

THE

Desert

M A G A Z I N E

OCTOBER, 1949

35 CENTS

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DESERT CALENDAR

- Sept. 18-Oct. 15—First state-wide Crafts show, State Art museum, Santa Fe, New Mexico.
- Sept. 30-Oct. 1, 2—Pioneer Days celebration, Banning, California.
- Oct. 1-2—New Mexico State fair, Albuquerque.
- Oct. 2—State chambers of commerce trek to Bill Williams mountain, starting at Williams, Arizona.
- Oct. 4—Day of San Francisco. Annual trek of the Papago Indians from Arizona into Magdalena, Sonora, Mexico.
- Oct. 4—Annual fiesta and dance, Nambe pueblo, New Mexico.
- Oct. 4—Ranchos de Taos Fiesta, San Francisco Day processional, Taos, New Mexico.
- Oct. 4-5—Nevada State Pharmacists convention, Las Vegas.
- Oct. 5-8—Eastern New Mexico State fair, Roswell.
- Oct. 6-8—Navajo Indian fair, Navajo exhibits and rodeo, Indian dances each evening, Shiprock, New Mexico.
- Oct. 7-10—Salton Sea Regatta power boat races, at Desert Beach, California.
- Oct. 8-9—Centennial '49er celebration, frontier parade, Chandler ranch, Desert Hot Springs, California.
- Oct. 9-15—Las Cruces Centennial fete, Las Cruces, New Mexico.
- Oct. 14—Greenlee County fair, Duncan, Arizona.
- Oct. 14-15—National Highway 66 convention, Albuquerque, N. M.
- Oct. 14-16—Mojave Gold Rush days, rodeo, free barbecue, Mojave, California.
- Oct. 20-22—New Mexico School of Mines '49er Centennial celebration, Lordsburg.
- Oct. 20-23—Graham County fair, Safford, Arizona.
- Oct. 21-23—Tombstone Helldorado, in "the town too tough to die." Tombstone, Arizona.
- Oct. 21-23—Dig 'n Dogie Days; rodeo, mining events and county fair, Kingman, Arizona.
- Oct. 21-23—Papago Indian rodeo, Sells, Arizona.
- Oct. 22-23—Twelfth annual Pioneer Days celebration; parade October 22 at 1:00 p.m. Twentynine Palms, California.
- Oct. 26—Annual Rose Garden show, Valley Garden center, Phoenix, Arizona.
- Oct. 26-30—Pima County fair, Tucson, Arizona.
- Oct. 31—Mardi Gras, Barstow, California.



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Pictures of the Month

Navajo Old Woman

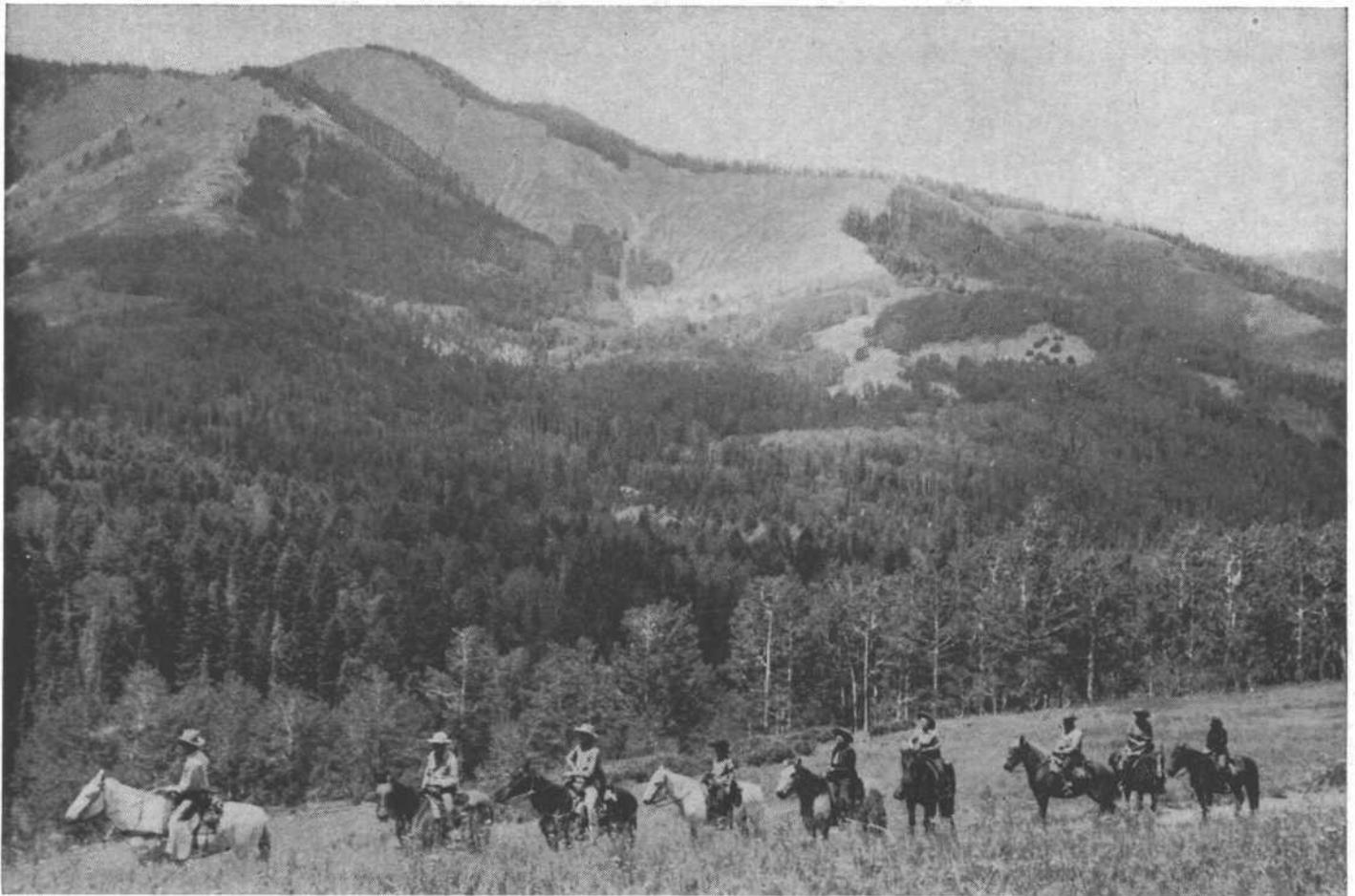
This intriguing study by Harry D. Gill, San Bernardino, California, won for him first prize in Desert Magazine's August photo contest. It was taken in Monument Valley in late afternoon with a 4x5 revolving back Graflex. Lens was an 8½-inch f/4.5 Goerz Dogmar, Isopan sheet film was used. Shutter set for 1/60 second at f.11.



Old Well

Second prize in Desert's August contest goes to Bill Stoughton, Pasadena, California, for this photo taken in the desert ghost town of Ballarat. Taken in December with a 4x5 Speed Graphic on Kodak Super XX, dark yellow G filter; 1/10 second at f.16.





The trail at this point led across a mountain meadow with the Abajo or Blue mountains in the background.

