left its mark on the North American continent. In the car with me was the 269-pound meteorite—to be delivered to a man to whom I am greatly in debt for the interest he took in a small boy many years ago. Dr. Nininger had forgotten about that incident on the college campus—but it had made too deep an impression on me ever to be forgotten.

During the intervening years he has assembled probably the largest collection of meteorites in the world. They are now



This is Meteor crater in northern Arizona—570 feet deep and 4150 feet from rim to rim.

housed in a fine flagstone building where they are accessible to all who travel the highway between Flagstaff and Winslow.

In the completion of this museum Dr. Nininger has attained a goal of many years planning. He is a dreamer—but also a practical man—one of the kind whose dreams generally come true.

As we sat in the museum surrounded by cases of polished and unpolished meteorite samples and tons of rough pieces too large to put under glass, I asked a question that has been in my mind for years. I wanted to know when it was he had decided to give up other scientific pursuits and begin the study and collection of these odd stones and chunks of iron which occasionally hurtle to our earth from unknown outer space at thirty times the speed of a rifle bullet.

"It was exactly at 8:57 p. m. November 9, 1923," he replied with that precision which is a part of his normal conversation. "I had just stepped outside after a meeting at the college with a faculty friend when a ball of fire which lit the sky like daylight streaked overhead and disappeared in an explosion behind the top of a pine tree opposite where I was standing. Meteorites had always been interesting to me as scientific curiosities and I had wondered vaguely if it would be possible to locate one which was seen to fall at a distance. I had worked out in my mind a possible method of approach to the problem. I checked the time, and without moving my feet took a pencil and made a mark on the sidewalk where I stood during the fall. This was the first step in a long and rather baffling search."

Next morning residents of Macpherson, Kansas, were a bit startled at the spectacle of Dr. Nininger and a physics professor with a surveyor's transit and a notebook taking a bearing on the top of a pine tree from the mark left the night before on the sidewalk. The two men weren't secretive

about their project. They realized that the more folks they could get interested, the better it would be.

Newspaper stories began to appear asking persons who had seen the fall to please write and state the direction as accurately as possible. The resulting mail was so heavy and confusing the physics professor spent one evening reading, and threw up his hands. Not so Dr. Nininger! Here was the place to apply psychology. He must analyze all of these letters and try to determine which writers were accurate observers and which just crackpots. This sifting process took a long time. Finally he found that about a dozen lines drawn from the more plausible accounts converged on an area in Kiowa county, Kansas.

But it would take time, a lot of time and search to locate a few scattered fragments of meteorite with only a vague idea as to the place of its fall. He could not do the job alone. He was raising a family on a teacher's salary, and could spare neither the time to make the search nor the funds to have it done. He must have the help of folks who lived in that area.

He solved the problem by offering to give natural history lectures in the schools in Kiowa county, and by securing newspaper publicity. He lectured on bird life and other subjects, but always devoted part of the talk to meteorites and the possibility of finding them in that locality. He carried samples with him to show the school children what to look for.

Eventually he developed wide-spread enthusiasm for the discovery of the "lost meteorite." There were many false leads and some disappointments, and it was not until some time later that a farmer dropped into the newspaper office in Coldwater in Comanche county, adjoining Kiowa county on the south, with an odd-looking rock he had picked up in his field.

Dr. Nininger arranged another trip. Perhaps this would be the real thing. And

it was! He had acquired his first meteorite, and with it a hobby which was to become a career.

For a while he continued his teaching of geology in the school, and occasionally he published a scientific paper. But he felt that he was getting into a rut that held but little future for him. He talked the matter over with Addie, his wife. She was one of the few women in a thousand who are not afraid to change the pattern of their lives, even though it might mean insecurity and hardship for a time. To her goes much of the credit for that place Dr. Nininger has attained in the world of science today.

Two years later Dr. Nininger secured a year's leave of absence, and in a house-car he had built the previous summer, the family embarked on a great adventure. There were three small children, and the car was equipped with a built-in crib for the youngest, just a few months old. They had \$19.50 in cash and a tank full of gas—and a great deal of hope. They would collect natural history specimens for Ward's at Rochester, and give lectures in any school which would give them an auditorium and a share in the admissions, or a fee, no matter how small. Somehow they would get along, and perhaps add an occasional meteorite to their collection.

Many miles of dusty roads and snow and mud rolled under the tires of the home-made house-car during that first trip. But they saw much of the country, made many new friends, and through purchase and exchange the collection of meteorites continued to grow.

Dr. Nininger held to the theory that there are hundreds of meteorites scattered over the earth's surface, and he constantly advised his listeners, "Keep your eyes open!" He felt that if he could interest enough people, and especially the youngsters, and make known to them how to recognize a meteorite, not only his own

collection but those of the other museums would increase more rapidly.

The first Christmas on the road was a low point in the new career. Schools had too many other programs to be interested in natural history lectures. Checks due for specimens that had been forwarded to buyers were slow coming in. They were almost at the point where they lacked money to buy postage stamps.

They came to a small town and parked the car near a pecan grove. The nuts had been harvested but there were a few to be gleaned, which the workers had missed. Here was something to do—and something to eat. While the family gathered pecans, Dr. Nininger walked into town to see the school principal about a lecture. The teacher was a pleasant woman and interested in the lectures, but such decisions had to be referred to the president of the school board. As she described him, the board chairman was a fine gentleman, but a cautious guardian of the taxpayers' money. He was also president of the bank.

When Nininger arrived at the bank, the president was talking on the telephone. Dr. Nininger planked some specimens of iron and nickel meteorite down on his desk, and when the president hung up the phone, he picked them up and asked about them.

"You aren't kidding are you?" the banker asked. "Is it really one of these things we see fall from the sky? Can you prove it?"

The answers evidently were very convincing, for when the interview was ended the president had arranged for a series of lectures, and out of his own pocket had

bought some specimens for the school science department.

That solved the problem of Christmas for the kiddies. Out of the confidence gained in surmounting such obstacles, the Niningers knew they were going to make a success of this venture into a new world of activity. At the end of the trip they counted up their resources. They had paid off a \$300 debt, had a few dollars in savings, were in good health, and had brought to light two new meteorites which the scientific world was eager to learn about.

As time went on Dr. Nininger spent more and more of his time studying meteorites, hunting them, or lecturing about them. Finally in 1930 he resigned his post at the college and a short time later became a member of the staff of the Colorado museum in Denver.

The knowledge of meteorites which Dr. Nininger had spread far and wide brought far-reaching results. Meteorites began to turn up in many strange places. Children found them in the plowed fields. They were discovered in rock walls. One farmer was using a big one to keep the wind from blowing the roof off his chicken-coop. It is no mere accident that Kansas has produced more meteorites than any other similar area in the world. Probably there are just as many in California or Florida—but Dr. Nininger's lectures have not been heard by as many school children in these states.

In Mexico Dr. Nininger found tools beaten from meteorites by the Indians. In New Mexico he was able to locate seven pounds of blackened stony meteorites which, when they fell, lit the sky brighter than day, left a cloud of haze several miles

long in the stratosphere, and were reported definitely to have fallen in four different states. Shrewd deductions and a great deal of patience located this fall—a feat which I would say is equivalent to finding a needle in a hundred haystacks. Tracing the location of a meteorite which is known only by a flash of light across the sky takes the patience of Job and the detective skill of a Sherlock Holmes.

On many of his trips Dr. Nininger passed and visited the great crater near Winslow in northern Arizona. This giant shell hole is 4150 feet across from rim to rim and 570 feet deep. It occurred to the doctor that this would be the proper location for a museum and laboratory specializing in the study of meteorites. And that dream also has come true, thanks to his perseverance and the loyalty of his very pleasant and efficient wife.

There the motorists who roll along Highway 66 may see and learn most of what is known about the physical properties of meteorites. There are stony ones which look like rounded bits of rock but show specks of nickel-iron when polished. There are iron meteorites with rusty pitted exteriors, and polished surfaces with geometrically etched patterns which make it possible to distinguish the material of one fall from that of another. Then there are stony irons that look like metallic fruit cakes. Others are light in weight and chalky in appearance with a black glassy coating—the Howardites. Visitors at the

Dr. and Mrs. Nininger at their American Meteorite museum on U. S. Highway 66 overlooking Meteor crater.



museum get a short lecture on how to tell meteorites from terrestrial rocks, and how to make intelligent reports on meteor falls.

Now that rocket missiles and high-flying planes have stirred the layman's interest in the stratosphere, a study of meteorites, their character, speed and behavior has taken on a new importance.

The location of the museum has many advantages for scientific purposes. It looks out on a vast sweep of the northern Arizona desert far removed from population centers and geographical obstacles. The White Sands proving grounds which Dr. Nininger frequently visits as an ad-

visor in connection with such "artificial meteorites" as rockets, is only 350 miles away.

Dr. Nininger envisions the day when a fully-equipped and well-staffed laboratory and observatory will supplement the facilities now at the northern Arizona museum. Of course the facilities would include a landing strip and a plane for prompt trips to the site of newly reported falls. The fulfillment of this dream presents no greater obstacles than Dr. Nininger has overcome since that day when he and Addie with \$19.50 and a house-car started out on their great adventure.

DESERT QUIZ

One of the functions of Desert Magazine is to give its readers a better acquaintance with the history, geography, minerals, botany, Indian lore and the recreation opportunities in the desert country. And probably no part of the magazine contributes more to this end than does the monthly quiz. Some readers of Desert will have a big advantage over others because they have had better opportunities to travel the desert roads. But all of them can learn something new from this page. Ten correct answers is a good tenderfoot score. Those who attain 15 are eligible to become honorary members of the fraternity of Desert Rats. And when you score 18 you become a Sand Dune Sage. The answers are on page 37.

- 1—Which one of the following words is not a synonym of the others—
Arroyo..... Wash..... Wadi..... Escarpment.....
- 2—Historically, the Jayhawkers are associated with— The Apache wars.....
Trek across Death Valley..... Founding of the Mormon church in Utah.....
First navigation of the Colorado river.....
- 3—Charleston peak is located in—
Nevada..... California..... Arizona..... Utah.....
- 4—If you were equipping your car for desert roads where there was likely to be heavy sand, the least important item in your kit would be—
Water..... Jack..... Tire chains..... Shovel.....
- 5—One of the following towns was never the capital of Arizona—
Prescott..... Wickenburg..... Phoenix..... Tucson.....
- 6—Leader of the first camel caravan across the United States was—
Lieut. Beale..... Kit Carson..... Lieut. Emory..... Bill Williams.....
- 7—Tonto basin is in—
California..... New Mexico..... Nevada..... Arizona.....
- 8—The mineral most commonly associated with iron in meteorites is—
Copper..... Tungsten..... Gold..... Nickel.....
- 9—Tucson, Arizona, was founded by—
U. S. Army..... Spanish padres..... The Mormons..... Fur trappers.....
- 10—The Inter-tribal Indian Ceremonial is held annually at—
Albuquerque..... Phoenix..... Gallup..... Window Rock.....
- 11—Color of the Joshua tree blossom is—
Blue..... Lavender..... Orange..... Creamy white.....
- 12—The Colorado tributary which Powell named the Dirty Devil is now called—
Fremont river..... Escalante..... Virgin..... San Juan.....
- 13—Norman Nevills is— An artist at Taos..... A senator from Utah.....
A national park superintendent..... A famous Colorado river boatman.....
- 14—On Highway 66 near Winslow, Arizona, the motorist crosses—
The Gunnison river..... The Rio Grande..... The Little Colorado.....
The Bill Williams river.....
- 15—Cochise was a famous—
Apache Indian..... Yuma..... Navajo..... Paiute.....
- 16—Ruth, Nevada, is well known for its— Famous caves.....
Open pit copper mining..... Prehistoric cliff dwellings.....
Volcanic crater.....
- 17—After mining and processing, quicksilver is shipped in—
Pigs..... Bags..... Flasks..... Kegs.....
- 18—According to legend, those who drink of the waters of the Hassayampa river will— Live to a ripe old age..... Always have good luck.....
Never again tell the truth..... Become bald-headed.....
- 19—The hardest of the following minerals is—
Chalcedony..... Calcite crystals..... Obsidian..... Topaz.....
- 20—To reach Palm Canyon from Palm Springs one travels—
North..... South..... East..... West.....

Hard Rock Shorty of Death Valley



"Anybody ever get bit by a rattle-snake around here?" The question was asked by the newest arrival at the Inferno Dude ranch.

Hard Rock Shorty was in a bad humor. He'd taken a job hustling baggage at the Inferno to get a grub-stake for his next prospecting trip. The dude who wanted to know about the rattlers had brought 14 pieces of luggage along—and after prying all that "hifalutin junk" out of the station wagon and stowing it away in the cabin Shorty was plumb disgusted.

"Sure there's rattlers here," he exclaimed, "an' they hate tenderfeet so bad they'll climb the outside of the house and come down the chimney to get a bite outa one."

The dude turned a little pale. "Are they really poisonous?" he asked.

"Hell man, them snakes is full o' pizen. Up here they gotta special kind o' pizen. Makes everything turn white. They even leave a white trail when they crawl aroun'."

"See all that white ground over there?" and Shorty waved toward Death Valley's well known salt flats. "Snakes did that—jus' crawlin' over the ground."

"Anything bit by them rattlers swells up biggern a house. Guess you never heerd about ol' Pegleg Pete. Usta prospect in them hills over there. One night Pete went out to set a coyote trap an' a snake nipped him in the leg. Happened to be his wood-en leg an' Pete didn't feel it."

"Fust thing he know'd he was raisin' right up in the air. Kept on goin' up while Pete pawed the air with both arms and his good leg tryin' to find somethin' to hang onto. The pizen in that wooden leg was swellin' it up like a tree trunk and Pete was growin' right up in the air."

"Boys discovered him up there next mornin' thirty forty feet in the air."

Shorty started to walk away.

"But Mr. Hardrock, they didn't leave the poor man up there did they?"

"Hell no, they finally shot 'im down to keep 'im from starvin' to death."



Portrait of a Velvet ant—by the Author.

'Little Old Man of the Sands'

By RICHARD L. CASSELL

IT IS called a Velvet ant, but it really isn't an ant at all, this hairy little creature of the dunes. Scientifically, it is *Dasympulilla gloriosa*, the "glorious one." It closely resembles the ant and is often confused with that insect, particularly those varieties of Velvet ants possessing close-cropped "velvet." They range in hue from bright red through auburn and yellow to pure white.

Actually it is a wasp. The females are wingless, but the males have dark wasp wings and strong flight. It is something to see these furry desert creatures running at a rapid clip over the sand, their scurrying punctuated by abrupt split second halts. Their course is remarkably straight and the distance covered by these insects is amazing.

Most of the members of the family are guests or parasites in the nests of other wasps and bees, but aside from that, their habits are solitary.

Sometimes called the "little old man of the sands," its disposition is amiable and it is not given to aggressiveness. However, if pinned down with a stick or some object for close scrutiny, it will be found that creatures thus provoked possess extremely long stingers and their bodies which appear soft and furry are actually ensheathed in a chitin armor as hard as a nutshell.

Most Mexicans and Indians fear the Velvet ant, believing its sting to be fatal. This is not true, but the sting is very painful. It was these people who dubbed this handsome insect "cow-killer" or sometimes "sheep-killer" and they trample it to death at every opportunity. Actually there is no basis for this fear.

It is only through high magnification that one can appreciate an insect's beauty—or ugliness, as the case may be. In reality, this creature measures only from one-half to three-quarters of an inch in length.

Mormon Crossing at Hole-in-the-Rock

In the winter of 1879-80 a wagon train of Mormon settlers enroute to the San Juan river to found a new settlement, spent three months with crude hand tools chiseling a passage way through and over solid rock to cross the Colorado river. This is the famous "Hole-in-the-Rock" crossing. Recently Chas. Kelly and two companions retraced the old route — and here is the story of what they found.

By CHARLES KELLY



DESERT travelers who have entered Monument valley from the north will remember the little settlement of Bluff, Utah, located in a picturesque setting on the banks of San Juan river. Due to erosion of soil by floods the town is now almost abandoned; but it has the distinction of being the first settlement in San Juan county. The story of how it came into existence is one of the most fascinating chapters of Mormon pioneer history.

Bluff can now be reached over a good road. But Mormons who settled there in 1880 traveled the toughest trail ever attempted by wagons anywhere in the West. Although I recently retraced part of that trail, it is still difficult to believe that wagons ever passed through the place known as Hole-in-the-Rock. Any sensible man would agree it couldn't be done.

Mormons first came to Utah in 1847. By 1879 nearly every valley in the state had been settled. San Juan county, in the southeast corner, was a land of mountains, red cliffs and deep canyons, difficult of access and apparently worthless. But one day Brigham Young's scouts brought word of a spot along San Juan river which might support a new settlement and plans were laid to occupy it. A number of families in Cedar City and Parowan were called upon to pull up stakes and migrate to San Juan county. Mormon pioneers accepted such orders cheerfully and without question.

The site selected was at the mouth of Montezuma creek on San Juan river. In order to reach it the settlers would have to cross Colorado river. But there was no known crossing between Green River, Utah, and Lee's Ferry, Arizona.

Charles Hall was sent to scout a road from the new settlement of Escalante. Reaching the Colorado just below the mouth of Escalante river, Hall found a narrow crevice in the canyon wall down which he thought it possible to take wagons. Without searching further for the easier crossing he later discovered at the mouth of Hall creek, he reported back and the caravan of 80 wagons and 240 people were ordered to begin moving across the desert.

Fifty-Mile mountain extends in an unbroken line of cliffs eastward from the town of Escalante to Colorado, its total length being about 65 miles. Along its northern base lies a wide valley, comparatively level but broken near the river by many small canyons. Down this valley the wagons began rolling, following the course of Harris wash, which is dry except at certain places where water comes to the surface.

Hole-in-the-Rock. Through this narrow crevice 80 Mormon wagons passed down to the Colorado river (visible in the center), then made their way through the sandstone cliffs beyond to found the colony at Bluff, Utah.



Slickrock Hill on the old Hole-in-the-Rock trail, about 58 miles from Escalante.

In May of last year Max Krueger, Horace Goodell and myself retraced this old trail in a small truck outfitted for camping. The road has been somewhat improved for the benefit of cattle and sheep men, so we had no great difficulty the first 40 miles. Over most of that distance we traveled parallel to the old ruts of pioneer wagons, still plainly visible. At Ten-Mile spring we found a good flow of water in the wash, surrounded by cattle. Continuing over a good desert road we reached Twenty-Mile spring, another seep in the wash. Here Harris wash turns northeast to enter Escalante river, hidden behind red cliffs in the distance. All water beyond that point comes from small seeps beneath sandstone ledges.

We passed Thirty-Mile spring without

seeing it, but cattle indicated the presence of water nearby. Forty-Mile spring, or Willow Tanks as it is now known, was a tiny drip the flow from which was stored in a concrete tank. This was one of the principal pioneer camping places, but it is inconceivable that this little stream, no larger than a pencil, could have furnished water for so many people and their stock. Every drop had to be carefully conserved. Our speedometer registered 43 miles from Escalante.

In that wide desert country stockmen build large wooden boxes at convenient intervals, usually near water, in which to store grain and other supplies for their cowboys and sheepherders. At 40 miles we passed Wilson's Box on our right, at the foot of a trail leading over Fifty-Mile

mountain. There was another at Willow Tanks.

Continuing east we missed Fifty-Mile spring but again saw cattle nearby. At 59 miles we reached another box at Soda Springs, a tiny seep of bad water. This box was full of grain, saddles and equipment. None are ever locked, since robbing a box is one quick way to commit suicide. According to desert custom, however, anyone in distress is always welcome to take what he needs.

At 60 miles we reached Cave spring and the Rock corral. Near the latter stood a one room cabin occupied by a man and boy. They showed us a tiny drip barely sufficient for two or three persons in a large sandstone cave. The Rock corral was another large cave in which the pioneers kept

Max Krueger and Horace Goodell, Kelly's companions, have stopped beside an unmarked grave along the old Mormon trail.





The ruts of the old Mormon trail are still visible, but they are paralleled today by a better road. Fifty-Mile mountain is in the background.

their stock, a few poles being sufficient to close the entrance.

By this time our road had become exceedingly rough, dipping into deep canyons, sometimes over "slick rock" where no tracks were visible, and sometimes across windblown sand where traction was difficult. We were within about six miles of the river, but the trail from that point had not been traveled recently, so we were advised not to attempt it. We should have heeded that advice; but being so near we

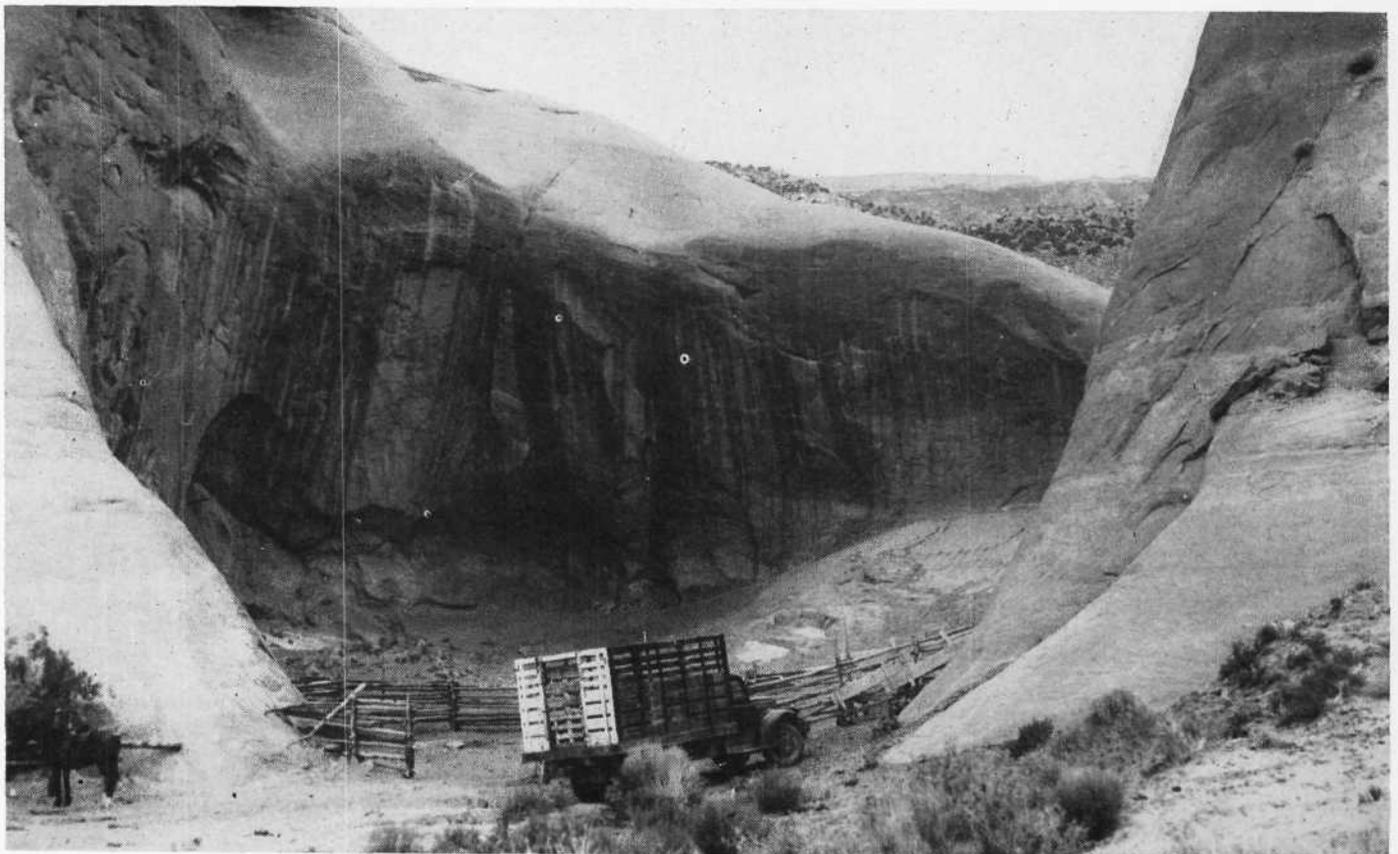
hesitated to turn back. The truck was new, there were three of us and we had been lucky up to that point—so we foolishly went on.

