

THE

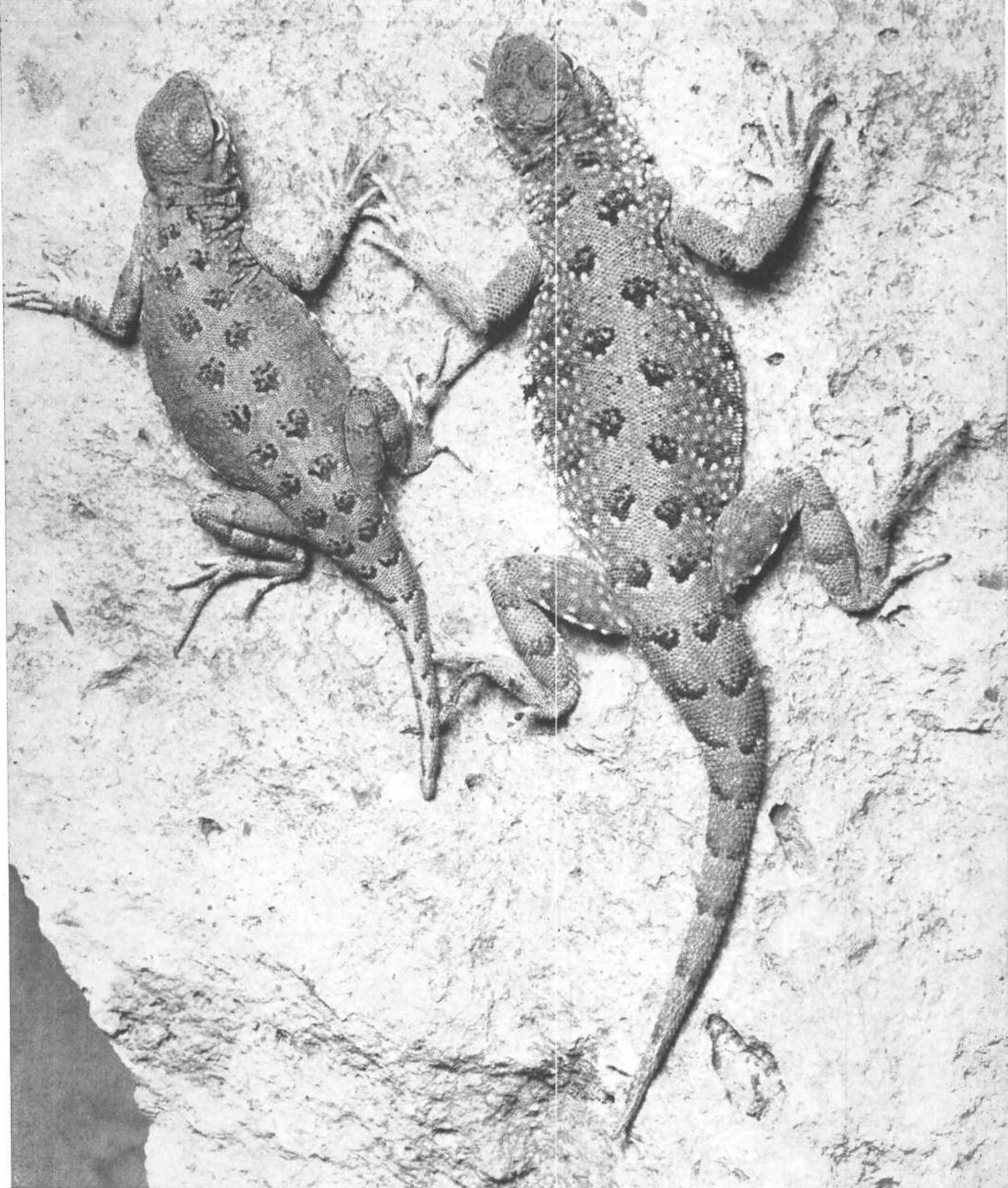
Desert

M A G A Z I N E



AUGUST, 1951

35 CENTS



They Like the Sandy Terrain

Photography by GEORGE BRADT

Here are two of the Speckled Earless Lizards (*Holbrookia approximans*) whose habitat is the sandy floor of the desert in New Mexico, Arizona and eastern Texas. Like most of the other American species of lizards they are quite harmless. They are unique in lacking an external ear opening—hence the common name.

DESERT CALENDAR

- August 3-6—State Little League Play-offs, Prescott, Arizona.
- August 4—Annual Smoki Ceremonials at Prescott, Arizona.
- August 8-10—Unitah Basin Industrial Convention, Roosevelt, Utah.
- August 9-12—Cowboy Camp Meeting, R. E. Perkins ranch, Prescott, Arizona.
- August 9-12 — Annual Inter-tribal Indian Ceremonial, Gallup, New Mexico.
- August 10-11—Annual Square Dance Festival, Flagstaff, Arizona.
- August 10-11—Junior State A.A.U. Swimming Meet, Tempe, Arizona.
- August 14-19 — National Convention Military Order of Purple Heart and auxiliary, Phoenix, Arizona.
- August 15-17—Future Farmers Association Leadership Conference, Prescott, Arizona.
- August 16-18—Senior State A.A.U. Swimming Meet, Phoenix, Arizona.
- August 17-19—Quay County Sheriff's Posse Rodeo, Tucumcari, New Mexico.
- August 20-29—American Numismatic Association Convention, Phoenix, Arizona.
- August 20-30—Rocky Mountain Regional Softball Tournament, Phoenix, Arizona.
- August 31-September 3 — Annual Santa Fe Fiesta, Santa Fe, New Mexico.

DURING AUGUST

Fiesta of San Lorenzo, Picuris Pueblo, 27 miles from Taos, New Mexico.

Taos Indian dances in town plaza every Monday and Friday, 8:15 p.m., and Spanish-Colonial folk dances every Wednesday, 8:15 p.m., Taos, New Mexico.

Southwest Museum in Los Angeles will display a selection from its collection of Indian musical instruments. Museum is open daily except Monday, 1 to 5. Admission free.



Volume 14

AUGUST, 1951

Number 10

COVER	HOPI BUTTERFLY DANCERS. Photo by Andre de Dienes of Phoenix	
NATURE	They Like the Sandy Terrain By GEORGE BRADT	2
CALENDAR	August events on the desert	3
HISTORY	So They Built Fort Bowie By FENTON TAYLOR	4
INDIAN LIFE	Mescal Roast. By RANDALL HENDERSON	8
FIELD TRIP	Where Turquoise Was Mined by the Ancients By A. LA VIELLE LAWBAUGH	9
CONTEST	Prizes for Photographs	12
LOST MINE	Cave of the Golden Sands By JOHN D. MITCHELL	13
POETRY	Ode to a Smoke Tree, and other poems	15
WEATHER	Wanted: A Desert Thermometer By GEORGE FITZPATRICK	16
QUIZ	A test of your desert knowledge	18
LETTERS	Comment from Desert's readers	19
EXPLORATION	We Climbed Avawatz By LOUISE TOP WERNER	20
NEWS	From here and there on the desert	25
FICTION	Hard Rock Shorty of Death Valley	28
MINING	Current News of desert mines	31
LAPIDARY	Amateur Gem Cutter. By LELANDE QUICK	32
HOBBY	Gems and minerals	33
BOOKS	Reviews of Southwest literature	37
COMMENT	Just Between You and Me, by the Editor	38
CLOSE-UPS	About those who write for Desert	39

The Desert Magazine is published monthly by the Desert Press, Inc., Palm Desert, California. Re-entered as second class matter July 17, 1948, at the post office at Palm Desert, California, under the Act of March 3, 1879. Title registered No. 358865 in U. S. Patent Office, and contents copyrighted 1951 by the Desert Press, Inc. Permission to reproduce contents must be secured from the editor in writing.

RANDALL HENDERSON, Editor BESS STACY, Business Manager
MARTIN MORAN, Circulation Manager E. H. VAN NOSTRAND, Advertising
Los Angeles Office (Advertising Only): 2635 Adelbert Ave., Phone NORmandy 3-1509

Unsolicited manuscripts and photographs submitted cannot be returned or acknowledged unless full return postage is enclosed. Desert Magazine assumes no responsibility for damage or loss of manuscripts or photographs although due care will be exercised. Subscribers should send notice of change of address by the first of the month preceding issue.

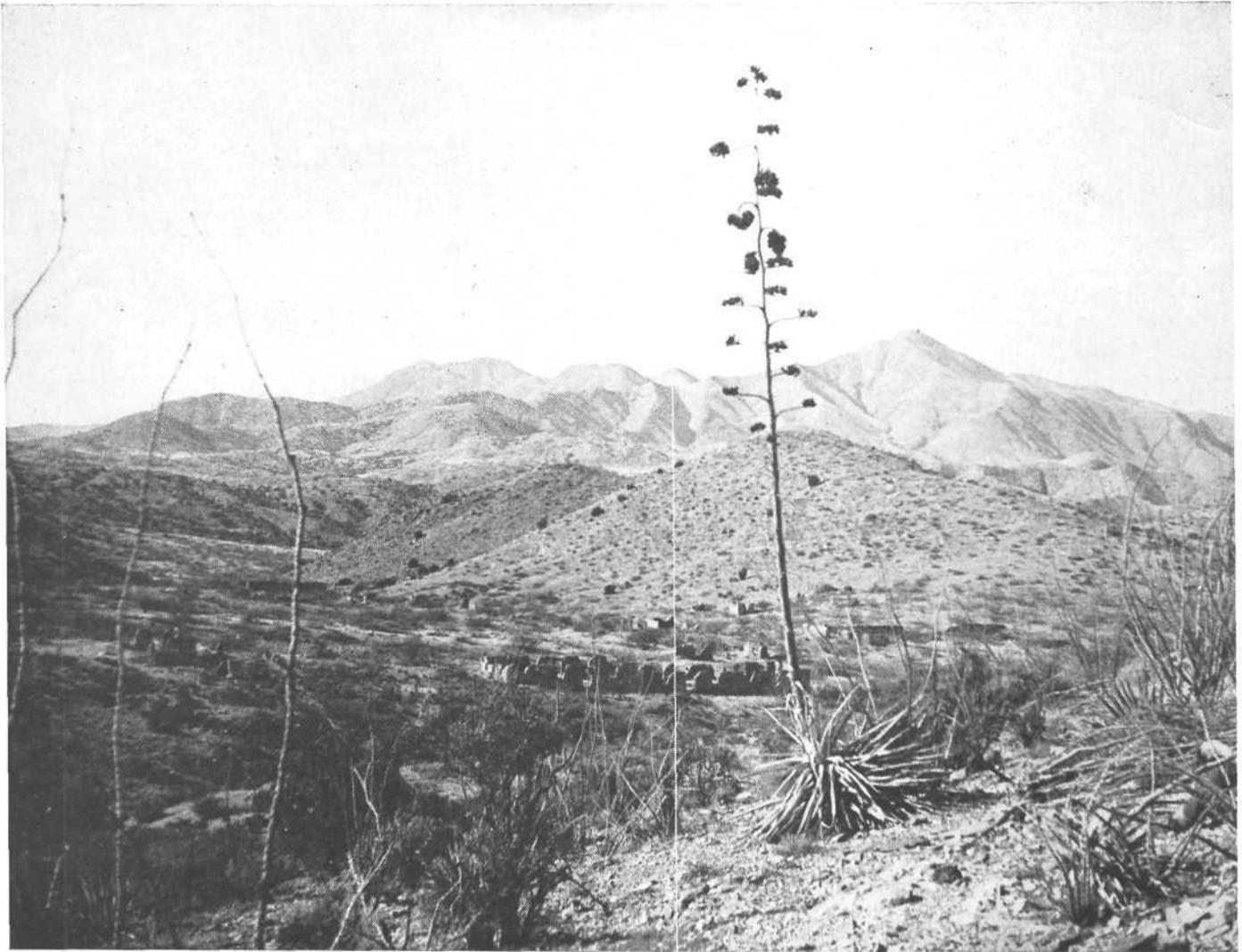
SUBSCRIPTION RATES

One Year.....\$3.50 Two Years.....\$6.00

Canadian Subscriptions 25c Extra, Foreign 50c Extra

Subscriptions to Army Personnel Outside U. S. A. Must Be Mailed in Conformity With P. O. D. Order No. 19687

Address Correspondence to Desert Magazine, Palm Desert, California



General view of old Fort Bowie as it looks today. The author believes the large ruin in the foreground was the mess hall. Stone breastworks still may be seen on the hillside in the center of the picture.

So They Built Fort Bowie . . .

Apache warriors under the wily chieftain Cochise were collecting too many white scalps at Apache Pass. Something had to be done to protect this main travel route across southern Arizona if the road to California was to be kept open. So the War Department built Fort Bowie—and here is the story back of the crumbling adobe walls which the occasional visitor finds near Apache Pass today.

By FENTON TAYLOR
Map by Norton Allen

NO OTHER eight-mile stretch of road in the United States has witnessed a more sanguinary history than the winding defile in southeastern Arizona known as Apache Pass. Located in Cochise's Apache empire, this rocky way was an ideal spot for savage ambushes of stages, wagon trains, travelers, and troops of U. S. cavalry.

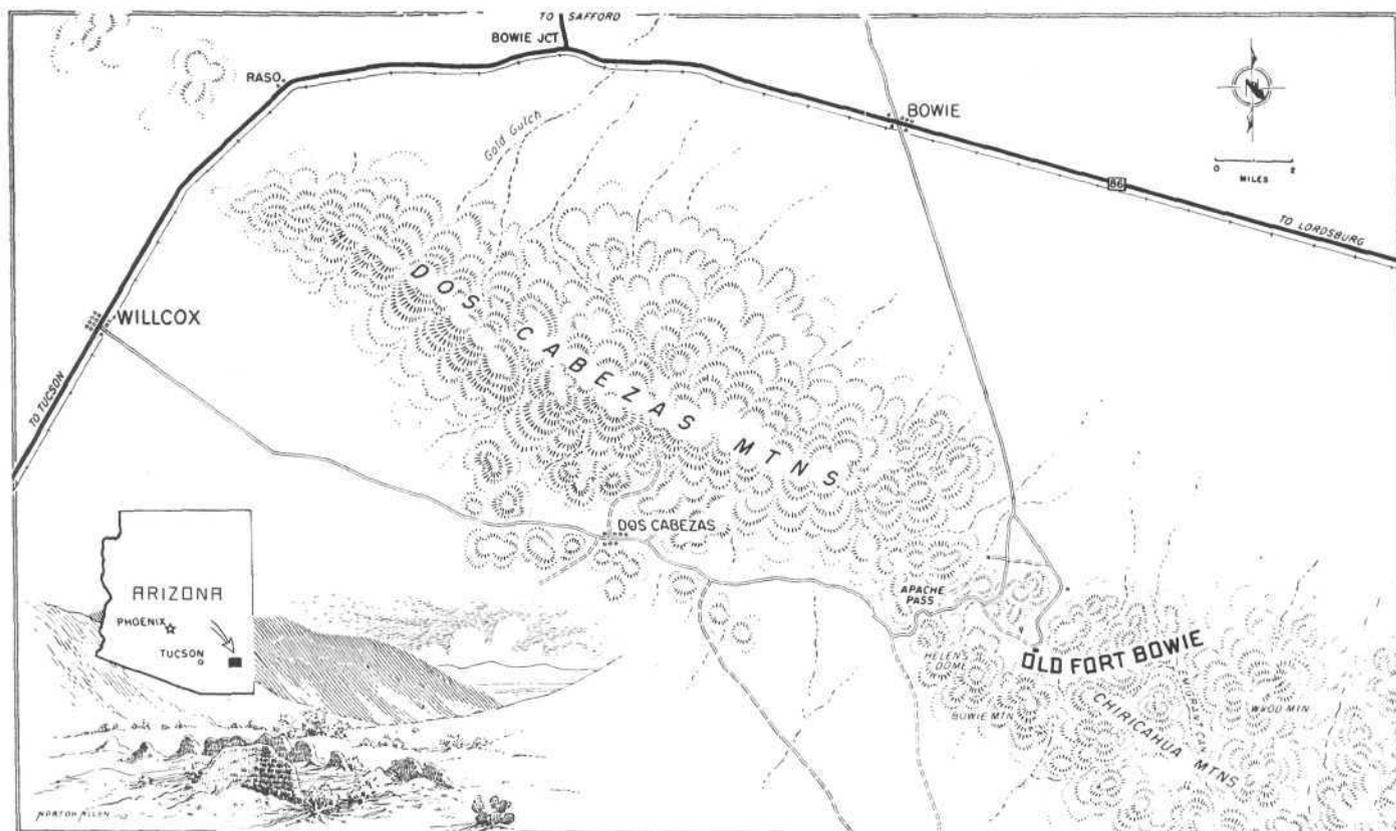
"Bloody Apache Pass" it was called in the brochure published a few years ago by the Willcox Chamber of Commerce. The few old-timers to whom I've talked confirm this name.

Because of the slaughter in the pass, Fort Bowie was built. For thirty-five years this soldier outpost stood as a desert sentinel for all who had occasion to travel this route.

For two years I talked of making an excursion to see the ruins of old Fort Bowie. Work and excuses delayed the trip. Finally, during the 1950 Christmas vacation, I announced firmly, "Tomorrow we're going to pay that visit to Fort Bowie." The family was delighted, and everyone began making preparations almost at once.

Next morning we drove to Bowie, the railroad town on Highway 86. Here we turned south toward Apache Pass on a road designed to carry modern tourists peacefully through the pass and on to Chiricahua National Monument.

Four months' drouth and the work of a highway grader had laid a powdery mulch over the road that our tires churned up into a yellow billow against the blue December sky.



Eleven miles south of Bowie, we branched to the left on a ranch road which dropped through a wash and wound around bulging hills toward a neat white house situated on a low hill ahead. Just about the time I began to wonder if I'd missed the next fork, this time to the right, I saw the turn ahead. A mile on this right-hand branch elevated us into a narrowing canyon and finally brought us to a stop before a wire gate.

The fence to the north of the road also boasted a gate through which an old road angled on up the canyon. On a fence post we saw a dark wooden arrow. The faded words "Fort Bowie" pointed to the old road.

We left the car at this junction and proceeded on foot. After hiking a few hundred feet of this rocky way, we were glad that we hadn't attempted to drive.

Up ahead loomed what appeared to be an old windmill. Climbing nearer, I saw that it was the headframe of an old graphite mine which ceased operations about 10 years ago.

We didn't stop here, though, for the summit of the climb was just ahead and we could discern through the leafless mesquite the yellow adobe of the first ruins. This sight gave an impetus to our hiking that soon brought us out in view of the level area on which Fort Bowie was located.

My first impression was of rows of broken adobe walls standing in straight

soldierly fashion. They were scattered over an area as large as three good-sized city blocks. Old Fort Bowie was much larger than I expected it to be.

Spread out in a sweeping panorama, 30 or more ruins were in various stages of disintegration. The walls that had been reinforced with blocks of rock stood highest. Plain adobe walls, for the most part, had almost rounded off into piles of rubble.

I stood looking over the mute remains, so forlorn in the solitude. I had read much of the history of Fort Bowie, and I recalled the thrilling days when it was garrisoned with troops.

About 100 years ago this story began. At that time Apache Pass, the narrow defile that winds between the Chiricahua Mountains on the south and the Dos Cabezas Mountains on the north, was the route followed by persons crossing the southern desert to California.

For the earliest travelers, this road ran through Mexican territory. The Gadsden Purchase in 1853 turned it into a United States road.

Securing water on this desert crossing was the problem of the traveler of that time. Along this route the water holes seemed to be spaced about a day's journey apart. This road provided water at Stein's Pass, San Simon Cienaga, Apache Pass, Sulphur Springs, Dagoon Spring, the San Pedro River, Rillito Creek, and finally,

Tucson. Apache Pass, ideal for Indian ambushes, was the bloody spot along this route.

The first Butterfield Stage from St. Louis to San Francisco wound through Apache Pass. It left St. Louis on September 15, 1858, and arrived in San Francisco on October 10, covering 2535 miles in 25 days, a record for stage travel at that time.

Apache Pass was the setting for Lieutenant George Bascom's meeting with Cochise in 1860. After Cochise had been persuaded to come into Bascom's camp under a flag of truce, the lieutenant attempted to take the Indian chief prisoner. Cochise escaped, but a few of the warriors accompanying him were seized by the soldiers. Striking back, Cochise captured some white prospectors and a stage station attendant. He offered to exchange them for the Indian prisoners. When Bascom refused, Cochise had the white prisoners put to death in sight of the soldiers. In retaliation, the soldiers selected the sturdy limb of an oak tree and hanged the Indian captives.

After this incident, Cochise declared war on the whites. For 12 years this war was waged with great cruelty. To make matters worse, the Civil War, which broke out the following year, caused removal of all United States troops from the territory, virtually leaving the Apaches in full control.

Shortly after the outbreak of the war between the states, Lincoln's ap-



Water was hauled to the fort in wagons and stored in these rock cisterns.

peal for volunteers sounded throughout the nation. In California the historic "California Column" was organized in answer to the call. This group hoped to be sent East as combat troops. However, there was some question as to the loyalty of some of the men. Rather than risk having any of them desert to the Confederacy, the army gave the Californians the task of defending Arizona and New Mexico against Indian depredations.

In 1862, therefore, the California Volunteers occupied some of the abandoned army posts and built new ones, of which Fort Bowie was one, named in honor of Col. George W. Bowie of the Volunteers.

Fort Bowie had a bloody beginning. In July, 1862, according to one account, three companies of infantry and one of cavalry left Tucson for New Mexico, following the Apache Pass route.

Indians harassed them at many places, particularly between water holes. The soldiers filled their canteens at Sulphur Springs and began the hot dry trek to the pass.

In the meantime, Cochise had been preparing a surprise for the oncoming troops. Under his direction his warriors had blended rock redoubts with the natural outcroppings of the hillsides in such a way as to block the path to the water supply. Mangas Coloradas and his braves joined Cochise there.

As the Californians neared the pass, the scouts scented danger. But the two howitzers which they had along gave them additional strength, and they were ready for anything the Indians wanted to give them.

When the hidden Apaches opened fire, the troops wheeled the howitzers around into position and started popping shells onto the hillsides. The exploding shells were too much for the Indians and they fled in panic. One Indian later reported that the soldiers had shot wagonwheels into the Apache defenses.

This battle occurred on July 14. A second attack was attempted by Cochise when the wagon train carrying supplies came into the pass. Again the Indians suffered defeat, probably

Cochise's worst, for he lost over 60 braves. Two soldiers were killed and three wounded in this fighting.

General James Henry Carleton of the Column realized the necessity for a strategic fort in this area. He gave the order for its construction. Buildings were erected without delay.

Fort Bowie didn't diminish the Indian menace at once. Mail was scheduled to arrive at the fort from Tucson once a week. In a period of 16 months the Indians killed 22 mail carriers. Stage drivers and mail carriers were offered a pay bonus for risking the dangers of Apache Pass.

After the Civil War, regular soldiers replaced the volunteer troops. Many of the Californians remained in the surrounding country as ranchers and farmers.

During the years that followed, Fort Bowie saw many historical characters and events. It played its part in the peace that lasted until the great chief-tain's death in June, 1874.

Major Sumner, son of the famous Civil War general, commanded for a brief term at Fort Bowie. General George Crook, for whom the Crook National Forest is named, made the fort his headquarters during the time he persuaded many fugitive Indians to return from Mexico to the reservation at San Carlos.

Geronimo was held at Fort Bowie after his surrender in 1886 until the army was ready to transport him by train to Pickens, Florida, where he was held until he was re-united with his family two years later and removed to Fort Sill, Oklahoma.

In 1897 the government finally abandoned Fort Bowie in favor of fewer and bigger posts. Travelers were using Apache Pass less frequently, too. When the Southern Pacific Railroad crossed Arizona in 1881, it followed the easier grade around the Dos Cabezas and through Railroad Pass. The overland route followed the railroad.

With the abandonment of Fort Bowie, any part of the buildings worth salvaging was sold at auction. The roofs were torn off for the lumber. The ice plant was sold and carried to Thatcher, Arizona, where it was put into operation for that community.

Loss of the roofs laid the walls open to the forces of erosion and the attack was begun without delay. Foundation rocks are all that remain to mark the location of a few of the buildings. I found myself wishing as I looked around that some means could be found to preserve these ruins from further disintegration. They should be kept as a monument to the fortitude of the builders of the Southwest.

Excited voices of the children turned my attention in their direction for a moment. They were finding something interesting for the souvenir shelf. Purple glass was eagerly sought, but large pieces were scarce. Old nails from the walls made additions to the relic bag. The discovery of some buttons caused excitement.

Leaving the children to their hunting, I started prowling among the various ruins. Up the hill to the southwest yawned the uncovered rock cisterns. No water there now; just an accumulation of rocks, dirt, leaves, and a struggling mesquite or two. The plaster finish on the interior of the tanks is clinging with astonishing tenacity after so many idle years.

South of the cisterns is the old canteen. Brown glass of broken beer bottles littered this ruin. Whiskey was not allowed in the fort area. For this reason, most of the glass scattered about is brown.

Empty shells, I was told, were abundant. Perhaps they used to be, but I hunted diligently to find two corroded, gray-green rifle shells and one .45 caliber shell. Fragments of cannon balls are often discovered, too. I wasn't fortunate enough to find one.

Initials cover every standing wall. I rounded one corner and was astonished to read the name, Curly Bill, 1871, on the wall. A second look revealed that the name and date had been scratched into the wall just recently. But I couldn't help wondering if the Galeyville outlaw might have left his initials there, and some modern visitor, noting that time was obliterating them, had obligingly gouged them deeper for the benefit of future visitors.

Over to the east side an old rock-walled ruin reared up higher than any of the others. Two high openings on the east and west sides could have been loopholes, but they seemed too high for that. When I found the door and looked in, I decided that they were narrow windows and that this was undoubtedly the remains of the guard house. I wasn't certain, but it was just the type of building for a jail.

From the Fort Bowie site you have a beautiful landscape view northward toward Apache Pass. To the east you can look down the trail we followed up to the fort and into the shimmering brown vastness of San Simon Valley.

A high conical peak rears to the south, an unmistakable landmark. One record labels it Helen's Dome, but an old-timer assures me that this name is wrong. It should be Helen's Doom. Helen was the name of an offi-



Above—Looking from the ruins toward Apache Pass. The old cemetery is in the valley, hidden by the trees.

Below—Souvenir hunters still comb the area around the fort seeking relics of the past.