19 Days on Utah Trails . . .

Some of the trails we followed were first trod by cliff-dwelling aborigines hundreds of years ago. Most of them had been blazed more recently by cowboys and the rangers of the U.S. Forestry service. Some of them were so dim I wondered how Ross Musselman, our guide, was able to find his way. Others were deeply rutted by the tread of thousands of head of cattle. Some were so steep and rocky we had to dismount and lead our horses. At other times they led through lovely vistas of quaking aspen and spruce, with Mariposa tulip and Indian paint brush peering at us from the leafy undergrowth that bordered the trail. For 19 days we followed these trails with an ever-changing panorama of red and tan and white sandstone buttes and domes and palisades in the background. We rode 353 miles — and never went beyond the boundaries of San Juan county in the southeastern corner of Utah.

By RANDALL HENDERSON

7HIS WAS the Utah desert wilderness — one of the most spectacular and least known regions in the United States. San Juan county has an area of roughly 3,800 square miles — more than the combined states of Delaware and Rhode Island — and yet its white population is less than 3000 persons, which probably is fewer persons than dwelt here at the peak of

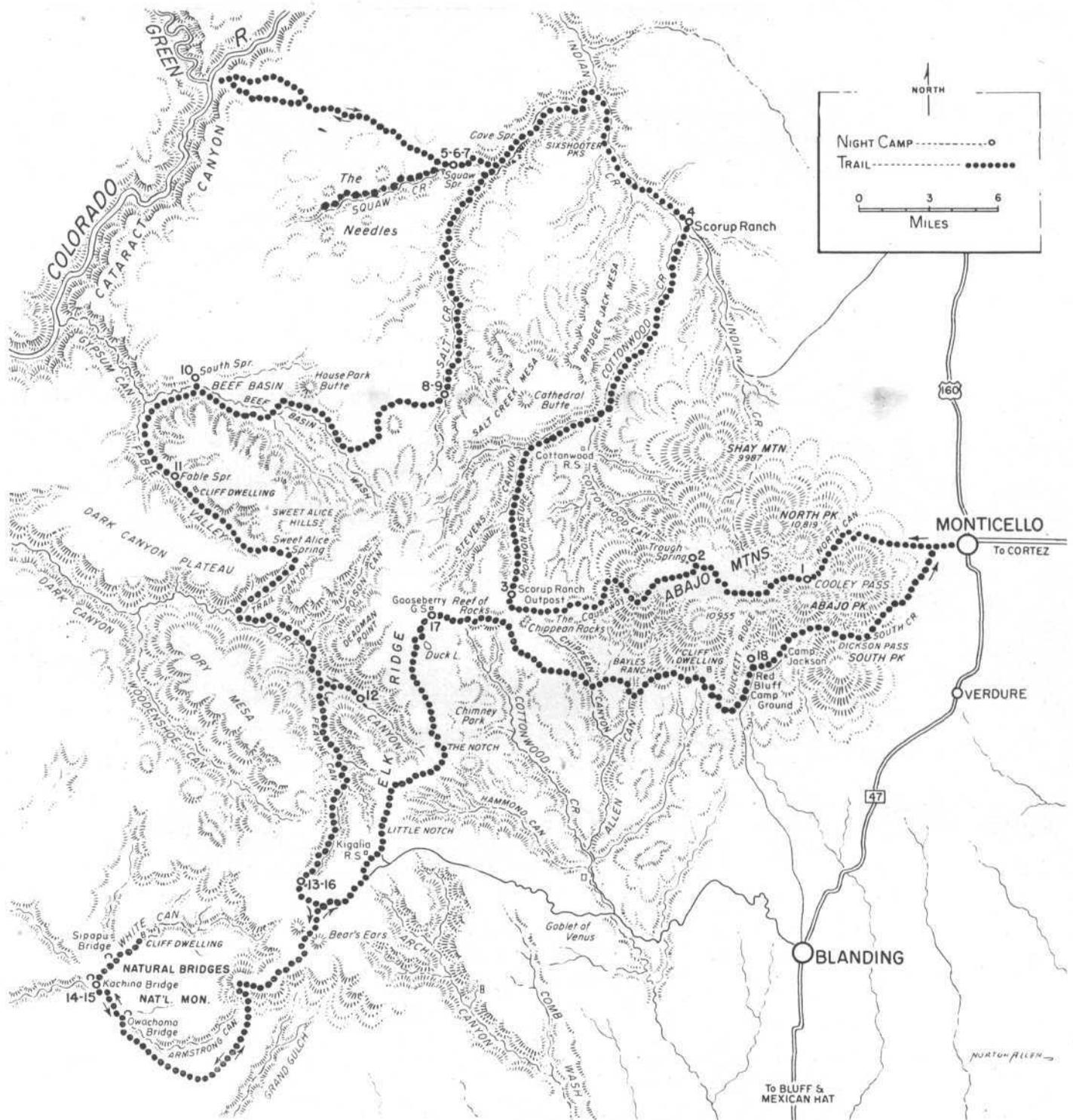
the cliff-dwelling culture a thousand years ago. There is no chamber of commerce in the county — which no doubt is one of the reasons Americans know so little about this colorful land.

From his guest ranch eight miles out of Monticello, Ross S. Musselman has been conducting pack trips into the San Juan country for 20 years. He probably knows the trails even better

than the cowboys who run cattle in parts of the county.

Ross invited me to accompany his 1949 expedition — and I was glad to accept, even though I realized the long hours in the saddle would involve some discomfort the first few days. I have long looked forward to an opportunity to get acquainted with this mysterious land of a thousand miniature Grand Canyons.

Nine of us arrived at Musselman's Four M ranch in mid-July, and met the four men who were to manage the pack train. In addition to Musselman, our crew included Val Leavitt, student from the Utah State Agricultural college at Logan, and Don Thomas, wrangler for the ranch, as packers, and Marvin Rogers, 16-year-old student of Berkeley, California, who was spending his summer vacation as a guest-employee at the ranch. Marvin's job technically is known as camp flunkey. But Marvin was no ordinary



Showing the route of the 19-day trek. The numbers along the heavy dotted line indicate the consecutive night camps—18 of them.

flunkey. He is an Eagle Scout who in the days ahead endeared himself to every member of the party by his indefatigable work and good humor.

Guest members of the party were: Scott and Edyth Carpenter of Nutley, New Jersey; Clarence (Pete) and Faune Spang of Butler, Pennsylvania; Elsie Flexon of Pittman, New Jersey; Leonard Martinson of San Francisco; Nancy Flack, 13-year-old of Pasadena, California; Gary Justice, 11-year-old

of Berkeley, California, and *Desert Magazine's* reporter.

Before he came to Utah 20 years ago, Ross Musselman was secretary in charge of boys' camps for the Woodbury, New Jersey, Y.M.C.A., and his guests nearly always include boys and girls of school age who spend their summer vacations riding and camping with the Musselman expeditions.

We started with eight pack animals—seven horses and Kewpie, a little

mule not much bigger than a burro, but the best pack animal of the train. Kewpie was the clown of the outfit.

Here is the day-by-day record of our 353-mile ride along the remote trails of Utah's sandstone wilderness:

First Day

All morning we loitered around the Four M corral, getting stirrups adjusted, saddlebags arranged, packs on the animals, and last-minute details completed. Some of the pack horses had



Cyclone valley, a former river channel now abandoned. The floor was covered with a new growth of tumble weeds. Typical spires and palisades of the San Juan country in the background.



Trail near the head of Indian creek where the Abajo mountain slopes were covered alternately with spruce, quaking aspens and talus slopes of broken granite. There was snow in many of the ravines.

been on pasture for months and obviously did not fancy the idea of going to work again. But the saddle horses were veterans of the trail and Ross provided each rider with a well-broken mount.