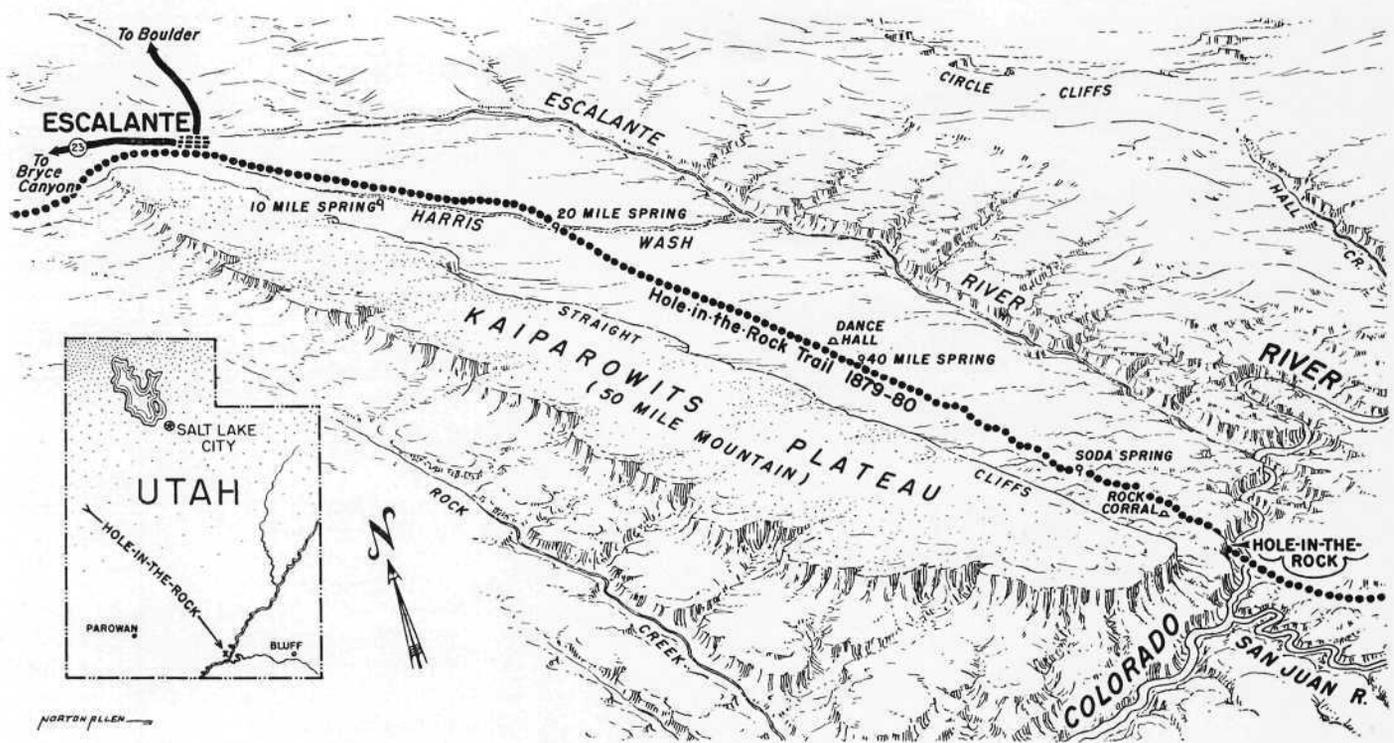
Perhaps it would be better not to go into details of those last six miles. Going down steep sandy slopes was easy, but getting back up again was another matter. Canyons became more frequent and the dry sand deeper. At last we could go no farther, so decided to leave the truck and walk.

Within about a mile we reached the top of the canyon overlooking Colorado river, at that point a high wall pierced by a narrow crevice. This crevice is the historic Hole-in-the-Rock. Standing on the brink of the descent we looked down an incline of 45 degrees, choked with boulders of all sizes. The opening seemed scarcely wide enough for a wagon to pass. Could it be possible this was where the Mormons crossed?

Cautiously we started down, and soon

Rock corral where stock was held while waiting for the road to be finished. Cattlemen in the area are still using this natural corral.





found concrete evidence. Names of the Mormon pioneers who made this trek were found scratched on the walls. Marks of picks and chisels remained in the rock, and some distance down we found a series of steps carved out of solid rock. In one narrow place we had to crawl under a huge block of sandstone which almost closed the crevice. On one side had been chiseled out a deep groove to allow wagon hubs to pass. It had later slid into the crevice preventing further passage of vehicles. Lower down we encountered another long series of steps cut in the rock. The whole descent was as steep as an ordinary stairway. In places it had been filled with loose rock to make a roadway, while in other places rock

had been chopped or chiseled away. Storms had removed much of the fill so that except for those stone steps there was little evidence of road work. Length of the descent was about 1000 feet, most of it lying at an angle of 45 degrees.

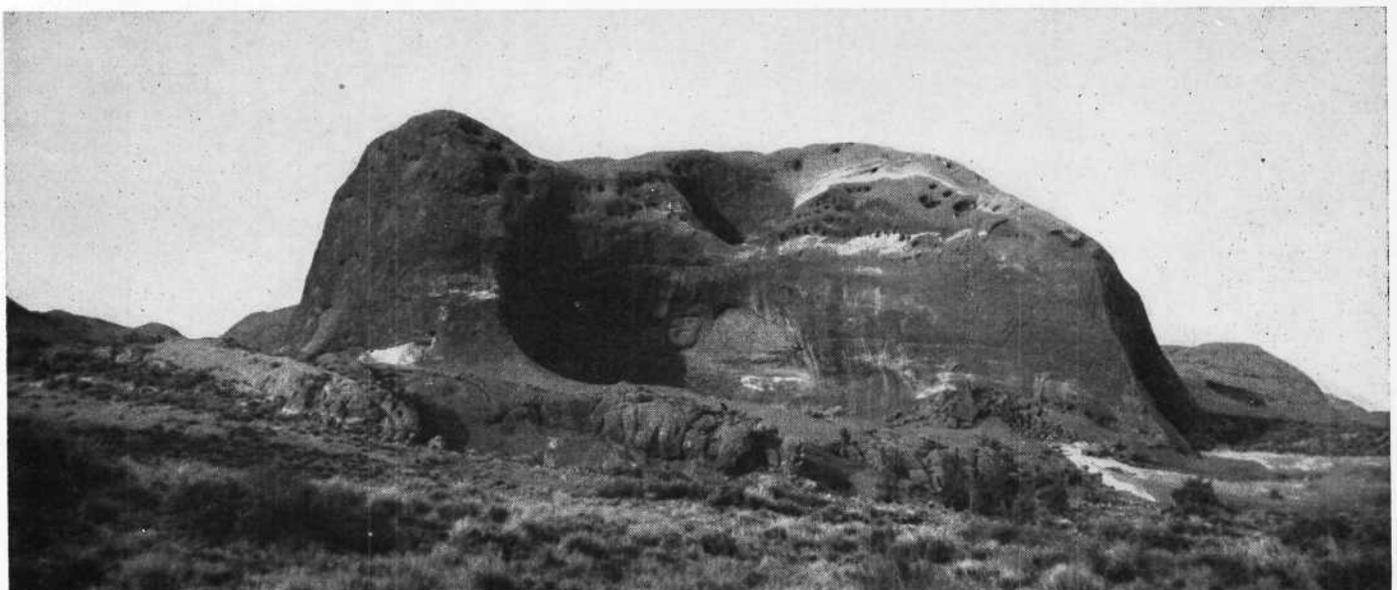
Near the bottom of the descent the trail became a rock slide covered with blow sand, down which pioneer wagons were skidded and then parked on a narrow sandbar above the river. The canyon wall opposite was somewhat broken down, but a long rock dugway had to be constructed before wagons could be taken across and landed.

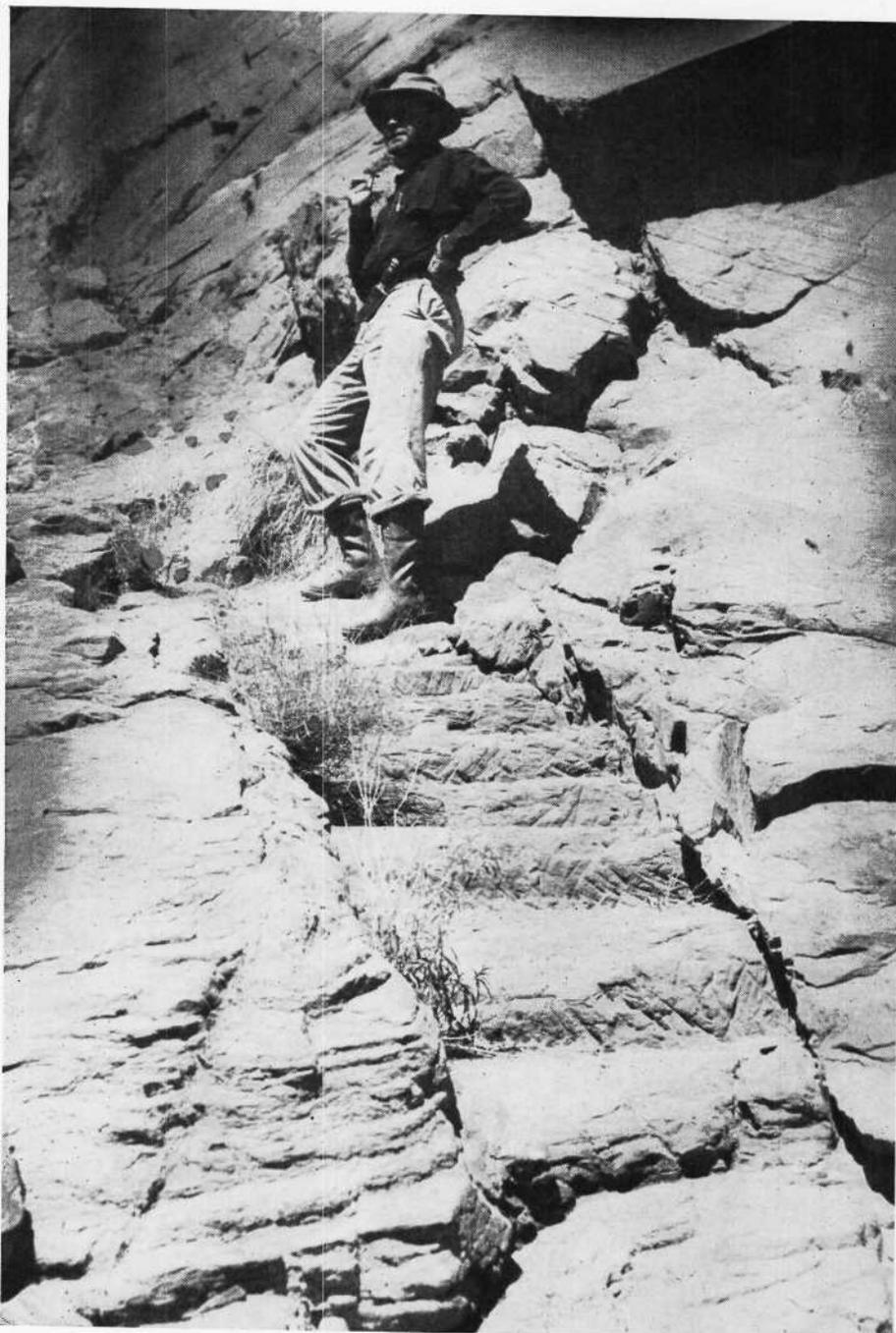
These Mormon pioneers of 1879 reached Hole-in-the-Rock without too

much difficulty, stopping at springs and waterholes conveniently spaced at about ten mile intervals. But it was immediately evident that a great amount of work must be done before wagons could be taken down through the Hole. The men even considered turning back to search for an easier route, but were ordered by church authorities to proceed at any cost. They little knew what that cost would be.

It was late in October when this caravan reached Hole-in-the-Rock. When it became evident several weeks would be required to build the road, groups of families were sent back to make camp at various waterholes, since there was not sufficient water at any one place. Some camped at

"Dance Hall" rock where the Mormon pioneers danced to pass the time while men cut a road down through Hole-in-the-Rock. Names of the party carved on walls are still visible.





Steps chiseled out of solid rock enabled the horses to keep their footing while the wagons were lowered with the aid of ropes. Willis Johnson stands on the trail which for 1000 feet is as steep as an ordinary stairway.

the Rock corral, some at Fifty-Mile spring and some at Forty-Mile. West of the latter place was a great natural bowl in a red sandstone formation, with a smooth floor, appropriately named the Dance Hall, most famous landmark along this trail. Here women, children and older men passed long evenings dancing to forget their discomfort and short rations, while younger men hacked and blasted a road down through the Hole. We found old names cut on walls of the Dance Hall, and traces of many others eroded by wind and rain.

At last, after nearly three months of the most gruelling labor, the road was completed and wagons began making the treacherous descent, with locked wheels

and ropes attached to rear axles. Even with the utmost care some were wrecked. It is a miracle any reached the bottom intact. It was February first before all were taken down and another week before they crossed the wide Colorado.

During those three months supplies ran low and men were worn out with constant hard labor. But the worst going was still ahead. Between the Colorado and Montezuma creek lay many miles of the roughest country outdoors—slickrock, deep canyons, and then the Clay hills where wagon wheels clogged with sticky mud. Grass was scarce and teams grew thin. It was not until April 5 that the first wagons reached what is now Bluff on the San Juan river,

after being nearly six months on the road. When the pioneers saw flat land along the San Juan there, they refused to go farther. So Bluff became the first Mormon settlement in San Juan county, founded because of sheer exhaustion.

Within the next year Charles Hall found an easier crossing at the mouth of Hall creek, which was used for a year or two, after which both crossings were abandoned for the longer but better road by way of Moab, Monticello and Blanding—the present highway. Pioneer settlers of Bluff found a virgin country well adapted to grazing and within a few years acquired more wealth per capita than any town in the United States. But overgrazing and consequent floods soon wiped out that wealth, leaving the place scarcely more than a ghost town.

We did not cross the Colorado at Hole-in-the-Rock. So far as I know the old trail from there to Bluff has been retraced but once since 1880. What we saw at Hole-in-the-Rock was incredible enough. Even after seeing the steps carved out of solid rock; even after looking at deep grooves in the wall made by wagon hubs, it is still almost impossible to believe that 80 wagons passed down that crack in the canyon wall to the Colorado river.

Trappers along the river had told the Mormon pioneers, "It can't be done." It couldn't—but they did it!

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SNOW RUNOFF FORECAST FOR COLORADO RIVER

Total annual inflow at Lake Mead will be about 96 per cent of normal according to March forecast of United States weather bureau on water supply outlook of Colorado river basin. Low February precipitation caused downward trend from normal forecast in January. Flow is now expected to be 11,000,000 acre-feet. On upper Colorado, flow will be slightly below normal in Roaring Fork and slightly above normal above Glenwood Springs.

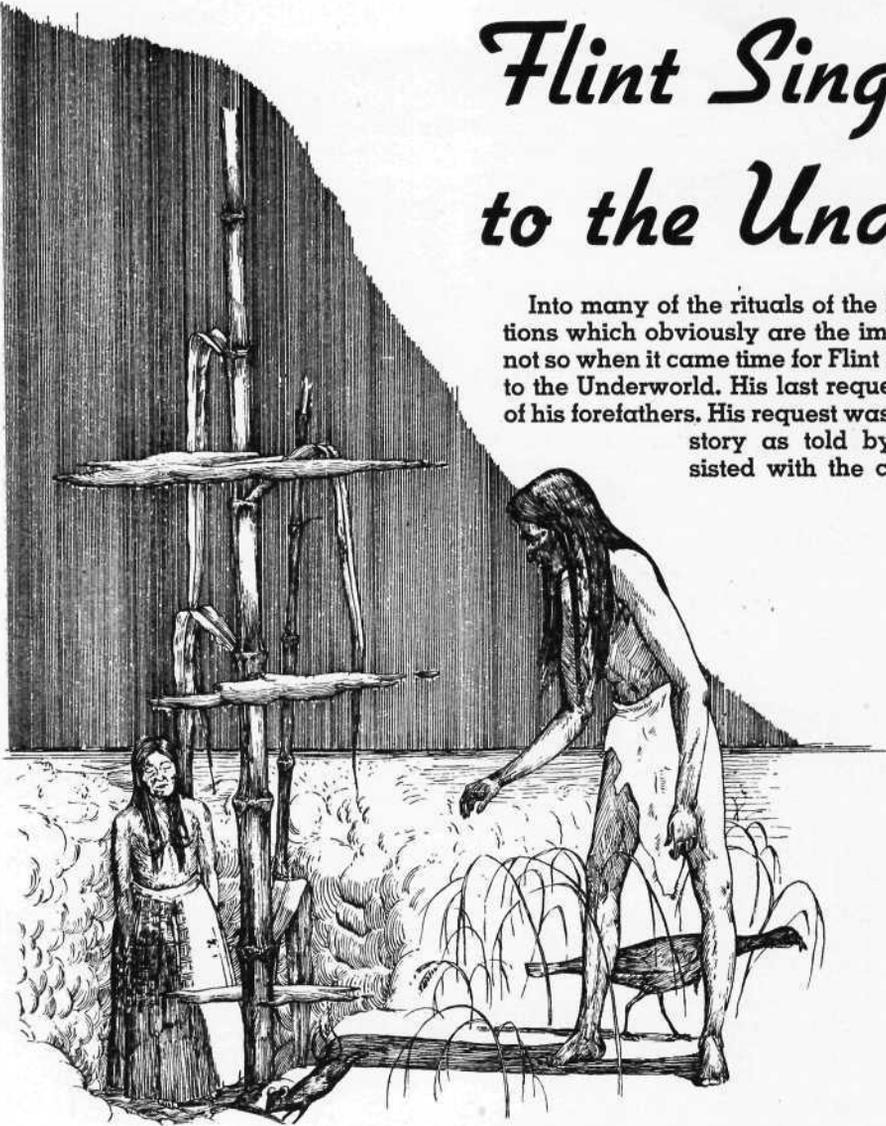
Gunnison will have total flow about 17 per cent below normal, with the Uncompahgre down 25 per cent. Dolores will be 15 per cent low. Outlook for Green river basin is still good, but forecast has been revised downward. At Green River, Utah, flow will be 116 per cent of normal.

There will be a significant shortage of water in San Juan basin with less than 50 per cent normal flow expected in Los Pinos river. Maximum precipitation of record would be necessary to bring this basin back to near normal.

Snowfall varied greatly over Colorado basin in February. Most stations in upper Colorado, Gunnison, Yampa and Green River basins showed amounts above average, with Gunnison reporting 189 per cent of normal. On the San Juan, Dolores and Little Colorado, snowfall was extremely light. Water content of snow was below normal, although temperatures averaged four degrees higher than usual.

Flint Singer Returns to the Underworld

Into many of the rituals of the Indian tribesmen have crept little variations which obviously are the imprint of the white man's civilization. But not so when it came time for Flint Singer, the aged medicine man, to return to the Underworld. His last request was that he be buried in the manner of his forefathers. His request was carried out to the letter—and here is the story as told by Richard Van Valkenburgh, who assisted with the ceremony.



The First Death. And when Mountain Lion looked down into the Hadjinah, or Place of Emergence he saw his wife down there. And when his shadow was cast upon the ground beside her the lost woman looked up and said, "You shall also come down here into the Underworld when you die." And thus for the first time our ancestors knew death.

By RICHARD VAN VALKENBURGH

Photographs by Milton Snow

Pen sketches by
Charles Keetsie Shirley, Navajo artist

JUST after the frost turned the corn-stalks to gold the news came over the grapevine that the famous old medicine man *Hathli Besbi*, the Flintway Singer, lay seriously ill in his hogan under Rainy mountain in northern New Mexico. A few days later his son Juli rode into my headquarters at Lybrook station with the request:

"Tis bad. Last winter my father's burro jumped when an owl hooted. He was thrown into the rocks. And all summer *Chalisani*, the medicine man, has sung over him to drive out the demons of pain that are knifing his back. It is his wish that you come to our camp as soon as possible."

Aware that I might be riding into a Na-

vajo burial I hesitated for a moment. But the Navajo are my friends, and I agreed to leave as soon as my horse could be caught and saddled. White folks who live close to the Navajo know that when the shadow of death falls over the countryside they are expected to help.

When we left Lybrook the sun had dropped behind the scarps of El Huerfano. Only its red afterglow lighted our way down through the rims to *Halitchiitab*, the Land Amidst the Colors. And only the eerie whisper of the Black Wind of Night greeted us as it prowled through the junipers that lay along the trail to the hogans of Flint Singer.

Inside one of the smaller hogans in the large camp we found the old man lying in a coma. By the dim firelight I could see the dwelling had been stripped of all furnishings. And from out of the darkness came the sobbing voice of *Yithbah*, the old man's wife, "After *Chalisani* left we moved him to this old hogan."

That was bad news. For when a Navajo medicine man departs and the sick person is moved to an old hogan or shelter the family is reconciled to the worst. For the Navajo have such a fear of the power of after-death that should a person die in the finest hogan it would become *bokai*, a "fear place," and never be occupied again.

The opportunity to talk to Flint Singer never came. He did not regain consciousness. Just as the smoky-orange moon of Navajo autumn began to climb from behind the black rims of Rainy mountain the old medicine man passed from this world into the new life that all good Navajo believe awaits them.

Slipping from the dwelling which had now become one of the dreaded fear hogans I sought a breath of fresh air. In the soft yellow light that seemed to creep down from the rims and mantle the camp I spied Juli hunched against a rock. With his hands over his face and with tears furrowing his brown cheeks he said:

"Four days ago my father said, 'My son. I have dwelt on this earth the full time given the Earth People by the Gods. Each year my body has shriveled toward the final disintegration that comes to all old people. All I ask is that when the end comes I be started on my journey to the Underworld in the manner of my forefathers.'"

In the manner of his forefathers! I had seen and assisted in a number of Navajo burials. But all of them had been tinged with White Man's ritual. And now—was I for the first time in my experience to be allowed to witness the traditional burial rites of the Navajo?

I walked across the silent camp with Juli. Soon after we entered the main hogan he informed me that as the eldest son of the deceased that it would be his duty to select the chief and three *yo'oolai*, or mourners.

While awaiting the coming of the other members of the family from their nearby hogans, Juli sat in the shadows with his mother. When they had all hurried in as if in terror of the darkness outside, Juli began with great deliberation to select

those who would officiate at his father's burial.