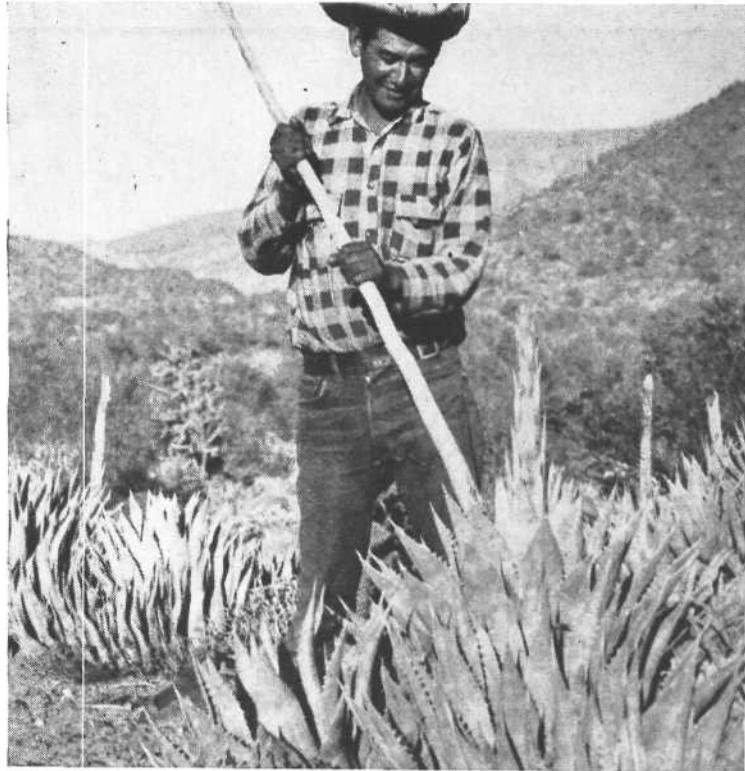
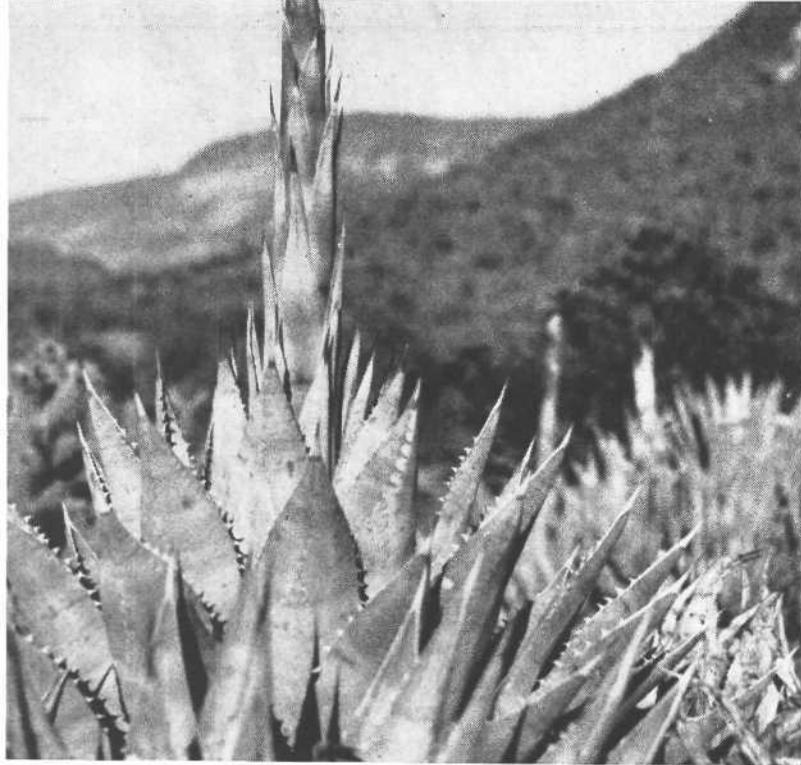
cer's wife. Captured by the Indians, she was carried to the top of this peak and put to death. This sad incident gave the landmark its name.

To the southeast is Bowie Peak. This mountain top was once the busiest heliograph station in the West.

Down the wash to the right of the old road from Apache Pass are the remains of the cemetery. Wooden crosses at one time marked many of the graves. Souvenir hunters, showing no reverence for such a spot, have stripped the cemetery of these markers. Only faint mounds are visible.

Close to the cemetery is the spring, source of Fort Bowie's water supply. Water was hauled from here in tank wagons and stored in the cistern above the fort.

Two hours in such a spot pass far too rapidly. Before it should be time, it seemed to me, the sun was dipping toward the western peaks, signalling time to go home. And so we left Old Fort Bowie, now a desert sentinel in a vast, peaceful silence, but ever ready to reveal fascinating stories of the past to any sympathetic visitor who will enter the ruined portals.



MESCAL ROAST

By RANDALL HENDERSON

One of the important items of food for desert Indians far back into prehistoric days has been the mescal roast. On a recent trip into Baja California, I found the Pai-Pai Indians in Arroyo Agua Caliente still preparing the young mescal buds for food as did their ancestors.

Botanically classified as *Agave deserti*, the plant is known in Mexico as maguey or mescal, and among Anglo-Americans as wild century plant. It grows in the Upper Sonoran and transitional zones, between 1500 and 5000 feet, and flowers only once in its long life.

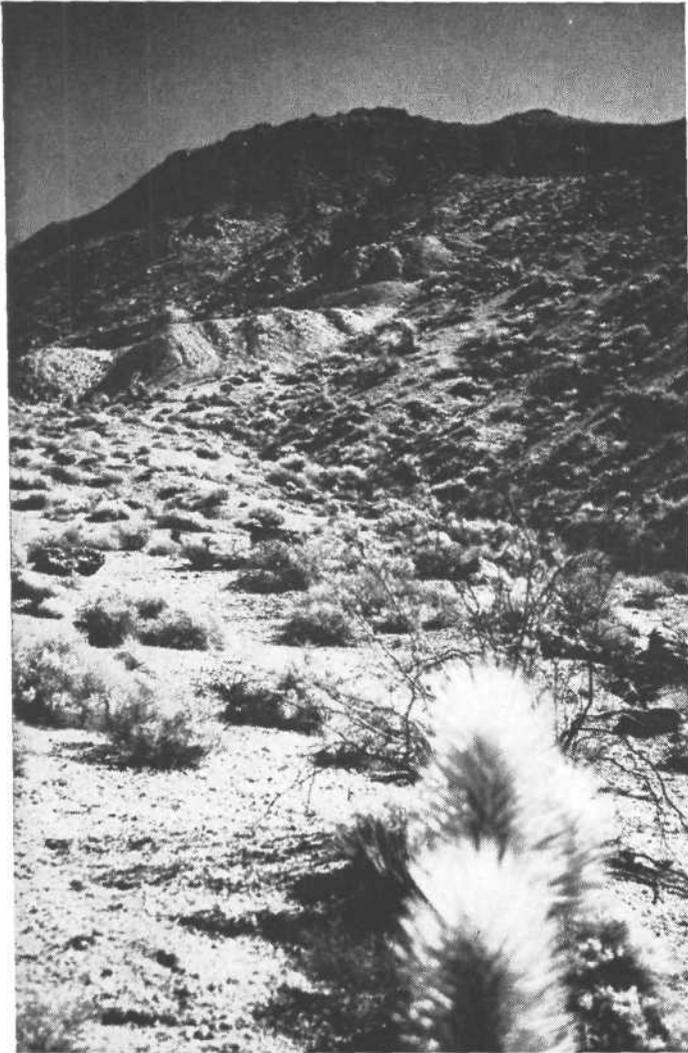
In April or May, depending on altitude, the plant which is nearing the end of its life span sends up a huge bud as shown in the upper left picture. This bud becomes a flower stock from 6 to 10 feet in height, with yellow blossoms. After flowering, the plant dies.

The Indians used a sharpened stick, as demonstrated by Hector Borquez of the Pai-Pai tribe, to gouge the bud out of its rosette of thorn-rimmed blades. It is a laborious process. When extracted from the plant and prepared for roasting the lower part of the bud, the edible part, resembled a big pineapple.

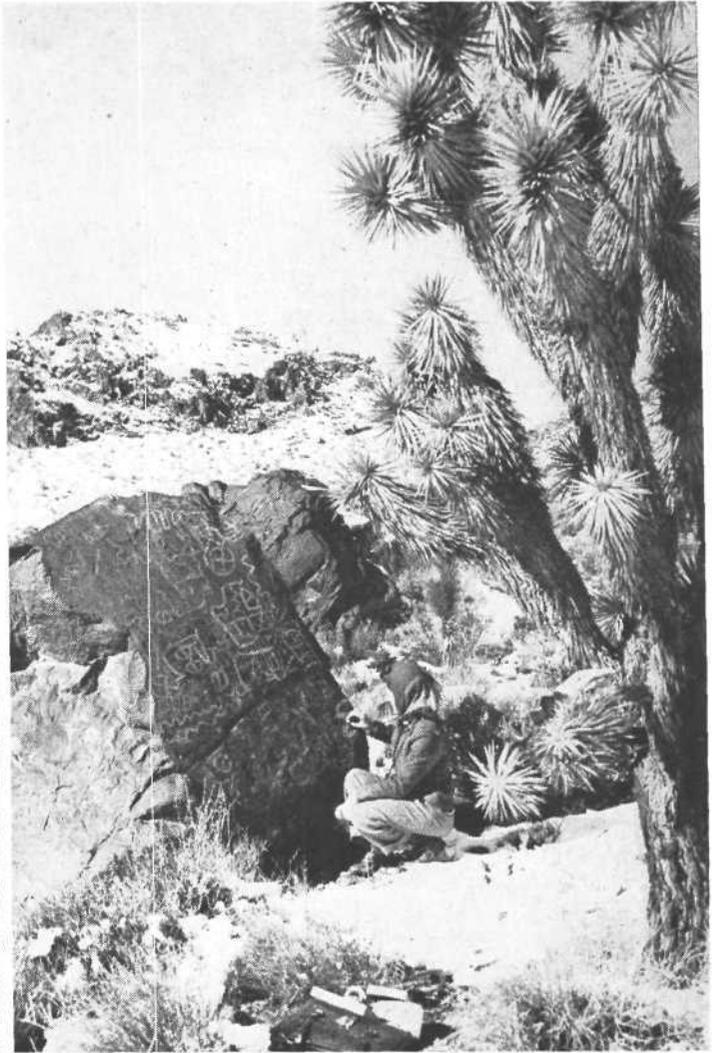
Preparatory to the roast, a pit about 2½ feet deep and 3 feet wide was excavated and lined with rocks. Then a wood fire was built in the hole and fed with fuel until the rocks were well heated. Below on the left, Victor is tossing the mescal bud into the bed of coals. Then more hot rocks were heaped on top, and the roast covered with several inches of earth.

Twelve hours later the pit was opened, and the charred bud removed. Benita Arvalla of the Pai-Pais is shown with the roasted bud after its charred husks had been removed and the heart split open. Well cooked, its color and consistency is about that of southern cooked yams—and it has much the same flavor.





Looking up the slope toward the old Toltec workings.



The ancients left their marks in the basaltic rocks.

Where Turquoise Was Mined by the Ancients

From distant lands, perhaps even from the Montezumas in Mexico, came trusted men to mine with crude tools the beautiful blue stone found on the Mojave desert of what is now California. The old Indian workings have all but disappeared—but in more recent years the white men also found it profitable to work the turquoise claims in the Shadow Mountains. Today the mines have been abandoned, but La Vielle and Neva Lawbaugh found it an intriguing place for exploration.

By A. LA VIELLE LAWBAUGH

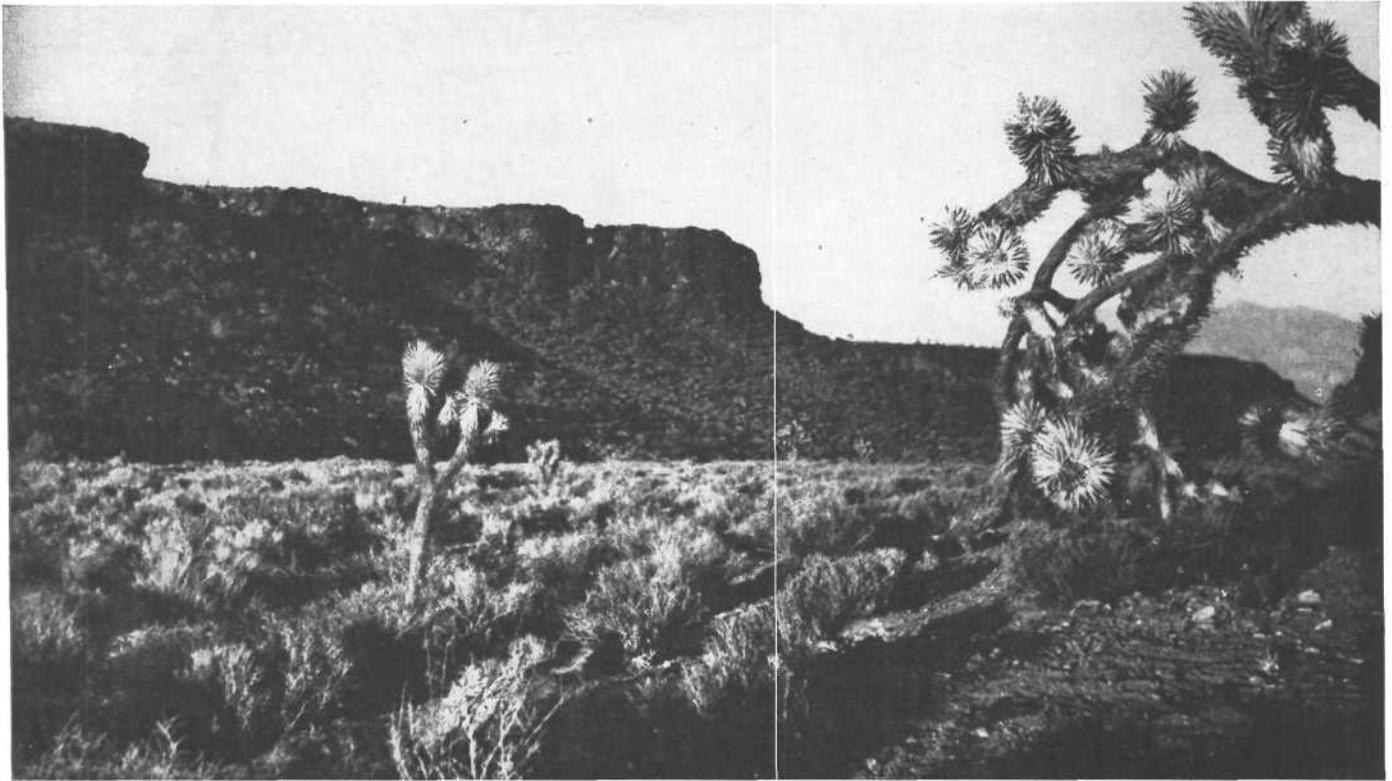
Photos and map by the author

Neva and I once befriended an old-timer on a California desert trail. He had lost a section of radiator hose and luckily the spare length which we always have with us was of correct diameter. After installing the new radiator hose and while sharing our lunch he told a story which later led us on several trips to the old Toltec Mine in the Shadow Mountains of northeastern San Bernardino county.

He recounted an interesting tale of turquoise; of primitive miners in our own great American Desert, who, many centuries ago, came into the

land of the Desert People in search of precious stones. They made friends with the natives and began to work many mines. For centuries great quantities of the beautiful blue stone were taken from the area and transported annually to their far off country.

The new-comers to the turquoise country were unlike other Indians, with lighter complexions and hair. They were possessed of many arts and were very industrious. It was they who made the rock carvings and who taught the ancestors of the desert Mojaves the same things. A powerful neighboring tribe distrusted these "new things" and resolved on a war of extermination. After a long conflict, most of the strangers were slain, and the mines



In this escarpment of basalt are caves which are believed to have been used by the prehistoric miners for shelter.

were abandoned until some of the old workings were rediscovered in 1897 by T. C. Bassett. He had observed in this neighborhood a small hill where the float rock was seamed and stained with blue. Digging down a few feet, he found a vein of turquoise—a white talcose material inclosing nodules and small masses of the mineral. At a depth of 20 feet he found fine gem color as well as two aboriginal stone hammers, similar to those found at the Los Cerillo Turquoise mine just above the Sonoran border.

At the first opportunity Neva and I with our good friends Ruth and Merle Coger were headed for the Shadow Mountains. We traced the Arrowhead highway through the ancient lake beds at Manix; through beautiful Cronise Valley, the valley of the cat. Many travelers driving west discern the huge sitting figure of a cat which nature has formed through the medium of a slide and drifted sand on the steep slope of the granite mountains which form the western shore of East Cronise dry lake.

After leaving Baker we paused at Halloran Springs service station where we met M. H. Kohlars and talked with him about the country to the north of the highway. We found him a likeable and interesting person whose hobby is model railroading.

Checking the speedometer just a few hundred feet west of the service station we took a trail to the right towards some hills, through an area

strewn with large and small basalt blocks. Nearing them we came upon an old black top road at the Edison power line. It served us for only a short distance before we turned left onto another desert trail.

A huge vulture lumbered into the air as we approached Halloran Springs. A raven had been swooping savagely groundward at the vulture. The attack was continued until the two were lost to sight.

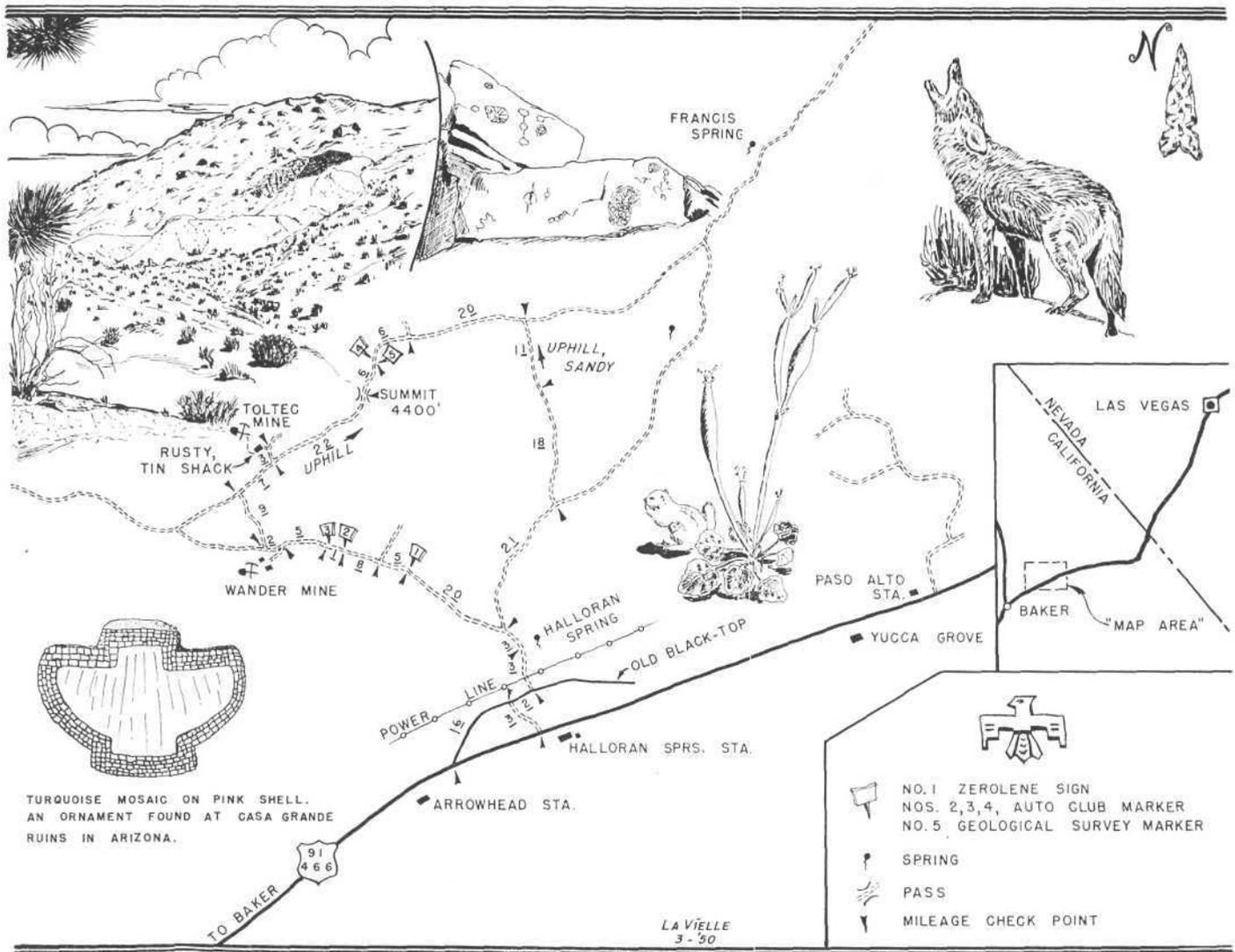
Here, at this ancient haunt of man, it was easy to turn back in time and visualize this idyllic spot as it was when the climate of late Pleistocene age supported a greener, more profuse cover than is now evident. Today, only a few dying mesquites are there; trees which hospitably furnished the more recent aborigines with food and shelter. The spring has been covered over, for protection, with one drain pipe feeding an open tank for stock and another at a higher level which would drain off any excess flow of water.

At the fork beyond the spring we turned left and dropped down a sandy slope past a large outcrop of brown stone and on across a wash. A beaver-tail cactus flaunted its rich blooms at the side of the trail. Off to the right were two magnificent Joshua trees. Near one was a huge pile of rusting tins and in the clearing a rusting stove and other litter. Between an old Zerolene advertisement and the first Auto

Club marker we stopped to move a desert tortoise which blocked our path. It was a good excuse to stretch our legs and to observe at close hand the wind poppys and buttercups which formed splashes of color on both sides of the trail.

Just past the cut-off to the Wander Mine we took a still fainter trail to the right toward another group of hills. Creosote bushes, sage and desert tea scraped the sides of the car as we rocked along. A little antelope ground squirrel scurried along the side of the trail and then dashed abruptly out of sight behind a group of Engelmann's cereus. Cholla, niggerhead, barrel, and fishhook are other beautiful cacti which make up the varied ground cover. The deserted shack described by Kohlars was nestled in the lee of a hill at the mouth of a canyon. A colorful group of Joshua trees lined the terrace in front of the cabin. The hillside was dotted with the delicate colors of Mojave asters.

We climbed the ridge to the north following the old burro trail which undulates sharply and traverses four ridges and three canyons. At the second ridge Neva found an old glory hole which had been run into the ground under the trail. It is quite near the rugged, reddish brown outcrop of rock which the local people call the glass mountain. While crossing the bottom of the third canyon we found a flower which always thrills us with its vivid



reds—Indian paintbrush. As the summit of the fourth ridge was reached, the old mine, with its extensive dumps, was just below us.

Beyond the immediate terrain a breath-taking panorama unfolded in the clear, sparkling air. The power line where it crosses the north tip of Silver dry lake was visible, as was a dry lake further north, the Soda Mountains, the Avawatz Mountains and the bright, white workings of a distant talc mine.

We had believed that no road led into the Toltec mine; that all material and ore must have been borne in and out on burros. Yet a faint road leading down a ridge to the west was discernable. It had been built up on slopes where the angle was so great that a loaded vehicle might roll over, but it followed the natural terrain and in places was indistinct. A tremendous amount of digging has been done at the old mine. The expense of this mining was high—about \$20.00 per foot. Giant powder was used exclusively and required 10½ pounds per foot.

The main rectangular shaft at the Toltec, 100 by 60 feet and about 70

feet deep, is quite impressive, with drifts leading back into a rocky interior at various levels. A tunnel on the down slope side leads from the lower level and emerges farther down hill, opening onto the immense dumps. It provides ready access to the main working. Another, and quite dangerous open shaft goes straight down, through one of the old dumps, into the rocky slope and is about 60 feet deep. This exploratory shaft was sunk to determine the depths of the turquoise veins. Ladders are visible 15 feet down the shaft but the upper section has been removed. There are minor pits and tunnels all around the vicinity. Pieces of ore with turquoise inclusions may be picked up at most any spot around the dumps. One noteworthy piece, a beautiful pale blue gem stone which cut into a perfect oval measuring 32 x 45 millimeters and weighing 203 carats was taken from the Toltec. Shipments as given by Wells-Fargo (Jan.-Feb. 1903) amounted to 431 pounds of matrix and ordinary turquoise and 49 pounds of picked material.

Timber was non-existent at the

mines. What little was used came from a locality 10 miles from the diggings. At the nearby Himalaya turquoise mine, owned by L. Tannenbaum of New York, water of an inferior quality but safe for drinking was found at 85 feet. There was no machinery on the property. All work (screening and washing) was done by hand. The mine was last worked in 1903, when six men were employed at \$2.50 a day.

When the first signs of ancient people who worked the Toltec Mine site were observed in 1897 there were still many open pits there. These aboriginal quarry workings were not large but were extensive in their number. Until the large recent dumps crept westward, there was still one of the old pits not more than 100 feet from the entrance to the Toltec Mine.

Here at the Toltec, in the canyon and on the ridge we found no positive evidence remaining of the ancient miners. A small overhang shelter was observed where the rock appeared smoke-blackened. We noted no other signs of occupancy. Modern man and erosion have erased all vestiges of their coming and going. Yet in other places,

signs still remain. Pieces of pottery, and many petroglyphs are to be found.

During that peaceful and delightful time when the sun had abruptly dropped behind the Soda Mountains and as dusk approached we talked of turquoise; its age-old history and its place in modern economy. The wail of a coyote brought us back to the Toltec. The desert night came swiftly upon us. A full moon mounting the vault of a star-studded sky clearly lighted the trail back to the car.

Neva and I have made several such trips into the turquoise district and have found the principal area to occupy 15 miles by 3 or 4 in width. The region is volcanic in aspect, being largely covered with flows of basaltic rock reaching outward from a group of extinct craters. These flows extend for miles and appear as long low ridges, separated by valleys and rough irregular canyons. Among these basaltic rocks and in the valleys are found smaller areas of low rounded hills of decomposed sandstones and porphyries, traversed at times by ledges of harder crystalline rocks, quartzites, and schists.

In the canyons and on the sides of the hills are the old mines, which appear as saucer-like pits, from 15 to 30 feet across and half that depth. They are scattered about everywhere, but time and mining activity since the turn of the century have obliterated most of them. Stone tools were abundant in the old workings and the indications were that the locality had been exploited on a great scale and over a long period. For here was an important source of the turquoise used by those early people, some of whom lived in the many caverns which pockmark the canyon walls. Smoke-blackened roofs and rudely sculptured walls indicated that they were occupied for a long period by those early miners. In the blown sand and debris which covered the floors, stone implements and pottery shards have been found. Some of the cave openings had been partially closed with rough walls of trap blocks piled one upon the other.