We rode away at one p.m. and 2½ hours later stopped briefly in Monticello for last-minute purchases. Leaving the town we followed the well-graded road which leads over Abajo mountains to Blanding. Locally the Abajos are called the Blue mountains. This group of peaks is an island-like range rising to 11,357 feet from the 7,000-foot plateau on which Monticello and Blanding have been built. For the most part the range is timbered with aspen and spruce, but its slopes are checkered with great splotches of granite talus where nothing will grow.

We jogged along a lane bordered with dense thickets of Gambel oak, sometimes called Rocky Mountain white oak. The flowering season was at its best, and the dense underbrush was colorful with Mariposa tulip or Se-go lily, the state flower of Utah, Canterbury bells, paint brush and wild rose.

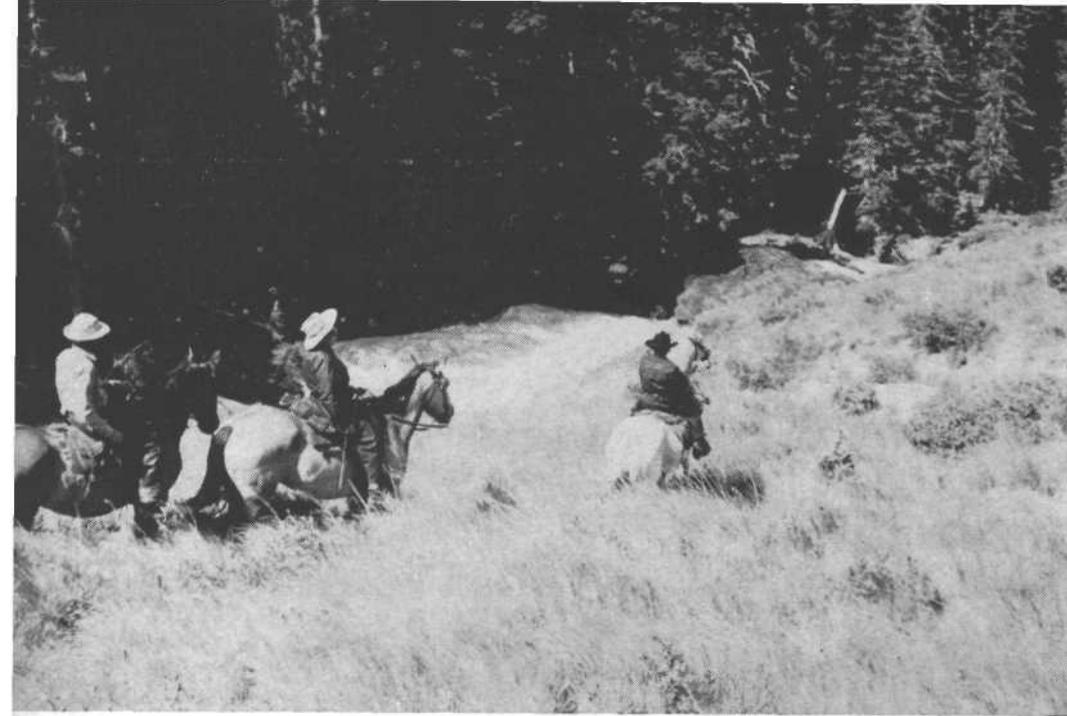
As we climbed the oak gave way to aspen and spruce, and wild iris and columbine were added to the flower display. The trail led into North creek canyon where a tumbling stream pours down from melting snowbanks above.

Just before dusk we reached the summit of Cooley Pass where at an elevation of 10,600 feet we were to camp for the night. Nancy Musselman, 20-year-old daughter of our Chief, had driven up ahead of us in a jeep

pickup, and had a big fire going when we arrived. We carried water in buckets from the trickle below a nearby bank of snow. It was chilly at that altitude even in July, but most of the snow had melted when we recrossed the Abajos on our return trip nearly three weeks later.

We were in the La Sal forest reserve and the timbered areas on the range have been well protected. From our mountain camp we could look down on the checkerboard plateau where Utah ranchers grow beans and wheat on land that until recent years supported only sage brush. The annual rainfall in San Juan county varies from eight to 18 inches. Rain has been plentiful this year and big yields of wheat were being harvested.

One of the extra pack animals, car-



The mountain meadows were knee deep with grass—the result of heavy rains during the past season.

rying no pack, took off into the oak thickets this afternoon and finally got away from the pursuing wranglers, so our train was reduced to seven burden-carriers. But that was ample. Musselman figures one pack horse for each two riders. The biggest item in the pack load was oats, three quarts a day for each animal.

We spread our sleeping bags on a spongy mattress of leaves and twigs. Some of us had air mattresses, and later we were glad we brought them, but tonight the bed of leaves needed no extra padding for comfort. Our bedtime lullaby was the gentle swish of wind blowing through the spruce boughs.

Today we traveled 18 miles.

Second Day

The horses had scattered through the timber during the night and it was ten o'clock in the morning before we

were packed and ready for the trail. At this camp we left the dirt road and took a steep trail down the side of the mountain to the headwaters of Indian creek.

Again our path led through dense forests of quaking aspen. Mountain people call these trees "quakies." The aspen is a clannish tree. The tall slender white-barked trunks grow so close together a rider has to be on the alert constantly to avoid bruised legs.

We crossed and recrossed the creek many times. Trickle of snow water feeding in from the side ravines soon built it up to a sizable stream and we passed a party of men pulling trout from its waters.

Then we climbed out of the canyon and followed a good trail that contoured the mountain at about 10,000 feet. We had departed from our morning camp ahead of the pack animals,

and at noon we stopped in a sheltered cove beside a great snowbank to wait for them. A sudden rain squall sent us scurrying for cover under the spruce trees, but the sun soon reappeared.

Later we passed an Indian metate lying on the trail. In the days that followed we saw many of them—but we left them where they lay. One cannot collect Indian artifacts of such weight on a pack trip. Once Ross got off his horse and picked up a well-shaped mano—and I have that as a souvenir of the trip.

Late in the afternoon we reached a little meadow along Trough creek, a tributary of the great Cottonwood canyon system. There was a fine spring here, and water troughs for the cattle which run this range. The cowmen have improvised a type of trough worth mentioning. They hollow out huge logs, like dugout canoes, and then string them out end to end along the gentle slope so that each log overlaps the one next below, and overflows into it. Thus a string of a half dozen log troughs fed by gravity is always full, and will serve a large herd of stock.

We were in a little clearing sheltered by aspen, oak and Ponderosa pine, with a great white cliff wall towering on one side. Ross was chief cook, but all of us assisted with the camp chores—bringing in wood, carrying water, peeling potatoes. At most of the camps dry wood was plentiful, but there were times when springs had to be cleaned or dipping basins excavated to get clear water. Pete Spang assumed the role of water engineer and usually improvised easy access to the camp waterhole.

For cooking purposes, Ross followed the traditional practice of the range, where wood is plentiful. The method is to pile the fire high with wood, and then when it is reduced to hot embers, rake out little beds of them for the coffee pot, the skillet, and the stew pans. Thus the cooking is done around the fringes of the main fire, with each vessel on its own bed of coals.

Yes, it smokes up the kitchen ware—but it serves well. And I am sure it is easier on the pack animals and packers. I can imagine some of the remarks a wrangler would make each morning if he had to throw a squaw hitch over a portable camp stove.

With the fire going and the comisary unpacked, each of us turned to the important task of selecting a smooth place for the bedroll. At Trough springs camp we had to choose between wet sand along the creek, or a dry steep hillside. Each of us solved the problem in his own way—and if we made a bad decision we knew it

Gary Justice, youngest member of the party, with Kewpie, the clown of the expedition.



before morning, and probably will not make the mistake again as long as we live and camp out.