For chief mourner he named *Tulisani*, a traditionalist and maternal clansman of Flint Singer. A younger man called *Hasbke* from the same clan was chosen while the other two mourners were from the paternal side of the deceased's family. Upon *Tulisani* would fall the responsibility of keeping the taboos. He took charge immediately.

Moving to the west wall of the hogan he untied his queue and let his thin grey hair scraggle down over his bony shoulders. Then he stripped off his clothing until only his breechclout remained. Watching closely he waited until the other three mourners had disrobed before he began to speak in what was almost a chant:

"*Djini*. They tell. Death was demanded in the beginning by the Creators. The first time that the People knew of this was when the wife of Mountain Lion disappeared from the camps. This was just four days after the People came up into this World through *Hadjinah*, the Place of Emergence.

"They started to search for the lost woman. In the mud they found her tracks. Following them they soon came to the edge of the *Hadjinah*. And when Mountain Lion looked down into the hole he saw his wife down there combing her hair. When his shadow was cast on the ground beside her, from out of it ran a mouse.

"Seeing the shadow the woman looked

up and spoke, 'You shall also come down here into the Underworld when you die.' Then the People knew that she had died and had returned to the land of shadows from whence they came. And thus for the first time our ancestors knew there was such a thing as death.

"When the People returned to their camp they began to worry about death. The more they talked the more confused they became. And finally the headmen were sent to the Creators to find out. For it was First Man and First Woman who made all things and gave them the breath of life.

"They said, 'Children. It is true that we made you and gave you life. You will always go ahead and make the best of that gift. You must follow the laws that we have laid down for you. But still, death is planned to balance life and from now on you shall always have it.'

"Still the People wondered. Possibly there was a way to arrange it so that there would be no old age and death. And while they were in council Coyote ran up with a black stone and threw it in the water saying, 'If this floats there will be no more death.' Of course it sank and that is how the People became convinced there would always be death.

"Upon learning more of the power of death the Headmen began to make the taboos that we Earth People must observe. There are many things that we must do to protect ourselves against the terrible power. And I shall be watching during these four days of mourning to see that nothing is done to delay the passage of our kinsman's spirit to the Underworld."

Then I was startled as *Tulisani* continued, "This White Man whom the People call *Babawana*, the Good One, will assist. For he helped *Hathli Besh-ni* with food and clothing in the hard winters. Furthermore—his people the *Bilakana*, are alien

and do not seem to be affected by Navajo *Chindi*, or ghosts of the dead."

Here I noticed that Flint Singer's name had been spoken and wondered. For I had had always believed that the Navajo never mentioned a dead person's name under any circumstances. But I learned later from *Tulisani* that "in" or "ni" added to the given name shifts it to the past tense and makes it usable without fear of ghostly reprisal.

Then turning to Juli and his mother he continued his instructions, "No member of this family shall partake of food or drink—not even the babies who nurse, as long as the body shell of the deceased lies unburied. For after the first death the People ate and were sickened."

When the spirit leaves by "breath going out" and begins its four day passage to the Underworld, death comes in and the body shell becomes an evil thing and the home of the *Chindi*.

Then speaking to *Hasbke* the Chief Mourner said, "We will soon leave this hogan to prepare Flint Singer for his journey. With the first light of dawn you will leave to select the grave. Find a secret place high in the rocks where no one will be disturbed by the *Chindi* or be robbed by the Wolf People, or witches."

Pale streaks of light began to wash out the darkness in the eastern sky as I followed *Tulisani* and the other mourners to return to the old hogan in which Flint Singer lay. While the first light of dawn began to come down through the smoke hole I watched as they prepared the old man for burial.

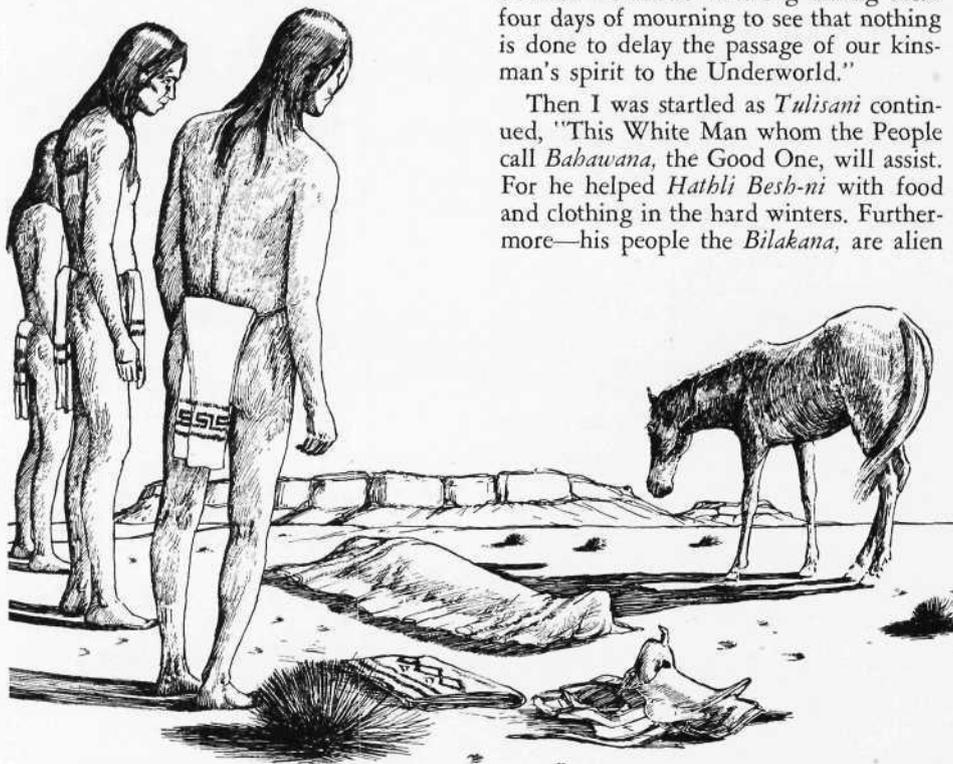
All of the clothing was removed from the wasted body. Then it was carefully washed. Muttering an unintelligible prayer *Tulisani* smeared red streaks of paint across the jaws. And then the hair was washed in yucca suds, combed, and tied up in a queue with a new cotton string.

To me fell the task of assisting in dressing the old man. Somehow, a complete outfit of new clothing had turned up during the night. And after these had been gently put on we adorned our old friend with his fine string of turquoise beads, rings, and an old concha belt that was a museum piece.

With Flint Singer now fully dressed in his best we had our last look at his peaceful old face as we carefully rolled him up in two trade-blankets. And then as *Tulisani* looped both ends with rope and tied them with distinctive knots he said softly:

"By the way these knots are tied, no good Navajo will ever disturb this bundle—only grave robbers and witches would do such a thing. Their punishment if caught would not only be the vengeance of the Gods, but also death at the hands of the People!"

Then the mourners worked to seal the eastern doorway with logs. I watched and wondered how we were going to get out. This was quickly answered when *Hasbke*,



Stripped of all their clothing the mourners carried the remains of Flint Singer from the *bokai hogan* or "fear place" up into the Land Amidst the Colors for burial. With them they led his favorite horse which would be sacrificed so that the old medicine man might have a mount with which to make his four day journey to the Land of the Dead in the Underworld.

who had returned by this time, took an axe and started to smash out a hole in the north wall. When he finished he "killed" or broke the axe handle.

Soon after taking up a bundle of juniper twigs and starting to sweep away our footprints "so that the ghosts would not follow us" *Tulisani* suggested that I leave the hogan. I don't know what took place after I emerged through the hole and walked over to where Juli was holding Flint Singer's spirited roan mare.

While I stood there *Hasbke* and *Tulisani* came out followed by the other two mourners who now acted as pall bearers. Walking slowly they ascended a small knoll in back of the hogan and stopped. Turning their faces toward the dwelling they stood as if waiting for something.

Suddenly sparks began to fly out of the smoke hole. Then tendrils of flame began to spurt out from the ragged hole in the north side. Licking up the resinous piñon logs they threw a cloud of pitchy black smoke into the sky. As it settled over the camp like a pall the burial party started up the trail that led to the rocky wastes to the north.

Toiling upward through the rainbow-tinted wastes of crumbling Rainy mountain we sighted a reddish crag that rose in ragged spires against the milky-blue morning sky. Then struggling up through a narrow fissure with the balking mare we climbed to the place selected for the burial of Flint Singer—a small cave.

With their burden still on their shoulders the pall bearers stood like statues while *Tulisani* prepared the grave. Working fast he cleaned out the litter from the floor and then took a shovel and dug down two feet. In this depression he placed upright flagstones.

Laying a trade-blanket in the bottom the Chief Mourner looked toward the pall bearers. Slowly they moved toward the grave. Bending, they gently laid the old medicine man in his last resting place. I noted his head was pointing northward—

No Navajo could be persuaded to pose in this picture, for under the cairn of stones in the right center lies the earthly remains of one of The People.



This is a bokai or "fear hogan" of the Navajo. Note the logs piled in front of the eastern doorway. This hogan is doubly taboo for its occupants were killed by a stroke of lightning. In this instance the remains were left where they lay, for death by supernatural violence makes the chindi more potent than when the Indian dies from natural normal causes.

towards *Hadjinab*, the Place of Emergence.

Then over Flint Singer we laid two saddle blankets. By his head we placed a new Stetson, and by his side there was a roll of tanned buckskin. Over all *Hasbke* shoveled earth and stones to come flush with the surface. Then after "killing" the shovel the cave was completely sealed with logs and rocks.

I watched as the roan mare was saddled and bridled with an old silver covered bridle from which there hung a turquoise studded *naja* or crescent. I was sick at heart and turned my head when *Tulisani* walked towards the horse with a rifle in his hand.

There was a moment when only the rasping of the wind through the crag broke the silence. Then came the shot! And I did not look back as I started down the fissure. *Tulisani* put his hand on my shoulder and said gently, "You should not feel bad. With all these fine things you would not want your friend to travel to the Underworld without them for lack of a horse?"

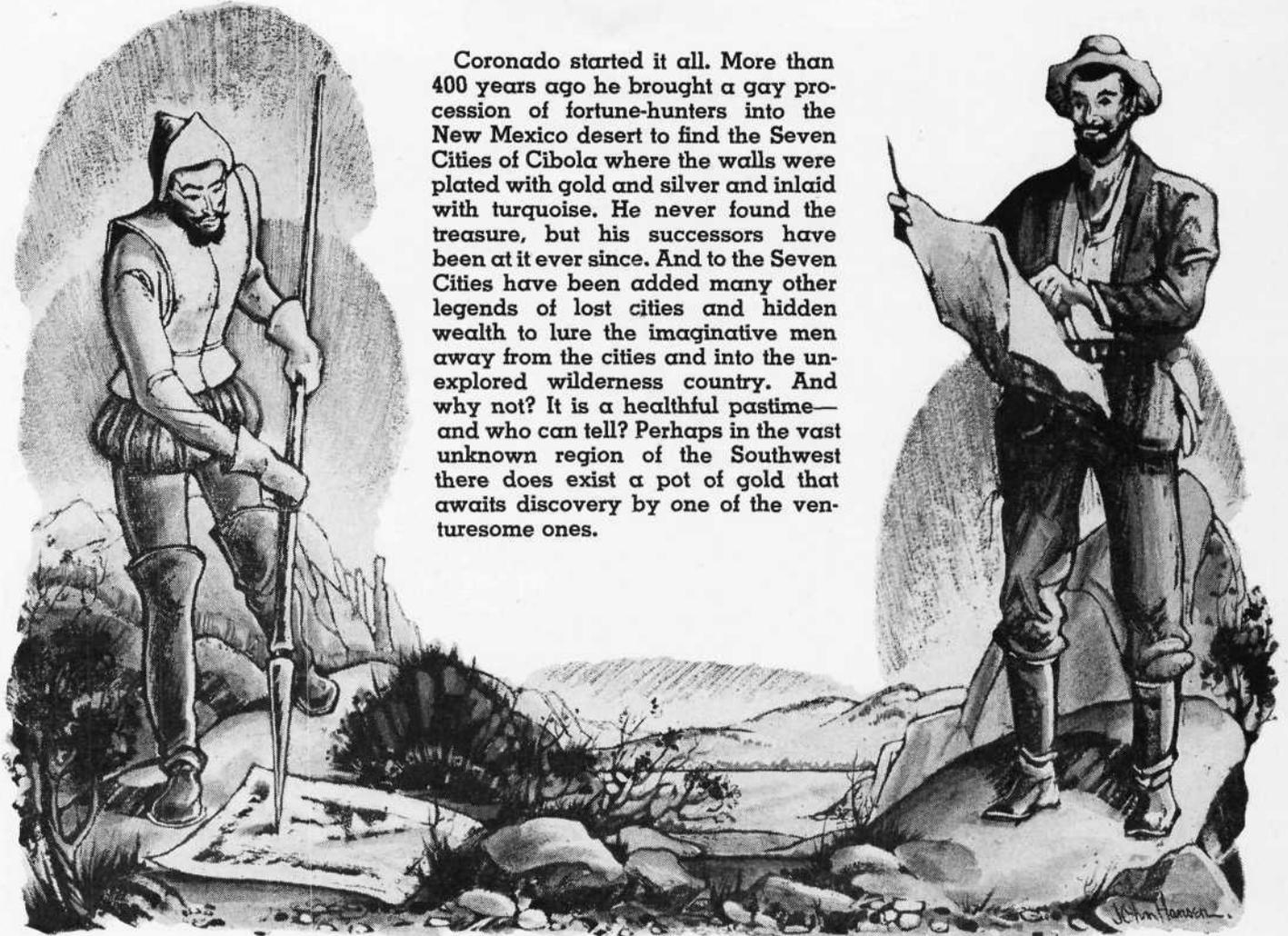
Had someone come across the mourners as they returned to camp by another route they would have thought they were seeing things. With their naked bodies gleaming in the sunshine they followed taboo and hopped and skipped along the skyline of the ridge that slanted back down to the camp.

I stayed to watch the mourners purify themselves of their contact with the dead by washing their bodies. After this *Tulisani* allowed the family to breakfast and we had a light meal of mutton stew and coffee.

Not having time to stay for the four days that would see the Spirit of Flint Singer safely in the Underworld and the mourning concluded by a ceremonial wailing I quietly slipped out of the hogan. No good-byes were said. They understood—unnecessary talk and movement during this period is taboo.

And as I rode up from the lavender shadows settling on the Land Amidst the Colors and away from the camp in which the ruins of the fear hogan still smouldered I realized—in all my years with the Navajo this had been my most profound experience—the death and burial of Flint Singer.





Coronado started it all. More than 400 years ago he brought a gay procession of fortune-hunters into the New Mexico desert to find the Seven Cities of Cibola where the walls were plated with gold and silver and inlaid with turquoise. He never found the treasure, but his successors have been at it ever since. And to the Seven Cities have been added many other legends of lost cities and hidden wealth to lure the imaginative men away from the cities and into the unexplored wilderness country. And why not? It is a healthful pastime—and who can tell? Perhaps in the vast unknown region of the Southwest there does exist a pot of gold that awaits discovery by one of the venturesome ones.

Lost Cities of the Desert

By ARTHUR WOODWARD
Curator of History, Los Angeles
Museum

Illustrations by John Hansen

IN 1839 an old mountaineer named Campbell visited the ruins of Gran Quivira in New Mexico. Later he related a fanciful story of digging for treasure and sinking into an underground room which had polished walls and which was decorated with many painted murals. He also related that in the hills nearby he found a mine shaft and a cave, and in the mine he found a crowbar and other implements made of some mysterious black metal which he averred was not iron or steel. Like most of the discoverers of such places he left all of the items where he found them.

Campbell also stated that there was a broad, paved avenue approximately one hundred feet in width which led directly east from Gran Quivira for a distance of more than 40 miles.

In 1853, other treasure-seekers reported they had found a huge stone pyramid standing about five miles west of the Colorado river, and about 200 miles above its mouth. This structure was said to be composed of 52 distinct layers of stone, 18 inches to three feet in thickness, and it rose into the air 100 feet. On top was a platform 50 feet square.

Fantastic? Not at all. I have listened to modern tales equally strange, told by men who were convinced that the figments of their imagination actually existed.

About 1937 a tall thin man with deeply sun-tanned face and a bald head, whom for convenience I shall call Pete McGonigle, came to my office and related a story of the miraculous discovery of an underground city in the mountains just east of Death Valley, not far from Shoshone.

"For a number of years," he said, "I have been convinced there are a series of huge limestone caves in the strata underlying all of the desert region from Death Valley south and east to the Colorado river. Now I know my theory is correct be-

cause I have found the entrance to the main cave. I have also found the council chamber of the underground city. Not far from the entrance to these caverns I found these specimens."

He held out a few fragments of twined basketry and some reddish colored pot sherds.

I recognized them as belonging in that part of the country and while I discounted his tale of an underground city and a connecting chain of caves extending half way across the state of California, I felt perhaps he had found a cave with occupational strata. Since we knew that ancient man as well as the prehistoric ground sloth had lived in the California and Nevada deserts twenty or thirty thousand years ago, there was always a chance that this case might be the archeological discovery of the century. Of course I was interested.

"Would you be willing to take me to this cave?" I asked.

"Of course! That is why I came in to see you. I have a windlass and rope already rigged over the opening and I have been

down into the mountain for a distance of about 100 feet and the opening continues on to the subterranean river. Then on top of the hill is the council chamber. It is a huge room and it is where the old people held their meetings. I am now engaged in blasting the entrance which has been blocked by a rock fall."

"Where did you find these specimens?" I asked.

"In a small cave not far from the council chamber," he replied.

Well, the result was that a day later we were enroute to Shoshone. The old-timers on the main street eyed us a bit sardonically, I thought, as we paused in the town for a bite to eat. One or two spoke to Pete and later I heard guffaws of laughter.

We continued on through the town and a mile or so beyond the place Pete led the way up a rocky hillside. Sure enough there was a windlass and a coil of stout rope with a bosun's chair at the end of it. Pete tossed a few boards aside and we peered into a dark hole.

"There she is," said Pete proudly. "Didn't I tell you? I've been working on this place for some time. Would you like to go down and see for yourself?"

It didn't look much like a place where either prehistoric man or even the red haired sloths would have lived in the most primitive days. In the first place the entrance was almost vertical and it was too narrow to permit the passage of a large animal. In fact it looked like a tight squeeze for a man.

"Okay," I said, "I'll go down."

I took a flashlight, and Pete and a helper grasped the handles of the windlass. I seated myself in the bosun's chair and swung off.

"Y'wanta be careful at one place," Pete warned, "it gets pretty narrow and if you don't watch out you may take some hide off your back."

He called this down to me after I was 10 or 15 feet from the surface.

"Fine time to tell me," I shouted back.

Down, down into the black narrow vent I went, twisting and turning at the end of the rope. The rope squeaked under the strain and I glanced nervously at the thick yellow strands, and felt comforted by their newness.

The passage varied in width. Now it was so narrow my knees and shoulders rubbed the sidewalls, and again I could flash my light across some eight or ten feet of space to the opposite wall. Occasionally I kicked out with my feet and fended my body away from a projecting knob. By this time I was convinced this was a natural crevice through a limestone deposit and that no man or beast had passed that way before Pete McGonigle ventured down.

When I reached a point about 100 feet below the surface my feet touched a small platform of wood which Pete had built on a projecting rock. Here I stood and flashed my torch downward. Only darkness, that



"He related a fanciful story of digging for treasure and sinking into an underground room which had polished walls and which was decorated with many murals."

impenetrable cave darkness, thick as an invisible wall, swallowed up the rays of the light.

Faintly I heard Pete bellowing instructions.

"Drop a rock straight down," he said, "you'll hear it splash into the river."

I obeyed and I heard the stone bounce once or twice, then splash into an invisible body of water. To me it sounded as though the rock had fallen into a quiet pool. The air at this level was hot and stifling. There was not the freshness one might expect if this was an outlet for a series of caverns. I lighted a match and there was no wavering of the flame. The air was dead.

I tugged on the ropes and began a slow, twisting ascent to the surface.

"Well," said Pete as I emerged, "did you hear the rock plunk into the river?"

"I heard it strike some water," I answered truthfully. "But tell me Pete, did you ever go on down to the river?"

"Nope. I never went beyond that platform. I figured it must be 300, maybe 400 feet down there and I never had that much rope. But the river's there. I've dropped many a rock into it. Some day I'm going on down and take a small collapsible canvas boat with me. Then I'll shove off and I'll bet I come out at the Colorado river. Why, this string of caves runs for miles. Mitchell's cave over in the Providence mountains is a part of this chain. Only he never went far enough down."

By this time I was beginning to have my doubts about Pete's veracity. Still, he had brought in some basketry and pottery.

"Now, I'll take you up to the council chamber," he announced. "It's just a short piece up the hill."

We hiked on up the mountain and as we passed a small overhanging rock beside the trail Pete said casually, "That's where I picked up that basket."

I was too winded to think of anything suitable to say but I was thinking plenty. His ideas of caves were beginning to irk me.

We paused on the summit of the hill. Pete stamped firmly upon a flat rock. There was dull ringing sound.

"Hear that? It's hollow underneath. That's where the council chamber is, and I'll bet it has a lot of stuff in it."

"Where's the entrance?" I asked.

"Well," responded Pete, "I'm a workin' on it. I ran out of powder and can't do any more work until I get some."

"Then you've never been in the council chamber?"

"Nope, but I know she's there," he said assuredly.

"If you've never been in it how do you know there is a council chamber?" I demanded.

"Why," said Pete, "the machine told me so."

I groaned. This was the first time I had heard anything about a "machine."

"What kind of a machine?" I asked.

"An electric divining box. It tells me when I am over a cave, and by moving around I can determine the dimensions of it. That's why I know this is one of the caves that hooks up with the chain that goes clear to the Colorado."

Needless to say, all of my interest in further exploration of Pete's "council chamber" vanished into the crystal clear air. We left Shoshone and although Pete has come in now and again to tell me of the progress he is making, blasting a tunnel through the solid rock mountain top, he hasn't as yet entered the sacred council chamber.

There have been others who wandered into the museum with equally fantastic tales.

There was the man who said he was a prospector. He told me that in 1918 he found a buried town a few miles north and east of Barstow. He and his partner had pried up a stone slab and found several stone lined rooms buried beneath the desert floor.

Like the old mountaineer Campbell, these men swore they found the walls smooth and painted with Indian "higherglyphs." They also found three graves and in them were the bones of tall Indians accompanied by pots and arrowheads, but no gold or silver ornaments.

When I pressed the old desert rat for a further description of the rooms he said they were connected by arched doorways! I let him ramble but when he said arched doorways, I knew he was romancing. There were no primitive architects in either North or South America who were cognizant of the Roman arch!

The old man offered to guide me to the spot and all he wanted was the motion picture rights to the discovery, in the event the museum sent out an expedition to uncover the place. I agreed to this and set the date for our departure into the desert in my car. I am still waiting to make that trip. It has been over ten years since he was in my office.

Another time I was asked by a newspaper reporter to accompany him and a photographer into the desert beyond Julian in San Diego county to look at a buried city.

I told the pressman that I'd go along for the ride but I didn't expect to find a buried city, unless he meant the ghost town of Banner.

A few days later we met a rather slender mild-eyed man clad in blue cotton shirt, blue jeans and a pair of knee boots in front of the old Kenilworth inn at Ramona. This individual was driving a small pick-up truck. He led the way and we followed in the press car.