Another impressive feature is the abundance of petroglyphs in the whole region. They are numbered by thousands, incised in the hard basalt of the cliffs, or on large blocks of the

same rock that have fallen and lie on the sides of the valleys.

Today, the demand for turquoise far exceeds the supply. A splendid opportunity exists for the man who can discover a new producer of high grade material. As in the old days, turquoise has always held a high place among man's treasures. Excavations in Egypt show its use prior to the first dynasty. In ancient Greece, Aristotle was credited with the statement that turquoise prevented death by accident and that it was beneficial for scorpion and reptile stings. However, the literal translation here may mistakenly use turquoise for lapis-lazuli. In book 37 of his *Natural History* (first published in A. D. 77), Pliny tells of *callais*, which from his description must of a certainty have been turquoise. Another Greek, a physician named Alexander Trallianos (6th century A. D.) mentions the wearing of turquoise on the finger as a cure for epilepsy. An Arabian manuscript, penned between 1300 and 1400 and entitled *Nozhat al Colub* deals with *firuzdje* (turquoise). As late as 1776 some men still believed that turquoise was an artificial product formed by the action of fire upon fossil teeth.

A notable physical characteristic of turquoise is that once it is removed from the earth and ground and polished, it is very likely to change from its usual rich light blue color to a greenish shade. This fading of the stone has given concern to many a purchaser. Persian traders were wont to decamp as soon as possible after a sale was consummated to avoid trouble on that score. Unlike the old Persian traders, modern Americans at the turn of the century marked all their finished stones with an individual letter or a symbol and guaranteed the color for six months. If the stone noticeably changed color within the guaranty period, it was replaced without charge. The companies who followed this system cut their trademark on the back of the stone, an A for the American Turquoise Company, a circle for the Azure Company, a cross for the American Turquoise and Copper Company, a T for the Toltec and an arrow for the Himalaya.

Although turquoise is known to every continent, it occurs at comparatively few places on the globe and is confined almost exclusively to regions of barrenness and aridity. Noteworthy is the fact that with few unimportant exceptions, no occurrence is now known near which traces of prehistoric mining have not been discovered.

Photo Prizes in August . . .

Every month is picture month on the desert—in the wintertime at the lower levels, and during summer in the higher elevations of the mountain ranges which cross and crisscross the desert Southwest.

In order to have the best of these pictures available for publication, Desert Magazine offers cash prizes for the finest of the photographic art secured by our readers. There is a wide range of subjects—landscapes, wildlife, strange rock formations, sunsets, desert people, botany, mineralogy—the field is unlimited, but the pictures must have been taken on the desert.

The next Picture-of-the-Month contest will close August 20, and all members of the photographic fraternity are invited to submit their prints.

Entries for the August contest must be in the Desert Magazine office, Palm Desert, California, by August 20, and the winning prints will appear in the October issue. Pictures which arrive too late for one contest are held over for the next month. First prize is \$10; second prize \$5.00. For non-winning pictures accepted for publication \$3.00 each will be paid.

HERE ARE THE RULES

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

Address All Entries to Photo Editor

The Desert Magazine

PALM DESERT, CALIFORNIA

Here is a lost gold story that reads like fiction—and yet John Mitchell, who perhaps knows more about the lost treasures of the Southwest than any other living person, has related the story just as it was told to him 50 years ago.

Cave of the Golden Sands . . .

By JOHN D. MITCHELL
Illustration by Don Percival

7ifty years ago, about the time the Salt Lake railroad was being built from Salt Lake City to San Pedro, California, many small mining camps were springing up all along the line and the hills were full of prospectors. An old man with long white whiskers, mounted on a burro and driving four others ahead of him, showed up at the little mining camp of Crescent, Nevada. After watering his burros at the water trough near the windmill he pulled off to one side and made camp. By the time his burros were unpacked and hobbled and the campfire going, Winfield Sherman, Ike Reynolds, Bert Cavanaugh, Jim Wilson and the writer had gathered around to pass the time of day with the newcomer.

During the conversation, which was carried on mostly by Winfield Sherman, a typical long-haired, bewhiskered desert rat, the old prospector volunteered the information that his name was Riley Hatfield, that he hailed from Raleigh, North Carolina, and that he had come out west on the advice of the family doctor. He said he was headed for Searchlight, Nevada, to purchase provisions and to see a doctor about a heart ailment that had been troubling him.

The old man was very polite, had a good outfit and looked prosperous. However, he did not seem to be much interested in the Crescent camp, de-



The bottom seemed to drop out of the cave and the water rushed out with a roar like thunder.

spite the buildup we old-timers had given it while sitting around the campfire.

The old man broke camp shortly after breakfast the next morning and by sunup was headed out over the trail in the direction of Searchlight. Two days later the writer happened to be in Searchlight to pick up mail and provisions and met the prospector at Jack Wheatley's boarding house.

After dinner I joined the old man on the front porch for a smoke and a little chat. During the conversation he told me he had some placer gold for sale and asked me if I knew anyone who would buy it. I referred him to the assay office at either the Duplex or Quartette mine. Later that afternoon he told me he had sold the gold at the Duplex assay office. He reached into his pocket and pulled out five or six of the most beautiful gold nuggets I had ever seen. He said he was sending them to a friend.

I saw the prospector several times the following day and late that afternoon he told me he had purchased his supplies and had seen a doctor and would be ready to pull out early the next day. He asked me to accompany him as far as Crescent where I had my own camp.

After breakfast the next morning

we headed our two pack outfits in the direction of Crescent Peak 14 miles west.

About noon we stopped for lunch and to give the burros a chance to browse. While the bacon was sizzling and the coffee pot was sputtering the old man told me he had discovered four pounds of gold nuggets in a black sand deposit near the Clark Mountains northeast of Nippeno (now called Nipton.) He invited me to go with him as he did not like to be out in the desert alone.

He said that one day while camped just below Clark Peak, he climbed a short way up the mountainside and saw off to the east a dry lake bed that suddenly filled with water. It looked so real he could see trees along the shore and their reflection in the water.

The route he was following to Crescent and Searchlight was in that general direction so he decided to investigate the lake or whatever it was. As he approached the lake later it had entirely disappeared, and he then realized that it was only a beautiful mirage. Fortunately he had brought a good supply of water along. About noon while skirting the western edge of the dry lake bed he saw what seemed to be the entrance to a cave on the east side of a small limestone

hill about 50 feet above the level of the dry lake bed.

There is something interesting about a cave. It may contain anything—an ironbound chest full of gold and silver and precious gems, bandit loot, old guns, saddles, artifacts, bones of man or long extinct animals. I sometimes think this love of the cave has been handed down to us by ancient ancestors who lived in caves. When one of those old-timers headed for his cave two jumps ahead of a three-toed whangdoodle the cave looked good to him.

Likewise this cave looked good to the old prospector and he decided to make camp and explore it. At least it offered shelter from desert sand storms.

The entrance was a long tunnel. He had not gone far inside when he heard the sound of running water. Returning to the mouth of the cave for a lantern, he made his way back along the narrow entrance and soon came to a great dome-shaped chamber resembling an amphitheatre full of churning water. As he stood there a small whirlpool appeared in the center and suddenly the water rushed out with a roar like thunder. The bottom seemed to have dropped out of the cave. The floor was shaped like a large basin with bench-like terraces or steps that led down to the dark center. The terraces were piled high with black sand that trickled down with the receding water.

Hanging from the ceiling were thousands of beautiful stalactites while other thousands of stalagmites stood up from the floor of the cave. In places they formed massive columns. Around the interior of the cavern were many grottos sparkling with crystals. The walls were plastered with lime carbonate like tapestries studded with diamonds. Never in his life had he seen anything like it. Above the top terrace was a human skeleton and in a nearby grotto were the bones of some extinct animal, probably a ground sloth.

The center of the basin-shaped bottom of the cave was now filled with black sand that had slid down from the surrounding terraces. On the way out he gathered a few handfuls of the sand which later was found to be sprinkled with yellow nuggets that gleamed in the desert sunlight. That night the old prospector sat by his campfire smoking and reveling in the dreams of a Monte Cristo. Was he not rich?

According to his story the water in the cavern rises and falls with the ebb and flow of the tides in the Pacific and is active twice every 24 hours. First a rumbling sound like a subterranean

cannonading is heard coming from the dark interior and then suddenly the pile of black sand that chokes the tube-like chimney, is seen to rise up, and a dark column of water 18 feet in diameter bulges up from the center and reaches a height of 45 or 50 feet. This dome of water and sand spreads out into waves and breaks into white spray as it dashes against the terraces. The play or intense agitation keeps up for several hours and then the pool settles down and is as quiet as a millpond.

If the old man told the truth about the sand in the lake bed and in the cavern, it would be difficult to compute the value of the gold that could be taken from this cave. Then, too, every time the tide comes it brings up more gold. How far the black sand reaches down the underground stream, I am unable to say.

Our dinner was over by the time the old man had finished his story, and we began to break camp.

He invited me to go along with him to his cave and work with him. This I readily agreed to do as soon as I could sell my mining claims in the Crescent camp. The old man promised to be back in about three weeks with more gold at which time I hoped to be ready to accompany him.

I sold my claim to an old French Canadian named Joe Semene, who

was prospecting for a Dr. John Horsky, of Helena, Montana.

The old prospector never returned and to this date no word has ever come out of the desert as to his fate. I have since learned that an old man with long white whiskers was found dead on the dry lake bed near Ivanpah. He and his burros were shot to death. I do not know if this was the same man or not.

The old man had told me that there was from three to six feet of this heavy black sand on the dry lake bed, which is now covered by a shroud of snow white sand.

Naturally I do not know the exact location of this million dollar cave. If I did I would locate it myself instead of writing this story which will, no doubt stir interest in that part of the desert. This cave should not be confused with one that recently was discovered out on Highway 91 east of San Bernardino, California, which is said to extend for a distance of eight miles and to contain a fortune in gold.

Some old prospector or desert rat with a magic lamp to transport him to this hole in the ground, could live like a king, if he had enough money to buy a small electric light plant, some rails and an ore car. He could live in a fairy palace with nothing to do but wait for the tide to come in with more gold.

Would Make Desert Land Productive

Proper methods of desert agriculture could turn millions of square miles of unproductive, desolate land into a supplementary area for man's use. This is the opinion of Dr. Raymond S. Cowles, professor of zoology at the University of California at Los Angeles, who specializes in research with the flora and fauna of the southwestern deserts. He recommends selective breeding and harvesting of native plants already adapted to the drying winds, burning sands and infrequent rainfall, rather than further efforts at irrigation, as the answer to wide-spread desert agriculture.

"The possibility of reclaiming desert land through irrigation seems to be nearing its limits," the UCLA scientist points out. "But there are a great many plants which require no water except the small amount they are accustomed to in their desert homes. In fact, a desert agriculture based on such plants would have failures only in the years when there was too much rainfall." Dr. Cowles suggests that a scientific analysis of all desert plants would reveal hundreds of specimens of potential commercial value.

These plants would either be useful

in the production of essential foods or of materials valuable to medicine, agriculture or industry. He points to St. John's bread or the locust tree as an example of food-producing plants. This tree has a high food yield per acre of nutritious pods which are eaten by animals and sometimes by man.

The jojoba, or goat nut, is another plant whose nut is readily eaten by livestock. It is hardy and drought-resistant and grows wild in a large area in the Southwest. The nut contains a high percentage of an oily wax, which has been found to be useful in making candles which have a high melting point. The jojoba oil has another unusual quality—it does not become rancid.

Another interesting plant is the native tobacco, which has a delicate fragrance somewhat similar to Turkish varieties. There are also many kinds of bunch grasses which feed grazing stock. Dr. Cowles readily admits that many problems remain to be solved in the field of desert agriculture. But he suggests that since the many plants living there now have come to terms with their environment, man should be able to match their adjustment.

Ode to a Smoke Tree

By LOIS ELDER ROY
Palm Desert, California

A smoke tree is a filmy wisp
Of wind-blown spray;
Gossamer as silken web, wherein
The errant night winds play,
Argent glory down arroyos
Where blue-veined mountains drain,
Pouring down in tumbling cadence
Desert's golden wine of rain.

A smoke tree is a silver urn
Placed near a dune
Where hoarded treasure spills
And overflows in June.
Blossoms, deep as midnight,
Form pools of shadowed blue;
An angel artist breathed upon her work
When she was through.

A smoke tree is a magic loom, whereon,
With mystic thread,
The sunlight spins dark, shadowed lace
To lay across the white sand bed.
And up the wash, like silver ribbons
Shimmering in the sun,
The magic of the trail unwinds. I follow
Where wild quail and coyotes run.

ESCAPE

By SIBYL J. LAKE
Dumas, Texas

Star-studded sky and desert calm,
And silhouette of waving palm,
And sleepy flowers on the hill
And stately cactus standing still
Against the night!

These things can calm the weary soul,
And teach us Heaven is our goal,
And help our hearts to understand
That God is here on every hand
To guide us right.

Oh, weary soul, forsake thy quest.
Renounce the city's raw behest.
"Take up thy bed" and seek the hills
Far from the scene of clashing wills,
And win the fight.

ARROWHEAD

By ROBERT TURNER
Greybull, Wyoming

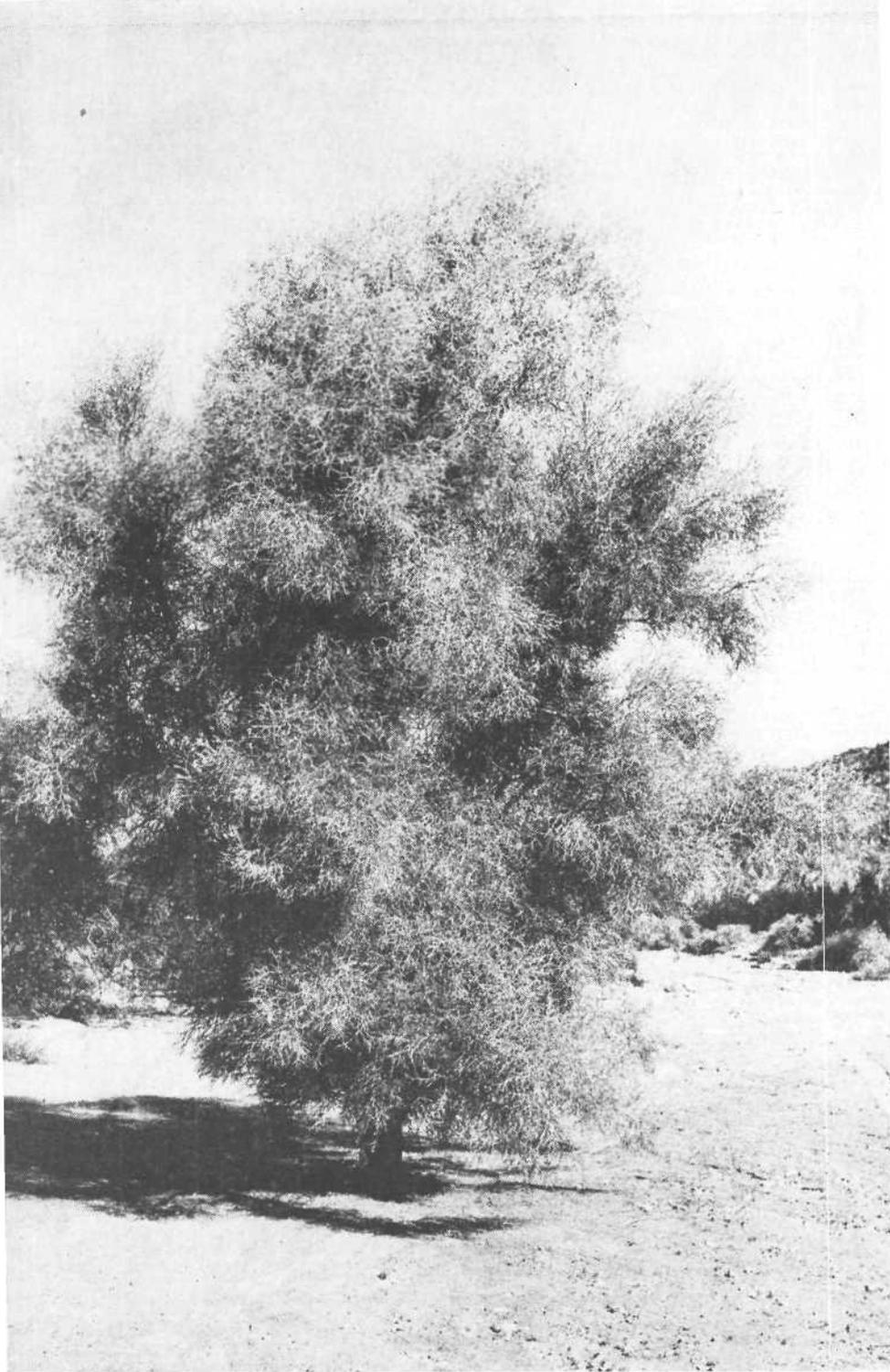
Polished by the shifting sands,
Black as desert nights that hide it,
Chipped by copper-colored hands,
Used but once . . . a Red man tried it,
Sent it speeding toward its mark,
An instant . . . then its work was done,
Now it rests through still and dark,
And shimmers 'neath the desert sun,

To Attainment

By TANYA SOUTH

Sleep then, nor dream of mighty
splendors,
Nor envy them when you awake.
Those august greatnesses and
grandeurs
Work and determination take.

The heights and conquests each must
earn,
Carved on his inmost soul, in blood.
And he who sleeps, though he may
yearn,
Cannot attain the Great or Good.



Photograph by George M. Roy

AUTUMN'S TOUCH

By MARGARET FOX BALLOUGH
Albion, Michigan

Autumn . . . hesitating
To make known her visit here . . .
Though longing to be noticed
Stands trembling . . . as in fear.
'Tis now she must be subtle
And task with quiet grace
To weave her spell . . . and yet
Not change in character, this place.

In other lands, left far behind,
Her handiwork is known
By crimson trees . . . and fallen leaves
By Autumn's breath are blown!
Encircled by her arms, the world's
Held firm in Autumn's clutch . . .
Though desert sands and arid lands
Yield slowly to her touch,
As Autumn trails her fingers through the
sand.

THE DESERT

By RUTH A. MOORE
Healdsburg, California

Sometimes the desert is cool and calm
Sometimes it's harsh and cruel,
When wind and heat and blowing sand
Begin their endless duel.

Sometimes the desert's a devilish fiend
Who likes to taunt and fool
The lost and dying thirsty man
With mirage of waters cool.

Sometimes this beast is like a lamb
So gentle, meek and kind,
It's then I like to search her out
And all her beauties find.

Sometimes the desert's a fairy land
When bathed with pale moonlight,
And starry sequins overhead
Lend their magic to the night.

Wanted: A Desert Thermometer

The desert's summer heat is greatly over-rated—mostly because science has not yet devised a thermometer which will register temperatures in terms of bodily comfort. The Fahrenheit thermometer now in use not only is an inadequate instrument but it is a downright prevaricator. In the meantime folks go on "suffering" from heat which may be 20 degrees imagination.

By GEORGE FITZPATRICK

Editor of New Mexico Magazine

Art by Raymond McCoy

MY WIFE and I were walking along Wilshire Boulevard in Los Angeles after driving in from New Mexico across the Mojave desert. Sauntering casually, window

shopping, I shed the coat which I had put on for custom's sake. My shirt was sticking to my skin. My forehead oozed perspiration.

"Either I've got a fever," I said, "or

"We were more uncomfortable at 85 degrees in Los Angeles on an excessively humid day . . .



this place is hotter than Needles was yesterday." (It had reached a maximum of 110 degrees there.)

My wife made the usual remark about Los Angeles' unusual weather, and I wondered aloud what the temperature actually was. In a few minutes we had our answer. A large thermometer in the shade of a doorway showed the temperature to be 85 degrees. As far as comfort is concerned that thermometer was a barefaced prevaricator. We were more uncomfortable at 85 in Los Angeles on an excessively humid day than we were in Needles under the full force of the desert sun that had sent mid-afternoon temperatures to a high of 110.

So the thermometer doesn't really tell you the temperature insofar as your body reacts to that temperature. And actually 85 in Los Angeles on a humid day is not the same temperature as 85 in Los Angeles on a dry day. The human skin registers these two 85-degree readings differently.

I have been so hot in Chicago when the temperature registered 95 that I spent the few hours between trains in an air-conditioned movie instead of sight-seeing as I would have preferred. I have really sweltered many a time back east in Erie, Pa., when the temperature reached only 83 degrees. Yet 83 or 93 or even 103 in any of a dozen places in the Southwest, Albuquerque, Tucson, Palm Desert, or any other you name, is so pleasant that we southwesterners wonder how people can live any place else.

The explanation, of course, is in the trite old saying, "It isn't the heat; it's the humidity."

Using myself as a guinea pig, I have been keeping a weather eye on the thermometer and have come to this conclusion: *The recorded temperature seldom agrees with my skin's reaction to various types of heat and cold.*

The high temperatures reported from southwestern points during the summer frighten easterners who begin to get faint when they think of temperatures over 90.

Yet as far as skin comfort is concerned a temperature of 100 in the Southwest actually is about 80.

A meteorologist friend explained it for me by saying that the body has a very efficient cooling process, and that the evaporation of a single ounce of moisture removes more than 1800 calories of heat from the body. The difficulty is that the rate at which this evaporational cooling takes place depends upon the relative humidity. If

the humidity is high, the rate of evaporation of the skin's moisture is slow. If the percentage of humidity in the air is low, the rate of evaporation is rapid.

Thus in dry Needles or Phoenix or Albuquerque, the rate of evaporation in the middle of summer is rapid, while in New York or Baltimore or Philadelphia on a usual summer day, the rate of evaporation is slow, due to the high percentage of humidity in the air. So the skin is actually more comfortable in higher temperatures in the desert than in temperatures 15 to 25 degrees lower in the damper East!

It boils down to the fact that comparative temperature readings for various parts of the United States have little or no significance. They may be as much as 15 to 20 degrees off in relation to the reading your skin would give.

So the true measure of temperature should be the degree of hot or cold that we feel.

At present there is no measuring device to approximate the reading the skin would give to the temperature, although some climatologists believe that the wet-bulb temperature more closely approximates the reading than does the dry-bulb. Wet bulb recordings are made daily by the Weather Bureau to compute humidity, but these readings are seldom published.

To obtain wet-bulb readings and to determine relative humidity, the Weather Bureau uses what is called a sling psychrometer. Two identical thermometers are mounted together on a strip of metal. To this are attached three or four links of chain and a handle that can be grasped in the fist. One of the thermometers is covered with muslin. This is then dipped in water to wet the cloth thoroughly. Holding the sling, the operator whirls the thermometers rapidly in the air. Evaporation of water from the muslin causes a lower reading on the wet bulb than on the dry-bulb thermometer. In dry air, water evaporates faster, and the rapid cooling therefore gives a lower reading. The difference in readings provides a measure of moisture by which relative humidity is computed.

In the dry climate areas of the West and Southwest, the difference between these wet and dry-bulb readings will vary as much, on a summer day, as 25 or 30 degrees. The wet-bulb temperature, of course, is the lower one—and this more closely approximates the temperature that the skin actually feels.

This explains why a temperature of 100 degrees in Tucson is not uncom-

fortable and why temperatures up to 120 degrees are not unbearable. The body actually feels a temperature considerably lower than the dry-bulb thermometer registers.

Direct rays of the sun, of course, are hot—and we feel hot. But move over into the shade. There the wet bulb reading might be as much as 30 degrees lower than the hundred that the dry-bulb thermometer registers.

A thermometer that more accurately measures the temperature in terms of skin comfort would have a tremendous psychological effect on southwestern visitors. People who are frightened away from the desert by temperatures of 100, and 110, would feel no discomfort if those temperatures were more accurately recorded at 85 and 90.

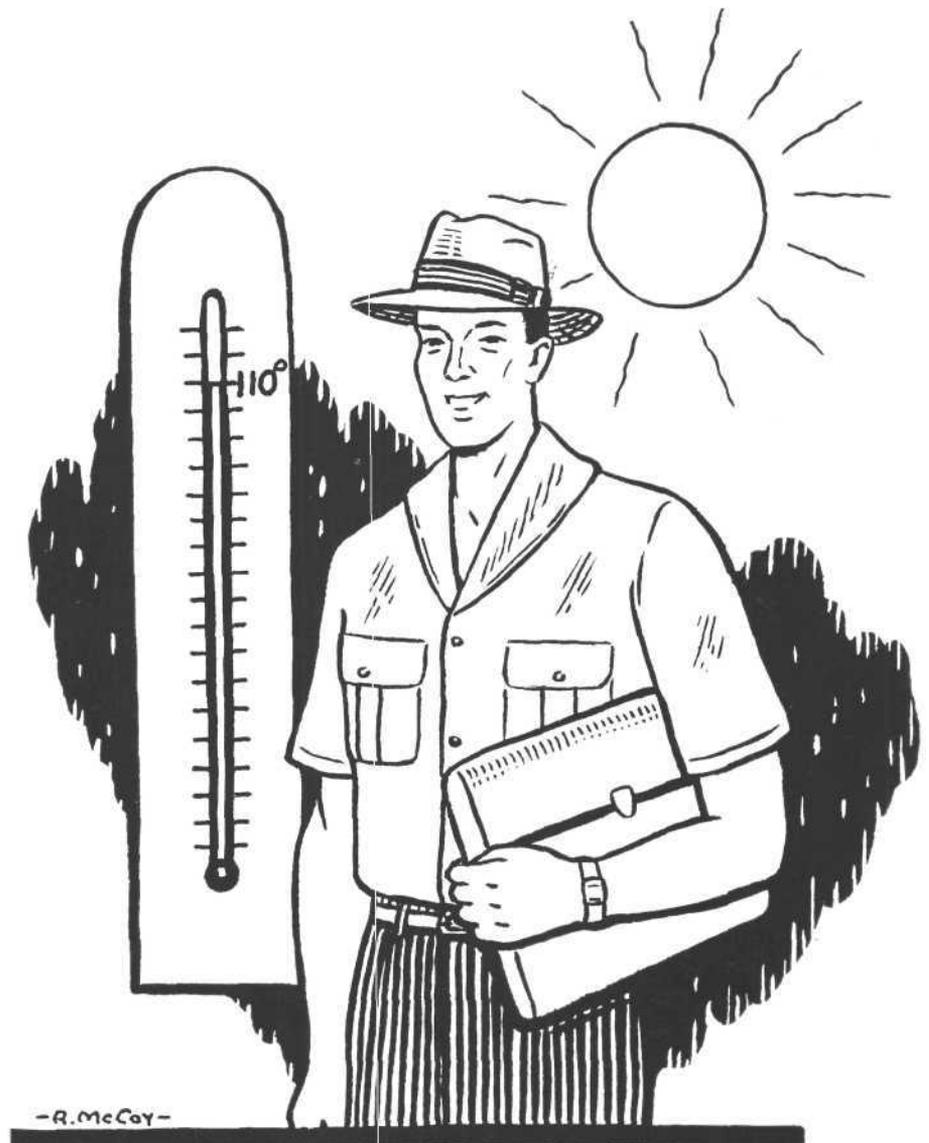
Even though the wet-bulb thermom-

eter is frequently more accurate in summer in approximating the temperature the skin feels, the Weather Bureau experts say it is not the solution to the problem, since other factors—speed of air movement, barometric pressure, muscular activity, clothing—influence the temperature we feel.