For dinner tonight we had mulligan, made from fresh vegetables and canned meat, with canned plums, bread and jam, and coffee. We started with several loaves of fresh bread.

Today we rode 16 miles.

Third Day

We were up at 5:30 this morning. One of the animals went on a rampage just as Don and Val were throwing the hitch over its pack. The horse raced off through the aspens scattering pots and bedrolls as it went. Then a hard rain came and we had to seek shelter for a half hour under the oak trees.

It was 12 o'clock before we left camp. The trail led up out of the creek bottom to the top of a ridge where we had a glorious view of the country we were to traverse during the next few days. In the distance were the pinnacles of Monument valley. We were looking down on the Four Corners country, and could see the faint outlines of Shiprock in northwestern New Mexico.

Immediately below us was a series of white sandstone "cockscombs" towering above a forest of Ponderosa pine. This formation is called the Causeway, and is a spectacular landmark for this part of San Juan county.

Every hour or two the Chief would stop for a 30-minute rest. During the first few days of the ride these "stretch" periods were most welcome to those of us who had done little riding in recent years.

During the afternoon the trail led across a lovely mountain meadow fringed with pines. Among the trees ferns were growing as high as the horses' backs. Then the forest changed to aspens, with more ferns. Toward evening the trail led down into a broad valley of pasture lands. We saw a deer on the opposite hillside. The valley is called Mormon Pasture.

Our camp that night was near an old log house, where a generous flow of spring water was piped out to a corral. This cattle camp is said to have been established in the nineties by Mormon ranchers, but more recently has been acquired by the Al Scrup cattle interests.

Bordering the valley are great bluffs of red sandstone, with pinyon and juniper growing on the ledges and wherever they can obtain a root-hold. At an altitude of 7,000 feet, the night was cool and there was ample space for the bedrolls out in the pasture.

Around the edge of the pasture were wild gooseberry bushes laden with ripe fruit. No doubt Ross Musselman could make good gooseberry pies—but not with the equipment we had in this pack train.



Ross Musselman, who has been riding the Utah trails for 20 years.

Scrup's cowboys use this camp occasionally. A jeep was standing beside the log cabin. Cattlemen are using these cars more and more. They are useful for hauling supplies in the open country. But they do not take the place of the cowboy's pony when it comes to rounding up cattle in broken terrain and timber.

Today we rode 14 miles.

Fourth Day

There was dew on our bedrolls when we awakened at five o'clock this morning, but the desert sun soon dispersed the moisture. For breakfast we had creamed chipped beef with the last of the fresh bread.

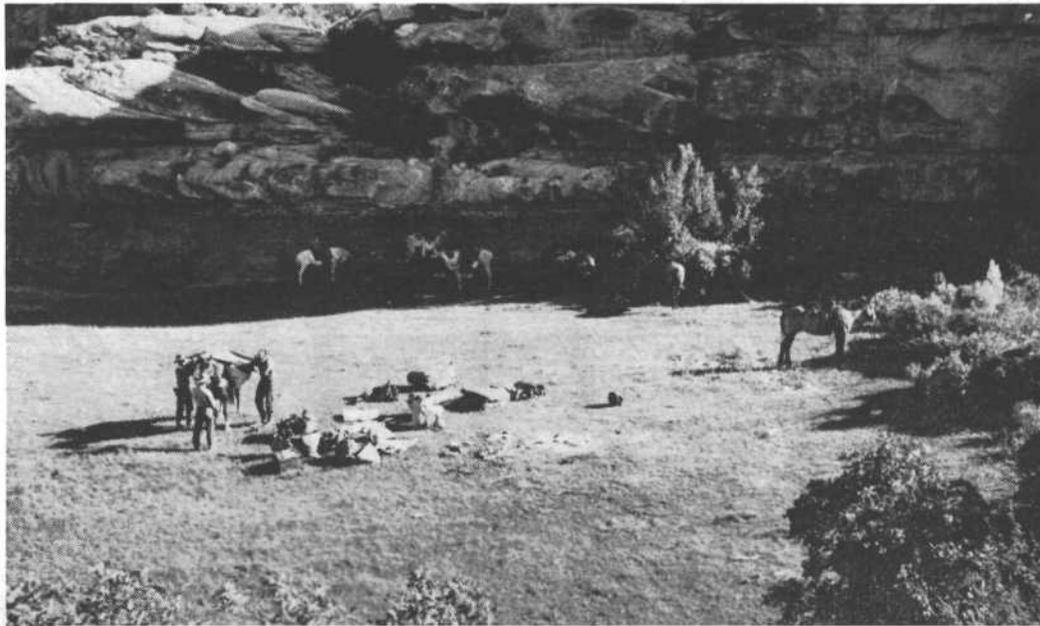
Then we rode along the creek in Mormon Pasture through endless fields of sage, sprinkled here and there with purple lupine. I am sure that lupine is the most widespread flowering plant in the Southwest, with Indian paint brush in second place. Lupine's

range is from sea level to 10,000-foot altitude.

As we rode down the valley, turreted walls of red and white sandstone gradually closed in, and an occasional Ponderosa towered above the forest of pinyon and juniper that covered the floor of the canyon. We followed the creek to its junction with Stevens canyon, and then down Stevens to Cottonwood canyon. Just below the junction with Cottonwood we stopped in the shade of a grove of cottonwood trees, and while some of the riders bathed in the creek others climbed a nearby butte where the slopes were covered with broken Indian pottery and obsidian chips. Many artifacts have been taken from the old pueblo ruins at the top of the summit, Ross told us.

Soon after we had resumed our ride down Cottonwood creek we passed huge blocks of sandstone in which were lodged sections of petrified tree trunks.

There were Indian petroglyphs on the walls near this camp on the grassy floor of a canyon.



Hard Rock Shorty of Death Valley



Hard Rock Shorty tipped his chair back to its most comfortable angle on the porch of the Inferno store, and allowed he might go up to the claim on Eight Ball crick and see how Pisgah Bill was getting along.

"Where does this Pisgah Bill stay all the time?" asked one of the bystanders. "We've never seen him. I don't believe there is such a person."

"Well now," answered Shorty, "Bill is still a lively ol' cuss despite his 70-odd years, but you may never see him fer he's very shy. But he wasn't always that way."

"Bill's been a changed man ever since he made that trip out to the city in the 'twenties. That trip really did somethin' to Bill."

"Yuh see when he arrived there the streets wuz full o' strange lookin' fellers wearin' yella britches an' little red monkey hats on their heads. Bill couldn't figger it out—decided maybe he had gotten into a furrin country by mistake. Finally walked up to one o' them funny lookin' clowns and asked him if he could talk English. The feller said a few o' them could, and what did he want?"

"I want to git back to the U.S.A." hollered Bill.

"Whereabouts in the U.S.A.?" the feller wanted to know.

"Death Valley, out in Californy. That's where my claim is, and I wanta go back there right now!" exclaimed Pisgah.

"Come along with me, an we'll have some fun," the feller said.

"So Pisgah jined the crowd, an' they played jokes on him, an' everybody laffed, an' they took him in a parade—an' finally Ol' Bill got it through his head these folks wasn't furriners—they was Shriners having a convention.

An' Bill was so ashamed of hisself fer bein' so dumb, he come back home and vowed he never wanted to see a dude again."