That man certainly led us a merry chase. We rambled through Ballena, on up through Witch Creek and down into Santa Ysabel. I thought we might continue on up the grade into Julian but our guide swung to the left and we tore on past the white-washed Indian chapel and down the grade

through Carrizito canyon. Then we pushed across Warner's ranch and turned east and went down San Felipe valley. At the junction of the San Felipe-Warner's road with the Borrego highway we swung sharply to the right back toward Banner.

By this time I had convinced my newspaper pal that we were on a wild goose chase and our cunning, madman guide was trying to throw off imaginary pursuers.

We halted beside a small rocky knoll covered with brush, live oak and quartz outcrops.

"You wouldn't imagine you were standing upon the site of a buried city, would you?" said our guide.

"No, you wouldn't," I answered truthfully.

We rambled over that hill for an hour while the man told us all about the wonders of the metropolis that lay buried beneath our feet. All he wanted was a few thousand dollars capital to begin excava-

tions. He also wanted \$1000 for exclusive story rights when the city was laid bare. He showed us the natural rock formations shattered by centuries of exposure and solemnly pointed out ruined staircases, fallen pillars and portions of triumphal arches.

He was rather vague as to the original inhabitants. Some learned scientist had told him this might be one of the lost cities of Mu but the origin was unimportant. The important fact was that the city was there just waiting to be dug out. So far as I know it is still there. If any Desert reader is interested in spending a few thousand pesos, I can lead you right to the spot. But perhaps that blue-shirted hombre will be sitting on top of the hill guarding it with a shotgun. In that event perhaps you can make a dicker with him. The last we saw of him he was standing at the foot of the knoll, staring rapturously at the quartz outcrop seeing in it the grandeur that was Rome. Poor chap, he had been out in the sun a bit too long.

Cover Pictures Wanted . . . For Desert

Many of the beautiful cover pictures which appear on Desert Magazine are acquired in the annual cover contest which this year is scheduled for May.

Entries in the cover contest should be 9x12 inches or larger—vertical shots. Photographers should keep in mind that the picture must be so composed that the masthead printed across the top of the picture will not mar the beauty of the subject. Any desert subject is eligible—scenics, wildlife, personalities (but not girls in bathing suits or other sophisticated prints), rock formations, flowers—anything that would make a typical desert cover.

Strong black and white contrast is desired, and unusual cloud effects often add to the quality of the picture.

Entries must be received at the Desert Magazine office by May 20. A cash prize of \$15.00 will go to the first place winner, \$10.00 for second prize, and \$5.00 each for non-winning pictures accepted for publication.

HERE ARE THE RULES

- 1—Prints must be on black and white, 9x12 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 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



Part of the upper oasis in Grapevine creek—a juniper tree in the foreground. These palms grew at an elevation of 3000 feet.

Day in Grapevine Canyon

From the floor of California's Coachella valley the steep rocky north slope of the Santa Rosa mountain range appears quite devoid of life or interest. Actually, concealed in the recesses of this rugged mountain face are six scenic canyons where the *Washingtonia* palm grows in its native habitat. Here is the story of the recent exploration of one of these canyons.

By RANDALL HENDERSON

WE STARTED our descent of Grapevine canyon far up on the north side of Asbestos mountain, which is one of the lesser peaks in the Santa Rosa range of Southern California.

Grapevine is one of the seven precipitous ravines which slash the north slope of the Santa Rosas and dump their occasional storm waters into Palm Desert cove on the floor of Coachella valley. Considering the infrequency of storm floods in this desert region it must have taken the forces of Nature a million years more or less to chisel seven canyons in so small an area.

There is running water, and wild palm trees are found in six of the seven canyons. These six, reading from left to right on the map are Deep canyon, Carrizo, Grapevine, Dead Indian, Ebbens and Cat

creeks. The seventh, Ramon canyon, is dry most of the year. It has no native palms, but someone many years ago planted a date palm seed in Ramon creek. It grew well for a few years, but a long drouth finally sapped its life.

I had attempted to climb Grapevine ten years ago, starting at the point where it takes off as a tributary to Dead Indian creek. But there were hazardous vertical falls in the lower end of the gorge and the going was very slow. A day's time was not enough to ascend Grapevine to its source and return. By midafternoon I was only half way up, and so I turned back and entered this canyon in my notebook as an unfinished exploration, to be completed at a future date.

It was a crisp morning in early January

this year when I returned to renew my acquaintance with this canyon of the many waterfalls. I would make sure of ample daylight for the complete journey this time by making it a one-way trip. My daughter, Evonne Riddell, ferried three of us to the headwaters of the creek. My companions were Chuck Riddell and Pat Dennington. We carried an 80-foot rope to scale down over the waterfalls.

From the orderly date gardens of Coachella valley we motored up along the zig-zag route of the Pines-to-Palms highway to the point where a little side-road is marked "Shumway ranch" and then followed a dirt and granite trail through a luxurious growth of Upper Sonoran zone shrubs and trees to The Tors, the name given by Nina Paul Shumway to her lovely mountain cabin high up on the side of Asbestos mountain. The Shumways homesteaded this land many years before the Pines-to-Palms road was built. Their adobe house is so well concealed in its setting of piñon, juniper and jumbled granite boulders as to be completely hidden from view until one drives into the



The aged palm on the right was burned, perhaps by lightning, many years ago, but recovered and probably will add another 50 years to its life span.

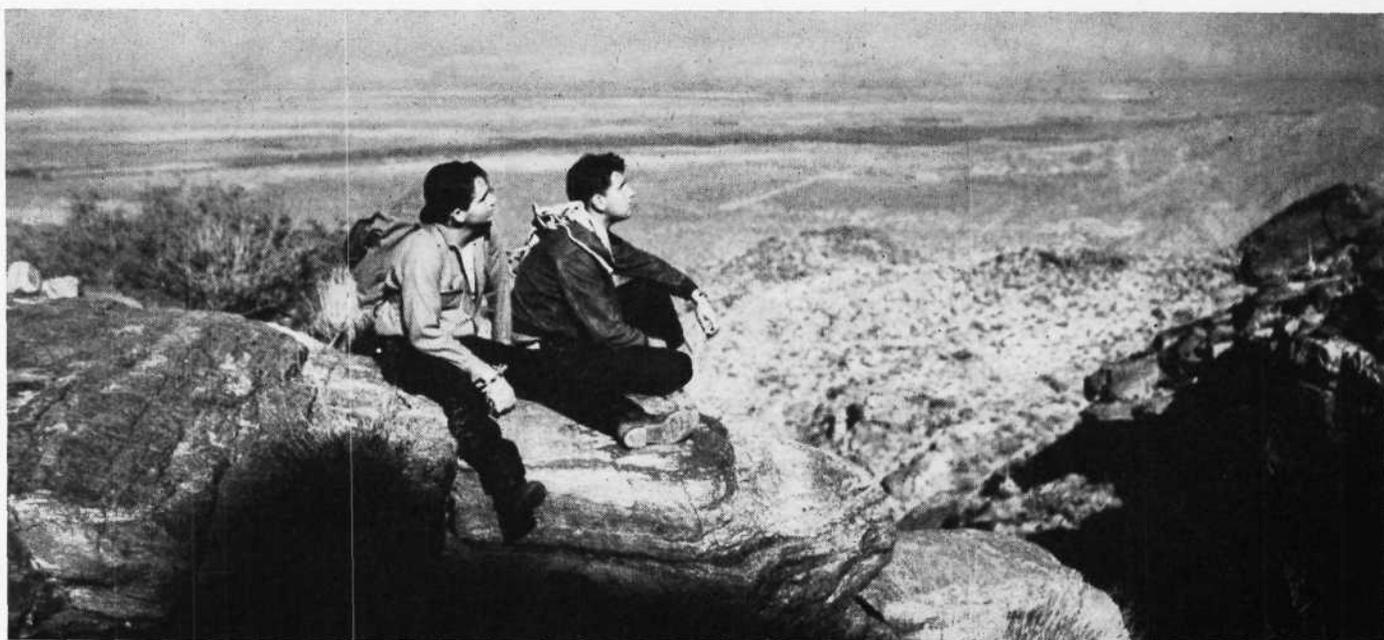
dooryard. From its wide glass windows one may look down on the checkerboard of date and grape and grapefruit plantings in Coachella valley 16 miles away, and in midsummer be grateful for the moderate temperatures of this 4200-foot elevation.

The Shumways found a tiny spring up on the side of the mountain at the head of Grapevine creek, and piped the water a half mile to their cabin. This spring was to be the starting point for our trek down the gorge.

It was 8:20 in the morning when we shouldered our packs and started scrambling over the rocks toward the spring. We told Evonne to meet us at the Dead Indian creek bridge on the floor of the desert at 3:00 p. m. That was our estimate of the time it would take to descend the seven miles of this crooked creek.

At its upper end the canyon drops away rapidly. The pitches were not difficult enough to require a rope, but we lost altitude steadily the first mile. Then the canyon began to level off somewhat. Next to juniper, the most conspicuous shrubs along the way were yucca and nolina. This was too early in the season for bloom but the dead flower stalks of the previous season were standing. Some of these yucca flower stems were more than four inches in diameter, and in the larger ones we saw an occasional woodpecker's hole. This was the first time I had ever noted woodpeckers using yucca stalks for nests.

It was 10:55 and we had hiked 2½ miles and dropped to an elevation of 3100 feet when we saw the first wild palm tree, a healthy three-foot *Washingtonia* growing beside a huge cottonwood. A half mile farther downstream we came to a pretty oasis of palm trees, more than 50 of them growing along a lively stream. It was a natural picnic park, and we stopped here



Pat Dennington and Chuck Riddell at the top of one of the dry waterfalls in Grapevine. In the haze beyond is the Coachella valley 2000 feet below the point where they are sitting.

for lunch from our knapsacks. Water had appeared intermittently along the canyon floor, and the pools in the upper elevations were covered with thin ice.

Below this point we found only an occasional palm, and the character of the vegetation changed rapidly. Beavertail cactus, ephedra, catsclaw and jojoba or goat-nut, gradually replaced juniper, piñon, yerba santa, ribbonwood and the *Rhus ovata* of the higher elevations. At 3000 feet we passed the last piñon, but juniper and *Rhus ovata* remained with us down to the 2000-foot level.

The rock of the upper canyon was granitic with considerable feldspar, but lower down it became brown schist thickly inlaid with mica.

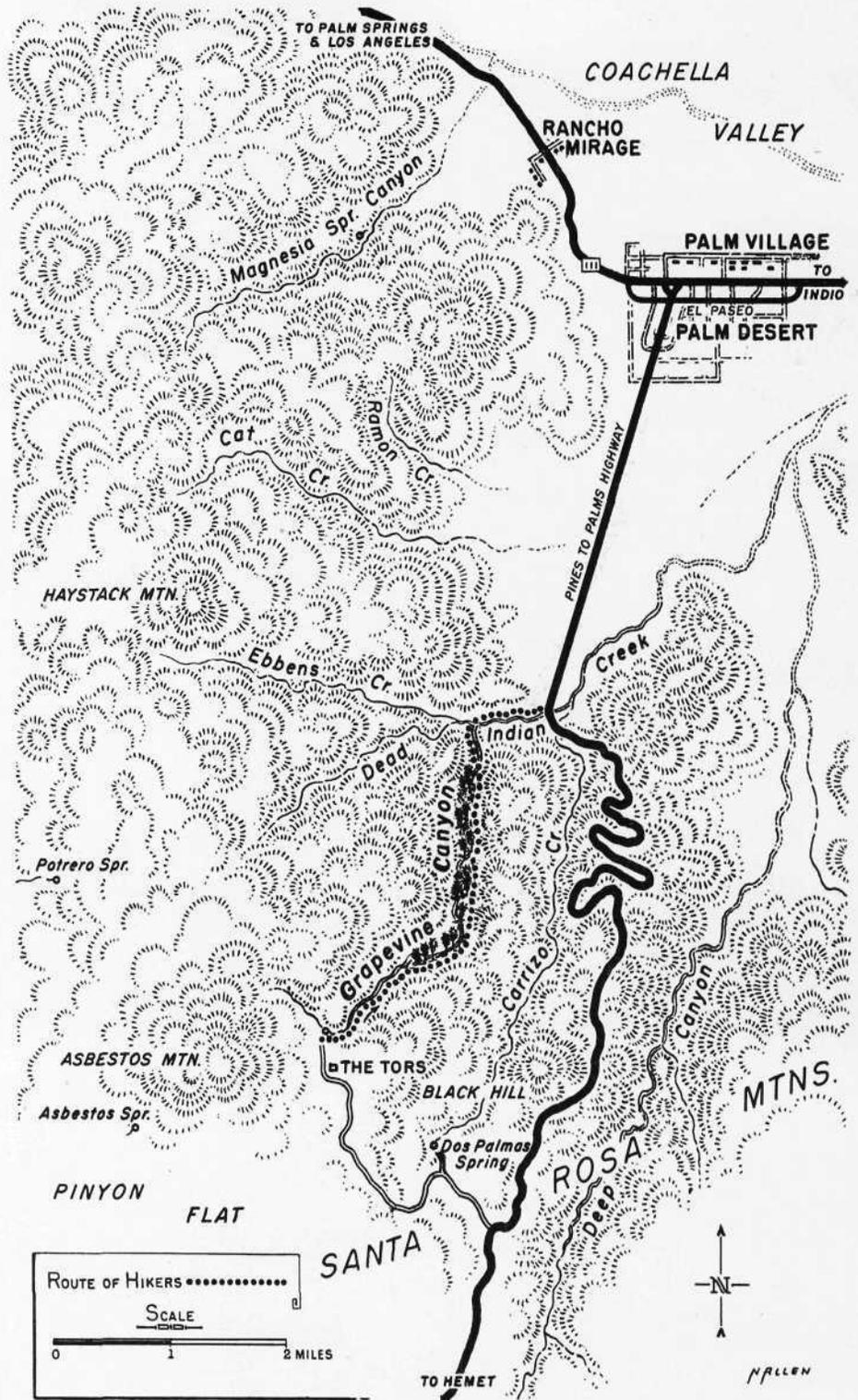
No serious climbing problems developed until we were within a half mile of the bottom, where Grapevine empties into the dry channel of Dead Indian arroyo. Then two vertical falls blocked our way in quick succession. It was necessary either to detour or rope down, and since Chuck and Pat had looked forward to their first lesson in rappelling, we uncoiled our rope and went down by the most direct route.

Roping down is simple enough and very safe when the proper technique is used. The method is to double the rope around a solid rock or tree and descend in a self-manipulated sling, then pull the rope through when the last member reaches the bottom. The only limitations in this method of descent are the availability of belays for anchoring the rope at the top, and the length of the rope. Since it is doubled for purposes of recovery after the descent, it must be twice as long as the highest pitch to be scaled. The first time over the edge of a cliff in a rope sling is a rather critical test for the novice. After he learns to trust his rope, it becomes a thrilling sport.

We roped down over two falls about 30 feet in height, and the difficult part of the journey was over. Below that point we passed two more palms and a few hundred yards farther arrived in Dead Indian—and met Evonne at the bridge just 10 minutes behind our schedule.

I don't know why they named it Grapevine creek. Actually I did not see a wild grapevine the entire distance. But the name might well apply to the serpentine route the creek follows in its course down the mountainside. I am going to suggest to Nina Shumway that she plant some grape cuttings around her spring. That would be one way to make the canyon fit its name.

Chuck and I carried mechanical counters to record the palms. The number of trees over three feet in height was 101. From the start at 4325 feet we descended to 1100 feet in six hours and 50 minutes of rather leisurely hiking. Among the palms were a half dozen old-timers perhaps 150 years old. Their fronds had been burned, probably by lightning. But the mature younger



trees wear the full skirts of trees which have been spared for 50 years or more.

Grapevine is too inaccessible to be well known among the scenic canyons of the Southern California desert. But its isolation merely adds to the enjoyment of a day within its rugged walls.

There are those who are apprehensive lest the growing popularity of the desert as a recreation area result in the destruction of much of the natural beauty of the canyons in this area. Any misgivings I may have in this regard are dispelled on such a trek as we made down Grapevine canyon. All over this desert region are canyons no less charming than Grapevine whose iso-

lation will remain a protective barrier against their despoliation. Fortunately, the kind of dunderheads who paint their names on rocks and spread tin cans over the landscape do not go very far into such wilderness terrain as characterizes the north slope of the Santa Rosas.

Palm Springs has been attracting hundreds of thousands of visitors annually for many years—and yet Grapevine canyon, less than 20 miles away, bears no evidence of having been traversed previously. I am sure that others have followed that rocky course, just as we did, but they left a clean trail—and you and I are grateful for that kind of sportsmanship.



Photograph by Nicholas N. Kozloff.

Afterglow

By LOIS ELDER ROY
Portland, Maine

Upon this rocky ledge
So far above,
We stand together, you and I,
The one I love.

Never shall I forget
The beauty of this day's end.
Far below, across the west,
Quiet and serene
The evening clouds have come at last to rest.

A range of hilltops rise in silhouette
On either side;
And in between—
Down at the desert's magic edge —
Soft lapping of an ocean tide.
Celestial harbor
Glorified!

Far out
A phantom ship
Glides tranquilly;
And mystic, dreamy islands
Float, in shadowed amethyst
Upon a faintly coral sea.

Toward the north,
Tall forests
Bend to ocean's breeze

Upon a coastline's rugged crest;
Where, high above
With hunter's dogs
The great Orion stalks
In endless quest.

And as we return,
Reluctant, loathe to go—
To say good-bye—
We find, reflected in the homeward trail,
The magic of the sky.

DANCE OF THE DUSTIES

By HELEN L. VOGEL
Coachella Valley, California

The little specks of dirt and sand
Were lying staid as should the land
When out of nowhere into now
Came prankish Wind Draft. With a bow
He stirred the sleeping Dusties high,
Whirled them, dropped them back to lie
For one short moment, then a whoop
And Wind Draft cast them in a loop.
He whipped them through a whirlpool dance
Of dervish turns without a chance
To cease their dizzy, skipping whirl.
He ducked and pushed them to a curl
Of devil twisting cyclone, small,
It's true, but most fast of them all.
Then—suddenly he dropped them down
Quite finished with his wish to clown.
The little specks of dirt and sand
Lay staid again as should the land,
And out of now back whence he came
Old Wind Draft fled. He has no shame.
The poor, small, tired Dusties.

DESERT NOCTURNE

By JEAN HOGAN DUDLEY
Yosemite, California

Across the dunes we walk, into the waiting
desert night,
From distant silences a warm and drowsy wind
now blows.
Like darkly-robed priests who chant in weird
and rhythmic rite
The rustling palm trees sway against a moonlit
sky that glows.
(Against the gleaming radiance of the undulat-
ing sand,
Against the moon's bright halo as she rises full
and gold.)
Like humble-hearted worshippers, or children
hand in hand,
We pause and feast our eyes on all the rapture
they can hold.

DAWN

By TANYA SOUTH

Look you then unto the dawn.
And when it rises from the sea
Of dark and want and misery,
Think not then your battle's won.

But as a soldier then arise,
And towering o'er your failings dire,
With hope of Light and Truth afire,
Soar to the skies!



Geode hunters swarm over diggings as Desert Gem and Mineral society sponsors second annual field trip to Hauser beds in Black hills of Imperial county, California.

Operation Rockhound...

From the Hauser geode beds in Southern California's Chuckawalla desert have come some of the most spectacular crystal geodes found in the Southwest—and since the supply is almost inexhaustible for those who are willing to dig for their specimens, this has become one of the most popular hunting grounds for collectors. At the invitation of the Blythe gem and mineral society a great caravan of motorists recently invaded this gem area—and here is the story of their day in the field.

By HAROLD O. WEIGHT

THE COYOTE flattened himself behind a giant ironwood as car after car swept down the army-graded road. When the last vehicle had passed, he turned and streaked for his most remote hiding place in the nearby Chuckawalla mountains. There is little doubt but that he thought the army was invading his desert again.

It was an invasion, but the invaders were looking for rocks, not coyotes. Desert Gem and Mineral society, of Blythe, was conducting its second annual field trip into the Hauser geode beds of Imperial county, that February morning. I was at the rear of the procession, mapping the route for those readers of Desert Magazine who have not yet found their way into one of the most fascinating desert areas of Southern California. So I saw the greyish-brown figure as it flashed up the bed of the sandy

wash. And I did not blame the coyote for running, nor would I be surprised if he were still keeping to the mountain canyons.

He had just seen what was undoubtedly the greatest concentration of motor vehicles in that area since Patton's tanks had plunged across those same wastelands where hordes of young Americans in 1942-43 were hardened for the bitter road which lay ahead, across North Africa, France, Germany.

On this February morning, 1947, the roar of 70 motors—jeep, truck and passenger car—shattered the silence. From Wiley's well to the Palo Verde mountains, great plumes of brownish dust spurted into the windless air.

The Hauser geode beds lie near the center of a magnificent desert wilderness roughly bounded by the Chocolate moun-

tains on the southwest, Chuckawalla and Little Chuckawalla mountains on the north and the cultivated area of the Palo Verde valley along the Colorado river on the east. Collectors refer to them as being in the Chocolates, the Chuckawallas or the Little Mule mountains. Actually, they lie in the southern end of the Black hills, near the head of great Milpitas wash.

Known to the rockhound for many years, these fields have produced some of the most beautiful and varied geodes found in the desert. Some are lined with amethyst crystals. Others have huge calcite crystals perched on drusy quartz, with deep red under the quartz. On the debit side, there is a large percentage of duds, and the geode matrix will not take much of a polish.

Roads into the area were so difficult and unpredictable that for years only the more hardy collectors made the trip. During the war, army road construction brought the geode beds, 40 miles southwest of Blythe, to within 11 miles of a graded desert road. About this time the Desert Gem and Mineral society was debating whether or not a gem show at Blythe would attract much of an audience.

"Give them a field trip," Norman Brooks, first president of the society said, "and promise them geodes. They'll come."



Typical geode forms. These specimens are from field near Searchlight, Nevada.

So the society held its first show in February, 1946, and the slogan of the field trip was: "Everyone who attends is guaranteed at least one geode." Thirty-five cars made that first trip, with 70 passengers.

When the caravan assembled for the second field trip, on the morning of February 8, 1947, there were 65 cars in line and many had gone to the beds the night before. More than a third of 750 people who had registered at the two-day gem show wanted to go on the field trip. The society, advising owners of late low-slung cars to leave them behind, promised transportation to those who did not have it. Glenn Vargas, society secretary-treasurer, did necessary liaison work between available seats and would-be field trippers. When the caravan moved westward on Highway 60-70 toward Desert Center, the cars were well loaded. In addition to California and Arizona license plates, there were visitors from Oregon, Illinois and Michigan.

A clouding sky held the threat of rain as the long line of cars climbed from the fertile bottom lands of the Colorado river to the first and second mesas, passing south of the big, now almost deserted, army air base. At ten miles we passed the area of the old beach line, where many rockhounds have found cutting material in the past. The foothills of the McCoy mountains closed in on the highway from the north.

At 17.8 miles we left the paved highway, turning south, toward the gap between the Mule mountains and the Little Chuckawallas. When the last car had left the highway and the caravan had halted on the dirt road leading to Wiley's well, Vargas sighed in relief. "There's more danger from reckless drivers on the highway than from accidents on bad desert roads," he said.