F. W. Reichelderfer, chief of the Weather Bureau, Washington, declares that "the problem of determining an index of human comfort (involving the four factors of temperature, relative humidity, air movement and radiation) has been a matter of concern for some time." He goes on to say, however, that an index suitable for one set of conditions may not be suitable for another.

"For example," the Weather Bureau chief says, "a person exposed to a strong wind may experience wind

"... than we were in Needles under the full force of the desert sun at 110 degrees."



chill, but a person in a sheltered place does not suffer similar effects."

The American Society of Heating and Ventilating Engineers years ago recognized the inadequacy of the dry-bulb thermometer as an index of comfort. It has evolved what it calls "effective temperature." This is defined as "that index which expresses the composite effect of air temperature, relative humidity, and air motion on the human body." "Effective" refers to physiological effects on the body.

While this "effective temperature" would hardly be applicable to the desert outdoors, it is interesting in pointing up the problem of finding a proper index of human comfort.

By a series of research tests the Society developed a formula by which the known dry and wet-bulb temperatures and other factors can be read in terms of "effective temperature." Under certain conditions the dry-bulb thermometer might register 76 and the wet-bulb thermometer give a reading of 63. According to the Society's formula, the "effective temperature" would be 70 if the movement of air is slow, 67 if moderate and 65 if rapid. A printed scale makes rapid computation possible when the wet and dry-bulb temperatures are known.

Under the formula, with wet-bulb temperature at 60 and dry-bulb temperature of 90 the "effective temperature" would be 75.9 degrees. This is the nearest thing to what the skin would register as has yet been devised. But it still would hardly be suitable for general outdoor use.

The scale was designed for indoor use, and in their research before World War II they determined that people should not work in non-air conditioned buildings when the "effective temperature" reaches 84 degrees.

As to the outdoors, the problem is still unsolved. Weather Bureau Chief Reichelderfer points out: "There is no well established comfort index known to us suitable to cover the entire range from the extremes of winter to those of summer, valid under all conditions out-of-doors."

So science still has to catch up with itself on a simple little thing like a thermometer that actually registers the temperature the body feels. The field is wide open.

As to the prospects of solving the problem, we have only this not-too-hopeful statement from the Weather Bureau chief:

"Several organizations are working on this complex biological-environmental problem, and when a comfort index suitable for general meteorological application is produced, we shall give serious consideration to its use for local dissemination to the public."

Desert Quiz

The Quiz is a monthly test for those who want to learn more about the geography, the botany, the history, the wildlife and personalities, past and present, and the lore of the desert country. The questions cover a wide range of subjects about people and places and things of interest to those who travel. 12 to 14 is a fair score, 15 to 17 is good, 18 or better is exception. The answers are on page 30.

- 1—When frost comes in the fall the foliage of Juniper trees turns—
White ____ . Red ____ . Yellow ____ . Remain green ____ .
- 2—Arizona's famous Camelback Mountain is seen from—Flagstaff ____ .
Phoenix ____ . Tucson ____ . Nogales ____ .
- 3—A balsa was used by the Indians—To kill game ____ . As a magic
prayer stick ____ . As a funeral pyre for the cremation of the
dead ____ . Raft used by Colorado river Indians to cross the
stream ____ .
- 4—The ripples on desert sand dunes are caused by — Heat ____ .
Wind ____ . Rain ____ . Earth tremors ____ .
- 5—The cactus skeletons used by wood-workers to make lampstands and
other novelties come from a species of—Cholla ____ . Hedgehog ____ .
Prickly pear ____ . Night-blooming cereus ____ .
- 6—Old Indian trails generally followed—The bottoms of the arroyos ____ .
Ridges ____ . Mesas or slopes of the foothills ____ . The sand dunes ____ .
- 7—Amethyst is violet colored—Calcite ____ . Quartz ____ . Feldspar ____ .
Obsidian ____ .
- 8—Harqua Hala is the name of a mountain range in—Arizona ____ .
New Mexico ____ . Utah ____ . Nevada ____ .
- 9—John Hance was a famous story-teller at—Tombstone ____ . Grand
Canyon ____ . Death Valley ____ . Santa Fe ____ .
- 10—The famous Goosenecks are in the—San Juan River ____ . Colorado
River ____ . Green River ____ . Gila River ____ .
- 11—Correct spelling of the range of mountains overlooking Death Valley
is—Pannamint ____ . Panimint ____ . Panamint ____ . Panamint ____ .
- 12—Clifton, Arizona, is famous for its—Silver mines ____ . Gold
mines ____ . Copper mines ____ . Lead deposits ____ .
- 13—The Comstock lode is generally associated with the mining camp of—
Rhyolite ____ . Tonopah ____ . Goldfield ____ . Virginia City ____ .
- 14—The structure known as The Hopi House is in — Zion National
Park ____ . Petrified Forest National Monument ____ . Bandelier
National Monument ____ . Grand Canyon National Park ____ .
- 15—The Earps of Tombstone had their famous gunfight with—Billy the
Kid ____ . Geronimo's Apache warriors ____ . The Clanton Gang ____ .
Butch Cassidy's outlaws ____ .
- 16—The Shivwits Indian reservation is in—Utah ____ . Nevada ____ .
California ____ . New Mexico ____ .
- 17—The Smoke tree generally blossoms in—February ____ . June ____ .
March ____ . Throughout the year ____ .
- 18—The epic story of Imperial Valley's reclamation, *The Winning of
Barbara Worth*, was written by—Edwin Corle ____ . Harold Bell
Wright ____ . Zane Grey ____ . J. Frank Dobie ____ .
- 19—The Spanish word *Cienaga*, commonly used in the Southwest,
means—Small mountain ____ . Marsh or miry place ____ . Flowing
spring ____ . High level plateau ____ .
- 20—Window Rock in Arizona is the agency headquarters for the—Apache
Indians ____ . Mojaves ____ . Navajos ____ . Papagos ____ .

LETTERS . . .

Geronimo, Apache or Greek . . .

Phoenix, Arizona

Desert:

When I bought your June issue and began looking through the pages, one of your stories was quite surprising—"Geronimo, Apache or Greek."

Eleanor Hodgson quotes most of her material from Angelo Doxa, a Greek writer who suggested that the name, Geronimo, came from the Greek name Heronimos, and that the famous Apache chief may in reality have been a Greek.

This assumption is quite unlikely. Geronimo's name, before he broke away from Cochise's Apaches, was *Goyathlay*. He then changed it to Geronimo which is the Mexican version of Jerome.

Angelo Doxa also suggests that Geronimo had the features of a Greek. Actually, he was a perfect example of the Apache—high cheekbones, hooked nose and thin lips. He was short and had a broad chest.

The locket which the writer offers as proof, could easily have been stolen by the Apaches from a foreigner traveling through their country.

Although there is no proof, it is believed Geronimo's parents were killed by Mexicans when he was very young.

After looking up all the available records, I am convinced Angelo Doxa is mistaken—and that Geronimo was a full-blooded Apache.

DON PALMER

Corona del Mar, California

Desert:

The Greek writer, Angelo Doxa, who is quoted in your June issue, was mistaken about Geronimo being a Greek. I was captured by the Apaches in New Mexico in 1885. I put in 18 years in the Apache country and knew Geronimo. He was a full-blooded Apache.

SGT. FRED F. VEDDER

Chandler, Arizona

Desert:

Referring to the article by Eleanor Hodgson, in the June issue of the *Desert Magazine* calling attention to the book "The Charming Tropics," written by Angelo Doxa, a native of the Island of Keofalonia, Greece.

It is a long cry from the Island of Tenos, in the Aegean Sea, to the hills and valleys of the Great Southwest where the notorious Geronimo, the

Apache Chief, rode at the head of his little band of Apache warriors. The name Geronimo is Spanish and means Jerome in English. Many Indians of the Southwest and Mexico were given Spanish and American names by the pioneers as their Indian names were very difficult to pronounce. As an example—the American government sent a number of scholars into the West to rename a small tribe of Indians. Knowing the Indian superstition, they gave instructions to make the new names sound as much like the old ones as it was possible to do. Coming to a buck whose name was "Bobtail Coyote," they renamed him "Robert T. Wolf."

I have seen several of these old-time silver lockets among the Indians around Taos and Isleta, New Mexico, and they all contained a lithographed picture of the Virgin Mary, with the inscription—"Virgin of Taos," not Tenos, as the Aegean Island is spelled. It is therefore just possible that the author could have been mistaken in distinguishing between the words Taos and Tenos as it was said to have been very dim at the time she tried to read it.

I happen to know that Geronimo's father was a pure-blood Apache married to an Apache squaw. Let us hope that she was beautiful. They were of the wild pagan tribes of the hills and probably never heard of the Island of Tenos in the far away Aegean Sea. If the notorious Apache chief was a Greek I am a Chinaman.

JOHN D. MITCHELL

Who Gets the Treasure? . . .

Silver City, New Mexico

Desert:

Can you inform me as to the proper procedure necessary to establish ownership if a person finds a cache of lost or buried treasure? Who should be notified, and does the government claim a percentage of the wealth? Where can I get this information?

EDWIN P. PATCHFORD

Desert Magazine referred this inquiry to the California Division of Mines, and was advised that "Disposition of buried treasure found on public domain and on private property depends on many legal factors. Ordinarily, buried treasure found on privately owned land belongs to the owner of the property, but in some cases, by court decision, such rights have been given to the finder."

The American Antiquities Act of 1906 appears to apply in some instances, but the conditions are so diverse as to make it impossible to quote a general rule which will apply.—R. H.

Ancient Spanish Mines . . .

Santa Fe, New Mexico

Desert:

Noting Glenn Holmes' letter concerning Spanish mining in the Southwest in the May issue of *Desert Magazine*, a brief historical item may not be amiss.

I, too, have seen the Spanish relics at Santa Rita, New Mexico, in fact have been present when some were discovered. They are typical of relics found wherever ancient Spanish mines exist and are similar to those described in my article about the "Mina del Tiro" in the March issue of *Desert*. There was essentially no change in mining methods as used by the early Spaniards until the advent of the Americans a few years prior to the American occupation in 1846.

The relics at Santa Rita were all recovered from the early Spanish workings opened there by modern mining operations. The copper deposits at Santa Rita were discovered in 1800 and actual mining operations began about 1804. Thus the Santa Rita relics are from mining operations of the early 19th century

CHARLES L. KNAUS

No Water at Corn Springs . . .

Desert Center, California

Desert:

Motorists who may be going to Corn Springs oasis to camp should be informed there is no water at the present time. The spring ceased to flow several years ago, and some prospectors from Aztec Well helped me put down a well among the palms. But the water is not up to standard for drinking, and should not be used, even if it can be gotten out of the hole.

WILL LEWIS

Desert Magazine has written to Riverside County authorities urging that the well be re-conditioned, as Corn Springs has been one of the historic watering places on the desert—dating back to a time long before the white men came to the desert, as evidenced by petroglyphs on the rocks there.—R.H.

Let's Leave It Alone . . .

San Francisco, California

Desert:

Is there any chance to get a piece of that big petrified tree trunk in Nevada which Nell Murbarger wrote about in your July issue?

TIM TIMOTHY

No one will ever get a piece of that grand old petrified veteran of a prehistoric forest without using dynamite—and no one with the heart of a true rockhound would ever do that.—R. H.

We Climbed

There are many mountains higher than the Mojave desert. But no one knew much about the Sierra Club decided to make the story of what these mountaineering Califo-

in them than hills. He is a native of Michigan and has mined in Colorado.

A couple of old ruts left by the Avawatz Salt and Gypsum company led their truck up the wash to the present site of their cabin. They found there an old dugout in the hillside. Later



These are the Sierra Club climbers who reached the top of Avawatz.

Our plans for the ascent of Avawatz Peak in California's Mojave desert began to take form in January, 1949, when Henry Greenwood, chairman of the Desert Peaks Section of the Sierra Club assigned to Walter and Bernice Heninger the duty of scouting the trip.

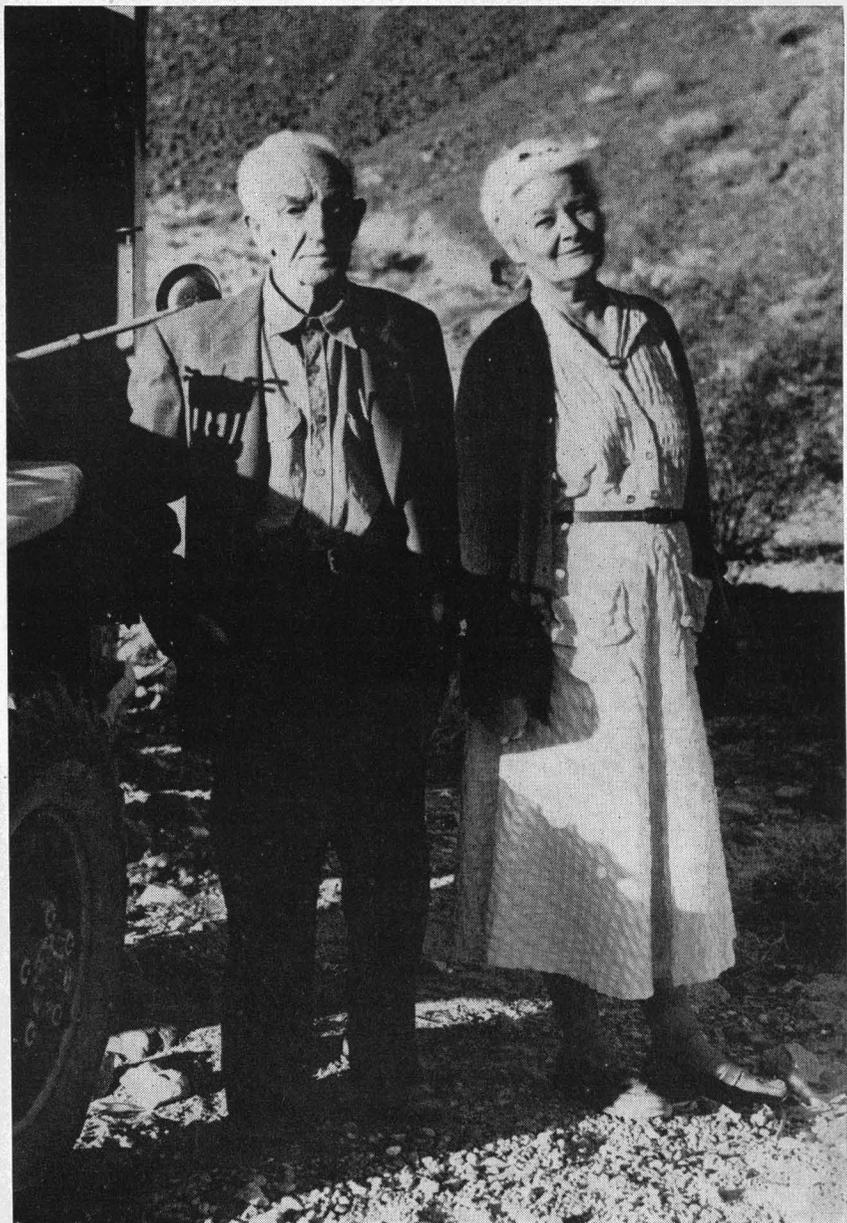
During the Christmas holidays they made a preliminary climb from Cave Spring. It was late in the morning before they got away from their base camp and at 1:30 they realized they would not make the summit in time to return that day. Not being equipped for an overnight camp they turned back. They had under-estimated the mountain.

Five months later they tried again. This time they took Highway 127 out of Baker, California. They left the paved highway at Salt Spring and followed a rough but passable road past Sheep Creek Spring to the cabin of John and Adelina Smith and started their ascent from this point. They did not go to the top at this time, but they found what they considered the best route to the summit.

When they gave their report to the Section program committee the Avawatz climb was scheduled for the Thanksgiving holidays in 1950. Fritz Sloman was named as leader.

Late on Thanksgiving day a dozen cars rolled into the rocky parking space near the Smith cabin, and in response to the invitation of John and Adelina began unloading their camping and climbing gear for an overnight camp.

The Smiths came to the Avawatz Mountains 16 years ago with two daughters, 10 and 11 years old. They came in search of relief from asthma for Mrs. Smith and one of the daughters. And John had his eye on the gold



John and Adelina Smith have a little mine on the slope of Avawatz range. They've been here 16 years.

Avawatz...

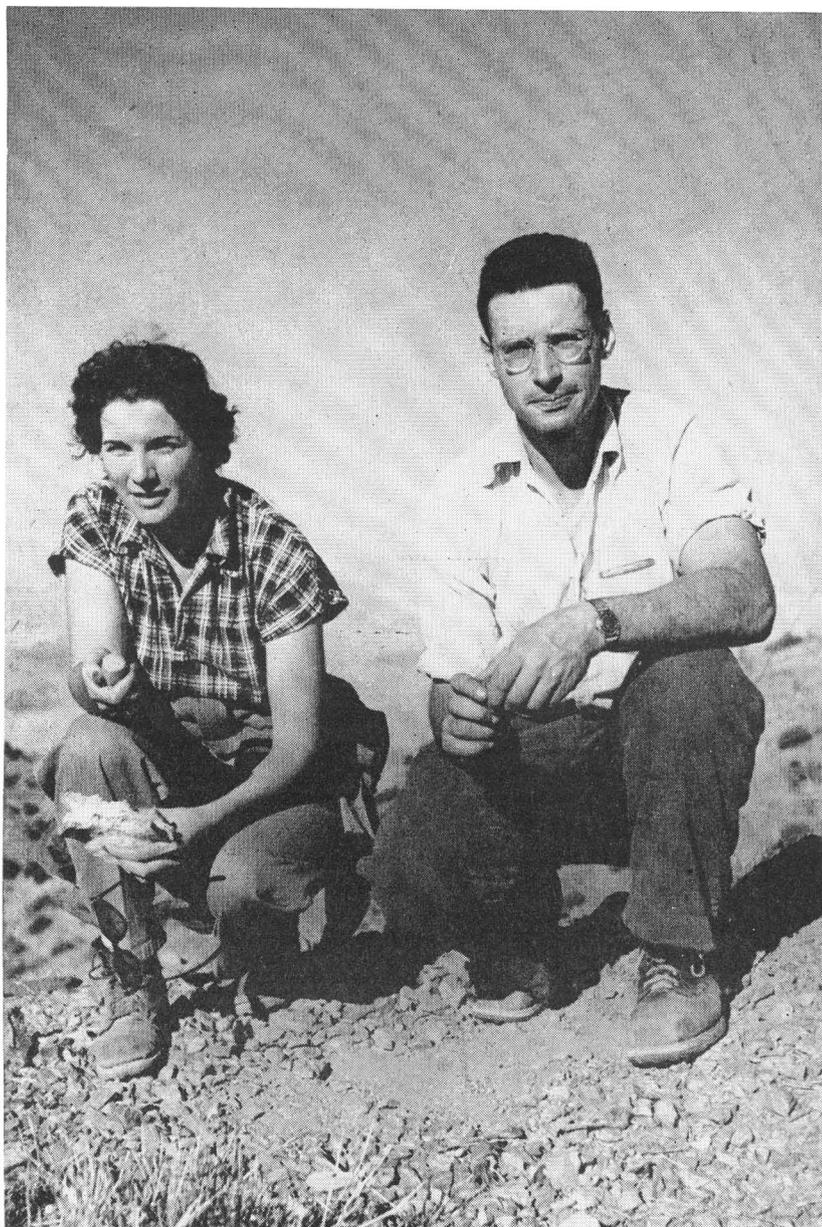
an Avawatz Peak on California's
out Avawatz, and so the climbers
6200-foot ascent—and here is the
ernians do on such an expedition.

they were told that it had once har-
bored a still.

The Smiths pitched a tent and began
building a cabin. Rocks from the wash
were handy materials and they hauled
in lumber and other necessities with
the truck, a little at a time.



John and Adelina Smith—they lived in a tent before this cabin was built.



*Marge Henderson, assistant leader, and Fritz Sloman,
leader, of the expedition to Avawatz Mountains.*

The nearest grade school was 40
miles away, at Silver Lake. Mrs.
Smith, a graduate of the University of
Minnesota, taught the girls at home
until they were ready for high school.
They entered Barstow high later and
were graduated from there. Both are
now married and the Smiths are grand-
parents.

Without outside help, the family de-
veloped a gold mine that keeps them
and keeps them there. Lead, silver,
gypsum and talc have been found in
the Avawatz Mountains. During the
war, prospectors searched for radio-
active minerals but found only traces.
Gold is the only pay dirt so far.

The Smiths radiate a youthful cu-
riosity about and a lively interest in
the world outside, as well as the des-
ert. They talk about retiring to town.
Their desert homestead is so much a
part of their lives that separation will
not come easy.

Before dusk on that Thanksgiving
evening campfires were flickering in
many places along the wash. From the
Casper Casperon camp came the
smell of bacon and beans. Bill and
Marge Henderson broiled steaks on a
sheet of metal. Glen Warner and
Ralph Harlow cooked a mess of spa-
ghetti over a GI gas stove, and Fritz
Sloman warmed up a pressure cooker
full of pork shoulder with sauerkraut,
onions and caraway seed. The camp-
site was backed by a cliff with nearly
vertical strata which was emphasized
by a broad white streak of talc running
from top to bottom.

The veterans of former attempts on
Mt. Avawatz agreed that lack of time
was the main reason for their two pre-
vious defeats. So they set five a. m. as
the starting time on this, their third
attempt. Under a desert moon 24
people started up the wash, Fritz Slo-

man leading and Marge Henderson bringing up the rear as assistant leader. The elevation at the Smith cabin is 1800 feet. The highest point in the range is 6200 feet, so we had about 4400 feet to gain, within a distance of about nine miles.

Adelina Smith had decided to make the climb with us. "In the 16 years we've lived here, I've been all the way up the canyon only once," she said.

The wash was wide open at first.

Gradually it became light enough to see who had come. Fritz Sloman, Marge and Bill Henderson, Bernice and Walter Heninger, were all veterans of previous attempts and were especially eager to make the top this time. Three members of the San Diego Chapter of the Sierra Club were with us: Barbara Lilley, Frances Pierson and Eugene Vinson. From the Los Angeles Chapter: Muriel Pope, Glen Warner, Dorothy Campbell, Eleanor

Smith, Georgie White, Larry Ames, Peggy Fredricks, Bert Baldwin, Ralph Harlow, Elgin Pierce, Louise and Niles Werner. James Bonner had brought two guests: Rosamond Baker, a prospective club member, and Adele Millerd, from Sydney, Australia. Adele is an International Education student this year at the California Institute of Technology. We asked her about the Australian deserts. She said they are very much less accessible than our deserts.

The wash narrowed between smooth walls of white, pre-cambrian marble. Now and then we encountered a little rock scramble up dry falls. As the sun rose higher we welcomed the shade of the canyon walls.

About four miles above the Smith cabin, Mrs. Smith pointed out the Upper Spring, running water from a pipe. Clumps of desert willow grew at this spot and fresh droppings of mountain sheep were all around.

"We estimate we have six or eight mountain sheep back in here," Mrs. Smith told us. "We'd have more if the mountain lions didn't get the lambs. One old ram is quite friendly with Mr. Smith. Allows him to come almost within petting distance. Two years ago the Los Angeles County Museum sent a group in here to get a sheep for mounting. Mr. Smith showed them where to find the sheep. They took an ewe and their taxidermist prepared it right in front of our house. It was lambing time and they took a perfect little lamb out of the ewe and stuffed it too. I understand they're both on display in the American animals exhibit at the Museum at Exposition Park."

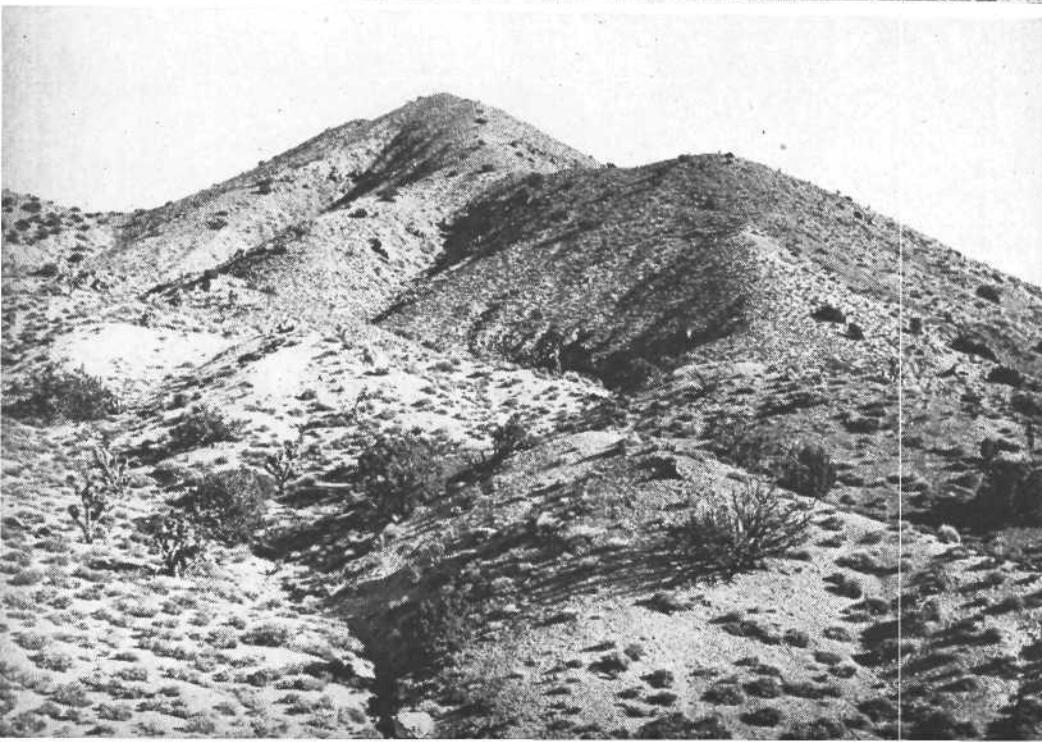
The girls wanted to know how Mrs. Smith kept her skin so soft and white living on the desert.