Today I got my first glimpse of a western collared lizard—and as far as I am concerned it is the prettiest member of the whole lizard family. Perhaps 10 inches long, of which more than half was tail, the striking characteristic of this lizard is its coloring. The head was orange. Then two black bands circled the neck, and the body was a brilliant green, tapering off to a slate-colored tail. In the days ahead I saw many of these brilliant-hued reptiles. Not all of them were as brightly colored as this first one, but I always stopped to watch them until they disappeared in the rocks.

At 6:30 we reached our night camp at the junction of Cottonwood and Indian creeks. Al Scorup's ranch headquarters in Indian creek canyon was just across the stream, and several hundred acres of cultivated fields are watered from the creek. We had been riding all day on the Scorup cattle domain. (*Desert Magazine*, Oct. '40). Al Scorup came into the San Juan country in 1891 as a youth of 19 with a few dollars in his pocket and grub on his pack horse. From that lowly start he has built a cattle empire that covers more than a million acres.

Nancy Musselman met us again with the jeep at this camp, bringing supplies that must last for the next nine days, for tomorrow our trail would lead into a wilderness where roads are unknown.

It had been a hard day's ride under a scorching sun, but we found a deep waterhole in Indian creek just below camp and the cool water dispelled all fatigue.

We were 10 hours on the trail today and rode 26 miles.

Fifth Day

We were up at 5:45 and had breakfast at seven. Then Ross and I crossed the creek to pay our respects to Al Scorup, on whose land we were camping. Although in his late seventies, he was saddling his horse for a morning ride. He is still a very active cattleman, and his intimate knowledge of the San Juan range enables him to direct its operation without spending 16 or 18 hours a day in the saddle as he did for many years.

We left camp at ten o'clock and for 11 miles followed a winding course down Indian creek. The spires of the twin Sixshooter peaks were conspicuous landmarks on our left as we rode down the valley. We stopped along the way to examine some petroglyphs on the rocks. This canyon, farther upstream, has some of the finest glyphs found in the Southwest. (*Desert Magazine*, Nov. '46).

We passed the mouth of tributary Lavender canyon, and then climbed a slick rock trail to Salt Creek mesa where we had a gorgeous view of what

is called The Needles country, a flaming labyrinth of domes, spires, castles, towers, pinnacles and monoliths that has never been made a National Park because it is so inaccessible. Against the towering cliffs the pinyon trees looked like dwarfed shrubs.

Then we dropped down into a meadow that led to Salt creek. The usual sage which blankets much of southeastern Utah was missing here and in its place was a great pasture of tumbleweeds. When tumbleweed is green the horses will eat it if there is nothing better. But portions of the flower structure dry into a disagreeable little thorn that both humans and animals avoid. When tumbleweed dries its roots give way before a strong wind and the plant goes rolling across the horizon, spreading seeds as it goes. We crossed through great fields of it at the lower levels of our journey.

Crossing Salt creek, which was now dry, we came to Cave spring, where a pool of water fed from seepage in the sidewalls is sheltered by a great overhanging cliff. This is another cowboy outpost. Faint pictographs on the walls indicated that prehistoric Indians had used this cave long before the cattlemen came to this country.

We waited here for our pack train to arrive, and then rode another three miles to Squaw spring, where a fine flow of water bubbled up through the sandstone floor of an arroyo. Our camp site here was bare sandstone, and those of us with air mattresses were glad we had brought them. This was to be our base camp for the next two days, so we brought in a big supply of dead juniper from a nearby butte, and sought what comfort we could on the sandstone ledges.

Today we rode 24 miles.

Sixth Day

It rained during the night but there were waterproof tarpaulins enough to keep us fairly dry.

We were up at 5:45 and went about our camp chores leisurely, for the day's schedule was to include only eight miles of riding.

At 10:45 we followed the Chief along a trail that led up Squaw creek into the heart of The Needles. Here millions of years of erosion have sculptured great cliffs of red and tan and cream sandstone into forms so fantastic as to make the term "Needles" wholly inadequate. In the gigantic palisades that towered above us we could find nearly any form imaginable. The sphinx was there, the pyramids, battleships, pipe organs, mammoth toadstools, and towers and spires and domes were everywhere. Pinyon grew on the ledges and in pockets, wherever it could find a toe-hold, and to add to the artistry of this mammoth fairyland

the walls in many places were streaked with patterns of tan and brown—the soluble desert varnish that rains had brought down from the capping at the top.

It rained while we were in The Needles and it was a disappointing day for pictures—but those weird formations probably will still be there for the photographers a thousand years from now.

We were reluctant to leave this gallery of the sculpturing gods and the sun was near the horizon when we departed for our camp on the slick rock. When we arrived at base camp the packers were trying to smoke out a rattlesnake they had seen crawl under a huge boulder. Eventually it came out for fresh air and was shot by Val. This was the only rattler seen during the 19 days. The natives told us San Juan county is “not good snake country.”

Today we rode 8 miles.

Seventh Day

Six of us rode off early this morning for a sidetrip that would take us to the junction of the Green and Colorado rivers. The women chose to remain in camp to do their laundry—and rest.

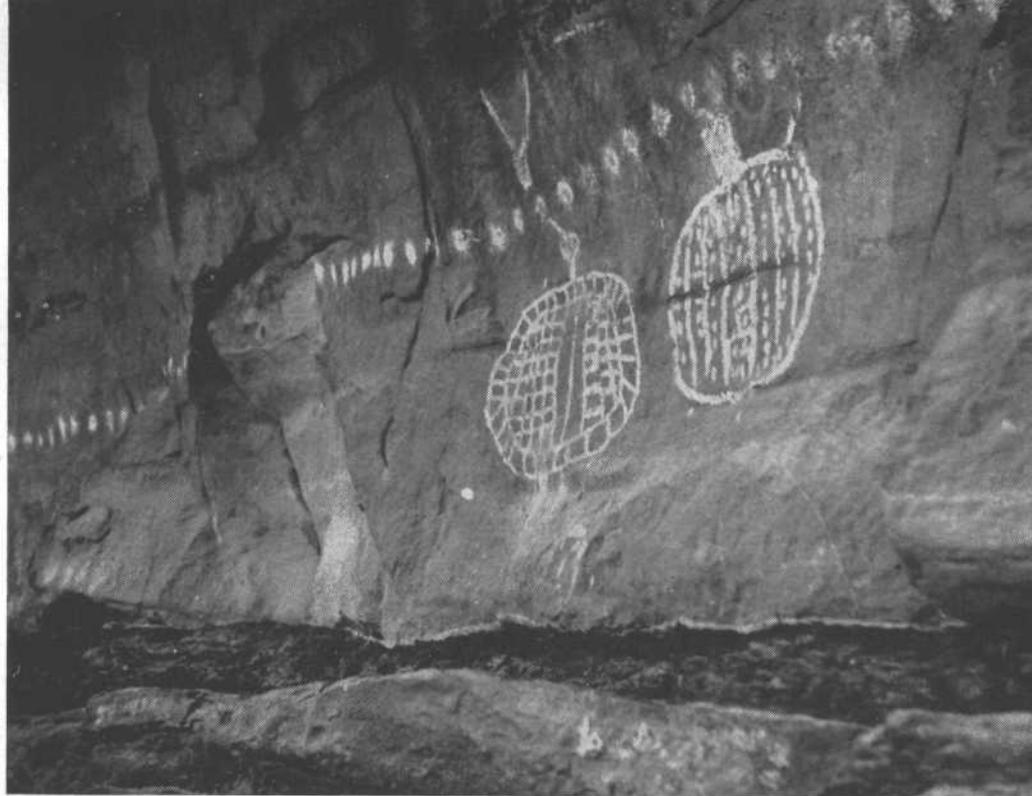
Our ride for the most part was across pinyon covered mesas, with an occasional shallow arroyo to cross. At 12:35 we reached the end of the horse trail, and then hiked along a ledge for a half mile to a saddle from which we could look down on the Y formed by the Colorado and its major tributary 1200 feet below us. This is the Cataract sector of the Colorado—where boatmen have encountered many hazards in the navigation of the stream.