It is no easy matter to convoy nearly 300 people—some of them tenderfoot drivers on their first field trip—into such a rugged and remote area. But the Desert Gem and Mineral society realized its responsibilities and prepared for every foreseeable emergency. An experienced desert driver took the lead, and others were scattered throughout the caravan. Last unit was a truck equipped with two-way radio. The truck was capable of towing broken down cars and carried an experienced garageman and tools. Burton A. Cohoon, general chairman for the show, rode the truck to be sure no stragglers got in trouble. Spare gas and first aid equipment were carried, and there were several physicians in the party.

The road to Wiley's well is part of the system of military highways which army engineers carved throughout the California-Arizona maneuver area when American armored divisions fought training battles through the desert heat haze. It

is still in a reasonable state of repair, and trailers frequently are towed as far as the well. But erosion is beginning to gnaw at vital places, and bumpy, U-shaped detours mark newly-created washes. There are, of course, many stretches of washboard. It is regrettable to see roads like this, which have opened new desert areas to the average motorist, go to ruin for want of occasional scraping and a little work.

At 8.9 miles from the highway, the caravan halted where scattered trails led west to Wiley's well, situated on the edge of a big wash which drains much of the southern slope of the Little Chuckawallas into Ford dry lake in Chuckawalla valley. The well has been an important watering place for desert travelers and camping spot for prospectors since it was dug in 1908 by A. P. Wiley of Palo Verde. More recently it has been used for cattle which are run in the area in seasons when feed is available. There are no mesquites near the well, but big palo verdes and clean sand make it a pleasant place to camp.

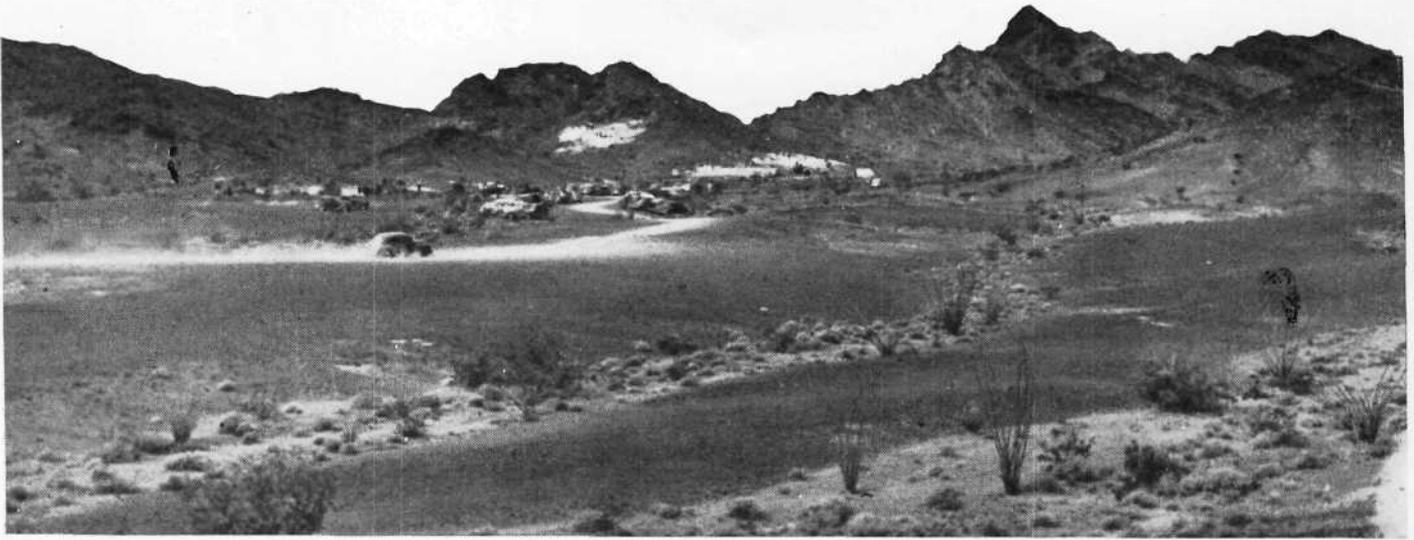
Wiley's well is closest reliable water supply to the Hauser beds, which lie about 15 miles southwest. Old timers have mentioned a Blue Mountain tank in the Black hills area, but so far I have been unable to identify the mountain or find the tank. The only water which I have found in these hills is in small pools in rocky arroyos, immediately after rain.

There are many hills in the Black hills group and they are composed largely of faulted volcanic flows, probably of the Tertiary period, overlaying granites and schists. Much of the volcanic material is a reddish andesite, and the flows dip beneath recent gravel in many places, exposing sharp scarps on the opposite sides. As the caravan moved on, almost due south, these low, dark, clustered hills could be seen to the right of the road, dominated by a snag-toothed volcanic core.

We passed the crossing of the Niland-Rannells road and went under the big power transmission lines which run between Blythe and Calipatria. Ahead, to the east of the road and toward the Palo

ROAD LOG—BLYTHE TO HAUSER GEODE BED

- 00.0 Blythe.
- 17.8 Turn left from Highway 60-70, 4/10 mile east of telephone line crossing highway. Head almost due south.
- 26.7 Wiley's well on edge of wash west of road.
- 26.8 Niland-Rannells road crossing. Continue south.
- 27.0 Pass under power transmission line.
- 30.2 Faint road right (west) not Hauser bed road.
- 30.7 Turn west on Hauser geode bed road.
- 33.8 Faint cross road running SE. Keep right (south).
- 34.7 Cross tracks left by Patton's tanks, also old road branching right. Keep left.
- 35.4 Cross old road again. Keep left (west).
- 36.0 Three-way road branch. Keep left.
- 36.2 Rockhound camp ground on edge of wash. Wood available. Road worse from this point on. Road turns sharply left through wash.
- 37.1 Low pass with short, bad stretch of road beyond at 37.2.
- 37.9 Road branch. Left branch goes into low group of buttes with geodes in number of diggings. Keep right on main traveled road (southwest).
- 38.6 Faint road branch right leads into hills. Keep left, main road.
- 39.1 Faint branch right to hills. Keep left.
- 41.6 End of road at Hauser geode beds.



White scars on hills mark burrows of earlier collectors as Operation Rockbound arrives in valley of Hauser geode beds.

Verde mountains, rose a striking two-pointed butte. This, Glenn Vargas explained, is an infallible marker for the Hauser turnoff. "Watch the two peaks," he said. "If they disappear behind a small mountain you have just passed the road branch. Go back and look for it along the west side of the road."

If the geode hunter watches his mileage carefully there is little chance of missing the turn. The caravan left the army road at 12.9 miles from the highway, turning west on a well-traveled road marked by a small stone cairn. It had taken an hour and a half to drive from Blythe to the turnoff. From this point the road has been constructed and maintained by rockhounds, with a little dubious help from wandering tanks and

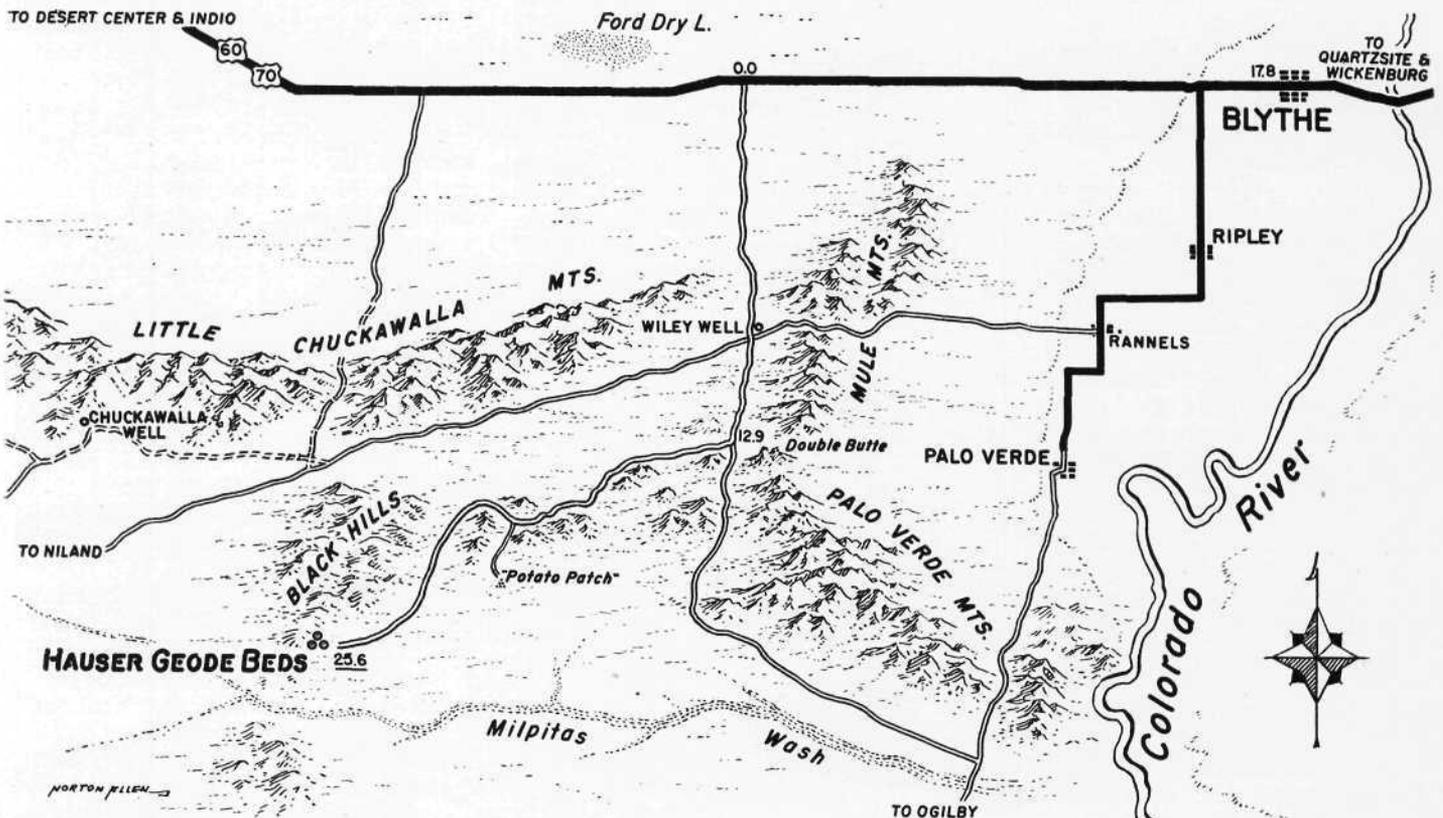
military equipment during the war. Much of the driving is in second gear, as the road twists and winds, dropping into little ruts and washes.

I dropped farther behind the caravan. The last time I had been in the area, a few months after the end of the war, there had been many branching roads and aimless tracks almost as clearly marked as the geode trail. I thought that I would have to check mileages closely. Besides, we were in a region of colorful mountains, raggedly eroded buttes and deep, twisting washes heavily lined with vegetation. I like this the best of any section of the desert that I know, and I wanted to see it without a dust haze obscuring its beauty.

This country would be a revelation to

those who picture the desert as an expanse of sand and cacti. It is worth the trip just to walk down one of the big washes, especially near sunrise or sunset when the big palo verdes and ironwoods which crowd the banks throw long shadows across the white sand. Many of these spreading trees tower 20 feet and more into the air. At scattered points incense bush showed great yellow heads of bloom and on hillslopes there were flaming tips on occasional ocotillos. Even the creosote, growing in its patterned sparseness, was taller and sturdier than is usual.

I soon found that extensive road mapping would not be necessary. So many cars have gone into the area that one simply stays in the main ruts until the Hauser beds



are reached. It is not a trip for an inexperienced driver and a two-car party would be better than one alone. But the road is better than it was, and any group equipped for a desert trip should have no trouble.

On the banks of a rather deep wash, 18.4 miles from the highway, many collectors and societies have camped in the past. There are big ironwoods and plenty of wood. From this point on, the road is rougher. Many rock hunters have preferred to make base camp at the wash, driving the remaining five miles with unloaded cars. Others go loaded, and even take luggage trailers to the geode beds and camp there.

The road branches at 20.1 miles from the highway. Left branch wanders southeast into a group of hills on whose scarred slopes the pits of the geode hunters may be seen. Included here is the Potato Patch, from which many specimens have been removed. Main road swings to the southwest, slides across the slopes of some small buttes, crosses a valley and winds down the eastern edge of the big group of Black hills. Dips and twists require cautious driving. Then the road cuts through a narrow gulch, heads north again and ends in the little valley of the Hauser geode beds, 23.6 miles from the highway.

It was mid-morning when Operation Rockhound reached its objective. There had been no casualties enroute, beyond two blowouts and a bumper half-torn from a late model car. It is probable that no collecting area ever before had received an attack of the intensity of that which swept over the reddish hills. Armed with pick, shovel and sack, hundreds of hunters dove into the many holes which already had been opened, and started scattered burrows of their own. Dirt was soon flying over the entire area and excited yips told of frequent strikes. The sense that these were individuals was lost, and the scene resembled huge ant hills whose occupants have been grievously disturbed.

Necessity of digging the specimens out cools the ardor of the quantity collector. That and the fact that the geode area is extensive, permit the Hauser beds to survive such an assault with little depletion of reserves. Actually, such extensive digging can improve the beds if the rockhound shows a little thoughtfulness toward the collector who will follow him. It may seem easier, at the moment, to cave in the bank of a prospect hole than to keep the waste material cleared out from the bottom. But after a little mining of that type the geode-bearing strata—which is usually a greenish clayey material in this area—will be completely buried and the hole will be useless.

These Hauser beds were found by rockhounds and explored and developed by them. Joel Hauser, the original discoverer, made no effort to monopolize the deposit or to profit from it. Societies and individuals since that time have followed the un-

written rockhound code and have made no attempts to bar fellow collectors.

At the present time, individuals have filed across the center of the area, claiming to have found cinnabar in veins. The only previous attempt at mining in the Black hills was for manganese in the first world war. Discovery of cinnabar in paying quantities in this area would be surprising indeed, and the output of the claim so far seems to be sacked geodes.

The operators offered no objection to rockhounds digging on the claim area so long as they did not go into a large hole marked with the discovery monument. But the time is coming when mineral societies must plan methods of protecting their finds against even potential denial of entry by late comers who move in. Rockhounds have done enough work in this area to patent a number of claims, if such deposits legally can be filed on.

The rain which had threatened did not develop, and the overcast sky meant cool digging. All day Collis Mayflower, club president, and other officials were busy identifying specimens and giving advice on likely spots to dig. Coffee was furnished by the Blythe society and rockhounds who considered food important stopped at noon to eat. Most of them adjourned, at

one time or another, to a portable rock saw which an enterprising lapidary had hauled to the field. Here, for a small fee, the specimens just dug out could be sawed and its value determined.

By midafternoon many collectors were already bouncing back toward the highway. Before nightfall, the forces of invasion had ebbed away and a startled quiet was returning to the desert. The little valley, crowded with more than 80 cars at the peak, held only those remaining over night. Members of the Desert Gem and Mineral society were wondering, if the rate of expansion continued, where they would find room for next year's crowd.

Like the coyote, I prefer a little solitude on my desert excursions. I would rather hunt rocks when I don't have to stand in line to do it. But such excursions serve a great and good purpose. Many of the rockhounds were desert people. But to others the experience was entirely new. Racing through the desert on black-topped roads, they could not see its beauty nor feel its fascination. This day—even though they had come with a throng they had left the beaten path. Only a hill had separated them from their fellows, but they felt the peace of the desert, and looked upon its face. Many of them will come back again.

Wildflower Forecast for May . . .

By May the flowering season on the lower levels of the desert will have passed, but above the 2500-foot level some annuals and many perennials will be at their best. The one important exception to this is smoke tree, growing in the washes on the desert floor. Its deep purple bloom coming the last week in May and early June is worth traveling far to see. Its habitat is the Colorado and southern Mojave desert, and southwestern Arizona.

From Twentynine Palms, California, Sara M. Schenck reports that while the annuals will have gone to seed, the shrubs and trees in Joshua Tree national monument, including smoke tree, nolina and others of the Upper Sonoran zone will be blooming in May.

At Lancaster, although the flowering season is a month earlier than usual, the larkspurs, scarlet bugler, lupines, mariposas and brodiaea may still be in blossom in May.

Edwin C. Alberts, park naturalist in Death Valley, writes that while the flowers on the floor of Death Valley have passed their peak, there is the possibility of a wide variety of blossoms in the upper passes, including beavertail cactus, indigo bush, apricot mallow, Mohave aster, Panamint daisy and an occasional cliff rose.

Clark Mills and Robert Cartter of the Searles Lake Gem and Mineral society report an unusually fine showing of blossom in April, but by May the bloom will be

limited mostly to the upper levels of the Panamint and Argus mountains.

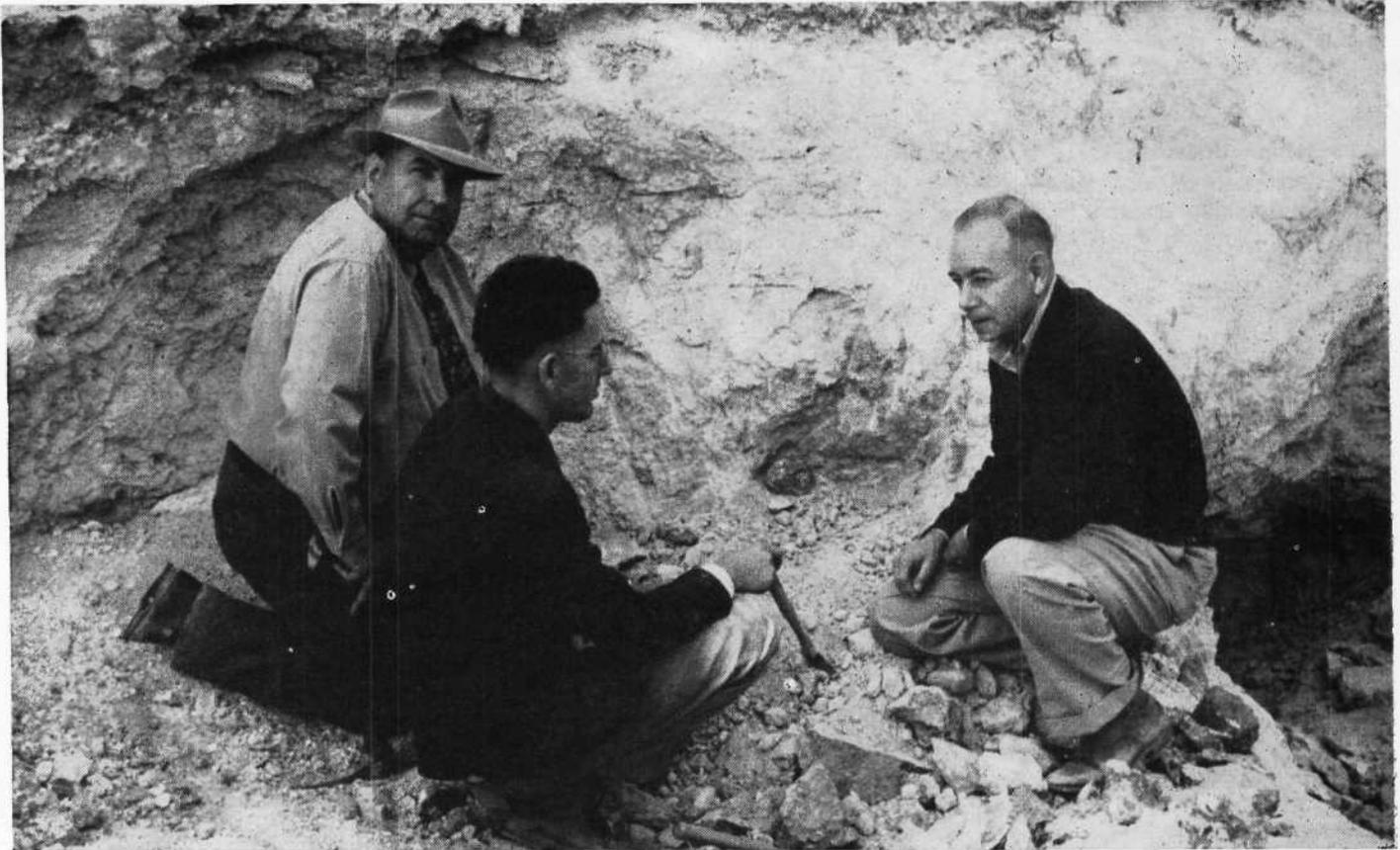
Reports from A. T. Bicknell at Casa Grande national monument and William L. Howenstine at Saguaro national monument indicate that the flowering of the cacti will be on the decline in May. At Tumacacori Earl Jackson forecasts rainbow cactus, prickly pear and cholla blooms for May.

An open winter at Grand Canyon has made the flower forecast for May rather uncertain, but Superintendent H. C. Bryant of the national park expects a limited showing of Indian paintbrush, redbud, western wallflower, wild candytuft, blue bells, squaw currant, larkspur, white phlox, aster, and others during May.

Gordon C. Baldwin, park naturalist in the Boulder dam area forecasts barrel, cholla and fishhook cacti for May and early June.

Dora Tucker of Las Vegas states that until the middle of June visitors will find rock daisies, rose lupine, mimulus, chia, blazing star, mallow, desert aster and ground cherry in the Valley of Fire and other rocky areas.

From Zion national park, Park Naturalist Russell K. Grater, believes that visitors in May and June will find a good display of blue brodiaea, sego lily, narrow leaf yucca, prince's plume, purple torch, cucumber, beavertail and grizzly bear cactus, Indian paintbrush, desert marigold, shooting star, phlox and purple sage.



Collis Mayflower (left), president of Desert Gem and Mineral society, Glenn Vargas (center), secretary-treasurer, and B. W. Coboon (right), general chairman of the show and field trip dig a geode from the clayey "ash."

Discovery of the Hauser geode beds

Desert Magazine asked Joel Hauser for a brief personal sketch giving the story of the discovery of the geode beds which bear his name, and here is his letter in reply:

Dear Desert:

In answer to your letter, I started collecting in the Black hills (Chocolate mountains, Chuckawallas or Little Mules, take your pick) back in 1935. At that time it was quite a feat to find the turnoff to Wiley's well and a miracle if one could cross the sand and washes between the highway and the well without getting stuck. The wind would frequently obliterate the road by blowing sand over the single tracks across the dunes.

I was born in Blythe in 1915. My father went there in 1909 and drove a freight wagon from Blythe to Glamis, the nearest railroad point, 60 miles away. When I developed an interest in rocks, particularly agate nodules, my dad urged me to hunt along the Blythe-Niland road. He frequently had been over the area and had noticed nodules here and there. I bought a Model A Ford for \$37.50 and started looking. After gathering material from several beds near the roads, it became necessary

to get farther and farther into the hills. It meant literally beating roads across the desert, moving rocks, dodging deep washes and pushing the car across the worst spots.

General system for scouting an area was to drive as far as it seemed possible to drive, then hike over the hills exploring for new agate beds. When I found a new bed I would then have to figure how to build a road somewhere near it. It often was necessary to drive 10 miles to find a way across some of the big washes.

Most of the agate nodule beds I found did not supply too many fine agates, so a premium was placed upon being first into an area. It became a sort of game. I would beat a road a few miles farther back into the hills. The next time I went down there, the road would be pretty well defined because so many other rockhounds had been over it.

No one seriously considered digging in the early days. When the surface ma-

terial was all gathered in, it meant moving on to new areas. In 1937 I decided to go completely around the Black hills and try to work the area from the back. One day, while skirting the hills, the Hauser beds were discovered.