"It's natural," she said. "I never use creams. I guess I'm lucky."

We rested at the Upper Spring, giving everyone a chance to catch up. For most of us the breakfast hour had been too early to enjoy much food. Lunch bags came out of knapsacks and out of lunchbags came oranges, apples, carrots, celery and sandwiches. Sounds like a vegetarian picnic. These foods we especially enjoy in desert lunches, because of their moisture content. Everyone carried at least a quart canteen of water and many carried canned fruit juice besides. Seasoned climbers usually carry, on one-day trips: a sweater or parka, flashlight, dark glasses, matches. The leader is required to carry a standard first aid kit. Niles Werner always carries a pair of pliers for two reasons: to pull out boot nails that give trouble,

Above—Some of the climbers along the route. It took seven hours to ascend 4400 feet to the top.

Below—The bald summit of Avawatz. Joshua trees are seen growing nearly to the top—with a sprinkling of pinyon and juniper.



and to pull out cactus spines from victims' hides.

At the Upper Spring we took the left fork which is narrow for a short distance. Here grow clumps of real willow. Then the canyon widens to a wash again, its sides rising gently to red-brown volcanic-like ridges. This gentle rise is generously dotted with Joshua trees, smaller varieties of yucca, and beavertail cactus.

Around a bend the formations indicated we were coming to the end of the canyon, and to the foot of some steeper climbing. The lead group had already paused there to consider the routes. Yellow cliffs to the left were deeply furrowed with steep gullies and topped by a craggy summit. Beyond this summit, we suspected, was the peak. To the right was a scree slope. Above the scree slope the ridge ran, in a short arc, toward the top of the yellow cliff.

While the leaders pondered the question of which way to go, the rest of us whiled away the time resting, talking and laughing. Someone wondered where the name 'Avawatz' came from.

"We have always assumed it was Indian," Mrs. Smith said, "but we have never been certain as to the origin." Later in Erwin A. Gude's *California Place Names*, I found the following information:

"The name appears on the map of the Merriam expedition (1891) as Ivawatch, a name doubtless supplied by the Indians. It is derived from Southern Paiute *na-hu-watz*, 'mountain sheep.' The use of the prefix *iva-* 'white, clear' in place of *na-hu* may imply that the word referred to 'white sheep' (O. J. Fisk). The name was commonly pronounced *a-va-watz* by the settlers . . ."

There is always a great deal of laughter on such trips. We laugh at many things that don't seem funny when one tries to put them on paper afterward. Whether the joke is good or not, doesn't seem important. People in high spirits will laugh at the slightest excuse.

"That must be the old gate we're supposed to pass through," said Bill Henderson, pointing to an old post with a cross-piece sagging from it. That way lay the scree slope.

"The cliff is more direct," was Larry Ames' opinion.

"That may be so, but it's no place to take a large party without ropes," judged Fritz Sloman, the leader. And he started up the scree slope. Half a dozen others liked the looks of the cliff and decided to try it. The rest followed Fritz up the scree, sliding

back halfway every time they took a step. But the scree slope wasn't long and they soon reached a ridge, which climbed in an arc, toward the top of the yellow cliff. Most of the cliff party made it easily, but a few found the last 10 or 15 feet steep and the footing poor. Fritz ran up the ridge to assist them.

We could see by now that we were still a long way from the summit. We couldn't even be sure which ridge led to the highest point.

Fritz and Niles started up the right ridge with Barbara Lilley and Eugene Vinson following. Bernice and Walter Heninger decided to wait until it was certain which was the true summit. Larry Ames and Muriel Pope went up a draw between the two summits and the rest straggled out behind.

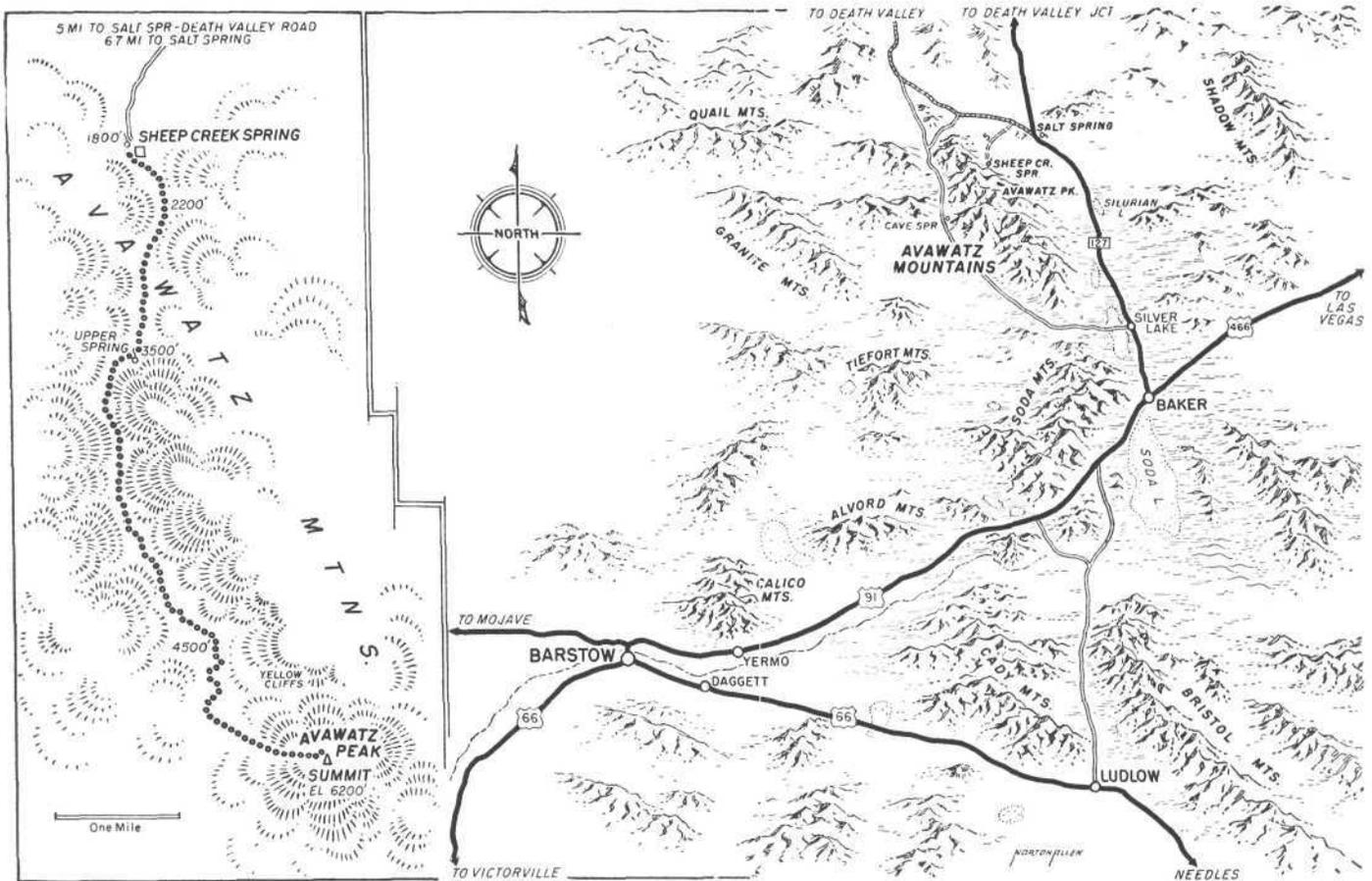
Pinyon Pines decorate the slopes above the scree, and fine large junipers are all over the hills.

Fritz and Niles disappeared over what looked like the top. After a little

Above—On the trail to Avawatz Peak. Proper dress for such a mountain climb is—whatever you want to wear.

Below—This is the canyon up which the party came. The going was rough in some places.





they appeared again and signalled us to come on. We relayed the news back. Later Fritz reported that, according to the map, the elevations of the two summits differed by only 24 feet.

By ones, twos and threes they came up. Everybody made it. It took seven hours. We estimate the distance at nine miles. Bill Henderson passed around his binoculars. Off to the east the Silurian Hills seemed to be burying themselves in their own alluvial fans. Far beyond them, in Nevada, rose the Charleston Mountains. Silver Lake and Soda Lake lay dry and white to the southeast. To the southwest, the Tiefert Mountains loomed close, with Bicycle Lake at their feet. In the immediate foreground to the northwest, the other high summits of the Avawatz range cut off most of the view toward Death Valley. From the crown of the Avawatz, one can see almost all the features characteristic of our California deserts.

We enjoyed the top for a couple of hours. Some wanted nothing more than a good drink of water and a good rest. Most of us enjoyed our apples, oranges, fruit juice and candy. Camera fans were busy. Fritz emptied a No. 10 can of tomato juice, removed the

label from the can and passed the paper label around to get everybody's signature. That was the record we left on top, in the cairn placed there by the Geological Survey. In the cairn we found only one record. It had been placed there that very morning, by Don Rappolee, of the San Diego Naval Base. He had made a solo ascent by moonlight and reported seeing two rams.

Going down was like payday. The places that had taken the longest going up, were the fastest going down. Especially did we coast on the scree. In the canyon again, the party broke into groups; some wanted to hurry down; some wanted to saunter. Fritz stayed in the rear to see that everyone got down safely.

We passed a group lingering to take a last look at the yellow cliffs. Down the wash, we stopped to share the peanuts and hard candy Glen Warner and Dorothy Campbell passed us. Later we passed up a couple taping up blistered toes. And so on down the wash and back to camp. And at the end of the day there was a general good feeling that the climb to the crown of the Avawatz was a stimulating and rewarding experience.

ISSUE OF SPECIAL STAMPS ENDS FISHING CONTROVERSY

Distribution of 10,000 special use stamps for fishing on waters of the Colorado river was slated to begin June 28 with Las Vegas sporting goods dealers, who are authorized to handle Nevada fishing licenses, getting priority on delivery, according to Helen Scott Reed, county clerk. Delivery of the stamps, issued by Arizona, to outlying points at Nelson, Overton and Boulder City was expected to be completed before the fishing permits become effective, July 1. The stamp distribution brings to a peaceful conclusion a fishing license controversy that has raged over use of waters of the Colorado river between the states of Arizona and Nevada. Under the special use plan local anglers and non-resident fishermen will pay one dollar for the stamp for the privilege of fishing on waters that form a boundary line between the two states. This stamp will be good until December 30. The fee for the full year of 1952 will be two dollars. Nevada has delivered 20,000 stamps to Arizona officials for distribution. The Nevada stamps are to be attached to valid Arizona licenses, either resident or non-resident.—*Las Vegas Review-Journal*.

HERE AND THERE . . . on the Desert

ARIZONA

Arizona to Improve Roads . . .

TUCSON—Highway budget figures released in Arizona include \$1,039,600 ear-marked for improvement of Highway 66. The moneys will be used for completion of the Yucca cutoff between Kingman and Topock, grading and draining 12 miles between Topock and Franconia, 35 miles of resurfacing between Topock and Kaster, 19 miles of grading and draining between Topock and Kingman, three miles of grading and an overpass near Yucca, and four miles grading, draining and surface work east and west of McConnico.—*Desert Star*.

Well Drilling Banned . . .

PHOENIX — W. W. Lane, state land commissioner, has declared 400,000 acres of Pinal county lands as a "critical area." The declaration calls for restrictions against drilling water wells for new land development. Designation of the area as critical was made under provisions of the State Groundwater act of 1948. The Pinal area is the third and largest section to be placed under state water control. Only one small segment of the county, north of Red Rock, remains free of state water jurisdiction.—*Tucson Citizen*.

Travel Increase Noted . . .

GRAND CANYON — Travel to Grand Canyon national park is 8.2 percent above last year's total to June 1, park service officials have disclosed. So far this travel year, which started Oct. 1, 228,688 visitors have been checked into the park, compared with 211,261 for the same period last year. May of this year, however, has shown a slight decline with 49,726 visitors coming into the park, as compared with 50,109 for May of 1950. This year's visitors have included travelers from all 48 states and many foreign lands.—*Coconino Sun*.

Water Users Get Project . . .

YUMA — Valley division of the Yuma project—oldest Bureau of Reclamation development on the Colorado river—was slated to be turned over July 1 for operation and maintenance to the Yuma County Water Users association. The transfer was to be made in accordance with a recently executed contract between the Bureau and water users. The Valley division contains approximately 50,000 acres. Water is diverted at Imperial Dam, 18 miles

northeast of Yuma, and is carried through the All-American Canal for 14½ miles to Siphon Drop where it is turned through the Siphon Drop power plant into the Yuma main canal.—*Yuma Sun*.

. . .

Peyote-Eating Defended . . .

FLAGSTAFF — Eating of peyote buttons is not "debauchery" but a harmless and valuable religious sacrament as practiced by the Native American Church, it is claimed by a Navajo group. Peyote or mescal buttons are the dried, disc-like tops of the small spineless Mexican cactus, resembling a potato chip covered on one side with a tuft of down-like cotton. Recent statements protesting the use of peyote as harmful and habit-forming are the result of misinformation, the Navajo group advised. K. F. Parker, curator of the herbarium at the University of Arizona has recently indicated that most scientific investigation has shown the peyote plant to be non-habit forming and harmless.—*Coconino Sun*.

Hidden Canyon Goal of Trek . . .

PHOENIX—Included in the vacation plans of six Arizona youths is a 400-mile trek into some of the wildest country in Mexico. The group hopes to explore the fabulous Hidden canyon, supposedly larger than the Grand canyon and containing newly discovered species of tropical animals. A 150-mile hike with burros from Alamos, a Mexican town 500 miles south of the border, to the edge of the canyon is planned. Two members of the group are from Phoenix college, two are from the University of Arizona, one has just graduated from North Phoenix high school and one attends the Massachusetts Institute of Technology.—*Tucson Citizen*.

Arizona Wins Water Vote . . .

WASHINGTON—Senate approval, 50-28 of the Hayden-McFarland bill authorizing the \$788,000,000 Central Arizona Reclamation Project marks the second successive Arizona victory over California in the quarter century-long fight over Colorado River water. The margin was five votes closer than in February, 1950, when a similar proposal passed 55-28. The Congressional future of the proposal is still in doubt, however, since the House Interior-Insular Affairs committee some months

don't forget...

FIRE CHIEF

the world's most famous gas

IS REGULAR PRICE!



Get Fire Chief today from your Texaco Dealer—
"The best friend your car ever had."



THE TEXAS COMPANY

Texaco Dealers in all 48 States

TEXACO PRODUCTS ALSO DISTRIBUTED IN CANADA

THE DESERT TRADING POST

Classified Advertising in This Section Costs 8c a Word, \$1.00 Minimum Per Issue

INDIAN GOODS

FOUR PERFECT AND FINE Indian Arrowheads \$1.00, 2 large arrowheads \$1.00; extra fine stone tomahawk \$2.00; 4 beautiful bird arrowheads \$1.00; 2 flint knives \$1.00; fine effigy peace pipe \$8.00; bone fish hook \$2.00; 6" or over spearhead \$5.00, thin and perfect. List Free. Lear's, Glenwood, Arkansas.

WE SEARCH UNCEASINGLY for old and rare Indian Artifacts, but seldom accumulate a large assortment. Collectors seem as eager to possess them as their original owners. To those who like real Indian things, a hearty welcome. You too may find here something you have long desired. We are continually increasing our stock with the finest in Navajo rugs, Indian baskets, and hand-made jewelry. Daniels Trading Post, 401 W. Foothill Blvd., Fontana, California.

COLLECTORS ITEMS in Indian Handicraft. Old baskets from 20 tribes, buckskin garments, war bonnets, beadwork, Navajo and Zuni Pawn silver jewelry, peace pipes, headbreakers, old bows and arrows, handmade Indian saddle, beaded saddle blankets, bone breast plates, Navajo yea rugs. Pat Read, Indian Trader, Lawrence, Kansas.

BOOKS — MAGAZINES

BOOKS FOUND: Any subject, any author. Fast service. Send wants—no obligation. International Bookfinders. Box 3003-D, Beverly Hills, California.

PANNING GOLD — Another hobby for Rock Hounds and Desert Roamers. A new booklet, "What the Beginner Needs to Know," 36 pages of instructions; also catalogue of mining books and prospectors' supplies, maps of where to go and blue prints of hand machines you can build. Mailed postpaid 25c, coin or stamps. Old Prospector, Box 729, Desk 5, Lodi, Calif.

"GOLD PANNING FOR PROFIT." Healthy outdoor hobby. Beginners' big illustrated instruction book—\$1.00. Miners' gold pans, \$2.00. Prospectors' powerful magnifying glass, \$1.00. Desert Jim, 627 Lillian, Stockton, California.

WE WILL PAY 50 cents each for good copies of the Desert Magazine issue of September, October, November, 1945, and January, February, 1946. Desert Magazine, Palm Desert, California.

FOR SALE: Western Americana, limited selection; Covers Ghost mine and railroad items, glass. Write your particular interest, I may have it. Box 64-D, Smith, Nevada.

KEEP YOUR MAPS . . .

Every month Desert Magazine carries two or three maps especially prepared for readers who come to the desert for recreation or field trips.

These maps are best retained for permanent reference by filing your copy of Desert Magazine each month in one of the loose-leaf binders supplied by the magazine publishers.

Covered with imitation leather and gold embossed, each binder holds 12 copies. They are easy to insert and they lay flat when open.

MAILED POSTPAID FOR
\$2.00

THE Desert MAGAZINE
PALM DESERT, CALIFORNIA

BUSINESS OPPORTUNITIES

TRADING POST, Hiway 80, Rox and Indian Goods. 1 acre, 3 houses, soft water well. Healthy, good living for couple. Reason old age. \$8500. Trading Post, Boulevard, Calif.

FABULOUS EARNINGS — Fascinating pastime. Growing Genuine, living miniature (Ming) Trees. New Sensational Business or Hobby. Astounding information FREE. Dwarf Gardens, Box 355N, Briggs Station, Los Angeles 48, California.

MISCELLANEOUS

FRED AND JESSIE FORTER welcome you to "Pow-Wow" Rock and Gift Shop. East end of Yermo, Calif. Hi-way 91. You are assured of an interesting stop here; whether it be rocks, gifts, information or a souvenir. What's your hobby? Ours is rocks. Come in and "Pow-Wow" with us.

LADY GODIVA "The World's Finest Beautifier." For women who wish to become beautiful, for women who wish to remain beautiful. An outstanding desert cream. For information, write or call Lola Barnes, 963 No. Oakland, Pasadena 6, Calif. or phone SYcamore 4-2378.

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

GEIGER COUNTER — Nucleus, \$16, Postpaid. You add battery and phones to make a reliable, sensitive, beta-gamma detector at lowest possible cost. Free informative literature. Westcoast Products, Dept. D-M, 8227 Grove, Sunland, California.

DESERT TEA. One pound one dollar postpaid. Greasewood Greenhouses, Lenwood, Barstow, California.

SILVERY DESERT HOLLY PLANTS. One dollar each postpaid. Greasewood Greenhouses, Lenwood, Barstow, California.

COLOR SLIDES: Photomicrographs of rare types of Agate. World Travelogs; Grand Canyon, Petrified Forest, Yosemite, Carlsbad Caverns, White Sands, Indian Ruins, Big Bend. Bric, Zion, Wild Flowers, cacti, reptiles. Four samples 2x2 or stereo and literature, \$1.00. Dave Harris, 2401 Pittsburg, El Paso, Texas.

FOR SALE: Under \$10,000, nice modern home in mountains. 1 1/4 acres, 216 feet on Highway 80. Good business location. Oak and fruit trees, berries & garden. Plenty flowing water. Location: Manzanita, Calif. Address Harvey K. Deeds, Star Rt. Pine Valley, California.

PROSPECTORS AND ROCKHOUNDS WANTED. To join the newly incorporated United Prospectors Organization. If you are experienced or beginners the articles in our magazine are bound to help you enjoy your hobby and the outdoors. Send your name for our new brochure and literature. United Prospectors, Box 729, Lodi, California.

FISHER LIGHT WEIGHT economy Model M-Scope type ME metal locator, cost \$137.50. Also small Geiger counter, cost \$37.50. Perfect condition. \$85.00 for both. J. A. Stiles, 10930 Mines Ave., Whittier, California.

FOR SALE: 1941 Dodge army ambulance, 4 wheel drive, 5 new 9:00x16 tires and tubes in addition to 4 on truck. New Dodge 120 h.p. motor installed in 1948. Have been getting 14-16 miles per gallon. Inside of body remodeled for camping; will sleep 2 adults and 2 children. \$650. Paul Crockett, 750 E. Alvarado, Pomona, California.

SAVE 50% On New Binoculars! Free catalog. Free book. "How to Select Binoculars." Write today! Bushnell's 43-D-00 Green, Pasadena 1, California.

TWO-BDRM. HOME — furnished, on half-acre walled-in lot. 6-in. walls, poured concrete. Plenty of cheap water. Gorgeous view. Only \$8600. Located seven miles NE of Palm Springs. R. H. McDonald, Desert Hot Springs, California.

ago voted to postpone further consideration of a counterpart bill until the water row is settled by binding agreement between the states or a court ruling.—*Los Angeles Times*.

Indian Service Men Promoted . . .

SAN CARLOS—Commissioner of Indian Affairs Dillon S. Meyer has announced appointment of Thomas H. Dodge as superintendent of the San Carlos Indian agency. Dodge, a Navajo Indian and former chairman of the Navajo Tribal council, succeeds Arthur E. Stover who retired May 31 after 18 years in the Indian Service. Dodge's former position as head of the Truxton agency at Valentine will be filled by Austin F. Ladd. Ladd has been finance officer at the Colorado River agency for the past two years. He was chief clerk of that agency for 10 years, from 1939 to 1949.—*Bureau of Indian Affairs*.

Davis Dam Play Area Planned . . .

DAVIS DAM—Residents of Arizona and Nevada have a vast new water playground they hardly know exists. It is 67-mile-long Lake Mojave, behind the Colorado's Davis Dam. Lake Mojave is somewhat smaller than Lake Mead to the north, but National Park Service officials have drafted a plan for joint recreational development of the two areas. Principal recreation site to be built on the Arizona side of Lake Mojave will be at Katherine, just north of the dam. According to Park officials the biggest attraction at the lake during the next five years will be fishing.—*Desert Star*.

CALIFORNIA

Navy Uses Salton Sea . . .

EL CENTRO — U. S. Navy sea-planes plan to use the north end of Salton Sea as an emergency landing place. On request of the Eleventh Naval District, the Imperial Irrigation Board of Directors recently gave permission for such use. The permit, it was disclosed, protects land leases on the marginal area of the sea. The Navy explained in its request that the new landing place would be used in case of unfavorable weather conditions at San Diego.—*Imperial Valley Weekly*.

Huge Land Sale Announced . . .

CALEXICO — Imperial Valley's largest farm land deal, a cash sale at a figure reportedly in excess of \$800,000, has been announced. W. Lee Johnson, Harold H. Johnson, Ole C. Johnson, and Rex T. Drysdale purchased the entire capital stock of Martin C. Wahl, Inc., including 1280 acres of farm land about three miles east of Calexico. All improvements

went with the land, including feed lots for 6000 cattle. The land sold for \$500 an acre—a record price for large tracts. Known in the Valley as the old Cudahy ranch, the land has been farmed almost exclusively to row crops such as vegetables and sugar beets. Under the new ownership the operation is to be changed. Nothing but field crops are planned. Purchase of the Wahl land brings total holdings of the buyers to more than 6000 acres of Valley land.—*Imperial Valley Weekly*.

Refuge Opening Opposed . . .

LA QUINTA—Edmund C. Jaeger, dean of desert naturalists, warns that the greatest concentration of desert bighorn sheep in southern California is threatened with extinction if the Santa Rosa State Bighorn Sheep refuge is opened to deer hunters. Jaeger discounted statements made by O. T. Harvey, Riverside County Conservation Commission member, that sheep have made little progress in the refuge, hence no justification for maintaining the closed area. Those who really know the refuge have learned that there are many bighorn wandering over the rough terrain there, Jaeger contended. He proposed a four-point program to preserve the Santa Rosa sheep consisting of retention or enlargement of the existing refuge area, better sign posting, assignment of more wardens, and increased conservation education.—*Date Palm*.

Scotty Castle Road Opened . . .

DEATH VALLEY—Scotty Castle road, 21-mile stretch of new highway officially designated as Route 72, is now open following recent dedication ceremonies. The dedication took place where the road crosses the California-Nevada state line with Governor Russell of Nevada and other state officials present. It was followed by open house at Death Valley Scotty's castle with a luncheon for the official guests. Scotty recalled that he had first travelled the course of the present highway in 1883 with his burros.—*Times Herald*.

Warren Signs Tramway Bill . . .

PALM SPRINGS—Last legal barrier to building a \$6,000,000 tramway in Mt. San Jacinto State park was cleared recently when Governor Warren of California signed legislation changing the territorial limits of the Winter Park Authority. The bill facilitates acquisition of the right of way for the projected lift up the slope of Mt. San Jacinto in southern California. The tramway is contemplated as the largest aerial cable car in the world. It would be used as a lift for winter skiers and summer tourists.—*Los Angeles Times*.

Highway 91 Dangerous Road . . .

BARSTOW — Highway 91, from Barstow to the Nevada state line, is the most dangerous stretch of road in California, according to a recent statement by Chief of Police Floyd W. Howard of Barstow. Chief Howard pointed out that Barstow is the intersection of two trans-continental highways, 91 and 66, and that it takes constant patrolling to keep accidents down within the city. He attributed much of the danger to the fact that tourists coming in off the desert roads are used to speed and light traffic conditions and when they reach the Barstow area they fail to reduce speed. He also cited trouble encountered by the highway patrol with drivers who are tired and sleepy after a weekend in Las Vegas. Chief Howard estimated 2,500,000 cars pass through the city each year.—*Las Vegas Review-Journal*.

Land Sales Reported . . .

INDIO—Sale of a ranch, date garden and city property, representing \$130,000, was reported in the Coachella valley recently. V. C. Smith sold his Jackson street ranch, with 125 acres in cotton, to Dr. William G. Durnin of Long Beach. Other transactions included the sale of Center street property by Jack Milam to J. R. Griswold of Los Angeles, and Paul Preston's disposal of his 20-acre date garden on Avenue 58 to James Armstrong, Valley rancher.—*Date Palm*.

"Wetbacks" Flown Home . . .