This point is accessible only by horse and foot trail, and few parties have visited the spot. We erected a cairn and Ross said that on his trip next year he would bring in a register so visitors could leave a record of their arrival at this remote spot.

When we returned to the horses Ross told us we would take a different route back. Parallel to the Colorado and less than a mile east of its channel we entered Cyclone valley, a vertical-walled gorge that resembled a hundred others we had seen—with the exception that it had a level alluvial floor covered with tumbleweed. Obviously, it had been formed during some pre-historic period by running water. But the stream long ago had been diverted elsewhere and today there is no stream channel in its floor.

We climbed out of Cyclone valley over a grade so steep we had to lead the horses, and dropped down into Devil's Lane, a formation almost identical to Cyclone—a gorge with no water channel in its floor.

Near the base of the sidewall in Cyclone canyon was a 12-foot stratum



Above — Petroglyphs of ancient design under a rock overhang near the head of Salt Creek.

Below — These well-preserved pictographs found in a cave showed exceptional artistic skill.

of conglomerate that would provide a field day for a rockhound. It appeared to carry great quantities of jasper, and crystalline quartz and calcite.

Our return route wound through a maze of picturesque canyons. Once we had to detour a fresh earthquake or fault crevice three feet wide and apparently bottomless. When we returned to camp we learned that a rainstorm in The Needles during the afternoon had

sent a flash flood of thick red water down Squaw creek, submerging the spring. However, the runoff had been completed and clear cool water again was bubbling out of the rock in the bottom of the arroyo.

Today we rode 25 miles.

(This narrative will be completed in the November issue of Desert Magazine)



*Manuel Archuleta and his wife Alyce Pinno. Their Indian names are
"Rain God" and "White Flower."*



*Manuel plays his recordings for his friends in San Juan pueblo. Left to right—
Manuel, his father Demecia Cata, Juan Trujillo, Santos Cruz, Juan "Sheep",
Hilario and Joe A. Garcia.*

The Chants of My People...

Manuel and Alyce Archuleta reside in Albuquerque where he is employed by the Indian Service as stock and file clerk. They have three little daughters, aged ten, seven and two. To earn extra money Manuel occasionally lectures at the University of New Mexico and teaches Indian lore and dances in the schools. The recording of the Indian songs is a hobby that has never added much to the family income, but Manuel is hopeful that the sale of his recordings eventually will enable him to devote all his time to this work. There are literally thousands of Indian chants, and many of them deserve to be reproduced and preserved. The Archuleta address is P.O. Box 1493, Albuquerque, New Mexico.

By MANUEL ARCHULETA
as told to ILON BARTH

MY INDIAN NAME is *Tse-we Ant-yen*. The songs of my people fascinated me, I loved them all. As a child I wanted to devote my whole life to them. When an old man died he took with him some of the songs others had failed to learn.

Recording these authentic Indian

chants actually started ten years ago. I wrote to a big recording company asking them if I could work for them in some capacity so I would be connected even if I had to sing my own songs. My letters were not answered. You can imagine how depressed I felt. When I first saw a portable recording outfit advertised it did not take me two minutes to order it. Regardless of cost I was firm in my belief that in some

way I would own it. At that time we were actually living on fifty cents a day. We had enough milk for the baby and a recording machine, and that was the most wonderful thing in the world.

Alyce Pinno, my wife, is from the Laguna pueblo. I met her while we were working for the Indian office at Albuquerque. The first time I went out with her on the bus to meet her people they gave her a big scolding for being

with a boy. I could hear her mother, as well as her father, giving her a lecture. They told her she would marry a Laguna Indian, that there were lots of nice boys at Laguna.

At Laguna everything was bare and brown. The pueblo was built on rock, up on the side of a barren hill. This seemed odd to me because I grew up among trees with fishing and swimming holes at my San Juan pueblo home. However, I learned to like the place. The people were full of happiness and laughter. Singing was closest to my heart and Alyce's father was one of the best song makers. One year he made 17 different songs for the ceremonial dances of the pueblo. These were not open to the public but I have two recorded songs from Laguna, "The Corngrinding Song" and "The Harvest." When I hear these Indian songs I am stirred by emotion. There is a lump in my throat.

Among my records is the Navajo "Squaw Dance Song." I realized that the Indians had been having these songs and social dances long before Columbus was credited with discovering America. Social dances among white people are held in smoke filled rooms, with people pushing each other around and shoving with their elbows. The Indians dance out in the clear fresh air with the sun, stars or fires for background instead of tissue paper and glitter. We have our own kind of jitterbugging, too, which the Indians have been doing for centuries. There is the *Pon-sha-dee* in San Juan pueblo where the boy and girl cut the rug with tom-tom music. These are frolics and the Indians enjoy dancing with their girl friends, too.

The Taos Indian round dance is held each evening all year around, weather permitting. It is a happy get-together and anyone is fortunate who lives where he can hear this concert. I determined to put this round dance on my recording for everyone to enjoy. Actually on one record there are four songs on one side and three on the other. I try to put as many songs as possible on one record so the Indians will have a number to listen to as they are the people who really enjoy them.

At first I had to ask permission of the Indians but now they come to me. While I was making songs of other tribes the San Juan people were wondering why I was not making a recording of their songs, my own pueblo. I explained to them that it was due to lack of funds, and distance. When I could I would get there. It meant I had to pick out my singers, haul them to Albuquerque to make the recordings, and feed them. Not all Indian

songs are suitable for recording purposes. I have to evaluate them and go through hundreds before a definite selection is made. A Navajo Indian friend named Willis George helped me draw the tom-tom picture I use as a trademark for all the recordings now arranged for quantity reproduction.

I finally got to my home pueblo with their records. The Indians saw me coming. I was almost swamped as they tried to pull me out of the car. They all wanted me to come to their house to play the records. San Juan is a modern pueblo now and they all had record players. I had about 100 records with me. It was an amazing experience to walk through the streets

and hear the Indians playing their San Juan records in separate houses, all going at once!

When an Indian came and told me the Governor of the Pueblo wanted me to play for him, and that he had his own phonograph I was elated. It was a wonderful feeling to think he had a meeting on some important matter and then asked me to play for him. That was the nicest thing that could happen to me.

My ambition is to make a recording of every song and dance possible. This will mean thousands of authentic Indian songs. It will preserve for my people their own musical history. Songs will not be lost when an old man dies.

TRUE OR FALSE

For those curious-minded folks who like to check up on themselves occasionally, just to see

how much they really know, *Desert Magazine* presents another of its True or False tests. These questions cover many fields of interest—geography, history, botany, mineralogy, Indian customs, and the general lore of the desert country. A good desert rat should get at least 15 correct answers. A grade of 18 is superior. The answers are on page 36.