Three of us were in the party and had stopped to camp for the night at the edge of the wash which drains the canyon holding the Hauser beds. It was still daylight after supper, and we scouted around a little. Some nodules were found lying in the volcanic ash at the edge of the wash. A few scratches in the ash, with a pick, uncovered more nodules. We dug until dark and found an unbelievable quantity.

Next day we dug out so many geodes we couldn't haul them all home. Here indeed was the mother lode for Black hills agate nodules and geodes. Rockhounds are still digging out all they want, 10 years later.

I never did finish skirting the Black hills. The rush to the Hauser bed started soon after my brother Howard and I met Dr. Warren Fox and Sam Payson on the way back to the diggings. We camped together and drove on into the beds next day. Sam and Dr. Fox spread the word, and the rush was on.

Very truly,
JOEL F. HAUSER
Redlands, California

Mines and Mining . .

Tombstone, Arizona . . .

Construction of 100-ton flotation mill by Operations, Inc., marks first large operation in mining field in Tombstone since before war. Mill will be used for lead-zinc ores of company's San Juan mine in the Dragoon mountains, and is expected to be in operation by June. Water from West-side shaft will be used in milling, and new road will be constructed from Middle March pass to mine, according to George I. Barnett, mining engineer of Berkeley, California, who negotiated lease on San Juan property.

Albuquerque, New Mexico . . .

Exhaustive study of iron ore deposits of New Mexico is being undertaken by Dr. Vincent C. Kelly, University of New Mexico geology department. Study was begun during war, under auspices of United States geological survey and bureau of mines, when shortage of iron was critical. Work of estimating potentialities of native ores, their quantity and characteristics, will be continued under university grant. When completed, Dr. Kenny's findings will be published as University of New Mexico bulletin, in cooperation with United States geological survey.

Prescott, Arizona . . .

Airborne magnetometer survey in Prescott area is being undertaken by United States geological survey. Investigation will cover that part of Yavapai schist which contains such well known ore bodies as United Verde, Copper Chief, Iron King and also Bagdad copper district. Dr. Charles A. Anderson, survey geologist, invited members of Arizona Small Mine Operators association to investigate possibilities of new survey method.

Carson City, Nevada . . .

If a bill which has passed Nevada legislature becomes law, grubstake agreements must be filed with recorder of county in which claims are located and not, as in the past, county in which agreements are drawn. Many of Nevada's great camps were discovered by grubstaked prospectors, but few such agreements are being entered into at present time.

Miami, Arizona . . .

Option to purchase all assets at Miami has been granted to Anaconda Mining company by directors of Van Dyke Copper company. Payments will reach \$5,000,000 over period of years, should Anaconda exercise option. Van Dyke holdings total about 1200 acres adjoining Inspiration Consolidated Copper company. A 1700 foot shaft was sunk on property in 1919-1920, with openings at two levels.

Austin, Nevada . . .

Rich ledge, tentatively identified as old Hayes vein, has been struck by diamond drill exploring Nevada Equity property at Austin. Vein was encountered between 191-198 feet down which, with allowance for angle of interception, would indicate width of 3½ feet, according to Robert Raring, vice-president of Nevada Equity. Sections of core, which was rushed to Salt Lake City for detailed assay, showed solid sulphides of copper, lead and zinc. Drilling is being pushed deeper in hope of cutting Austin's famous Panamint vein.

Winterhaven, California . . .

Fire swept the Holmes-Nicholson gold stamp mill, west of Winterhaven on Highway 80, doing estimated \$175,000 damage, about 25 per cent of which was covered by insurance. Plant, shut down since before the war, had just been readied for operation at cost of \$30,000. Fire started in transformer room near ore dump, and high winds spread it to rest of plant. Power source for modern firefighting equipment at mill was destroyed almost immediately, and unchecked flames left nothing standing but two small buildings on higher ground. Kenneth A. Holmes, owner, said he had made no plans to rebuild mill.

Yerington, Nevada . . .

Extensive drilling campaign at Yerington property of Anaconda Mining company has exposed 50,000,000 tons of low-grade disseminated copper ore. Ore carries 1.02 per cent copper content. Low-grade orebody of this size would require smelter of at least 5000-ton daily capacity and a 30-year operation.

Cottonwood, Arizona . . .

John H. Key, miner, reports rediscovery, near Cottonwood, of a lost gold mine which according to legend was worked for Spanish by Indian slaves. Key has been searching for deposit, which he calls Sandstone lost mine, for past 12 years. Discovery came after finding of an Indian rock map shown Key by Jack O'Brien, Cochise county prospector. Key and three partners have filed on deposits which he says "make the lost Dutchman look like a baby."

Tonopah, Nevada . . .

Operations are being resumed at Nevada Wonderstone quarry 20 miles east of Tonopah. Demand for the highly colored, banded rhyolite is increasing, according to C. C. Beedle, manager of Nevada Wonderstone company which is operating property under bond and option from Charley Joseph and Frank Trueba, owners. Shipments by truck are to be made to San Francisco and Southern California at regular

intervals. Stone is used in patio flooring, flagstone walks and in facing on cement work.

Bishop, California . . .

Pumice brick plant of Bishop Building Materials company has been redesigned and streamlined. All-steel rig now is producing 2000 bricks of 10 types in eight hour shift. Plant, which has produced 300,000 bricks, has heated drying shed for use in cold weather. Constant tests are run on bricks to determine stress resistance and insulation factors. Electric vibrators in molds allow mass to be well bonded. Use of pumice building bricks is increasing, but local supply of pumice is considered adequate for any expansion.

Washington, D. C. . . .

System of tight government control over source materials of atomic energy has been announced by atomic energy commission. Regulations continuing wartime controls over uranium and extending them to thorium became effective midnight March 31. License is required for any person to transfer, deliver, receive title to or export from United States any atomic energy source materials. These materials are defined as any containing as much as one twentieth of one per cent by weight of uranium, thorium, or any combination of the two.

Goldfield, Nevada . . .

Brief report on Reed talc mine in Esmeralda county has been released by United States geological survey. Report, by B. M. Page, suggests that additional talc bodies might be found east and west of Reed mine along same fault zone trend. Reed mine, opened in 1928, has produced estimated 15,000 tons of talc. Main ore body is 500 feet long and from one to twelve feet in thickness. Talc is highly fractured and has been marketed mostly for use in cotton textile finishing. Geological maps accompanied report.

James Boyd, dean of faculty Colorado School of Mines, has been nominated by President Truman to succeed Dr. R. R. Sayers as director of bureau of mines.

Jack Hellman has been elected president of Yellow Aster Mining and Milling company, succeeding Albert Ancker who headed company for 30 years. No mining operations have been carried on at the Yellow Aster, in Randsburg, since wartime closing order which ended 45 years of continuous production.

Matt Murphy, Nevada state mine inspector since 1935, died in Reno on March 5. He has been succeeded by Art Bernard of East Ely, deputy inspector for past six years. Murphy came to Goldfield in 1906 boom and was superintendent of Silver Pick mine for 20 years. Bernard has been miner and mining operator all his life.

LETTERS...

Feather in the Sash . . .

Washington, D. C.

Dear Sirs:

I wonder if you can answer a question for us. Some time ago we bought an old Hopi wedding sash at the Indian Crafts shop in the Department of Interior here in Washington.

Carefully secured in the fringe is a small yellow feather, and I wonder if you can tell us the reason for the feather.

MRS. F. M. CLINGAN

Desert Magazine staff referred the above inquiry to Dama Langley who has been a close friend of the Hopi for many years. Following is Mrs. Langley's reply:

Ontario, California

Dear Mrs. Clingan:

Your question regarding the feather secreted in the fringe of a Hopi wedding sash was referred to me by the Desert Magazine.

I felt sure I knew the reason for the feather being there, but I went to Los Angeles and talked to some Hopi friends of mine who work with the museum there. This is what one of the older men told me:

"As you know, feathers and eagle down are of great importance in our ceremonies. They have great religious significance. But in the case of the feather tied in a wedding sash fringe, well, that was done as a good luck symbol. Much, very much like white people say four leaf clovers are good luck. Someone loving the bride hid the feather there to keep her away from sorrowful happenings."

If you will take time to go to the Library of Congress and read Capt. Bourke's "Snake Dance of the Moquis" you'll find a lot of information regarding Hopi use of feathers.

DAMA LANGLEY

Possibly a Meteorite . . .

Cannonville, Utah

Dear Sir:

Your article "Trees That Died of Fear" by Toney Richardson was interesting.

A possible theory might be that it was caused by a meteorite. On June 10, 1910, a meteorite fell in that vicinity. It could have been close enough to the earth to kill the trees with heat.

The concussion when the meteorite struck the earth was heavy enough to knock down pack horses and riders 20 miles away. The meteorite was never found, but old-timers tell me it must have been very close to the earth when it passed over this area.

O. M. MORLEY

When a Fellow Needs a Friend . . .

Campo Seco, California

Dear Mr. Henderson:

The story in your December issue by Charles Kelly brings back memories which might be of interest to you, also to Mr. Kelly and the Orr brothers.

I think it was in February of 1920 that I was headed toward Salt Lake City from Goldfield, Nevada. I was driving a 1912 Cadillac, a kind of a pick up with no windshield or top. The going was tough as I could only travel when the ground was frozen. After ten a. m. I would start to bog down in the valleys, so would call it a day until the night froze things again.

Well at last I came to a place called Fish springs (just a deserted cabin) and camped for the night. About midnight a herd of cattle stampeded past the cabin. Soon four cowpunchers came in. They had stampeded the cattle to keep them from drinking the water in a little stream that ran through the salt flats. Said it was poison. I made coffee for them and they ate most of my bacon.

They told me they didn't think I would get across the flats which were about eight miles wide. They were nearly right for it took me just five days to do it. I had to pack sage from the hills to put under the wheels. I had wrapped two log chains around my rear wheels and with their aid skidded across on my running boards.

Well, then my sins found me out. My gas line had jiggled until it had developed a crack. Not a man-sized one but just big enough so I wouldn't notice it. There I was about 25 miles from the Orr ranch, out of gas, water, tobacco, and bacon.

I looked like a cake of mud with legs when I started at noon on my trek to the Orr ranch. I reached there at three a. m. after losing the road several times. In the Cedar mountains there was three inches of new snow, and I had to start fires to keep from freezing.

When I stumbled into the ranch the dogs were unfriendly. I growled back at them, and kicked on the door. My hands were like icicles. A voice from inside said, "Go in the cabin in the back and make yourself at home."

And what a home that was! Table, chair, lamp—and a feather bed with quilts. If it wasn't for my frozen feet I would have been very comfortable. But I soon fell asleep and was awakened sometime later by a voice saying, "Better get up and come to supper."

Mother Orr had taken my clothes and dried them and left me a warm pair of hand-knit sox. I hadn't eaten for 36 hours, and what a fine meal they served me. Then

back to the feathers again, until they called me for a delicious breakfast. Then the Orr brothers drove me back to the car and put gas in the tank and we repaired the line.

When we reached the ranch, I wanted to settle my bill. I was about broke, and offered them some of my tools. They did not want to take them, but I insisted because I had lots of them.

If possible please print this, and send the Orrs a copy. I want them to know I have not forgotten their kindness to a very muddy and disreputable looking stranger. I hope Mother Orr still lives—God bless her.

E. W. BARTLETT

He Seeks the Beauty . . .

Yreka, California

Dear Mr. Henderson:

I have spent over 82 years working in stone but in the last 10 years have found more pleasure trying to develop the beauty the Master Artist created in the rocks than in all the years before.

Formerly I always looked for the big ledges, and found them in many types of material for Siskiyou county has them. I let the small ledges go unnoticed until recent years, but now I look for the beauty in rocks, either large or small. I have collected and polished over 1000 specimens with few duplicates—agates, jaspers, rhodonite, jade, marble and granite in many different colors and grades.

My father was a stone cutter and my mother carved in marble. She kept it up for 70 years and carved her last inscription in stone when she was 90.

I started at eight, tending the marble-cutting saws, and am still at it but now I use diamond saws and work with smaller rocks. My latest is an agate piece 8x9 inches. Siskiyou is a good place for the rock hunters—lots of territory and much valuable material.

J. B. RUSSELL

Ramona's Own Story . . .

Anza, California

Dear Sirs:

Much has been written and scores of tales have been told concerning the killing of Alessandro, leading character of the famous Ramona pageant.

Ramona was well known to our family and was a frequent visitor in our home. My father grew up with Ramona. He was present at Cahuilla when Juan Diego's body was brought to the village. He was also present when Helen Hunt Jackson visited the Cahuilla valley on her investigation tour which concerned Indian welfare.

Ramona told us many times of the shooting of Juan Diego (Alessandro). She spoke both Indian and Spanish so naturally my father and mother translated her

version of the affair to the rest of our family.

This is her story as told to us: "Juan and I were living at Pah-ah-wet-heh-ke (abode of the water babies, now known as Juan Diego Flats) and were very happy with our three children in our little adobe home. As you know we had sheep, goats, chickens and horses.

"Juan had been gone for several weeks shearing sheep in Pinacate (Perris valley). He arrived home late at night. I should say about eleven or midnight. He was tired and went to bed immediately.

"I awakened early the next morning and went out into the yard. Juan was still in bed. I noticed a strange horse in the corral. I went into the house and said, 'Juan you have someone's horse in the corral.' From the bed he replied, 'I shall return it as soon as possible.' I heard our dogs barking and said, 'Some Americano is coming after the horse, you had better get up.' The Americano rode into the yard and got off his horse calling for Juan to come out. Juan replied, 'All right, I'll be right out.' He got up, putting on his

clothes and went to the door. Just as Juan reached the doorway the Americano shot him in the chest. He did not speak to him, nor did Juan have a chance to say anything. As Juan fell forward he threw his arms around the stranger throwing him to the ground. They wrestled, Juan grasping him by the throat choking him. However, his strength soon left him and he fell over on his back. The Americano then shot him in the forehead with a revolver. He then mounted his horse and led the other down the canyon.

"I did not know what to do. I sat down trying to think. After some minutes or hours I thought of the Cahuilla village. I must tell my people. I then took our baby, Alejandro, Maria, our youngest daughter and Matilda, our oldest girl and set out for the village. We walked all of the way arriving there about four o'clock in the afternoon. There was much gaiety in the village as a fiesta was in progress and all of the people were there. I told them of the slaying of Juan. There was much sorrow. As it was late they did not go after the body until the next day."

RUPERT COSTO

Fabulous Seven Cities . . .

San Pedro, California

Dear Mr. Editor:

It was with great interest that I read Robert A. Barnes' story "Clues to the Fabulous Seven Cities of Cibola?" in your March issue.

I have known about the petroglyphs and ruins in the Lupton, Arizona, area for 10 years, and have planned going back there on a vacation trip to do some further exploring. I spent two days climbing Battleship mountain, and the round hill shown in your Desert Magazine sketch as Friar Marcos' Hill.

In the article there were no ruins mentioned on top of the round hill. There is a foot-and-hand trail up the east side of the hill that can be climbed by an active man. On top of the hill are bushels of broken pottery, also the exposed flagstone walls of ancient buildings. The rooms in these buildings were small, about six by eight. At the time, I thought they had been built by a small race of people, but probably I am wrong. Perhaps they were water reservoirs or food storage rooms.

I hope this information will interest those who plan to do further exploring in that area.

JAMES R. TALLMADGE

On the Subject of Humor . . .

Bodfish, California

Dear Desert:

I just want to thank Jim Pierce for his letter of criticism in the April issue, calling my attention to the cartoon in the March number. It was one I had missed.

My husband is at a meeting this evening and I am in my favorite armchair with Desert. Certainly did get a kick out of "Did ya get that gasoline stove aworkin' Joe?" Am still laughing, because we just returned from a long desert trip on which we had a similar experience with a gas stove—although we do claim to be seasoned campers. Trying to light it in a hurry in the dark, the darned thing took a crazy notion and flared up all over the place. My husband did have the presence of mind not to turn his back on it, but it almost ignited the canvas top of our pickup—which could have been worse than a fire in the seat of the pants.

Anything can happen on the desert. On one trip I saw an old-timer become so interested in spinning a yarn, he absent-mindedly sat down in the frying pan.

Folks who have no sense of humor shouldn't advertise it by writing letters to the editor.

SYLVIA WINSLOW

Contract for eight miles of canal construction on Yuma mesa division of Gila project has been awarded to V. D. Case company of Long Beach. Canal will afford 7800 acres of land to veterans during year 1948, under homestead law. Cost will be \$500,000.

Electric Bills are LOW! . . .

Wages have reached their highest level in many years, but with the tremendously increased cost of living, it's getting harder and harder to adjust the family budget. One item remains low, however, month in and month out, and that's the electric bill. Although you're using more electricity now than you ever have before, your dollar is going much further—electrically speaking. It gives us great satisfaction to be able to cast a brighter ray of light on the present high cost-of-living picture.



HERE AND THERE . . . on the Desert

ARIZONA

Hualpais Win Land Battle . . .

GRAND CANYON — Hualpai Indians have been awarded 502,870 acres bordering Colorado river below Grand Canyon, by decree entered in March in federal district court. Land was held by Santa Fe railroad under 1866 grant by Congress and 1931 opinion of attorney general. Indians claimed aboriginal rights to ancestral hunting grounds. Their case was based largely upon testimony of old men and women of their ancient enemies, Apache, Paiute, Mojave and Yavapai, who admitted land in question had always been considered Hualpai country. Sixty per cent of Santa Fe station grounds at Peach Springs and 6381 acres around Clay Springs were also awarded in decree ending 15-year battle. Decree followed two unanimous supreme court decisions favoring Indians.

Wild Hogs in Arizona . . .

FLAGSTAFF — Arizona has 11,000 peccaries or javelina—more than all other states combined, according to report of chief of forest service received recently at Coconino national forest headquarters. Only four other states boast wild hogs and their total is 2380. Also listed in census of Arizona wild life were 4800 antelope, 22,000 white tail deer, 42,000 mule deer, 4200 elk, 870 bear and 150 bighorn sheep. State is sixth in national forest area.

Rubber-Plant Investigated . . .

TUCSON—Rubber-bearing bushes six feet across were discovered by Captain Ernest R. Tinkham on recent expedition into Baja California. Plant, called candelaria, oozes astonishing quantities of latex when bark is punctured according to Tinkham, who brought samples back to Tucson. Studying deserts of North America under terms of a Guggenheim fellowship, Tinkham with his brother spent five weeks traveling through Lower California in converted army truck. Rubber plant was found several hundred miles south of Tijuana.

Navajo Want Less Control . . .

WINDOW ROCK — Navajo delegation headed by Sam Akeah recently appeared before senate Indian affairs subcommittee in Washington and protested Indian bureau "control, regulation and interference" in Navajo lives. Akeah, chairman of tribal council declared: "No people can grow strong and advance into citizenship responsibility when regimented and regulated and forever and continually made to feel that they are an inferior race." Delegates asked for modern schools and

hospitals, irrigation system, right to raise more livestock, and repeal of Wheeler-Howard act which permits setting up of tribal governments under Indian bureau jurisdiction.

North Rim Visited . . .

JACOB LAKE—Park service party in a "sno-cat" has successfully completed round trip between Jacob lake and snow-bound North Rim of Grand Canyon, proving workability of mechanical equipment in area in winter. Previously, skis have been only method of reaching rim when deep snows block highway from mid-November to late spring. Ranger W. J. Kennedy headed expedition, which was part of experiment to determine value of "sno-cat" for patrol and rescue work.

Havasupai Evangelist . . .

PHOENIX—Jim Crook, chief of Havasupai tribal council, was licensed as lay evangelist of Episcopal church at 54th annual convocation of Protestant Episcopal missionary district of Arizona. Crook, first of the Grand Canyon tribe to embrace Christianity, served many years as inter-

preter for missionaries. Havasupais now have 30 baptized members. Howard McKinley, Navajo from Fort Defiance also was made lay missionary at conference.

. . .

Flagstaff's oldest citizen, Mrs. Adelaida Rodriguez, 97, died March 10. She was born in Santa Fe, New Mexico, on Christmas day 1849 and had been a resident of Flagstaff since 1882.

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FOSSILS—Geological supplies, Geiger counters, thin sections, picks, hammers, etc. Omaha Scientific Supply Co., Box 1750, Omaha 4, Nebraska.

"PERRY DRILL"—New all-steel. Drills 1/4" agate in 5 min. Usable for drilling plastic wood, iron, gemstones. None better at any price. Only \$17.50. L. E. Perry, 111 N. Chester, Pasadena 4, Calif.

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FOR SALE—Chance for rockhound. Have lot just outside city limits of good desert town. Work shop with lapidary equipment. Good collection of rocks. Address Box G, Desert Magazine.

FOR SALE—Ten acres—2 fenced in—2 houses furnished. Good well, ideal climate. 9 miles east of Julian, California. Terms. Write W. W. Wood, Julian, Calif., Box 47.

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CALIFORNIA

Gulf Resort Planned . . .

CALEXICO — Creation of fishing, boating, hunting and seaside resort at San Felipe on Gulf of California awaits only completion of Mexicali-San Felipe highway, according to border sources. Fishing village of San Felipe and adjacent 32,500 acres of land along the gulf already have been acquired and hotel and other accommodations will be built. People now living in village will be moved to another location. With building of highway, now being surveyed, it will be an auto drive of only three hours from Calexico to gulf.

Barstow Fight Won . . .

BARSTOW—Long fight for incorporation of Barstow neared victory when state supreme court, by unanimous verdict, commanded San Bernardino county supervisors to proceed with calling election on matter. Supervisors had contended that petition for election must be signed by those representing 25 per cent of land and improvements while court decision declares that land must be valued separately from improvements. This validates petition which county had refused to accept.

Wildcat Attacks Girl . . .

PALM SPRINGS—A 30-pound wildcat attacked 14-year-old Bobette Buehler as she played with companions beside swimming pool of a Palm Springs hotel. Three-foot beast disappeared when girl ran screaming to hotel. Later found in a tool shed, it was snared by police officer James Maynard and was strangled in its attempts to escape. The day before, John Warner shot and killed another wildcat which he said had chased him into his home. Officer Maynard, former guide and desert veteran, declared that wildcats previously had not been known to attack humans.

Beans and Tortillas Did It . . .

BLYTHE—Benino Gallegos, 25 years a tamale vendor at Blythe, passed the century mark in February. He thinks he may last a second hundred, if he continues to eat plenty of beans and tortillas, and take care of himself with old Mexican herbal remedies. Benino was born in state of Michoacan. He remembers seeing Mexico's hero-statesman, Benito Juarez, and hearing his parents talk about Maximilian and Carlotta. In his early years he worked as a mule-skinner, but decided to come to United States to try his fortune when he was 65 years old. He arrived in Blythe in 1910 and has been there since.

Glider Record Set? . . .

TWENTYNINE PALMS — Bill Putnam and Ray Parker claim new U. S. record for pre-determined goal flight in a two-place glider. They glided 106 miles between Twentynine Palms and Needles, California, in three hours and 40 minutes. Record was achieved in winter when ther-

mals are less frequent. Glider was towed by airplane up to 2000 feet and released. Flyers reported encountering a sleet storm over the desert and that they were flying in below-freezing weather at all times except when they dropped low over Amboy. Discovery of another thermal saved them from landing in desert there. At times glider was over 9000 feet up.

Homesteads in Demand . . .