EL CENTRO—Flying Tiger airline flights from El Centro are carrying 240 "wet" Mexicans daily to points in the interior of Mexico. Under contract to

the Immigration Service, the flights were instigated recently in an effort to relieve pressure on immigration forces along the international border. Heretofore, illegal entrants were taken to the border in buses and allowed to walk back into Mexico. In many cases these men waited until the immigration officers left and then stepped back across the border.—*Indio News*.

NEVADA

Brothers Set Boating Record . . .

BOULDER CITY—Two brothers set a record when they navigated the 285 miles of treacherous Colorado river rapids in a flat-bottom rowboat down the twisting, roaring stream in 52

"EVERYTHING FOR THE HIKER"

SLEEPING BAGS
AIR MATTRESSES
SMALL TENTS

and many other items

VAN DEGRIFT'S HIKE HUT
717 West Seventh Street
LOS ANGELES 14, CALIFORNIA

FOR GOOD HEALTH

Find out about BERRY BRAND Genuine Brewery Yeast.

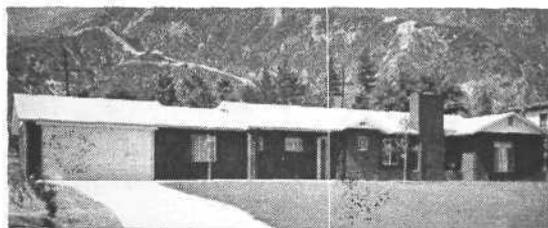
Write for free literature. \$1.00 per pound plus postage. Quantity discounts available.

"Proper selection of food today gives you HEALTH tomorrow!"

H. B. BERRY LABORATORIES
Box 188, Montebello, California
Telephone Union 1-0084

ASK YOUR CONTRACTOR ABOUT "PRECISION BUILT"

RED CINDER BLOCKS



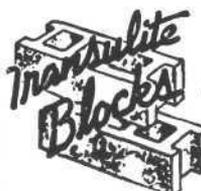
You'll have year
around comfort
with

"Precision Built"
RED CINDER OR
PUMICE BLOCKS

Homes of Distinction

are built with

More
House
For
Your
Money



PLANS AVAILABLE
DESERT CINDER BLOCKS FOR
DESERT HOMES

Transit Mixed Concrete Co.

3464 E. Foothill Blvd., Pasadena 8
RYAN 1-6329 or Corona Phone 1340

hours and 41 minutes. The pair are Jim Rigg, 28, one of the owners of a tourist resort at Mexican Hat, Utah, and Bob Rigg, 22, a student at the University of Colorado. Their voyage started the night of June 8 at Lee's Ferry at the head of the precipitous Grand Canyon and wound up the morning of June 11 at Pierce Ferry on Lake Mead. The Rigg boys, explaining

their fast time, reported they halted to survey only one falls, Lava Falls. They said they went over other major rapids without stopping, bailing out their boat on the fly.—*Los Angeles Times*.

New Plant at Full Capacity . . .

GABBS — Quantity production of basic magnesite began recently at the new Gabbs plant, it was announced recently by H. P. Eells, Jr., president of Basic Refractories, Inc. The new plant, located 150 miles from Reno in Nye county, is on the site of one of the two largest deposits of magnesite in the United States. It is expected to ease the shortage in refractories now being experienced by steel companies producing at record levels under impact of defense orders. One of the world's largest single rotary kilns for "deadburning" magnesia refractories forms a part of the plant facilities. — *Tonopah Times-Bonanza*.

Reservoir at High Level . . .

CARSON CITY—June 4 found the Lahontan Reservoir at its highest level of the 1951 spring runoff season, hitting a peak of 267,916 acre feet. The high level is only a few inches short of topping the natural crest of Lahontan dam, and is backed up by the highest storage in Lake Tahoe since 1943 and overflowing water for irrigation at Boca, Donner and Independence lakes in the eastern Sierra foothills west of Reno. A higher level is not anticipated, unless as the result of unexpected storms.—*Fallon Standard*.

Reunion Gets Approval . . .

BOULDER CITY—Immediate approval has greeted the proposed Boulder dam reunion this fall which would attract former workmen on the huge project. Clem Malone, former rigger on the dam and an ex-county commissioner said he thought the idea an excellent one because it would bring a lot of old-timers back to this area to see what their work on the Colorado river has brought about. It is hoped, according to sponsors of the project, that a meeting of former Boulder dam employees who still reside in this section can be called soon at which committees can be appointed to work out plans for the reunion. It was just 20 years ago that work on the dam was started.—*Las Vegas Review-Journal*.

Columbia Group Appointed . . .

CARSON CITY—Appointment of a Columbia basin interstate compact commission was announced recently by Governor Charles Russell. The commission was established by the 1951 legislature to represent the state in future negotiations among Columbia basin states involving water and power matters. Mel Lundberg, Elko, and

Alfred Merritt Smith, Carson City, were named to the commission. The two appointees will serve with State Engineer Hugh Shamberger and will receive \$15 a day plus expenses when in session.—*Las Vegas Review-Journal*.

Protest Mead Changes . . .

LAS VEGAS—Notice filed in the Federal Register May 18 under which prospecting and mining in national recreational areas could be curtailed by directive of the Secretary of the Interior has been protested by the Southern Nevada chapter of the Nevada Society of Professional Engineers, according to J. Ray Coulter, president. The protest, sent to Secretary of the Interior, Oscar L. Chapman, expressed opposition to any change in the general mining laws that would abridge the rights of any citizen to prospect for, locate and exploit natural resources within the Lake Mead Recreational area, or on any other federal land. Attention was called to the fact that the Lake Mead area contains vast deposits of minerals, the exploitation of which would add to the national wealth and augment the inadequate supply of sorely needed ores and minerals. — *Las Vegas Review-Journal*.

Atom Tests to Continue . . .

LAS VEGAS—Further atomic tests in Nevada were forecast by the Atomic Energy Commission's recent announcement of plans to expand camp facilities at Frenchman's flat. Sixty-five miles northwest of Las Vegas, Frenchman's flat was the scene of a series of atomic test explosions in January and February. The AEC estimated the new facilities will cost about \$1,500,000. Construction will consist of barracks for both men and women employees, and will be capable of housing 400 when tests are underway. Disclosure that the AEC intends to keep a permanent force of at least 60 at the testing site is an apparent indication that it plans to use the Nevada location for an indefinite time.—*Tonopah Times-Bonanza*.

Water Shortage Looms . . .

LAS VEGAS—Reports that springs in the Mt. Charleston section were drying up forecast a dire water shortage in the city of Las Vegas this summer. Forest Ranger H. C. Hoffman made the report of the lack of water in the springs and said the fire hazard in the mountains was the worst in the history of the section. Meanwhile, water experts said such conditions would certainly mean a curtailment in the Las Vegas water supply, and only time would tell how serious the situation would become.—*Las Vegas Review-Journal*.

Hard Rock Shorty

of Death Valley



"So you wanta write a story for the papers about me an' Pisgah Bill?"

Hard Rock Shorty, seated on the bench under the lean-to porch in front of Inferno store, was having a new experience. He was being interviewed by an eager young lady who had come all the way from Los Angeles to get material for a magazine article she hoped to sell.

"Ain't much to tell about me," Hard Rock assured her. "Wuz born in a minin' camp in Nevada, an' been at it ever since."

"Pisgah Bill's th' feller you really oughta write a story about. Pisgah's been everywhere. He's made millions—an' lost 'em all."

"Bill's the inventin'est cuss yu ever seen. He's the prospector who brought in a bunch o' them Arizony woodpeckers an' trained 'em to drill holes in his mine fer blastin! Wuz a good idea, only the woodpeckers finally drilled their way out o' the tunnel and flew back to Arizony."

"Please, Mr. Hard Rock, tell me more about this Mr. Pisgah. Where did he come from and how long has he lived in Death Valley?"

"Wal," said Shorty, "that's sorta pryin' into a feller's private business, but I can tell yu this much. Pisgah cum from Texas, an' he left there 40 odd years ago, as he explains it, tu cum out to this country where a man can live according to his own beliefs without the law interferin'. Trouble wuz that Bill believed all the horses in Texas belonged to him."

NEW MEXICO

Water Situation Serious . . .

LAS CRUCES—Water shortage in the Elephant Butte Water Users district is serious and without precedent in the history of the development, John Gregg of the Reclamation bureau has announced. An increase of six inches per acre-foot recently made available to project farmers brings the allotment up to only 50% of normal, which is more than three acre-feet, Gregg said. There has been no inflow this spring, and no gain has been made in water storage since water was turned on March 1. The use of ground water to supplement irrigation has relieved the situation somewhat, but wells are going down at such a rapid rate it has not been possible to keep abreast of the situation. Included in Gregg's announcement was the information that water-right owners of less than two acres will be given water once every three weeks for the next irrigation and once in two weeks thereafter. — *Las Cruces Citizen*.

Depot Expansion Planned . . .

WINGATE—Expansion at Wingate ordnance depot to the tune of \$15 million seems assured, according to information released by Senator Chavez (D-N.M.). Chavez said that Army Secretary Frank Pace has formally requested transfer of 2,439.97 acres of land from the Department of Interior in preparation for construction of new ammunition magazines. The land, which adjoins the east boundary of the depot, is administered by the Bureau of Indian Affairs as a part of the Fort Wingate vocational high school and the sheep breeding laboratories. — *Gallup Independent*.

Swamp Draining Begins . . .

ALBUQUERQUE—Work has begun on the San Marcial swamp draining project in southern New Mexico. Estimates of the amount of water the swamp wastes each year have run into the hundreds of thousands of acre feet. It has been using up more than 1000 acre feet a day. Hubert Ball, engineer for the Middle Rio Conservancy district at Albuquerque, said a pilot channel will be dug in cooperation with the state engineer, the El Paso and Las Cruces Irrigation districts, and the Reclamation bureau. — *Gallup Independent*.

Tours Well Received . . .

GALLUP — Free guided tours to points of interest in this area are being well received, according to written comments addressed to the Gallup Chamber of Commerce, sponsors of the trips. The plan is scheduled to

continue into early September with journeys to Zuni, El Morro National monument, movie locations, Kit Carson's cave, Canyon de Chelly monument and Chaco Canyon monument. A free narrated color movie is run each evening except Sunday at 8 p.m. showing the wonders of the surrounding country. — *Gallup Independent*.

Lake to be Sold . . .

CARRIZOZO—Interest in the proposed sale of Bonita lake and 7000 acres surrounding it was heightened by the recent announcement that bids for such a sale may be accepted soon. Paul Harris, land and tax agent for the Southern Pacific railroad, has assured officials that Carrizozo would be given particulars of the proposal. Bonita lake supplies water to Carrizozo, Vaughn, Corona, Ancho, Duran and Pastura. The lake has been used for years to supply water for locomotives but has lost much of its usefulness as a result of installation of diesel engines. — *Santa Rosa News*.

Advertising Contract Let . . .

SANTA FE—Recently formed New Mexico Advertising council has won a \$206,000 contract to publicize the Land of Enchantment. Ralph Jones, highway commission chairman, said it is estimated the money will be budgeted for national advertising over the 18 months beginning July 1. The advertising council was organized by Lewis A. Thompson, president, Patrick H. Hill, H. Duke Kerstein and Robert Stevens, all of Albuquerque. — *Gallup Independent*.

UTAH

Baker Dam Dedicated . . .

CENTRAL—More than 200 people gathered at the Baker dam near Central June 9 for the dedication service celebrating the completion of the dam. The service was conducted by Bishop W. Vaughn Jones of Veyo. Present from Salt Lake City for the ceremony were W. R. Wallis, chairman of the Utah power and water board, Tom Jensen, a member of the Utah Water association, and Mark Gardner, chief engineer for the Utah power and water board. Messages of congratulations were read from Governor J. Bracken Lee and Joseph Tracy, state engineer, who were unable to attend. — *Washington County News*.

Navajo Education Fostered . . .

BRIGHAM CITY—Navajo Indian youngsters, 1288 of them, are currently enrolled in a year-old institution here that promises relief to a much-debated issue. The government's Intermountain Indian school is located on a

thousand-acre campus nearly 500 miles from the reservation and offers firm grounding in English, arithmetic, trade subjects, home economics and other basic subjects. The completely modern school boasts a swimming pool, dormitories, dining rooms, shops, and classroom facilities equal to that to be found anywhere. Dr. George A. Boyce, superintendent, believes the school will turn out graduates capable of competing for jobs in fields never before open to Navajos, enabling a great number to leave the reservation where 65,000 now live at meager subsistence levels. — *Aztec Independent*.

Water Funds Sought . . .

OGDEN CITY — Mayor W. R. White of this city recently appeared before the Senate Appropriations subcommittee to urge approval of \$1,225,000 to begin construction of the Weber basin project. White said Ogden City



'The Oregon'

A completely new, powerful and modern line of Geiger Counters. No earphones—uses loud speaker. (You can listen for rattlers, rolling rocks, slides, etc.) You can wear your hat!

(Prevents sunstroke—protect your health.) Your hands are free—hooks to belt! For climbing, rock picking, fishing, riding, etc.

Weight 7 oz. Price \$69.50
WHITE'S ELECTRONICS
1218 M. St. Sweet Home, Oregon

LOWER CALIFORNIA

MAP

Most complete map yet published of Baja California, containing hundreds of the original place names. 28x42 inches, in two colors. Published by Arey-Jones of San Diego.

Postpaid, including tax, \$1.00

DESERT CRAFTS SHOP
Palm Desert, California



World's Greatest

BINOCULAR

See BUSHNELL'S NEW FREE CATALOG!

VALUES 33 Models \$17.95 UP

SAVE 50% And More

30 Day FREE Trial

Guaranteed to give you more and save you money on every popular model. Don't overpay! Compare BUSHNELL'S before you buy. Dealers Invited. Write Today!

"How To Select Binoculars"

BUSHNELL Binoculars Dept. 28 Bushnell Building Pasadena 1, Calif.

had reached the absolute end of its known water supply and the Weber project was needed to supply water for four defense plants which the government intends to further activate. E. J. Fjelsted, secretary-manager of the Weber Basin Water Conservancy district also backed the project as necessary to national defense. He said large population increases had put a tremendous burden on the city's water supply.—*Las Vegas Review-Journal*.

Pipe Line Contracts Awarded . . .

SALT LAKE CITY — Salt Lake Pipe Line company has awarded contracts in a million dollar expansion of its petroleum products transmission line from Salt Lake City to Pasco, Washington. C. E. Finney, Jr., president of the subsidiary of the Standard Oil Company of California, said contracts for building two pumping stations at Juniper, Idaho and Baker, Oregon had been let to Humiston-Rosendahl, Inc., Los Angeles. The pumping facilities will permit the pipe line company to almost double its flow of gasoline, fuel, stove, heating and diesel oils. Chicago Bridge and Iron company, which maintains a branch plant here, got a contract for construction of four tanks, and the Salt Lake Refining company will also build a storage tank here.—*Salt Lake Tribune*.

Livestock Show Planned . . .

CEDAR CITY—Preparations have begun for the annual livestock show scheduled September 6-8 at the show barns on the Branch Agricultural college campus. The Southern Utah Livestock Show association was reorganized recently, with Carlos Jones elected president and Alex Williams named manager. They succeed Heber M. Sevy and Dr. John Beal respectively. V. R. Magleby was named assistant manager, and C. L. Ewing and E. S. Gardner were elected as vice-presidents. Neil K. Boyter was held over as secretary-treasurer of the association. New directors have been selected, and three committees appointed to complete plans for the show.—*Iron County Record*.

Tourist Inquiries Increase . . .

VERNAL — Inquiries from prospective tourists reached a peak of 75 a day here recently, leading the Chamber of Commerce to expect a sharp increase in the number of visitors to the Uintah basin this vacation season. Most of the letters asked for information about Uintah basin primitive area and Dinosaur National monument. Each inquirer is receiving a descriptive folder on the monument and a map of Red Cloud loop, Utah's newest scenic drive.—*Vernal Express*.

Clear Lake Work Begins . . .

FILLMORE — Director J. Perry Egan, Utah Fish and Game commission, has announced the beginning of work on the Clear lake project near Fillmore, Utah. Four and one-half miles of new dikes are to be built. This will control the level of water on 1200 acres of land. The total project is to be handled over a three-year period and cost approximately \$100,000. Completion of the project is expected to enhance the importance of Clear lake as a migratory waterfowl nesting place and as a hunting ground.—*Millard County Chronicle*.

MAN-MADE CHANNEL SOLVES NEEDLES FLOOD PROBLEM

For this first time since 1944 the community of Needles, California, is free from the threat of floods by the roaring Colorado river. The river was scheduled to begin flowing through the new 12-mile man-made channel between Needles and Topock, Arizona, June 25. The channel is 200 feet wide and approximately 17 feet deep and was created by the Bureau of Reclamation's hydraulic suction dredge. It will restore the meandering river to a defined route, lessening the flood danger to Needles and reducing water losses caused by evaporation and transpiration. Nearly nine million cubic yards of silt and debris were excavated by the dredge and deposited along the new channel's banks to form a protective levee since operations began in February, 1949.—*Las Vegas Review-Journal*.

RULING FREES INDIANS TO SPEND OWN MONEY

Liberalized regulations governing individual Indian money accounts have been announced by Dillon S. Myer, Commissioner of Indian Affairs.

Under the new rules all Indians, except the Osages of Oklahoma and minors and mental incompetents, may receive and spend all moneys received by them without supervision of the Bureau of Indian Affairs. Where the funds have been encumbered for loans or other contractual obligations, however, these obligations will be protected.

"These new regulations on individual Indian moneys," Commissioner Myer pointed out, "are an important step in the direction of greater independence for the American Indian. They are part of the Bureau's general program of transferring to the Indians a constantly growing responsibility for the management of their own affairs. I am confident that the regulations will prove beneficial to the Indians and will help them to realize more fully

their potentialities as American citizens."

Approximately 80,000 individual Indian money accounts are affected by the new regulations, with an average amount of about \$700. Most of the accounts are extremely small. Indian funds have been under the control of the Bureau of Indian Affairs for the past half century.

Indians who choose to leave their accounts in the local Indian Bureau agency offices will be permitted to do so, Commissioner Myer explained, as a form of banking service. It is expected, however, that those taking advantage of this provision will be mainly elderly Indians and those living in remote localities. The majority will be encouraged to use normal banking facilities.

The Bureau of Indian Affairs is working on similar liberalization for the Osage Indians.

Under the old regulations, repealed by this action, much of the income from restricted property could not be expended without the supervision of agency superintendents or disbursing agents. With some exceptions, requests by Indians to spend their own money, regardless of the object, had to be referred to Washington for approval.

San Francisco, California . . .

Olaf P. Jenkins, chief of the division of mines, has announced that Special Report 6, "Geology of the Bitterwater creek area, Kern county, California" is now ready for distribution. The report is based upon mapping by the two authors, Henry Heikkila and George M. MacLeod, during the summer of 1947. It presents the results of a stratigraphic and structural study of 40 square miles in the Temblor range, in the heart of the major petroleum producing province.—*Division of Mines*.

ANSWERS TO DESERT QUIZ

Questions are on Page 18

- 1—Remain green.
- 2—Phoenix.
- 3—Raft used by the Colorado River Indians.
- 4—Wind.
- 5—Cholla.
- 6—Mesas or slopes of the foothills.
- 7—Quartz.
- 8—Arizona.
- 9—Grand Canyon.
- 10—San Juan River.
- 11—Panamint.
- 12—Copper mines.
- 13—Virginia City.
- 14—Grand Canyon National Park.
- 15—The Clanton Gang.
- 16—Utah.
- 17—June.
- 18—Harold Bell Wright.
- 19—Marsh or miry place.
- 20—Navajos.

MINES AND MINING . . .

Washington, D. C. . . .

It would be well for mining claim holders to be prepared to perform assessment work for the present and succeeding assessment years, according to Delegate E. L. Bartlett of Alaska. His advice was given following a canvass of both House and Senate in an effort to ascertain prospects for a moratorium. Bartlett and Senator Ecton of Montana had introduced legislation to waive assessment work on mining claims in the U. S. and Alaska during the national emergency. It soon became apparent that a sizable portion of the mining industry itself opposed such a waiver, and Bartlett advised that prospects for enactment of any kind of a moratorium bill were very slight.—*Humboldt Star*.

. . . .

Indio, California . . .

Reduction in size of the Joshua Tree National Monument, cutting the mine-dotted Pinto mountains from federal restrictions against mineral exploration, has stirred hope that the historic Pinto basin and Dale district region will regain its place as one of southern California's richest mining centers. Minerals located there include gold, iron, tungsten, lead, copper and that new source of mining fever—uranium. Earl Geiger, former Arizona copper miner, is typifying new activity in the district. He has reopened the Duplex and developed three new mines, all showing excellent possibilities in gold production.—*Indio News*.

. . . .

Banning, California . . .

Extensive exploration and development of the newly-discovered Banning tungsten district was recommended recently by O. R. Mont-Eton, geologist and mining engineer, after an investigation of several months. Mont-Eton warned, however, that considerable financial support, beyond the average small investment, will be needed to develop the district. Lying between the Banning airport and the south end of the Twin Pines county property, the district has an average width of approximately 1½ miles. Limited investigation reveals no continuous vein or veins, but a great number of individual outcrops. Mont-Eton has also found two deposits of corundum in the district. Corundum is used as an abrasive, and is the next hardest rock, or crystal to diamonds. Red crystals of corundum are rubies and the white and blue are sapphires. — *Banning Record*.

Henderson, Nevada . . .

Rhenium, a rare metal which sells at more than \$900 a pound, has been found in the flue dust of certain copper smelters, according to word received by Frank Radis, local chapter chairman of the American Chemical society. The metal is a gray to black powder, and is of great value because of its high melting point of approximately 5000 degrees, and because it has an even greater electron emission than tungsten. Rhenium has been shown to have a longer life than tungsten when used in electronic applications operating at high temperatures. A process has been discovered to recover the metal from smelter dust. — *Las Vegas Review-Journal*.

. . . .

Battle Mountain, Nevada . . .

Gold dredging was scheduled to be resumed at the Greenan placers in the Copper Canyon district by Natomas company of California. The powerful bucket-line dredge was shut down early this year for repairs after being damaged in operation. Natomas company reports the Greenan operation netted a small profit for 1950 after royalty payments and depreciation, and that the dredge recovered good values under severe operating conditions. Equipped with 120 buckets, each with a capacity of 11 cubic feet, the dredger displaces 2600 tons, is about 400 feet long and handles more than 350,000 cubic yards of material a month. It is the lone bucket-line dredge in Nevada.—*Pioche Record*.

. . . .

Las Vegas, Nevada . . .

Manganese Incorporated's two million dollar project near Henderson, in Clark county will be started soon, H. S. West, president of the New York firm, has announced. Part of the old Hanna plant, which operated unsuccessfully during World War II is to be utilized. The company also plans to operate the Three Kids mine, as well as other manganese deposits owned by the firm. It is estimated that 200 men will be on the job at the peak of construction work, and the project is expected to take eight or nine months to complete.—*Las Vegas Review-Journal*.

. . . .

Salt Lake City, Utah . . .

Utah tax commissioners recently pegged the price of iron ore at \$4.53 per net ton for property tax purposes—an increase of nearly 300 per cent over valuations set last year. Commission action was taken after a ses-

sion with representatives of Utah's iron mining industry in an attempt to reach an agreement on the value of iron ore. Company representatives offered to compromise on an assessment figure of \$3.75 per net ton—compared to a 1949 valuation of \$1.55. The commission's original assessment was nearly \$11 a ton. Patrick Healy, Jr., commission chairman, said the commission was anxious to arrive at a fair valuation, and that the \$4.53 figure adopted was as low as was felt justified.—*Salt Lake Tribune*.

. . . .

Indio, California . . .

Iron Age mine, northeast of Pinto basin, has begun operations. First shipments total 600,000 tons of high-grade iron ore. Sixteen 25-ton dump trucks are hauling the 70 per cent pure ore from the mine to the railhead at Amboy, to be transhipped to Los Angeles harbor where the ore will be sent to Japan, according to George A. McDonald, representative of the mine-owning Fero corporation, Los Angeles. Future plans include the hiring of 100 miners and other workers, and the construction of a smelter at the mine site.—*Date Palm*.

. . . .

Bishop, California . . .

Discovery of a sizable deposit of uranium ore near here was reported recently by officials of the Natural Resources Developing company of Los Gatos, California. Exact location of the site was withheld, pending tests to determine the extent of the deposit. The company has located other mineral deposits in the Bishop area, and is known to be carrying on an extensive program of exploration in the Inyo-Mono area. While this is the first deposit of commercial grade uranium ore reported in this district, local prospectors have reported finds in the high desert areas in eastern Inyo and Mono counties.—*Mining Journal*.

. . . .

Searchlight, Nevada . . .

Title has been cleared by Searchlight Consolidated Mining company for resumption of production on the Blossom high-grade gold and silver mine here, the company recently announced. The property has been virtually idle for four years due to a controversy over title which has now been settled, according to Homer C. Mills, company president. Early production from this mine is reported to have been about one million dollars in high-grade ore. In 1937 a new ore chute was discovered and until the second World War ended gold mining, it produced nearly \$750,000 in ores having an average assay value of \$110 a ton.—*Humboldt Star*.



ALLEN JUNIOR GEM CUTTER

A Complete Lapidary Shop Only \$43.50

- Ideal for apartment house dwellers.
- Polish rocks into beautiful gems.
- Anyone can learn.
- Instructions included.

Write for Catalog, 25c

ALLEN LAPIDARY EQUIPMENT COMPANY — Dept. D

3632 W. Slauson Ave., Los Angeles 43, Cal.
Phone Axminister 2-6206

AMATEUR GEM CUTTER

By LELANDE QUICK, Editor of The Lapidary Journal

As we drove away from the Oakland convention more than 50 cars were in line for the big three-day field trip planned for the visitors. It was the wind-up of a busy time and a highly successful show. The number attending was a big disappointment and surprise, for we confidently expected that between 30 and 40 thousand people would come to see the greatest collection of gem and mineral materials ever gathered under one roof. But the last report we had was that the paid attendance had passed the eight thousand mark a few hours before closing time. This gave a profit in excess of \$1,000 and \$850 to the Federation from sale of grab bags.

Note that we said "paid" attendance. Since admission was charged this was probably the first big convention at which anything like an accurate count was made. However, if more had come we don't know how the dealers could have taken care of the business, for the people who did come spent more money than at any other show in history and the dealers, who subsidize the shows, went home with a little money. It is doubtful if any dealer ever makes much more than bare expenses in these deals when it is considered that he has to close his shop and leave home for a week in order to attend.