- 1—Death Valley was given its name by Death Valley Scotty.
True..... False.....
- 2—Desert mirages are seen only in the summertime. True..... False.....
- 3—Desert lily is a perennial that grows from a bulb. True..... False.....
- 4—Mormon colonization of Utah was started before gold was discovered in California. True..... False.....
- 5—Rainbow Bridge National Monument is in Arizona. True..... False.....
- 6—There are 36 sections of land in a township. True..... False.....
- 7—Fruit of the wild grapevine found in desert canyons is poisonous.
True..... False.....
- 8—The gopher snake will coil and strike like a rattler. True..... False.....
- 9—Tallest peak seen from anywhere on the California desert is San Gorgonio. True..... False.....
- 10—Hopi tribesmen who help the Snake clan put on the annual snake dances belong to the Wolf clan. True..... False.....
- 11—New Mexico was the 47th state admitted to the union.
True..... False.....
- 12—Blossom plumes of the salt cedar or native tamarisk are yellow.
True..... False.....
- 13—The state flower of Arizona is the Saguaro cactus. True..... False.....
- 14—Calcite often was used by the Indians for making arrow and spear points. True..... False.....
- 15—Best route from the desert to the top of Mt. Whitney is the Bright Angel trail. True..... False.....
- 16—Indian sand paintings are made with a brush of yucca fibre.
True..... False.....
- 17—To visit Meteor Crater in northern Arizona, one would travel U.S. Highway 66. True..... False.....
- 18—Nuts of the pinyon tree grow in cones. True..... False.....
- 19—The junction of the Green and Colorado rivers is in Utah.
True..... False.....
- 20—Dates grown on the American desert ripen in the fall of the year.
True..... False.....

Yucca — New Mexico's lovely state flower — may bring to the desert Southwest a new industry. If a recently-developed "yucca gun" provides a practical method of separating the tough yucca fiber from the green leaves, not only could wild yucca be harvested profitably, but commercial yucca growing might become a new phase of desert agriculture. How the new yucca gun operates and the advantages of yucca fiber are here explained by a writer who has closely following developments in this field.

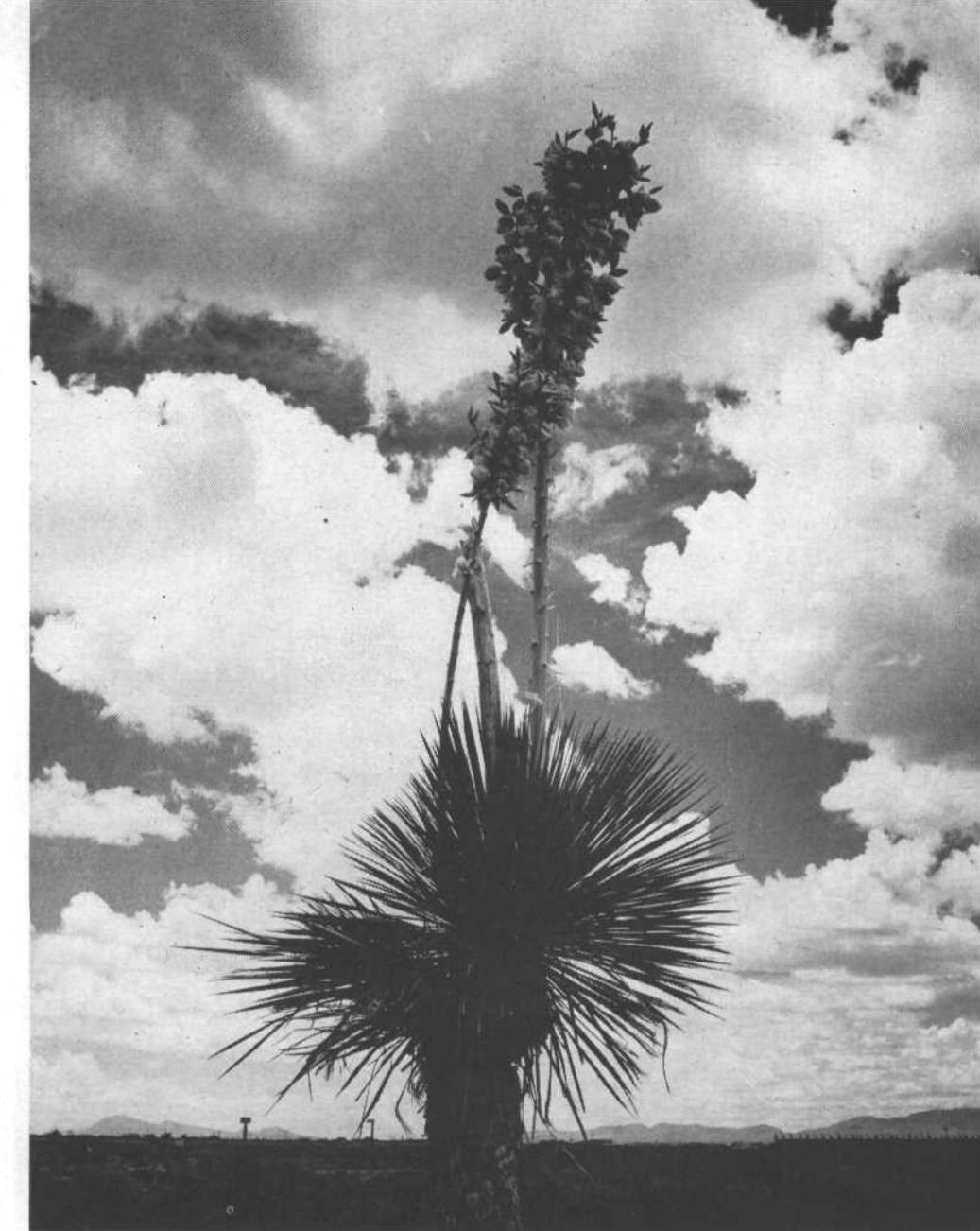
'Yucca Gun' May Create An Industry

By DOROTHY L. PILLSBURY

MOST PEOPLE THINK of yucca in seven or eight common varieties as good desert landscape. It may, one of these days, be more than scenery. It may scatter small industrial plants over the Southwest with employment for hundreds. It may start a new kind of agriculture where nothing else will grow. The desert horizon may some day be sprinkled with yucca farmers.

And all because of a gun! About two years ago R. S. Chapman, a California engineer, journeyed to Lordsburg, New Mexico. He was on crutches at the time, but he got there. It was a big occasion. Leaders of industry, agricultural experts and people who knew and loved the desert were there. Chapman and his associates had spent years and thousands of dollars perfecting that gun. It wasn't much to look at. It resembled a corpulent trench mortar.

On the outskirts of the little desert town of Lordsburg, the gun was set up. It was stuffed with green leaves taken from the yucca which grows in great profusion through the southwestern desert country. Steam was applied for a few minutes under pressure. The trigger was pulled. The gun roared. In a cloud of steam, shredded yucca leaves hurtled through the air to fall against a back-drop a few feet away. The resulting mass was yucca fiber, light



Graceful and beautiful, New Mexico's state flower may develop into a state asset in addition to its scenic value. New Mexico state tourist bureau photo.

brown in color and minus its terminal thorns. That fiber, laboratory tests prove, is tougher than hemp, jute, cotton or silk. It could be used for cordage, sacking, furniture padding and the caulking of ships.

Those tough fibers had been a part of the yucca leaf since its creation. The question had always been how to get them out—quickly and cheaply. Indians knew and used those fibers long before the first White Man showed up in the country more than 400 years ago. Evidently he rotted and pounded the green chlorophyll away to get the fibers. Time was not a decisive element in his life. From this fiber he made rope, woven carrying bags and sandals. Fragments of his handiwork have been found in prehistoric Indian cliff dwellings.