LOS ANGELES—Paul B. Witmer, assistant manager of bureau of land management for Southern California reports 832 applications for five-acre jackrabbit homesteads during February, indicating another upsurge in colonization of Twentynine Palms area. Total of applications in 1946 was 4400. During past three years 12,000 persons in the Los Angeles area have applied for the five-acre, five-dollar-a-year vacation homesites on government land.

. . .

Mrs. Margaret Dreyer, pioneer of mining camps of Colorado, Utah and Nevada, died in San Bernardino on March 18, age 90. She was a resident of Rhyolite, Nevada, from 1906 until 1922, and was the last woman to leave that ghost camp. She was known as Mother Dreyer to miners and prospectors of the desert region, and she had cared for many of them in sickness and fed them during financial reverses.

. . .

Mrs. Steve A. Ragsdale of Desert Center, "past 60," recently soloed for the first time. She completed her flight training in 14½ hours. Mrs. Ragsdale's two sons, Stanley and Thurman, also have made solo flights.

. . .

Construction of new and improved road from Yucca valley to about half way down Morongo grade was scheduled to start late in March. Project, to cost \$25,000, included realigning and lowering of grade.

. . .

West's first shipment of Escarole, Italian vegetable similar to Romaine lettuce but intended for boiling like spinach, was sent in March from Imperial Valley to Chicago markets.

. . .

Paved road from Barstow to and through Camp Irwin is open to all persons at all times, according to Lieut. Stillman, commanding the camp. But any deviation from main road while in reservation constitutes a flagrant breach of military and federal regulations.

. . .

Game wardens apprehended three men at Alligator slough, on the Colorado and charged them with using set lines and live bait to catch bass. Men had 20 lines set with total of 400 hooks. Forty pounds of bass were in boat, including one weighing over six pounds.

NEVADA

Nevada Wants Tahoe . . .

CARSON CITY—For the third time in as many legislative sessions, Assemblyman Don Crawford, Washoe county, has introduced bill proposing all territory east of Sierra peaks now a part of California, be annexed to Nevada. Crawford contends area belongs geographically to Nevada and that residents are greatly inconvenienced by political attachment to California. He proposes plebiscite to determine wishes of territory. Annexation would make Tahoe an all-Nevada lake.

Guano May Be Shipped . . .

NIXON—Indians of Pyramid lake reservation have entered into agreement with Dick McCully of Fallon, by which he will be permitted to exploit guano deposit near north end of Winnemucca lake. Deposit, covering 35 acres to depth of two feet or more, is believed to have been left by pelicans hundreds of years ago. Second, smaller, deposit has been reserved for the tribe. Indian war veterans plan to truck out fertilizing material in this deposit when road conditions are improved, and sell it to Nevada ranchers. Agreement with McCully has been forwarded to general offices of Indian affairs in Chicago for official action.

Move Mines School? . . .

RENO — Famed Mackay School of Mines will be separated from University of Nevada and moved from Reno to some mining community, if a bill drafted by assembly mines and mining committee becomes law. Wenlock Free, committee chairman, declared members felt it should be made possible for students to obtain first hand information and practical ex-

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perience to augment textbook theories. Free suggested Ely and Pioche as possible locations where such information would be available. In the senate, A. V. Tallman proposed that college of agriculture also be removed from Reno to some agricultural community such as Fallon, Lovelock, or Carson valley.

Twin Falls—Nevada! . . .

CARSON CITY—Citizens of Twin Falls county, Idaho, have petitioned Governor Pittman for annexation to state of Nevada—if Idaho will let them go. They have requested Idaho legislature to enact law detaching Twin Falls county from that state. Governor Pittman complimented petitioners on their good judgment and expressed willingness of Nevada to accept county if Idaho would release it. Twin Falls citizens, irritated by conditions in their home state, earlier had discussed possibility of forming "Nevadaho" as 49th state.

Goldfield Plans Museum . . .

GOLDFIELD—Plans for Goldfield's historical museum moved nearer realization when L. S. Barnes offered free use of stone structure, formerly a theater, to house project. Museum will be divided into three principal sections. One will be devoted to photographs of Goldfield in the boom days, famous mining properties and per-

sonalities. Second section will feature gold ores of area, minerals and semi-precious stones. Third section will house actual relics of mining camp's past. Goldfield News has called upon citizens to aid in necessary alterations in building and to loan displays when work is completed.

Dam Changes Necessary . . .

DAVIS DAM—Results of examinations of board of consulting engineers which has been considering foundation conditions at Davis dam are generally satisfactory, according to bureau of reclamation. Some changes will be required in design of concrete structures, but conditions are not beyond remedy. No question has been raised regarding the 140-foot high earth and rock fill dam itself. Problems have to do with foundation conditions for powerhouse, intake structure and concrete spillway. Necessary changes may cause delay of several weeks but work on the Colorado river development, which almost has been at a standstill, is expected to be at full swing within a month.

. . .

Stockmen and ranchers of Nye, Lincoln and White Pine counties, meeting at Ely, have organized United Stockmen's association. Association will fight increased grazing fees and work for consolidation of bureau of land management and forestry activities in Nevada.

. . .

Interstate commerce commission has reaffirmed its decision to permit Tonopah & Goldfield railroad to abandon lines between Goldfield and Mina. Decision applies only to interstate operations, and railroad has started court action to force Nevada public service commission to permit abandonment of intrastate service.

. . .

Mrs. Bessie Long, woman prospector and miner, died in Battle Mountain, March 5. Mrs. Long came to Tenabo, Nevada in 1936, engaging in placer mining with her sons. She entered field of turquoise mining at Tenabo, and later moved to Battle Mountain, carrying on turquoise mining at Copper Basin. She learned to cut and polish the gemstone and made up her own jewelry for sale.

. . .

Old station of the Las Vegas and Tonopah railroad in Goldfield was swept by fire believed to have been of incendiary origin, early in March. Building, which was being converted into apartments, was originally constructed during boom days at camp. It was built on site of the famous Gans-Nelson fight, which started Tex Rickard on his promoting career.

. . .

Albert Luther Sales, 75, who was a freighter between the camps of Wonder, Fairview and Tonopah in mining boom days, died in Fallon February 25.

NEW MEXICO

Dodge Leaves \$175,000 . . .

CRYSTAL—Estate of Henry Chee Dodge was estimated at \$175,000 by his attorney, Herman W. Atkins. Three safes at Navajo leader's Crystal ranch yielded \$38,000 in cash, \$12,000 in diamonds, and government bonds with current value of \$40,000, according to attorney. Collection of Navajo rugs at the ranch was valued at \$15,000. Dodge, who died at Ganado, Arizona, on January 7, made a mistake in writing down combination of one of the safes, and a professional safe-cracker from Albuquerque was called in to open it. Estate will be divided, under terms of will, among 17 heirs.

To Mark Santa Fe Trail . . .

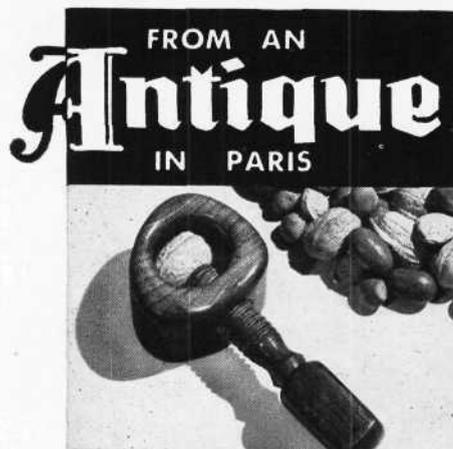
SANTA FE—New Mexico council of American Pioneer Trails association has been organized in Santa Fe. M. R. Tillotson of national park service is temporary chairman. Primary objective of council will be remarking of old Santa Fe trail. Ceremonies in which school children will place markers from Independence, Missouri, to Santa Fe will probably be held next September. Dr. Howard R. Driggs, New York City, president of national trails association explained that Oregon has marked much of the Oregon trail, and Montana the route of Lewis and Clark. This year Utah plans to remark the Mormon trail, while attempts will be made to have Colorado mark the Overland stage route and Wyoming the old Chisholm trail.

Whites Must Move . . .

SANTA CLARA—Non-Indians were to be evicted from Santa Clara pueblo by March 31. Move by pueblo officials would affect 75 persons, including Los Alamos workers. Juan Chavarria, governor of Santa Clara, explained action was intended to protect the people and their rights to their land; and to insure keeping of peace, law and order in pueblo. Answering protests that eviction might cause ill will, Chavarria wrote: "We, the Indian people, worked together side by side with our white brothers in battle and production. Now that the war is over, we want to live our pueblo life in peace again." Pueblo constitution provides for renting of lands to non-Indians for term not to exceed two years, provided pueblo approves such permits.

Indian Scouts Increase . . .

GALLUP—Four hundred Girl and Boy Scouts have been added to existing or new Scout units on Navajo and Hopi reservations in recent weeks. Total membership of Indian boys and girls on the two reservations now is over 800. All boarding schools, including Ganado mission, and all but a few more remote day schools have organized Girl or Boy Scout work. Ganado mission, Fort Defiance and Fort Wingate schools will send a troop of senior Boy Scouts to Philmont Scout camp in Taos mountains this summer.



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City: State:

Protest Land-Renting Scheme . . .

TAOS—Taos pueblo council has protested a joint resolution passed recently by New Mexico legislature, which asks Congress to permit long-term renting of Indian lands along Rio Grande to non-Indians. Memorial declared that part of land was not being fully used and that state of New Mexico found it necessary to develop its agricultural resources to greatest possible extent. "Long-term rental of land is equivalent to possession of land," pueblo governor Severino Martinez declared. "If it is necessary to take the fight to Washington, we are prepared to go."

Selago Nez, 86, former army scout, died at Chinle March 8. The old Navajo asked to be buried at Fort Wingate where he had served many years. Services were in charge of newly-organized American Legion post and Father Gail officiated. Nez was born at Fort Sumner when the Navajo were in captivity there in 1861.

University of New Mexico is reopening permanent research station in Chaco canyon this summer for 17th annual field sessions in anthropology. Sections will be held June 16 to July 26 and August 3 to August 30. Station was closed during war.

Pedro Cajata, 90, known over the entire country as Chief Manitou, died at Santa Clara pueblo on March 14, and last tribal rites were administered there. Resort at Manitou Springs, Colorado, is said to have been named after him, and an Espanola bank uses his picture on its checks.

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UTAH

New Salt Lake Resort . . .

BLACK ROCK BEACH — Plans to convert this Salt Lake beach resort to a "model Atlantic City" have been completed. State land board has approved eight-year lease of property to Western Service company. Dancing, rides and typical beach amusements will be featured. Midway will be constructed parallel to shore line, and a long pier for boats run out into the lake. Picnic and observation facilities will be constructed on top of Black Rock itself. Expenditure of \$400,000 is planned with much of construction to be completed before summer. Beach near Black Rock was originally selected as bathing site by Brigham Young, and one of original resort buildings still stands.

Monument Work Advances . . .

SALT LAKE CITY—First truckload of granite blocks for "This Is the Place" monument at mouth of Emigration canyon was unloaded at the site in mid-March. The three blocks, weighing a total of 9¼ tons, came from quarry in Little Cottonwood canyon which furnished granite for construction of Mormon Temple in Salt Lake City. Foundation for monument has been completed and most of the bronze pieces have been cast. More than 800 sumac shrubs, hundreds of junipers and pines and two lines of honey locusts have been planted, and road to site has been completed. Structure is scheduled for dedication July 24.

Geneva Rates Lowered . . .

PROVO — Interstate commerce commission has authorized reduced rail freight rates on steel shipped from the great Geneva plant here to Pacific coast terminals. Reduction, effective April 1, amounts to 31 per cent and will be a cut of \$4.40 a ton on steel shipped to Los Angeles, and \$3 a ton on that shipped to Seattle. Utah civic leaders and company officials called ruling victory for Geneva and the West in battle for cheaper steel.

Ute Claims Denied . . .

VERNAL—Throwing out claims totaling millions of dollars, United States supreme court has denied Uintah basin Indians right to compensation for land in White River valley, Colorado, where tribe once lived. Court ruled that Utes had been given only occupancy right to land in question and that they had been fully compensated for every acre in treaty reservation. White River valley lands were ordered sold by Congress, in 1880, to compensate surviving relatives of Indian agent and staff and U. S. troops who lost their lives in Ute massacre.

New Tabernacle Roof . . .

SALT LAKE CITY — World-famous Mormon tabernacle will have a new, \$60,000 sheet aluminum roof. Huge-domed

structure, completed in 1867, originally was covered with pioneer-fashioned shingles, then metal. New roof, of plates 36 to 42 inches wide interlocking in ridges to provide for expansion and contraction, has already been shipped from Pennsylvania. It will not be placed until after church general conference in April. Tabernacle will also be repainted, inside and out. Virtually an entire new organ for the building is under construction in Boston, but shortage of materials is delaying its completion.

DESERT QUIZ ANSWERS

Questions are on page 8

- 1—Escarpment is not a synonym of arroyo, wash, wadi.
- 2—Trek across Death Valley.
- 3—Nevada.
- 4—Of the four, tire chains are least essential.
- 5—Wickenburg.
- 6—Lieut. Beale.
- 7—Arizona.
- 8—Nickel.
- 9—Spanish padres.
- 10—Gallup.
- 11—Creamy white.
- 12—Fremont river.
- 13—Famous Colorado river boatman.
- 14—Little Colorado.
- 15—Apache Indian.
- 16—Open pit copper mining.
- 17—Flasks.
- 18—Never again tell the truth.
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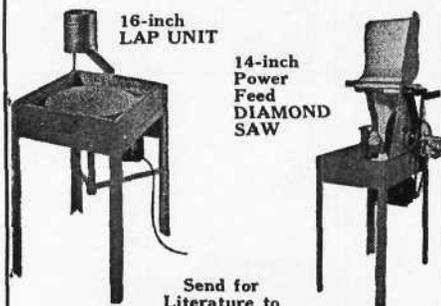
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AMATEUR GEM CUTTER

By **LELANDE QUICK**
Editor of The Lapidary Journal

On March 11 I gave a lecture "The Rediscovery of a Lost Art" (the lapidary art, of course) to the West Coast Mineral society at Fullerton, California. I mention it here because two things happened in connection with the engagement that seemed important and significant to the growth of the art. Being a dinner guest of the society's president, Marion A. Speer, I had the opportunity of visiting his Western Trails museum at Huntington Beach and I would like to commend the important work he is doing.

Speer is one of those Americans (more numerous than you think) who never throws anything away. Whenever he got his hands on a thing he kept it, and it's now in his private museum. He even has his report cards from school in Texas. And they were not bad marks—considering that his father was his teacher. But the important exhibits are the best collection of Indian artifacts I have seen in private hands, a fine collection of minerals and a splendid display of cut and polished materials. Speer has influenced hundreds of persons to adopt gem cutting and has done a great deal to return the "people's first art" to the people again. He is in the unique position of being able to take persons interested in the gem exhibit into his nearby shop and show them how gems are cut.

Speer's work has become so important that although his museum is outside the city of Huntington Beach he nevertheless has brought a mild fame to the city, which has given him the "keys of the city," and the chamber of commerce has given him a life membership. More than 30,000 visitors have signed his register since he began keeping records a few years ago and he never has charged admission. In his work for a large oil company Speer was seriously injured many years ago. He went to the desert and recovered his health as have done many who have found there an indefinable something that builds new bodies—and new spirits.

During his years in the desert he visited every nook and cranny to gather his collection of Indian relics, minerals and gem materials. "You can't name the place in any of the Southwestern states that I haven't been to," he told me. "Why I just came home from Death Valley and I know that valley better than Scotty himself. I started to explore one remote canyon and as I turned a curve in the trail there was a huge rock on which someone had painted 'Speer's been here.' It amused me at first until I started thinking that people might believe I'd done that, and I wouldn't do it for I don't approve marking the scenery that way."

Most of the folks interested in rocks in Southern California have visited Speer and watched the progress of his project. This information is beamed at our eastern friends who may be coming west this summer. Everyone who is able to get out of bed is going to travel and many will head for the Southwest. If you're going to take rocks back with you why not bring some out with you? Swap with our many dealers along the highways but save a good rock or two for Marion Speer when you visit his museum at Huntington Beach.

Speer has started something else that I hope becomes a trend. He let it be known at the junior colleges and high schools in Orange county that there would be a talk on gem grinding and it

was a unique experience for me to see so many young people. It is a sad fact that one doesn't see many faces at gem and mineral meetings on which the wrinkles are not starting to show. There are few people under 30 on the membership rolls. After the meeting ten of the teenagers joined the society, and I shall be interested in observing the effect, if any, they have upon the group in the years ahead. Would it not be a good idea for all societies to get a program for one evening that would be interesting to youth and then invite them to come? How I wish I had been exposed to such an idea when I was 18! Of course some of the oldsters didn't like the idea of the "kids" joining the society, but the thought occurs to me that if youth in sufficient numbers joined study, art and hobby groups and if they were permitted to share their elders' activities we wouldn't be worrying so much about "delinquency."

Katharine M. Gohn of Mesa, Arizona, writes that she found an agate at Escudillo mountain, south of Springerville, Arizona, that is exactly like the cut of the agate used as the heading for this page.

The Chicago Rocks and Minerals society has a mimeographed bulletin that is one of the most informative I have seen. It is called the "Pick and Dop Stick" and its editors are Herbert and Oriol Grand-Girard at 7738 Eastlake Terrace, Chicago 26. The society is willing to exchange with other organizations having bulletins. The March issue contains 10 pages the size of this magazine and has excellent articles on jade and jewelry making.

A new group, recently organized, is the El Paso Mineral and Gem society at El Paso, Texas. Organized January 22, it had grown to a membership of 37 in March. Interested persons may write to the secretary, Mrs. R. H. Miller, Ascarate Park, Route 42, Box 63, El Paso, Texas.

Another new organization is the Fallon Rock and Gem club recently organized with 20 members. Interested persons may write to the president, Charles M. Stains at Fallon, Nevada.

If small communities like Fallon have enough persons to organize a rock club and relatively small communities like Desert's hometown of El Centro can support two gem organizations one wonders why large cities, particularly in the West, have none. If anyone has an idea of effecting an organization and we can help, drop us a line.

For the benefit of the new organizations (and some older ones could profitably take note) I quote the well chosen words from the membership list of the Orange Belt Mineral society—

"Coming together is a beginning; keeping together is progress; working together is success."

A reminder to gem cutters and jewelry craftsmen—

Exhibition of modern jewelry by the best craftsmen in the country, sponsored by the Museum of Modern Art in New York, will be on exhibition in the Art museum at San Francisco April 15-May 6.

GEMS AND MINERALS

ARTHUR L. EATON, Editor

CALIFORNIA FEDERATION PLANS ANNUAL SHOW

Plans for eighth annual convention of California Federation of Mineralogical societies are nearing completion. Show, one of big events of rockhound year, will be held in Santa Barbara Museum of Natural History, May 23-25. General inquiries should be addressed to C. D. Woodhouse, convention chairman, 33 Mimosa Lane, Santa Barbara. Applications for club or non-commercial space should be made to Miss Alice Wiesendanger, 2660 Puesta del Sol, Santa Barbara. Mrs. Harold Foster, 21 Fairfax Road, Santa Barbara, is in charge of commercial displays.

Vice-president Jack Streeter lists 17 classes of competitive exhibits for convention. Classes include: material owned by society or three or more members; minerals; crystals; polished slabs or flats; cabochons; faceted stones; novelties—spheres, book ends, etc.; minerals from state in which exhibitor lives; minerals from one locality; jewelry craft—must contain a mounted stone; fluorescent exhibit; rare minerals and unusual localities; minerals under 2x2 inches; minerals carrying Dana number and arranged according to Dana system. Any polished material or jewelry displayed must be work of exhibitor.

There will be a junior collection, for exhibitors under age 15, and a guest exhibit open to anyone not a member of any society in federation. There will also be an award for the best display of minerals for sale by dealer taking commercial space.

IMPERIAL VALLEY ROCK SHOW WINS LARGE ATTENDANCE

Second annual gem and mineral show co-sponsored by Imperial Valley Gem and Mineral society and Imperial Lapidary guild, was held in El Centro, March 29-30. Exhibit, at which 1170 visitors registered, featured gems and cutting material of Imperial county, "jewel box of Southern California." Rockhounds from points as distant as New York and South America attended show which was held in auditorium of Central junior college.

Outstanding exhibits of local material, cut and polished, were displayed by Leon Miller, Sam Payson, Chuck Holtzer, Sam Robinson, George Moore, Ed Stevens, Leo DeCelles, Walter and Irene Gatlin, and Blackie and Linnie Beale. E. K. Brown showed plume agate from Texas and Sally Patton displayed a lighted case of sagenite. Diversified material was exhibited by the L. E. Richardsons, C. K. Pattons, the Allen Mains family, Esther d'Eustachio, the Morris Pratts and the A. L. Eatons.

Jane M. Hagar had a display of polished stones from desert and sea shore. Harold W. B. Baker of San Diego showed opals, crystals and minerals. Louis Goss of Los Angeles exhibited gems and mounted gossite, while Herbert D. Cooper and son had on display a large nodule of jade from Wyoming.

A diamond saw, cutting rocks and thunder eggs for visitors, was operated during the show

by Allen Mains. Ed Rochester was in charge of the fluorescent display staged through courtesy of the Mineralight company. Ira Huffman was responsible for lighting.

A feature of the show was a museum of oddities—principally rock—found on the desert. Exhibit, arranged by Eva Wilson and Ed Stevens, had formations resembling everything from Easter bonnets to mythical desert monsters. Miss Wilson also displayed flower prints made from pressed desert blooms. Jack Frost and De Witte Hagar showed saws and lapidary equipment.

Door prizes of jewelry and large polished specimens were given, and grab bag sales netted \$300.

Sam Robinson is president of the Imperial Valley Gem and Mineral society and Leo DeCelles heads Imperial Lapidary guild. The host societies already are planning for next year's show.

SAN LUIS OBISPO FORMS GEM, MINERAL GROUP

San Luis Obispo Mineral club has been organized with Gordon Bowser, president; H. E. Cox, vice-president and Mrs. Julia A. Underhill, secretary-treasurer. Vernon Porter, lapidary, was scheduled to speak at April 4 meeting. Anyone interested in collecting rocks or minerals, lapidary work or jewelry making, is invited to contact Mrs. Underhill.

SACRAMENTO SOCIETY HOLDS EIGHTH ANNUAL BANQUET

Sacramento Mineral society held its eighth annual banquet on March 8, with 150 members and guests attending. Those attending received miniature booklets containing society history and current information. Booklet cover was of thin sheet copper with shamrock stamped out and backed with green, with small polished beach pebble mounted on green. Outgoing president Downard was presented with gifts. J. L. Rosenberg, editor Sacramento Union, spoke. Minerals and stones were displayed by Doyle Rishel, the George Hinseys and the MacClanahans.

Club officers for 1947 are: Doyle Rishel, president; E. E. Pook, vice-president; Miss Marion Morton, 3009 F street, Sacramento, California, recording secretary; Mrs. Erma Siler, financial secretary; Leo Chausee, treasurer; Mrs. Ilga Hinsey, director.