Outside of the big borrowed displays of diamonds, colored stones and jade, the general run of the lapidary arts was not as fine as at some previous shows. If the splendid display of the non-member San Jose Lapidary society had not been there the lack would have been more noticeable. We examined the displays for new ideas and for cover material for the *Lapidary Journal* but we found only one item that filled the bill and we don't care to discuss that at this time.

However the mineral display was the finest we have ever seen, for the Northern California folks are great collectors and they have some impressive mineral collections. We augmented our own crystal collection with several fine pieces from the dealers' stocks; stocks that were the most complete we have ever examined.

Robert Roots of Denver had a case for kids that attracted our attention again and again, although at no time did we see a kid looking at it. Bob displayed many animals carved from fluorite and he had clever little stories accompanying each item. It was an outstanding display and we hope to see it offered at other shows in the future.

Harold and Nathalie Mahoney, co-chairmen of the affair, did a highly exacting task very successfully indeed—with the help of a hard working committee. And no one will ever know how much the fine work of Thomas Warren, president of the American Gem and Mineral Suppliers association, contributed to the success of the affair. The show would probably never have been held without the help of this organization. It is too bad the accumulated experience of a committee cannot be passed along but a new group takes up the task each year—a group that has to start from scratch.

It was decided to hold next year's California Federation meeting at Angels Camp, a town of 1167, in the Mother Lode country. This is a marvelous location for a trip;

but no place for a big meeting. There are 57 member societies in the Federation and if each society sends but one person to the meeting there are not 57 beds for hire in the town. When the news gets back to the societies we feel sure that the grass roots of the hobby will alter this decision.

* * *

While we were away a new group was organized in our town of Palm Desert. It adopted the name of Shadow Mountain Gem and Mineral Society, after the name of the mountain that sits friendly at our back door. George Merrill Roy was made President and as we go to press the membership has already passed the eighty mark.

Of all the communities in America this seems to be the one spot for an experimental workshop in the lapidary arts: The population is predominantly a retired one. The folks are along in years and they are in a financial position to get any equipment their whims dictate and they have plenty of room to play with it. They are in the heart of one of the greatest collecting areas in the world . . . and they live in the publishing center of the hobby. For the files and libraries of the *Desert Magazine* and *Lapidary Journal* are available to them and they can draw upon a wealth of experience and knowledge for their programs.

Plans are already afoot for a show next winter and this should be an interesting show indeed for at present no more than 10 percent of the members have ever cut a rock. A good show should be evidence of good teaching and accomplishment of a study program; a program in which President Roy is a great believer.

Plans call for two study groups. Beginners will be placed in a group called the Agateers. Here fundamentals will be taught and class work held in cutting cabs, flats and specimen pieces. When evidence is shown of accomplishment and knowledge the member will graduate to the Faceteer group in which faceting and jewelry making will be taught with a program of advanced study in crystallography. This method gets the horse before the cart in its proper position.

We envy these folks who have joined the new organization. Each new thing is a thrill to the novice and we wish we could recapture those thrills we first knew—although our enthusiasm has not dimmed very much. We just hope that this new enthusiasm does not become dulled too quickly by politics and vacation pictures instead of the supplying of gem, mineral and craft knowledge for which the group was founded. So many of these people have retired from something and now they are happy to find that they can retire to something. If they don't wish to call it a hobby (a word to which some people are allergic) let them use the best synonym for hobby. Let them call it a new interest . . . and keep it interesting. A grave responsibility rests upon the officers of this new organization to supply the thing for which these new people hope . . . a maintained interest in a new happiness. They have every incentive to become a leading group in the Second Stone Age—and we hope they do and we shall work with them to that end.

Covington DIAMOND BLADES
"Treat yourself to the best"

	Heavy-Duty Super-Chgd.	Super-Charged	Standard Charged
6"	\$ 8.60	\$ 7.60	
8"	10.95	9.95	
10"	14.50	13.35	
12"	21.20	17.65	
14"	27.95	24.45	
16"	31.20	27.70	
18"	62.50	41.25	34.40
20"	74.25	49.50	37.95
24"	88.80	62.60	48.95
30"	142.50	119.75	State Arbor
36"	215.30	179.10	Size

sales tax in California.
Allow for Postage and Insurance

Covington Ball Bearing Grinder

and shields are furnished in 4 sizes and price ranges to suit your requirements. Water and grit proof.

COVINGTON 8" TRIM SAW

and motor are compact and do not splash. Save blades and clothing with this saw.

BUILD YOUR OWN LAP

and SAVE with a COVINGTON 12" or 16" Lap Kit. We furnish everything you need. Send for free catalog.

COVINGTON Multi-Feature 16" Lap Unit Does everything for you.

COVINGTON 12" 14" or 16" Power Feed Diamond Saws

SAVE BLADES

Send for New Catalog, IT'S FREE

COVINGTON LAPIDARY SUPPLY
Redlands, California

Gems and Minerals

NEW SHADOW MOUNTAIN GEM SOCIETY HAS 80 MEMBERS

Newly-formed Shadow Mountain Gem and Mineral society, Palm Desert, California, signed up 80 members at a potluck supper June 22. The new group chose the following officers and executive board members: George Merrill Roy, Palm Desert, president; Don Butterworth, Coachella, vice-president; Susie Kieffer, Palm Desert, secretary; and Byron Phillips, Indio, treasurer. Board members are Clarence Black, Margaret Ward and Randall Henderson, Palm Desert; Omar Kerschner, Indio; Paul Wilhelm, 1000 Palms; and John Harnish, Palm Springs. Other board members will be chosen from Desert Hot Springs, Rancho Mirage and Coachella. Membership in the new society will be divided into two groups for instruction purposes. Beginners will constitute the Agateers, and advanced lapidaries will make up the Faceteers. Omar Kerschner was named field trip chairman and Lois Elder Roy is membership chairman.

ORANGE COAST GEM SHOW SCHEDULED FOR AUG. 15-19

Orange Coast Mineral and Lapidary society members are planning their 4th annual show which is scheduled to be held in conjunction with the Orange County Fair, August 15-19. Last year the show attracted much attention and aided in swelling the membership of the society. Recently the group has heard Jerry Laudermilk of Pomona college speak on "Modern Links with the Paleolithic," Mrs. Erna Clark of Redlands on "A Rockhound Abroad," and Jack Cadmon, criminologist from the Orange County Sheriff's office, speaking on the "Use of Fluorescent Light in Criminal Detection."

TACOMA SITE OF AMERICAN FEDERATION CONVENTION

American Federation of Mineralogical societies' 1951 convention has been scheduled for September 1-3 at the Masonic temple, Tacoma, Washington. There will be more than 5000 square feet of floor space for exhibits, and a like amount for the commercial displays. The Tacoma Agate club will be hosts. Northwest Federation members will hold their annual meeting in conjunction with the convention. A field trip, under the guidance of Sheldon Glover, state geologist, will circle the Olympian peninsula prior to the convention, August 29-31. The trip will extend the total activities of the meeting to six days.

Glenn Vargas was elected president of the Coachella Valley Mineral society at a recent dinner meeting at Coachella Valley Water District auditorium. Vargas has been at San Jose State college this summer doing advance research for a master's degree. Other officers elected were Hugh Proctor, vice-president; Leah Hambly, secretary; and Irving Jorstad, treasurer. Jessie Hamner, Clifton W. Carney and Jack Lizer were named to the executive committee. Plans for a series of summer picnic meetings were made.

ALBUQUERQUE CLUB MAKES ONE SPRING FIELD TRIP

Unfavorable weather this spring has limited the Albuquerque Gem and Mineral club to one field trip. Up Highway 66 to the Rio Puerco and about 10 miles off the highway some good selenite crystals with twins and penetrations were found. Some delicate hair-like specimens of selenite were also found in an old coal mine nearby. The club has had a series of interesting meetings recently at which Dr. Eglan Harrington talked on the geology of Sandia mountains and Tijeras canyon, and Charles Maxwell spoke on the precious stones of New Mexico. Lorimer Ratliff and Mrs. Lois Heister shared in giving talks on lead and zinc minerals. They presented specimens showing the different forms the same mineral may take.

NEWLY FOUND CAVERNS MAY BECOME TOURIST ATTRACTION

Newly discovered caverns, 20 miles north of Adelanto, California, may become a tourist attraction when opened to the public. Nicholas Baxter, co-owner and discoverer of the caves, told members and guests at the Victor Valley Gem and Mineral club's June 12 meeting. The caves are 100 feet below the surface at Silver Peak mountain, and extend approximately 150 feet in length, are 50 feet in width, and 50 feet high, according to Mr. Baxter.

Under the beams of a flashlight, he said, the formation of icicle-like stalactites and stalagmites become dazzling and silvery. The dozens of passageways which present many different and striking scenes of beauty have been given names, such as Silver Smith, and Cathedral Room.

Regular meetings of the recently founded St. Louis Mineral and Gem club are held on the first Friday of each month at the St. Louis University Chouteau house. A number of field trips have been scheduled, and visitors may join in, according to Ann Biffie, publicity chairman.

SEPT. 29-30 SET FOR SAN DIEGO SOCIETY SHOW

San Diego Mineral and Gem society's 14th annual show at its home in the Spanish Village, Balboa Park, is set for September 29-30. A demonstration is planned by the society's Lapidary school. For the first time in several years a display by commercial dealers in minerals, gems and equipment is scheduled, with special emphasis on San Diego county items. Exhibits in minerals and work of the lapidary arts pertaining to the three divisions of the society, mineralogy, mineral resources and lapidary are on the program.



*More Brilliant...
More Fire...
than the Diamond!*

FACETED ROUND GEMS OF SYNTHETIC TITANIA

have five times more ability than the Diamond to break light into its component colors producing a magnificent rainbow effect.

SEND FOR A FREE PRICE LIST describing

Titania Rainbow Jewelry

OTHER SERVICES OFFERED

- JEWELRY REPAIR SERVICE
- GEM STONE CUTTING
- GEM CUTTING EQUIPMENT, MATERIALS AND SUPPLIES
- JEWELRY MAKING TOOLS AND MATERIALS
- MINERAL SPECIMENS
- FLUORESCENT LAMPS, GEIGER COUNTERS
- URANIUM SAMPLES, FLUORESCENT MINERALS
- FIELD TRIP GUIDE BOOKS
- ROUGH AUSTRALIAN OPALS

GRIEGER'S

1633 EAST WALNUT STREET
PASADENA 4, CALIFORNIA
PHONE SYCAMORE 6-6423



*Here Are The Gifts
You've Been Looking For!*

Petrified Wood, Moss Agate, Chrysocolla
Turquoise, Jade and Jasper Jewelry

HAND MADE IN STERLING SILVER

Bracelets, Rings, Necklaces, Earrings
and Brooches

SPECIALLY SELECTED STONES WITH
CHOICE COLORS AND PICTURES

Write for Folder With Prices

ELLIOTT'S GEM SHOP

235 East Seaside Blvd. LONG BEACH 2, CALIF.
Across from West End of Municipal
Auditorium Grounds

Hours 10 A. M. to 9 P. M. Daily Except Monday

GEM MART

ADVERTISING RATE
8c a Word . . . Minimum \$1.00

MINERAL SETS: 24 Colorful Minerals (identified) in 1x1 compartments, \$3.00 postpaid. **PROSPECTOR'S SET** — 50 minerals (identified) in 1x1 compartments in cloth reinforced, sturdy cartons, \$5.00 postpaid. **ELLIOTT GEM SHOP**, 235 East Seaside Blvd. Long Beach 2, California.

TITANIA GEMS \$5.00 per carat for stones over 3 carats. Also mounted in 14K gold rings. All precious gems at lowest prices. Ace Lapidary Co., Box 67, Jamaica, N. Y.

ATTENTION ROCK COLLECTORS. It will pay you to visit the Ken-Dor Rock Roost. We buy, sell, or exchange mineral specimens. Visitors are always welcome. Ken-Dor Rock Roost, 419 Sutter, Modesto, California.

MINERAL SPECIMENS, slabs or material by the pound for cutting and polishing, Carborundum wheels Cerium Oxide. Mountings. Approval selection sent upon request. You are welcome. A. L. Jarvis, Route 2, Box 125, Watsonville, California, on Salinas Highway.

MINERAL SPECIMENS and cutting material of all kinds. Gold and Silver jewelry made to order. Your stones or ours. 5 lbs. good cutting material \$4.00 or \$1.00 per lb. J. L. James, Battle Mountain, Nevada.

DESERT GEM SHOP under new management. Lots of cabs, slab cutting material and minerals. Order by mail or stop two miles west of Salome. L. C. Hockett, Box 276, Salome, Arizona.

RADIOACTIVE ORE COLLECTION. Six wonderful specimens of Euxenite & Monazite, Autunite, Uranophane, Carnotite, Samaraskite and Lambertite in neat redwood chest, only \$2.00 Postpaid! Supply limited—Order now! **URANIUM PROSPECTORS**, Box 604, Stockton, California.

MING MOSS: One pound \$1.00 postpaid. Box 221, Big Bear Lake, California.

MEXICAN FIRE OPAL—A real buy, \$1.00 to \$5.00 per lb. 40 grams (mixed) approximately 25 pieces \$1.00. Coast Gems & Minerals, 11669 Ferris Road, El Monte, California.

TITANIA-RUTILE. New synthetic Gem, more brilliant than a diamond — man's newest achievement. Beautiful round, full diamond cut gems, \$5.00 per carat for stones over 3 carats; \$6.00 per carat for 1-3 carat stones; also mounted in 14 K gold rings, earrings. Write today for illustrated literature. Titania Lapidary Service, Box 9749-D, Los Angeles 5, California.

IF YOU ARE A ROCKHOUND you need the Lapidary Journal. Tells how to cut and polish rocks, gives news of all mineral-gem groups. Tells how to make jewelry, carries ads of dealers in supplies, equipment, gems, minerals from all over the world. Well illustrated, beautifully printed. Subscription \$2.00 a year —back numbers 50c. Sample Copy 25c if you have never subscribed or been sampled. **LELANDE QUICK**, Editor, Palm Desert, California.

FOR SALE: Beautiful purple Petrified Wood with Uranium, Pyrolusite, Manganite. Nice sample \$1.00. Postage. Maggie Baker, Wenden, Arizona.

BLACK ONYX blanks 25c each. Red Onyx blanks 35c each. Green Onyx blanks 35c each. Prompt service given to mail order jobs. All kinds of fine cutting, Juchem Bros., 315 W. 5th St., Los Angeles 13, California.

DIAMONDS: Save 40% —Wholesale prices, \$85 to \$2200. Loose brilliants. Resale. For price list Airmail Joachim Goldenstein, Export Dept. 6. Antwerp, Belgium.

BERYL CRYSTALS, Columbite, Tantalite, Purpurite, Andaluclite Crystals, Rose Quartz, Hell's Canyon Agates. Mac-Mich Minerals Co., Custer, So. Dakota.

FIFTY MINERAL SPECIMENS, 3/4-in. or over, boxed, identified, described, mounted. Postpaid \$4.00. Old Prospector, Box 729 Lodi, California.

THE GOOD LORD made the rocks beautiful. I love to cut and polish those rocks and find that beauty. Ken Stewart's Gem Shop. Custom cutting and polishing, Lapidary Equipment and Supplies. 37 South West Temple, 1/2 block from Temple Square, Salt Lake City, Utah.

BRING ARIZONA DESERT into your home with beautiful colored fluorescent Chalcedony paper weights. Small size 50c, large \$1.00. Satisfaction Guaranteed. Della Hubbard, Kingman, Arizona.

VANADINITE XLS, Apache Tears, specimen Chrysocola & Feather Malachite. Exchange for cut cabachons. Don Jackson, Box 1826, Globe, Arizona.

FREE CUTTING MATERIAL: to amateurs. You cut, polish and return some finished pieces. You keep the balance. Bill Henneberger, 903 Grand Ave., Grand Junction, Colorado.

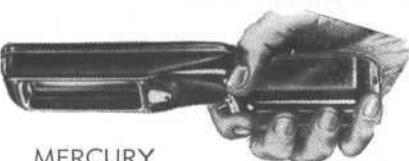
BLACK TOURMALINE CRYSTALS in matrix of red and white quartz, with mica and Lepidolite. Sizes \$2.00, \$3.00, \$5.00. Ask for list of specimens, cutting materials and fluorescent types. Jack The Rockhound, P. O. box 86, Carbondale, Colorado.

ARIZONA AGATE MINES will go under new management this fall. We will have more help, more stock, newly mined Arizona Agates in the brightest colors, faster service, expert gem cutting and finest hand made solid sterling silver mountings. (7) seven mixed slices of Arizona Agates \$5.00 post paid. Sample slices \$1.00 each. New listings should be printed by October. Arizona Agate Mines, Cave Creek, Arizona.

SPECIAL NOTICE: Because of the increasing need for more space, our main office has been moved to 2307 North Mesa Street, El Paso, Texas (Highways 80 and 85). Please visit us and inspect the finest stock of gem materials in the Southwest. Southern Gem & Mineral Co. (The Barrons) Phone 2-2160.

105 DIFFERENT MINERAL SPECIMENS—\$4.50. Carefully selected; makes a valuable aid in helping identify and classify your findings or makes a wonderful gift. Boxed & labeled. 70 different \$3.00, 35 different \$1.50. Coast Gems & Minerals 11669 Ferris Rd., El Monte, California.

6 BEAUTIFUL CRYSTALIZED SPECIMENS \$5. Ask for list of many items now in stock, cutting or fluorescent types. Jack The Rockhound, P.O. Box 86, Carbondale, Colo.



MERCURY
TUNGSTEN — URANIUM

**FIND VITAL
WAR METALS!**

with Ultra-Violet Mineralight

MINERALIGHT instantly identifies mercury, tungsten and many other valuable minerals now in demand for rearmament.

5 MINERALIGHT models for every requirement. Money-back guarantee.

FREE Send for free brochure on "Prospecting for Scheelite (tungsten) with Ultra Violet."

WRITE DEPT. 5L-21

ULTRA-VIOLET PRODUCTS, Inc.
145 Pasadena Avenue, South Pasadena, Calif.

AMONG THE ROCK HUNTERS

Joan Markwell, 12-year-old daughter of Mr. and Mrs. Alvin Markwell, gave a talk, "My Hobby—Rocks," at the May meeting of the Oklahoma Mineral and Gem society in Oklahoma City. The same discourse recently won Joan a blue ribbon at the Oklahoma county 4-H club annual contest. Plans for the June meeting included a talk by Alan Gordon on his recent trip to the diamond cutting centers of Europe.

Six trophies and 65 ribbons were presented among 200 entries of 48 exhibitors at the first annual Amateur Handcrafted Gem and Jewelry Competitive Exhibition, May 19-20, at Grand Crossing Park Field house, 76th and Ingleside. The exhibition was sponsored by the Chicago Lapidary club. More than a thousand visitors attended.

Orange Belt Mineralogical society members held the first of a series of summer picnic meetings in Perris Hill park, San Bernardino, June 3. Plans were readied for the California State Federation of Mineralogical Societies convention scheduled for June 22-23 in Oakland. The society has scheduled its fifth annual show in San Bernardino at the National Orange show's industrial building November 3-4. Thousands have attended this event in the past.

San Jacinto-Hemet Rockhounds held their June meeting at the home of Mr. and Mrs. A. Pool in Riverside, California. Plans were formulated for a San Marcus creek field trip. Members hope to find moonstones there. Len Harvey displayed rock specimens from Horse canyon and Susanville.

Aaron Otto, manufacturer of precision optics, was a recent speaker at the meeting of the Gem Cutters Guild, Los Angeles. He discussed polishing compounds and technical processes of polishing glass to an optical finish.

Scientific talks, field trips, and demonstrations of lapidary equipment were to feature the All Rockhound Pow-Wower's convention scheduled for July 4-7 at Vantage, Washington. Last year 404 attended, representing nine states and Washington, D. C.

Pasadena City college has recently named Edwin V. Van Amringe chairman of the Department of Physical Sciences at that California institution. Van Amringe founded the geology curriculum at the college 25 years ago.

Thirty-six members of the Minnesota Mineral club, St. Paul, visited Louise mine on a field trip May 19. Cedric Erickson found the prize of the day, a large geode filled with calcite and quartz crystals. Bill Gingham also had a good find of calcite crystals. The trip also included a tour of Armour mine No. 1 where the group went 600 feet underground to watch mining operations.

Members of the Riverton Geological society were slated to act as hosts at the annual Wyoming Mineral convention scheduled for June 15-17 in Riverton. Near the convention site are noted jade and moss agate fields.

FAMOUS TEXAS PLUMES
Red Plume, Pom Pom and many other types of agate. Slabs on approval. Rough agate. 8 lb. mixture postpaid, \$5.00. Price list on request.

WOODWARD RANCH
17 miles So. on Hwy 118
Box 453, Alpine, Texas

Rockhounds from nine western states were scheduled to gather in Phoenix June 8-10 for the convention of the Rocky Mountain Federation of Mineral societies. The Mineralogical society of Arizona was to be host. Exhibits of rock and mineral collections were to be on display at Phoenix college during the convention. A special exhibit was to deal with Arizona's Meteor Crater, with meteorites, silica sand, and other minerals of interest from the crater area near Winslow.

Gene Wilhelmy, field trip chairman of the Hollywood Lapidary society, reported at the group's May 10 meeting that quantities of good rainbow stones are to be found at Travertine Point. The society's next meeting was scheduled for June 14. Eldon E. Soper was to be the speaker at the June meeting.

New members are wanted by the recently founded Rocks and Minerals society of Southeastern Iowa. The organization has 32 charter members, and has established headquarters at New London. Some beautiful and unusual geodes are to be found in Iowa State Geode park near New London.

June 23 was the 20th anniversary of the founding of the Mineralogical Society of Southern California at Pasadena. The club is the pioneer earth science organization on the Pacific Coast.

Plans are being made by the Whittier Gem and Mineral society for its second annual show at the York Riding Clubhouse, one mile south of Whittier boulevard on Santa Fe Spring road. The show is scheduled for October 20-21.

Six members and a guest of the Dona Ana County Rockhound club of Las Cruces, New Mexico, found abundant supplies of ricolite and wild flowers on a May field trip to the ricolite mines in the foothills of the Mogollon mountains. Much material was found in a variety of shades from the palest gray-green to the deepest forest green. Lavender sand verbenas, California poppies, Indian paint brush, white thistle poppies, and many unidentified varieties dotted the sandy washes.

Demonstrations, displays and free literature for beginners are promised visitors to the Oregon Agate and Mineral society's Agate show scheduled July 28-30 at Oregonian Hostess house, Portland. Admission is free.

Orange Belt Mineralogical society members gathered at the Fontana Woman's club May 1 for their annual banquet. Dinner was served at gaily decorated tables and a variety program of music and dancing was presented. Arrangements for a field trip to have been made May 19-20 to Horse canyon were completed. New officers for 1951-1952 are Adolph Dosse, president; I. V. Graham, vice-president; Mrs. D. H. Clark, recording secretary; Frederick Gros, corresponding secretary; Howard Fletcher, treasurer; and A. B. Cyrog, federation director.

New officers of the Gem and Mineral society of San Mateo county were to be installed at a June 19 meeting in Burlingame, California. They are Francis Marshall, president; Walter Reinhardt, vice-president; Alice Sharp, secretary; and Dale Atwood, treasurer.

Two sound color movies were scheduled to be shown by the Standard Oil company of California at the June 8 meeting of the San Diego Mineral and Gem society. One, titled "Water—Fountain of Life," portrays the processes of evaporation and transpiration in the eternal water cycle. The other film, "Arizona—Land of Color and Contrast," displays the beauties of western topography. It was hoped that a third film showing one of Norman Nevill's trips down the Colorado River would also be available for the meeting.

Papers dealing with prospecting, map-reading, field trips, and methods of building up collections are to be prepared by members of the Evergreen Rock club of Seattle, in line with the planned preparation of a guide book by the club.

Male members of the Kern County Mineral society, Oildale, California, provided refreshments at the organization's May 14 meeting by bringing cakes. It is reported that some of the men even baked them, and part of the meeting was taken up with exchanges of recipes.

Jewelry and Design was to be the topic of a talk by Jessie Chittenden at the meeting of the Pasadena Lapidary society scheduled June 19, at the Odd Fellows hall, 175 N. Los Robles Ave.

Thirty-five persons were present at the May 24 meeting of the El Paso Rockhounds held in the Museum building at Texas Western college. A schedule for future meetings was drawn up including six dates: June 14 and 28, July 12 and 26, and August 9 and 23.

Dr. Charles N. Beard, professor of geology at Fresno State college, was the speaker at the May 24 meeting of the Fresno Gem and Mineral society. He spoke on the minerals found in the central coast mountains of California. Two films were shown, one on copper and silver jewelry making by Indians in Mexico and the other a nature study of the desert in bloom. Sixty-two of the 98 members were present for the meeting.

NEW—Sensational! GEIGER COUNTER



"The SNOOPER"
LOW PRICE ONLY **\$24.95**
COMPLETE

Find a fortune in uranium with this new, super-sensitive Geiger Counter. So small it fits in the palm of the hand or in the hip pocket, and yet more sensitive than many large, expensive instruments. Weighs only 1 1/4 lbs. Uses flashlight battery. Low price includes earphone, radio active sample, instructions. Sold with ironclad moneyback guarantee.

ORDER YOURS TODAY—Send \$5.00 with order or payment in full to save C.O.D. Write for free catalog on treasure finders for gold, silver, etc. and larger, more elaborate Geiger Counters.

Dealer Inquiries Invited **PRECISION RADIATION INSTRUMENTS**
4113 DM W. JEFFERSON, L.A. 16, CALIF.

BEFORE YOU BUY SEND FOR OUR BIG FREE CATALOG
The world-famous HILLQUIST LINE of lapidary equipment
LAPIDARY EQUIP. CO. 1545 W. 49 ST., SEATTLE 7, WASH.

FIRE OPAL MEXICO

10 Small Pieces Average 1/2"	\$1.00
5 Larger Pieces Average 3/4"—1"	1.00
12 Nice Pieces Cherry & Honey Opal	1.00
(Suitable for Cabochons)	
1 Small Vial Clear Fire Opal	1.50
1 Large Vial Clear Fire Opal	3.00
	\$7.50

Entire Lot Postpaid for \$5.00

Satisfaction Guaranteed or Money
Cheerfully Refunded

Prompt Shipment on all Sizes
Felker Diamond Saw Blades

RALPH E. MUELLER & SON

307 Admiral Blvd. • Kansas City 6, Mo.

Agate Jewelry Wholesale

Rings — Pendants — Tie Chains
Brooches — Ear Rings
Bracelets — Matched Sets
—Send stamp for price list No. 1—

Blank Mountings

Rings — Ear Wires — Tie Chains
Cuff Links — Neck Chains
Bezel — Cleveices — Shanks
Soldier — Findings
—Send stamp for price list No. 2—

O. R. JUNKINS & SON

440 N.W. Beach St.
Newport, Oregon

Minerals for the student and the class room
48 pieces, one from each state \$4.50; 50 pieces
for study \$2.50; 100 pieces for study \$5.00;
Broken pieces for tests 50c bottle.