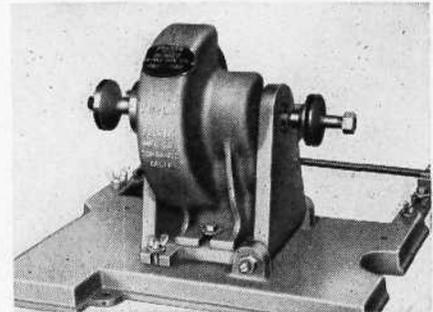
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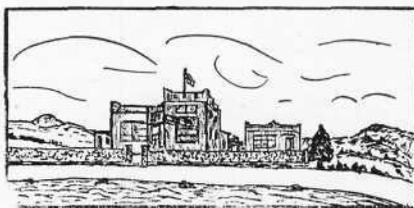
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FALLON, NEVADA, ORGANIZES ROCK AND GEM CLUB

Fallon Rock and Gem club has been organized by rockhounds in Fallon, Nevada. Charles Stains was elected president at first meeting held March 3 in Oats Park school; Mrs. Helen Cannon, secretary; Sam Walters, treasurer; George Kell, membership chairman; Jerry Donniss, lapidary chairman; Calvin Covell, publicity chairman. Meetings will be held once or twice a month, and many field trips are planned. Group collected geodes near Salt Wells March 2.

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AMONG THE ROCK HUNTERS

Mrs. Ella Arciniega, vice-principal of Fairfax high, Los Angeles, discussed crystallography in the laboratory, at March 14 dinner meeting of Pacific Mineral society held in Chancellor hotel, 3197 W. 7th. Subject of her talk was made visible by binocular microscopes. March 16 field trip was planned to Mint and Soledad canyons for howlite, probertite, natrolite and other zeolites.

Ernest Chapman talked on minerals of Broken Hill, New South Wales, at March 10 meeting of Mineralogical Society of Southern California, Pasadena. An exhibit by members of minerals from Australia and southwest Pacific islands added interest to the lecture. Victor Robbins led March 16 field trip to Winchester quarry.

Nebraska Mineralogy and Gem club elected following officers at annual meeting held February 25 in Paxton hotel, Omaha: Sharpe Osmundson, president; A. B. Nau, vice-president; Mrs. Bertha C. Minardi, 5715 No. 30th street, Omaha, secretary-treasurer; J. L. Freeman, E. R. Long, Adolph Jensen, C. D. Hutchens, board members. Club held annual dinner March 20 at Hotel Rome, Omaha. Dr. C. S. Schultz, director of University of Nebraska state museum, showed colored motion pictures of field expeditions. Mineral collection of the late Fred Eastman was on exhibit.

Dr. Joseph Murdock of University of California at Los Angeles has announced discovery of a new mineral which he has named Nuevite for the town in Riverside county. First specimen was found in that locality. Dr. Murdock describes new mineral as heavy, black, shiny material formed mostly of iron with three rare elements—tantalum, yttrium and titanium.

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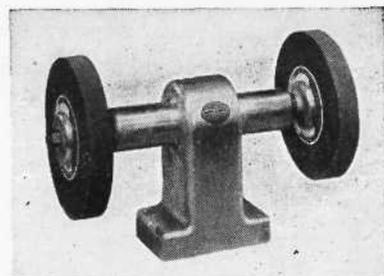
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B. Gordon Funk, mineralogy teacher, spoke on application of physical mineralogy to specimens in the field and at home, at March meeting of Los Angeles Mineralogical society. February field trip was to San Bernardino mountains adjacent to Lucerne valley, in search of garnets.

San Jacinto and Hemet Rockhound club held its first meeting March 9. Organizer Tommy Harwell was bitten by rockitis bug while on a visit to his sister Helen Ojan of NOTS Rockhounds at Inyokern. He contacted several San Jacinto and Hemet people interested in rocks and new society was born. First field trip was scheduled for last week end in March.

Arkansas Mineralogical society met February 16 at Hot Springs national park. Harold B. Foxhall, state geologist, spoke on mineral resources of Arkansas. There was an exhibit of Arkansas quartz crystals by members and dealers, and a display of gems. A banquet celebrated the 19th anniversary of the group.

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Sheriff Ware of Imperial county told members of Imperial Valley Gem and Mineral society about desert perils and tragedies at March 5 meeting. Mr. and Mrs. Earl W. Martin of Ann Arbor, Michigan, who were on their annual purchasing trip to the West Coast, displayed some of their beautiful specimens.

Jessie Quane, Los Angeles Lapidary society, talked on gem stones in jewelry and jewelry making, including design and demonstration of methods and equipment at March meeting of Santa Monica Gemological society. Professor W. R. B. Osterhold and Vern Cadieux reported on field trips to Mule canyon and Death Valley. Committee was appointed to prepare protests against increasing number of billboards appearing in Mint canyon.

Dr. Don B. Gould, professor of geology at Colorado college, was scheduled to talk on the geologic past of Pikes peak region at March 7 meeting of Colorado Mineral society, Denver. Members Warren R. Heberling and James B. Greenfield donated a pair of petrified wood book ends which will probably be auctioned to augment club finances. Charles Parker, Denver assayer, also a member, donated two ore specimens.

Polly Winklepleck, secretary of NOTS (naval ordnance test station) Rockhounds, Inyokern, California, has compiled a brief history of the club, tracing it from its beginning as an unorganized group in 1945 to its present status as a member of California federation. As many as 100 have attended scheduled field trips. Navy has assigned a permanent building to house lapidary equipment, and shop operates five nights a week with a crew of 12 as instructors. Anyone interested is invited to attend meetings held first Mondays.

E. E. Michael discussed land and sea shells at March meeting of Yavapai Gem and Mineral society of Prescott. Mr. and Mrs. Michael exhibited a thousand shells from all over the world. Michael explained how mollusks build their houses from aragonite and calcium carbonate. During March society made field trip to Mayer onyx mines where Charles A. Cox, mine superintendent, conducted members to collecting points.

COUNTY MAPS . . .

CALIF: Twnshp, Rng, Sect. MINES, All road, trail, creek, river, lake, R.R., school, camp, rng. station, elev., ntl. forest, land grant, pwr. line, canal, etc., boundaries. Size range 20x30 to 73x100 inches.

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Midwest Federation of Geologists issued its first bulletin in January, editors Alger R. Syme and Loretta E. Koppen. It contains directory of member societies and interesting articles on society history by Ben Hur Wilson; sand, Dr. George A. Thiel; lapidary procedures, Wm. J. Bingham; pearls, E. Lillian Mihelcic; fossils, James O. Montague. Officers of federation are: John F. Mihelcic, president; Benedict P. Bagrowski, vice-president; Loretta E. Koppen, 3376 Brunswick avenue, Minneapolis 16, secretary; C. W. Yaggy, treasurer; Ben Hur Wilson, historian; Thomas Scanlon, Alger R. Syme, directors-at-large.

George C. Anderson, president Chicago Rocks and Minerals society, has made a walnut mallet in shape of a geologist's pick to be used instead of conventional gavel. Jean Ross spoke at March 8 meeting on fluorescence of minerals and displayed different types of lamps. Members were invited to try out their own specimens to ascertain under which lamp they might react most favorably.

Major L. F. Brady was scheduled to talk on meteorite craters at March 6 meeting of Mineralogical Society of Arizona, and S. C. Brown on experiences of a geologist in Colombia at March 20 gathering. Quartz and feldspar were under discussion in the what-the-rockhound-wants-to-know department. March 9 field trip was to Date creek quartz crystal area. Society is experiencing housing troubles. Meeting place has to be announced from time to time in local newspapers until suitable centrally located hall can be secured.

Columbian Geological Society, Inc., Spokane, Washington, lists the following officers for 1947: P. N. Brannan, president; Hugh Henry, vice-president; Joseph M. Seubert, W 1820 26th avenue, Spokane 9, secretary; John W. Preser, treasurer; C. O. Fernquist, mineralogist; Alma C. Walker, Clarence E. Kline, C. B. Neal, directors. Society is an inland empire group of hobbyists devoted to study of gem collecting and cutting and of minerals and geology of the home area. Meetings are held first Thursdays at Eastern Washington State Historical society, W 2316 1st avenue.

ROCKHOUND CARAVAN SPENDS TWO DAYS IN DEATH VALLEY

Led by Clark Mills, president of the Searles Lake Gem and Mineral society, and Ralph Dietz, president of the Naval Ordnance Test Station Rockhounds, 175 mineral collectors and students of geology spent two days touring the Death Valley area March 29 and 30.

In addition to the two desert rock clubs, the caravan included members of the De Anza mineral society and the mineral class of the San Bernardino junior college. They were accompanied on part of the tour by Edwin C. Alberts, park naturalist in Death Valley, and the trip included visits to Artists' drive, Wildrose and Emigrant canyons, Zabriskie point and a tour of the old Colemanite mine at Ryan. At the overnight camp at Shoshone, Don Walden of Trona furnished a guitar accompaniment for a campfire songfest, and Harry Oliver of Thousand Palms entertained with many of his desert yarns.

Kern County Mineral society planned a potluck dinner March 10 in sales room of Coca-Cola bottling building. A motion picture was to provide entertainment.

ATTENTION SECRETARIES, PUBLICITY CHAIRMEN—

News for Gems and Minerals should be in office of Desert Magazine by twentieth of second month preceding date of publication. Material for July issue should be in May 20; material for August issue should be in June 20.

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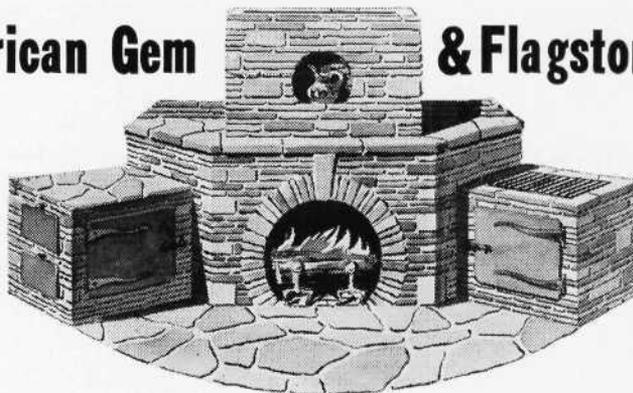
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Don E. Wight, guest speaker, gave chalk talk on gem-testing instruments and their uses at March 11 meeting of Pomona Valley Mineral club, Claremont, California. He displayed and explained uses of dichroscope, polariscope, eye loops, refractometer, diamond scales, hardness points, etc. Member Boileau presented a paper on bloodstone, or heliotrope, birthstone for March.

Bob Houston, who served two years in Burma as a lieutenant colonel with Gen. Stillwell's forces was speaker at March 19 meeting of Searles Lake Gem and Mineral society. He discussed minerals and gems of Burma. Members displayed material from that locality. Two films were shown—*Tibet, Land of Isolation* and *Work of Rivers*. The Searles Lake society netted \$1890.16 at its '49er party. Half of this goes into clubhouse fund and other half to local community chest.

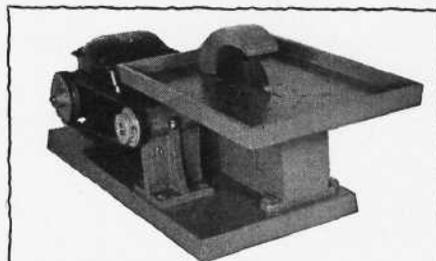
R. O. Diedrick, Oakland mineralogy teacher, was guest speaker at February 28 meeting of Mother Lode Mineral society, Modesto, California. He talked on borate minerals of California, displaying several specimens during lecture. Five new members joined society, making total of 78.

A technicolor sound picture—*Steel, Man's Servant*—delighted Northern California Mineral society at March 19 meeting. Film was loaned by Columbia Steel and made by U. S. Steel corporation. Gathering also viewed a short picture made by U. S. government—*Lake Carrier*—showing mining and shipping of iron ores. Society owns lapidary equipment which is available to members at a small cost.

Paul Mortimer gave an illustrated lecture on history of aluminum at February meeting of Los Angeles Mineralogical society, showing importance of this metal to mankind. O. C. Smith's book on mineral identification was raffled and three door prizes awarded. January field trip was to Mojave and Red Rock canyon.

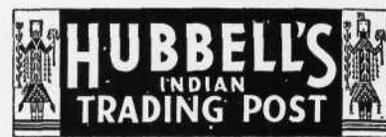
Several collectors recently have brought in specimens which they were quite sure were fossils. But it was a case of mistaken identification. At some time in the remote past, jasper, quartz, and other rocks have been eaten away by soil acids, leaving cavities of various shapes. These cavities, later, were filled with opaque calcite, a process known as "replacement." These have again been acted upon in the ground by carbonic acid, and by erosion, leaving the peculiar shapes, which often really do resemble fossils.

San Jose Lapidary society met April 1 at De Anza hotel. Meeting featured final preparations for gem show held April 19-20, and appointment of nominating committee.



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Mojave Desert Gem and Mineral club of Barstow elected officers at its regular meeting, March 12. W. F. Gabriel is president; O. F. Waters, vice-president; Faith Dotters, Daggett, secretary-treasurer. Executive board consists of Walter Lauterback, Cecil Gore, Mrs. W. F. Gabriel, Ray Longworthy, John Loeffler and Mrs. O. F. Waters. Mr. DeVose spoke on formation of rocks and minerals and their relationship to gems.

Members of Imperial Valley Gem and Mineral society are still finding some nice sagenite on the slopes of Graham's pass in the Chuckawallas, though field is pretty well worked over.

Northwest Federation of Mineralogical societies, which is holding its seventh annual convention August 30-31 in the Masonic temple, Seattle, has 23 member-clubs. States covered by organization are Montana, Wyoming, Idaho, Oregon and Washington.

Annual banquet of East Bay Mineral society has been scheduled for May 3 at Park Boulevard clubhouse, Newton and Park boulevard, Oakland, California. L. J. Hostetter, 4034 La Cresta avenue, Oakland, is chairman. Dr. Austin F. Rogers spoke to the club, April 17, on 50 years of mineral collecting.

Thomas Warren of the Mineralight company gave a talk on uses of fluorescent lights in commercial pursuits, at March 12 meeting of Long Beach Mineralogical society. Field trip for March 28-30 was planned to Lavic field about 35 miles east of Barstow, under leadership of Jim Bond.

Monroe Parks, of Permanente Cement company, presented sound picture at March meeting of Sequoia Mineral society held in Parlier union high school, Parlier, California. Pete Eitzen, field trip manager, arranged a trip, weather permitting, to Parkfield area March 9.

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Arkansas mineral bulletin reports establishment of a rock wool plant, the Tex-Ark Rock Wool corporation, by V. C. Doctorman and associates of Ft. Smith, Ark. Plant will be located at Texarkana, Arkansas.

Frank Estabrook and John Greb showed color slides of scenes across the country and of interesting rock specimens at March 8 called meeting of Imperial Valley Gem and Mineral society held in county court house, El Centro, California. Mrs. Estabrook and Mrs. Greb accompanied their husbands. Mrs. Alice Reed was also a guest. All are members of Gem Collectors club, Seattle.

George Marcher talked on lapidary art at March meeting of Los Angeles Lapidary society. Jessie Quane, program chairman, conducted short course of questions and answers on cutting and polishing of unusual materials. March field trip was to Mule canyon near Barstow.

Wilfred C. Eyles, Bayfield, Colorado dealer, offers one model M Streamliner diamond saw complete with 14 inch blade as a prize for best amateur display of cabochons at California state convention. This amounts to a value of \$138.50.

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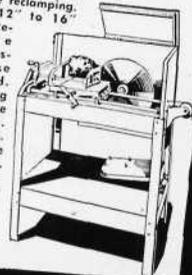
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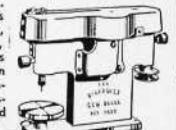
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By RANDALL HENDERSON

OLD MOTHER Nature played some strange pranks when she buried her mineral wealth under the surface of the earth where men would have to hunt and toil for it. She planted diamonds in the jungles of Africa, gold in the frozen arctic, copper in almost inaccessible canyons—and for some of her chemical resources, she selected as a hiding place one of the most forlorn spots on earth. She put them under the surface of an old dry lake at Trona, California.

But the hunters who seek mineral riches are a hardy lot. Eventually they discovered the chemical riches in the brine beneath the playa at Trona—and today they are pumping it to the surface and deriving a hundred and sixty odd commercial products from the solution.

There is only one reason why people live in Trona. Either they work in the huge processing plant of the American Potash and Chemical corporation, or they are in the business of providing the goods and services required by employes of the corporation. Trona is a company town—a cleaner and more orderly town than one generally finds where corporation mining is the sole industry.

But notwithstanding the company's efforts to provide a comfortable community, Trona is not a pretty landscape. Heat waves simmer over the salt flat in summer, and the soil is so sterile it is impossible to grow a little patch of petunias in the front yard without bringing in good earth from a distance.

To those who see beauty only in green parks and running water and tree-clad hills, or who imagine that happiness somehow is linked with comfortable temperatures and a luxurious physical environment, Trona is a drab place indeed.

* * *

Thanks to the invitation of Paul Hubbard of the Randsburg Times, I spent three days recently in the Trona-Death Valley area motor-touring and camping and hunting rocks and botanical specimens with the rockhounds of Trona, Randsburg and the neighboring communities.

I have never found a happier or more wholesome group of humans than the members of the mineral societies who were my companions on this trip. Beneath and beyond the somber landscape they have found the gorgeous coloring that lies just beneath the surface of those dull-appearing rocks. They have discovered the warmth of friendship that comes with close association on rugged trails and in the campfire circle at night. They cannot grow flowers around the house but out in the mountains that rim their valley they know where to find Nature's gardens of Panamint daisies and rock asters. The chuckawalla lizard that perches on a boulder is a harmless creature whom they regard as a friend. They call themselves rockhounds, but they are more than mere one-track hobbyists. The very nature of their environment has developed in them the resources to discover and create their own beauty and happiness. Their drab landscape has taught them, unconsciously perhaps, one of the most important truths that humans ever learn—that beauty is largely a reflec-

tion of the character within, and that happiness comes not from external things, but from the heart.

* * *

One evening at dinner I sat beside T. R. Goodwin, superintendent of Death Valley national monument. I was interested in learning how the park service was getting along with the prospectors. Death Valley is one national monument where there is no ban on prospecting. The miners can go out and pick around all they want. But they seldom do it.

And yet Death Valley region is much more highly mineralized than Joshua Tree national monument where prospecting is taboo. Nevertheless the swivel-chair miners of Southern California are howling to high heaven for the privilege of prospecting in the Joshua park area. What I learned in Death Valley merely confirms what I have long suspected—that it is the "No Trespass" sign rather than the lure of any mineral wealth to be found in Joshua Tree monument, which is causing all the irritation.

* * *

March winds are blowing today, as they always blow at this season of the year when the desert winter is giving way to summer temperatures. These sand-laden winds are annoying to tenderfoot housewives. But after they have lived on the desert a few years they become reconciled. At least, many of them do.

When I hear people complaining about the wind I feel sorry for them. Either their health is not good, or they are lacking in imagination. Imaginative humans can understand how stagnant and foul the atmosphere on this earth would become if there were no winds to change it once in a while. The wind, no less than the rain, is a heaven sent blessing that makes of this earth a habitable place for mankind.

* * *

The spring deluge of poetry is beginning to come in. It never fails. There is something about the atmosphere in March and April and May that makes folks want to express their thoughts in rhyme. And it is a good healthy urge. Only I wish they wouldn't all send 'em to the editor.

They come in at the rate of 300 or 400 a month—and we have space for only a dozen or so. I hate to return good poetry—and every poem is a good poem to the person who wrote it. My reluctance to return it is not because I have such a poetic soul—but rather due to my Scotchman's instinct for keeping everything I can get for nothing.

But the warehouse where we keep the poetry is bursting its sides with surplus—and still it comes. I am tempted to try John Hilton's scheme. Every New Year John burns all his paintings which have been on hand so long he is tired of looking at them. If I don't weaken between now and then, I may have a big bonfire next New Years eve and start the poetry department in 1948 with a clean slate.

Trouble is, I've promised to publish a lot of the verses now on hand. I hope St. Peter will forgive me for all the broken-promises-to-poets charged against me in the Big Book.



LOMAX TELLS ADVENTURES RECORDING AMERICAN SONG

All his life John A. Lomax has listened to America singing, and he has ventured into strange places to record words and music of the songs he has heard. Some of the things he learned, the people he met, the experiences he had, are included in *ADVENTURES OF A BALLAD HUNTER*. There is history in the book, and romance and excitement. And the hearts of the people of our country are laid bare in their folksongs, and the stories of their songs, with a realism that no novelist or reporter could duplicate.

Lomax has done great service to America in preserving much fugitive folk music which otherwise would have vanished before the onslaught of radio and juke box.

When he commenced his self-imposed task, anything literary of American origin was considered almost worthless. He met indifference, disapproval and sometimes actual antagonism. But he held to his work and in so doing played an important part in the great movement which freed American creative art from the shackles of English tradition.

When Lomax was four, living in Texas beside a branch of the old Chisholm trail, he woke one night to hear a cowboy singing in the darkness and the rain to quiet the restless trail herd. At that moment began the trail which has led to almost all parts of this nation: to cattle ranch, farm harvest, construction camp and dive. Some of the best songs have come from southern penitentiaries where Negroes sang to lighten their labor.

When he showed his first cowboy songs, copied on scrap paper and cardboard, to a professor at University of Texas, he was told that they were tawdry and cheap. That night he burned the manuscript. But the music he heard would not let him rest. Today there are more than 10,000 recordings, collected by Lomax and his son Alan, in the Archive of American Folk Song in the Library of Congress. And the country is made richer by his books, among which are *Cowboy Songs and Frontier Ballads*, *American Ballads and Folk Songs* and *Our Singing Country*.

He first recorded "Home on the Range" in 1908, obtaining it in San Antonio from an old Negro, a former trail cook, who lived in a shack under the mesquites beside the river. Many another favorite of today

was saved for us by the energy and enthusiasm of the man from Texas.

When the boy Lomax planted corn on his father's farm, he sang: "Whistle and hoe, sing as you go; shorten the rows by the songs that you know." The songs which he preserved have shortened weary rows for many of us. And *ADVENTURES OF A BALLAD HUNTER* not only is fascinating reading; it is part of the heritage of America.

The Macmillan company, N. Y., 1947. 302 pps. \$3.75.

MINERAL IDENTIFICATION BOOK REVISED, ENLARGED

A revised edition of Orsino S. Smith's book *Mineral Identification Simplified* has been published under the title *IDENTIFICATION AND QUALITATIVE ANALYSIS OF MINERALS*. According to the publishers, the volume makes identification of any mineral easy. A new system of qualitative analysis is introduced, a combination of the blowpipe and wet systems.

All of the more than 2000 minerals known in 1945 are classified in 13 groups according to specific gravity, then further broken down according to hardness in each group. Other physical properties such as streak, color, luster, cleavage, fracture, crystal system, fusibility, solubility in hydrochloric acid, index of refraction, and composition, are given in the tables.

The usefulness of the book, then, depends upon whether the student has the ability and the equipment to determine specific gravity of the specimen. A complete explanation of methods of determining specific gravity is given. Other sections deal with ultra-violet light in mineral fluorochemistry, mineral chemistry, tables of chemical reactions, qualitative chemical tests and the flame and its use in blowpiping.

There are many colored plates, with good ones of fluorescent minerals and blowpipe reactions. Those illustrating the minerals are blurry and sometimes off in color to the extent that they would be of little use for identification.

The enormous store of information that has been collected in Smith's new book should be useful to the advanced student.

D. Van Nostrand Co., Inc., New York, 1946. 351 pages, indexes, illustrations, 28 color plates. \$6.50.

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