MINERALS EXCHANGED

A. RICH

Box 11781, Wagner Station
8311 So. Western Ave., Los Angeles, 47

MINERAL SPECIMENS

Lapidary & Jeweler's Supplies
J. C. FILER & SON
1344 Hiway 99, San Bernardino, California
Midway between Redlands and
San Bernardino
Open Every Day

The CONLEY Co.
JEWELRY MOUNTINGS

ILLUSTRATED CATALOGUE AVAILABLE

The superb finish and fine craftsmanship of CONLEY'S ELKHEAD LIFETIME PATERN in 3-tone gold filled enables you to create exquisite jewelry equal to the finest professional shop. Other CONLEY mountings in Gold—Filled—Silver and Plate.

Lowest Possible Prices Consistent with Quality — Insist on Conley Quality.

AVAILABLE AT ALL BETTER DEALERS or write us
 W. 715 Riverside Ave., Spokane, Wash.

Black Spider Web Turquoise
 Domestic and Asiatic

Cut stones in all sizes

Wholesale only

MARYOTT'S
 40 Oak Street Miami, Arizona

ALTA INDUSTRIES
 Lapidary Equipment
 Manufacture and Design

16-18 inch power feed slabbing saw
 Belt sanders, including ball bearing
 Drill press
 Grinding arbor and trim saw

Send postal for free literature

ALTA INDUSTRIES
 4613 So. Central Ave. Phoenix, Arizona
 Visitors Welcome

NEW CATALOGS AVAILABLE

If you want Choice Cutting Material, Fine & Rare Minerals, Geiger Counters, Mineralights, Books, Trim Saws, Fluorescents, Ores, Gems, Ring Mounts, or advice, write to . . .

MINERALS UNLIMITED
 1724 University Ave., Berkeley 3, California

DON'T ASK US

How we do it: just be glad we are doing it. **MIXED SLABS—5c PER SQUARE INCH.** Agates, Jade, Tigereye, Lapis, Palm, Bone, Sagenite, Wood, Jasper, etc. Minimum order \$2.00 plus 20% Federal Tax.

COAST GEMS & MINERALS
 11669 Ferris Rd. El Monte, California

Construction and use of various instruments, including the gem refractometer was explained by Milton E. Gray of Gray and Erb Scientific Instruments at the May meeting of the Pacific Mineral society. Questions concerning the use of polarized light, action of prisms, and use of nickel, calcite and various types of illumination were answered by Mr. Gray. Plans for the society's next field trip to the garnet location of the Tejon ranch were discussed.

Members of the Earth Science Club of Northern Illinois were to hear a talk on the production of synthetic gems by Dr. Henry L. Cox of Corn Products Refining company at their June meeting in Downers Grove, Illinois. The next meeting of the club was scheduled for the second Friday of September.

Members of the Wasatch Gem society of Salt Lake City were anticipating an illustrated lecture on the quartz family of minerals, including opals, at a meeting scheduled for June 15.

Twenty-eight members of the Columbian Geological society enjoyed an all-day excursion to the Molybdenum mine, about 70 miles north of Spokane, May 13. The group had perfect weather for the trip.

Exhibits of gadgets and hand-made jewelry featured the May meeting of the Colorado Mineral society, Denver. Calvin Simmons displayed most of the gadgets. Among them were a slabbing saw, a sphere cutting device and a rotating disc coated with fluorescent-phosphorescent materials. Mr. Simmons also gave a talk on the minerals of the Franklin, New Jersey, area, which he visited recently while attending the Air Force Radiotronics school in Philadelphia. New officers of the society, who are to be installed at the next meeting in October, are James Hurlbut, president; Ernest E. Parshall, 1st vice-president; and Calvin B. Simmons, 2nd vice-president.

New officers of the Mineralogical Society of Arizona for 1951-1952 are E. R. Blakeley, president; and Floyd Getsinger, vice-president. George H. Steiner, C. E. Van Hook, John Houzenga, and John Weber are new members of the board of governors.

Forty-one charter members attended the first meeting of the newly organized Shoshone Rock club at Powell, Wyoming. Wayne Breitweiser will serve as first president of the club. Meetings are scheduled to be held in the local library.

GEM CONSULTANT TALKS TO SANTA MONICA GROUP

James Coote, speaking at the June meeting of the Santa Monica Gemological society, estimated 194,000 carats of gem diamonds with a value of \$13,000,000 came into the United States in February. The Los Angeles gem consultant revealed many problems of the gem appraiser, and discussed the composition and peculiarities of ornamental stones from diamond to coral. He predicted a new mineral like spinel but with double refraction from Ceylon would be announced soon, and expressed the opinion that the rapidly developing synthetic gemstone industry will not be harmful to the natural stone market.

Stories of Inca and Aztec superstitions about the use of emeralds to ward off diseases were told by Ruth Weatherbie at the May meeting of the San Diego Lapidary society. She also told of other green stones sometimes called emeralds, such as tourmaline, hiddenite, and demantoid. Colored movies of field trips to the San Geronio mountains, Mesa Grande, Ramona, Coon Hollow, and Picacho were shown by Mrs. Pegram. There were also some pictures of a fishing trip to Mexico.

Color slides of field trips and a discussion of opals by Dr. William Lanphere highlighted the May meeting of the Humboldt Gem and Mineral society. Paul MacMillan gave a report on a field trip to Cavello where jade, jasper and agate were found.

Rough and cut gems are in short supply throughout the world, according to Ernest Meier, New York gem dealer who has recently returned from a world-wide gem-buying tour.

J. F. Underwood, mineralogist, was scheduled as speaker for the June meeting of the Delvers Gem and Mineral society of Downey, California. He was to have spoken on mineral collecting in Montana.

Members and guests of the Chicago Rocks and Minerals society heard a lecture on "Thumbprints of Nature" by Dr. Robert Witfield at their last meeting. Dr. Witfield pointed out that the collecting of fossil ferns is different from other types of collecting in the paleontological fields since these are fossil imprints with all organic material gone. Through slides it was shown how these fossils of the Mazon Creek area are uncovered by immense shovels taking the overlay, then the shale down to the coal seams. It is in the shale above and below that the fossil bearing rocks are found.

BLACK LIGHT KITS

FOR ULTRA - VIOLET FLUORESCENCE

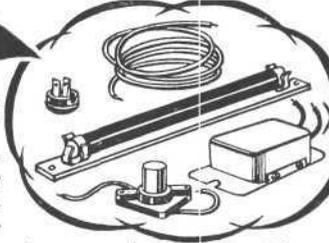
NOW . . . you can build your own black light equipment at a new low cost with these easy-to-assemble components. Geologists, mineral prospectors and hobbyists can easily make laboratory black lights for mineral identification. Signs, posters, pictures, fabrics, house numbers . . . anything painted with fluorescent paint glows with eye-appealing fluorescence under black light. Kit contains: Ultra-Violet tube, brackets, ballast, starter, wire, plug and wiring diagram.

Special!

4 Watt Kit—(5 1/4" tube)	\$3.00
8 Watt Kit—(12" tube)	\$4.00

Enclose full amount with order • Equipment shipped postpaid

C & H SALES COMPANY
 2176 EAST COLORADO STREET • PASADENA, CALIFORNIA



VACATIONING ROCKHOUNDS

If you are in or around the Los Angeles area plan to spend one Tuesday evening at the

COMPTON ROCK SHOP
 Open house every Tuesday evening from 7 P.M. to 10:30 P.M.

Lapidary equipment — Supplies
 Mountings — Silver Tools
 Specimens — Cutting material

COMPTON ROCK SHOP
 1409 S. Long Beach Blvd.
 Compton, California
 Tel. Newmark 29096

BOOKS OF THE SOUTHWEST . . .

HISTORY AND LEGEND OF THE RIO GRANDE RIVER

The Rio Grande, River of Destiny, is essentially a book of photography portraying the river, with sequences of related subjects. From the once fabulous town of Creede, Colorado, where springs and melting snow are the birthplace of the Rio Grande, Laura Gilpin, the author, takes the reader through New Mexico, Mexico and Texas to the Gulf of Mexico, where the great river of history and legend spends itself and is lost forever.

"A river seems a magic thing. A magic, moving, living part of the very earth itself—for it is from the soil, both from its depth and from its surface, that a river has its being."

Thus Laura Gilpin introduces the reader to a book filled with the poetry of delightful pictures and word descriptions.

We see not only the river but those who live beside it, unconsciously absorbing a part into their daily lives; the mountain sheriff who prided himself on never wearing a badge or carrying a gun, the prospector roaming the hills seeking with constant hope the location of a new strike, the Pueblo Indians, the dark eyed Mexicans, the men of the border patrol.

Through painted deserts and land where three civilizations meet and try to mingle, past enormous irrigation projects, past America's oldest civilization to sections modern science has turned from desert to rich agricultural development, Laura Gilpin takes us.

In following the word and picture story of the Rio Grande, one's imagination is stirred by the historical sequences; the Indians, the Conquistadores with their lust for gold, the Spanish Colonists and ourselves, taking much of the land along the river through strife and purchase.

It is a book to interest the historian as well as those who read for pleasure alone.

Published by Duell, Sloan and Pearce, Inc., New York, New York. Over 200 photographs. Maps. 243 pages. \$6.00.

Book Notes . . .

Grosset & Dunlap, publishers of New York, have announced the publication of a new edition of John Myers' *The Tombstone Story*, the original edition of which was printed some years ago by the E. P. Dutton company. The new edition is to sell at \$1.49.

Books mentioned on this page are available from Desert Crafts Shop, Palm Desert, California.

THE TAMING OF A WILD WESTERN BOOM TOWN

Tombstone, Arizona, "The Town Too Tough to Die," was one of the most fabulous of western mining camps during the last 20 years of the 19th century. Silver, discovered in 1877 by Ed Schieffelen, who ironically named his first claim Tombstone, was a lure that attracted men and women of many nationalities and various creeds. Some of them came here to escape the law in other communities.

John P. Clum, a former Tucson newspaper publisher, brought a Washington hand press into the new camp in May, 1880, and started a daily newspaper and named it the *Tombstone Epitaph*.

The *Epitaph* has survived through Tombstone's early years of phenomenal prosperity, its fires, earthquake, lawlessness, lavish prodigality in success and stubborn battle to survive when the delirious boom broke. It is still published in a town dreaming in the hot Arizona sun of some glorious future which may compare with its colorful, though lurid past.

Pulitzer Prize Winner Douglas Martin, former managing editor of the Detroit Free Press and now head of Journalism at the University of Arizona, has compiled *Tombstone's Epitaph* from the files of that newspaper, correlating them into a graphic history of Tombstone. The files covering the years 1880, 1881 and 1882 had been thought destroyed. It was during these years that Tombstone earned much of its wild reputation—when the Earps and Clantons shot out their historic feud. Douglas Martin with the true

newspaperman's tenacity finally found the missing files safe in the University of California Library at Berkeley and the library of the Arizona Pioneer Historical Society at Tucson.

For more than 70 years the *Epitaph* has reported the day by day story of Tombstone—its battle against lawlessness and disaster, its social events, its business development, the ups and downs of its mining enterprises—its hopes for the future.

Douglas Martin has written a volume, authentic, spicy and rich in detail. It is a fine contribution to the lore of the West—an excellent historical record of a roaring boom-town at the height of its glory, and of its transition to a stable American community with the hopes and problems of other western communities.

Published by the University of New Mexico Press, Albuquerque. 272 pp. \$4.50.

STORY OF THE DESERT'S NATIVE PALM TREES

Just off the press at the *Desert Magazine* publication plant in Palm Desert is a 32-page book titled *Wild Palms of the California Desert*. Written by Randall Henderson, the book contains much information regarding the native palm tree, of which the author estimates there are approximately 11,000 growing in their native desert habitats. The book also includes stories of Palm Canyon, Andreas, Eagle and Fern Canyons, material which has appeared in past issues of *Desert Magazine*. Half-tone cuts are used to illustrate the book, and there is a map showing the location of all the canyons in the Palm Springs area. 50 cents.

Arizona's Cactuses

Written in non-technical language by the director of the Desert Botanical Garden of Arizona, W. Taylor Marshall, this book describes and pictures in photos and drawings 60 members of the cactus family.

\$1.00 postpaid

California buyers add 3c tax

Flowers of the Southwest Deserts

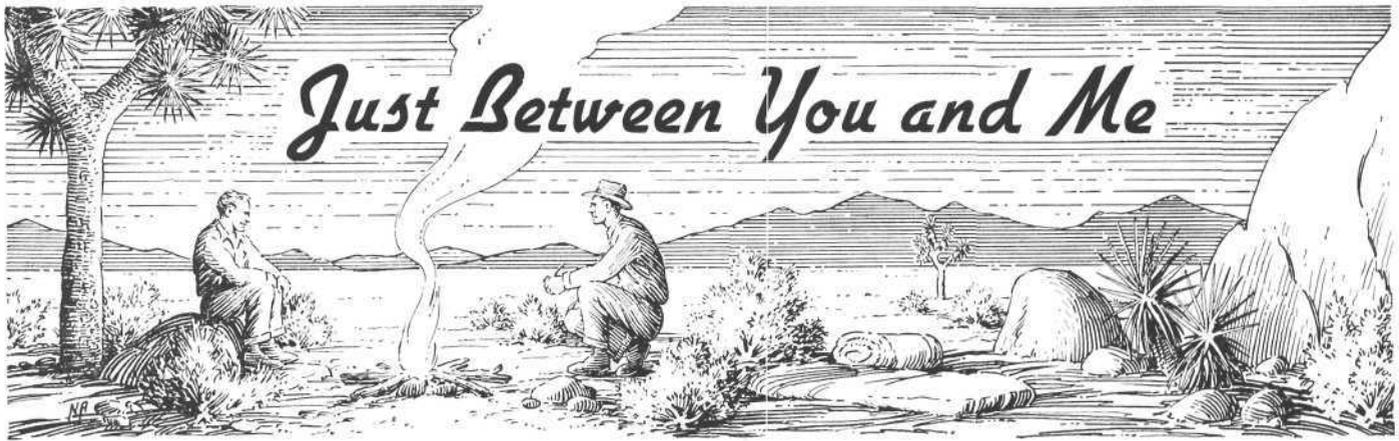
Many of the most common or spectacular desert plants are pictured in drawings and described for easy identification in this book by Natt N. Dodge for the layman with an interest in desert flowers.

\$1.00 postpaid

California buyers add 3c tax

Desert Crafts Shop

Palm Desert, California



By RANDALL HENDERSON

Salome, where she danced on the red hot sands!

Who hasn't heard of this little town on the Arizona desert? Dick Wick Hall lived there many years ago. Dick Wick died in April, 1926. But Salome is still there—just as hot as ever.

When you stop in Salome today, you'll see on the lawn beside Salome's biggest eating house a large replica of a frog—the frog about which Dick Wick wrote:

*I'm seven years old and I cannot swim
So don't blame me for looking grim
When a frog has to carry a big canteen
And water his back to keep it green
And prime himself if he wants to cry
When his belly gets burned with alkali;
Where grass grows brown instead of green,
A frog can't help but feeling mean.
I'm an old bull frog—and dang my hide
I cannot swim because I never tried.*

Salome was virtually a one-man town when Dick Wick Hall lived there. But his imagination and humor made it one of the best known little towns in Arizona. He advertised his "Laughing Gas Station" with original sign boards:

*We are here to fill your tank,
And get your money in our bank.
So stop and see us as you pass,
And fill your tank with laughing gas.*

He wrote about Salome in a little mimeographed newspaper that traveled far and wide. It was so clever the editors of *Saturday Evening Post* bought the rights to many columns of Dick Wick's humor and published them serially.

When Dick Wick died the folks who knew him made a great fuss over his passing. They erected a nice tombstone—made of the Arizona rocks he loved so well. Someone cast a fine bronze tablet with his likeness and cemented it into the monument. It is near the little cabin where he banged out his humor on an old typewriter.

When you go to Salome they'll sell you Dick Wick Hall postcards, menus, frog souvenirs. And around the town you'll see many of the quaint signs with which Dick Wick once advertised his laughing gas.

Salome is still cashing in on Dick Wick Hall!

But over on the back street where Dick Wick lived, his cabin is falling apart with disrepair. The large palm tree which he watered so carefully has been permitted to die. Broken windows and a sagging door are open to trespassers despite the faded "Keep Out" sign.

Inside the cabin is utter ruin. The floor is cluttered with yellowed *Saturday Evening Posts*—strewn with other rubble. The Laughing Gas Station over near the highway, where "we sell gasoline and ile and take your money with

a smile" totters dejectedly beyond the brilliance of the neon Standard Oil Station. The old store across the tracks, where Dick Wick bought his groceries is unoccupied and falling apart.

This is the way Salome today is honoring the memory of the man who wrote: I have lived for considerable periods in such large towns as New York, Pittsburgh, Omaha, Fort Worth, Los Angeles, and even Phoenix—and I have made considerable money at times. But I weary of it after a time and always come back to Salome, to the mind-resting quiet, the soul-satisfying peace and the vibrant mysteriousness of the desert. The average person in a big town gives up so much and gets so little out of life. What does it lead to in the end—this money-chasing, jazz-crazy, luxurious civilization the world is drifting into? I wonder—and the desert is a wonderful place to do a lot of wondering?"

Next month—in September—I presume the Salome Lions Club will be holding its annual Dick Wick Hall Barbecue and Jamboree. I have attended these programs in past year, and have listened to many eulogies of the man who brought fame to Salome.

I hope they'll hold another Dick Wick Hall Day this year. But before they invite out-of-town guests to meet with them in honoring the memory of Dick Wick Hall, I hope they'll spend much time and whatever funds are needed to restore the little cabin and the Laughing Gas Station—so that these may be preserved as a fitting monument to the memory of a man who was a great teacher because he mixed humor with his philosophy of sane living. I hope the tribute to Dick Wick Hall this year will be something more than meaningless words.

A scientist suggests that great areas of the desert may be converted to productive use without additional water supply by finding useful purposes for many of the plants and shrubs native to this arid region.

Maybe they will—but not while you and I are still living. And if you wonder why I am so certain of this I will remind you of the fortune spent by Uncle Sam during World War II in an effort to produce rubber from the desert's guayule plant.

The experiments failed because most of the desert's perennials are shrubs of slow growth. And when their growth is artificially stimulated by irrigation the extra water creates a different kind of fibre—a different chemical structure.

Man's inventiveness has changed the character of the landscape in many directions. But when he tampers with the processes of Nature—that is something else. Miracles may be accomplished by using Nature's laws—but those laws cannot be altered except by processes which are still beyond the ken of human beings.

THE **Desert** MAGAZINE
CLOSE-UPS

It is not often that the editor of one magazine contributes to the pages of another, and yet that happened this month when George Fitzpatrick, editor for many years of *New Mexico Magazine*, wrote for *Desert* the feature titled "Wanted—a Desert Thermometer."

George Fitzpatrick resides in Santa Fe and his editorial offices are in the New Mexico State Capitol building.

New Mexico Magazine is published at Santa Fe, and for 16 years has presented in text and excellent photographs a graphic cross-section of the diverse cultural and commercial activities of one of America's most fascinating states.

George not only edits the magazine, but he finds time to do considerable writing about New Mexico subjects. He is the editor of *This Is New Mexico*, a 328-page book which includes contributions by some of the best known western writers of the past and present, including Ernie Pyle, J. Frank Dobie and Stanley Vestal. He also edited *New Mexico Home Plan Book*, *Poems of New Mexico*, and *Pictorial New Mexico*.

He came to New Mexico for his health 25 years ago and for the next nine years was a reporter and feature writer for the Albuquerque Tribune. In his spare time he has contributed to such periodicals as *Whiz Bang*, *Master Detective* and *Rotary Magazine*.

He was 20 when he sold his first magazine story, and was so proud he carried the check around in his pocket so long it bounced when he finally cashed it.

Much of the information in this month's story about Old Fort Bowie in southern Arizona, came from Oscar G. Layton, who carried mail to the old fort in the years 1886 to 1888, and who retains a vivid memory of that period. Layton gave the information to Fenton Taylor who already had done considerable research on the subject—and the manuscript, "So They Built Fort Bowie . . ." is the result.

Taylor is a school teacher at Thatcher, Arizona, who does free lance writing as a hobby. He also has other hobbies, for he is president of the Gila Valley Gem and Mineral society and has taken up both the lapidary and the silversmithing crafts.

The Taylors have two daughters and two sons, and the visit to the old fort

described in Fenton's story, was a great adventure for the youngsters.

In school Taylor teaches English, dramatics and journalism.

New member of *Desert's* editorial staff this month is Alan Salisbury, who was graduated from the U.S.C. school of journalism in June. Alan was a tank combat officer in World War II, and took advantage of the GI training opportunity to enroll for university training as a journalist. Mrs. Salisbury is a registered nurse, and they recently have established their home at Palm Desert.

Evalyn Gist, until recently a member of *Desert's* editorial staff, lately has devoted her time entirely to free lance journalism. Mrs. Gist and her husband, Marion, have completed a guide book of motor tours in the Coachella Valley area of California. The book is being printed on the *Desert Magazine's* presses and will be ready for distribution early in the fall.

COVER CONTEST WINNERS . . .

Winner of first place in *Desert Magazine's* annual photographic cover contest in June was Mel Lewis of Salt Lake City. The first prize photograph, taken with a 2 1/4 x 2 1/4 Rolleiflex camera, was a vivid portrayal titled "Tragedy in the Dunes"—a broken wagon wheel and the skull of an ox partly buried in the sand.

Second place winner was Nicholas Kozloff of San Bernardino, California. His photograph, taken with a 4x6 Graphic View camera in Death Valley, was titled "Badwater Sunset."

The *Desert Magazine* staff wishes to express its appreciation to the many photographers who entered pictures in this contest. The regular Picture-of-the-Month contest conducted by *Desert* will be resumed, the announcement of the next awards appearing on another page of this issue.

The prize-winning cover pictures will appear on future issues of *Desert Magazine*.

BRADLEY-REHRIG has **ON HAND**
HIGH QUALITY AT REASONABLE PRICES

FRESH WATER RODS
FIBER-GLASS
FROM \$5.95 UP

PREMIUM FIBER-GLASS DEEP SEA RODS
25" HARD WOOD BUTT - 5 STAINLESS STEEL GUIDES - FROM \$14.95
9' 10 1/2" \$19.95

FULL LINE OF UMBRELLA TENTS \$34.95 UP

GARDEN UMBRELLAS \$16.95 UP

UMBRELLA TABLE
42" STEEL TOP
SOLID STEEL LEGS
\$19.95

WEST'S LARGEST IN CAMPING SALES - RENTALS (Per Week)
9'x11' TENT 7.50
SLEEP BAG 2.00
35" x 72" AIR MATTRESS 2.00
2 BURNER STOVE 2.00
SINGLE MANTLE LANTERN 1.00
ICE BOX 1.00
COT 0.75
NO DEPOSIT REQUIRED.
25% LESS AFTER FIRST WK.

REYNOLD'S 12pc. KIT 19.95

MODEL 60C
100 yd.
\$11.00
CHROME PLATED BRASS

AGM LANTERN \$8.95

2 BURNER STOVE \$11.95

JUMP BOOT \$11.95
ACCEPTABLE FOR BOY SCOUTS

DIRECTOR'S CHAIR \$6.95

SLEEPING BAGS
AIR MATTRESS
HUMIDIFIED CANVAS
25" x 72" \$13.95

36" x 80" 3/4 IN NET WOOL FILLING, GROSS WT 7 1/2 LB IN TUBULAR QUILTED FINE COUNT EGYPTIAN CLOTH INNER LINER COMPLETE ZIP WITH ARMY GUY COVER \$17.95

QUALITY CUTLERY
HUNTING KNIVES

GARDEN SWINGS \$39.95 UP
FULL LINE OF GARDEN FURNITURE

RAYON SPORT SHIRTS \$2.98

HEAVY DUTY LEATHER GLOVES \$1.59

BRADLEY-REHRIG
PASADENA 99 E. COLORADO Phone SY 3-8137
SAN BERNARDINO 447 THIRD
SANTA ANA 406 W. FOURTH
FRESNO RIVERSIDE 1115 VAN NESS 4023 MAIN
MAIL ORDER - ADD 3 1/2% SALES TAX. ALL MOSE. GUARANTEED

WHY TRITON GIVES YOU
GREATER ENGINE PROTECTION!

"MY BUSINESS IS GETTING TOP PERFORMANCE FROM ENGINES,"

SAYS

CLAY SMITH



WHO RECEIVED THE **SPEED AGE ACHIEVEMENT AWARD** OF "MECHANIC OF THE YEAR" AS THE COUNTRY'S OUTSTANDING AUTO RACING MECHANIC.

"I RECOMMEND TRITON MOTOR OIL AND USE IT IN MY CAR BECAUSE IT GIVES EXTRA PROTECTION, AND THAT MEANS BETTER ENGINE PERFORMANCE."



HOW DO I KNOW TRITON WILL
HOLD UP SO LONG?

TRITON IS THE RESULT OF INTENSIVE RESEARCH TO FIND A LONGER-LASTING OIL. A PURE, RICH 100% PARAFFIN-BASE STOCK GIVES TRITON ITS STRENGTH. SPECIAL, PATENTED COMPOUNDS RETARD ACIDITY, SLUDGING AND CORROSION AND CLEAN YOUR ENGINE AS YOU DRIVE! THIS COMBINATION PRODUCES AN OIL SO HIGH IN QUALITY IT WILL LUBRICATE FOR MONTHS!

HOW DOES TRITON
PROTECT AGAINST ACIDS?

TRITON MOTOR OIL CONTAINS A SPECIAL COMPOUND THAT RESISTS ACID FORMATION SO COMPLETELY THAT TRITON WILL ACTUALLY SHOW A LOWER ACIDITY AFTER MONTHS OF DRIVING THAN NON-COMPOUNDED OILS WILL IN ONLY 1,000 MILES!

UNION OIL COMPANY
 OF CALIFORNIA



Notice: Triton is now sold by many independent dealers and garages as well as regular Union Oil stations. If your particular dealer doesn't carry Triton, ask him to stock it for you.

WHAT IF YOU DRIVE
MORE THAN AVERAGE?

TESTS PROVE THAT EVEN IF YOU DRIVE TWICE AS FAR AS THE AVERAGE MOTORIST, YOU WILL STILL GET COMPLETE ENGINE PROTECTION FOR MONTHS WITH TRITON!