The White Man went a little further than the Indian. He tried scutching and chemicals. But it was slow and ex-

pensive. Not until World War I stopped the importation of jute, sisal and hemp, did the White Man pay much attention to yucca fiber. Then by slow expensive methods he made street brooms of it, cordage and even a special paper for the navy.

After the first World War, the Germans became interested in desert yucca. They, too, had suffered from lack of fiber material. Five hundred pounds of yucca seed gathered in New Mexico were furnished them through the United States Department of Agriculture. The seed was planted in botanical gardens near Frankfurt. With German love of detail, they learned much about our desert yucca. They established the fact that from seed planting to seed producing, the cycle takes about 40 months. But they used the old expensive method of retting to obtain the fiber. The process required about three weeks.



Inventor, R. S. Chapman, came on crutches to the testing of his yucca gun.
Photo by C. E. Redman.

to 556 pounds of fiber. This is a wild harvest from land which is good only for scenery or scanty grazing. Yucca, it seemed, was growing everywhere in the desert, even on old lava flows where there is practically no soil.

It was estimated that about 19,000,000 acres of land in New Mexico alone produce yucca in seven or eight varieties. It was estimated that there is enough yucca growing within reach of transportation to central processing plants to make 200 tons of fiber a day for 25 years. The best discovery of all was that the yucca plant is not killed by harvesting its leaves. In 21 months it will reproduce them leaf for leaf. To desert lovers, yucca as scenery will always be more important than yucca as cordage and sacks.

The road from invention to mass production is a long one in these times of unsettled conditions. Much has been learned along the way. It has been discovered that not only is neutral colored fiber produced by the new process, but that it takes only a 30-minute interval of washing and drying before it can be baled. Useful by-products have followed that may prove more remunerative than the fiber itself.

Yucca eclata, one of the common and abundant varieties of yucca used for fiber, is locally known as soapweed. Its roots contain a soapy agent. Indians and pioneer women used it for hair washing, for preparing wool for weaving and for cleaning their hand-woven blankets. To this day no ceremonial dance takes place among New Mexico's Indians without the participants indulging in a good soapweed shampoo.

This soapy agent is present in the residue left in the gun after the fiber is hurled out by explosion. Woolen goods manufacturers and makers of commercial shampoos are eyeing that soapy residue with great interest. So are boiler users as the soapy residue has been found to be a fine agent to remove caking from the inside of boilers and to prevent its formation.

But what about growing yucca? The United States government through its committee on irrigation and reclamation has been collecting facts about yucca and the fiber it produces since the successful testing of R. S. Chapman's gun. Could ex-servicemen be settled on 40-acre desert tracts? Could they plant them like corn fields, a thousand yucca seedlings to an acre? Chapman figures that from the German experiments these seedlings should yield a crop in 40 months and that it should average about 15 tons to an acre.

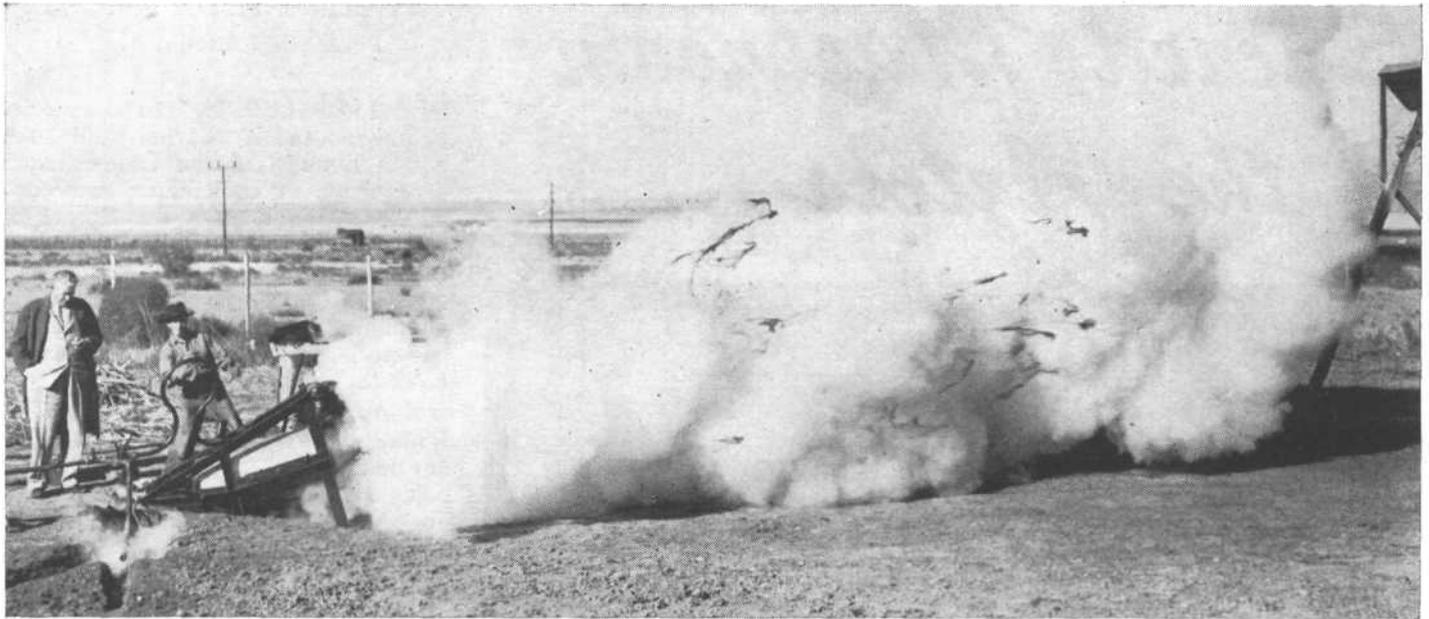
But how would a man make a living on the desert while he was waiting for

Eventually jute, sisal and hemp again were moving freely in world markets. The sack, cordage and furniture padding firms were getting what they wanted from foreign markets. The dearth of fiber material did not show up again until the second World War. That shortage continued long after the war ceased.

C. W. Botkin, professor of chemistry at New Mexico State college in the experimental division, renewed his long advocacy of yucca fiber for commercial purposes. With patient experiments he and his associates tested various ways of separating fiber from leaf by chemicals and other methods. They worked

out the percentage of fiber obtained from a given number of pounds. They tested its relative strength as compared to other fibers. They made field expeditions to determine the extent of yucca bearing land in New Mexico and neighboring Texas.

The roar of Chapman's pressure cooker gun at Lordsburg was the answer to the need for a quick and cheap method of separation. This being settled, Professor Botkin's laboratory findings became increasingly important. He discovered that with a fiber content of 43 percent and a 50 percent loss of moisture on drying, an average uncultivated desert acre will yield 227



Yucca fiber, freed from its leaf content, is seen hurtling through the air when fired from the Chapman gun. Photo by C. E. Redman.

his yucca farm to come into bearing? Chapman's answer is that he could gather the wild crop of yucca in his vicinity—that a man could cut and transport two tons of green yucca leaves a day to a plant within a radius of 12 miles.

He figures that owners of unproductive desert land will sell green yucca leaves to the gatherer for \$5.00 a ton. Even at the present high price of labor, he estimates that yucca fiber can be produced for around \$70 a ton. That is a big saving compared with jute at \$110 a ton brought in at the close of the war. In normal times the jute industry represents \$140,000,000 a year which gives some idea of the magnitude of the fiber industry.

Laboratory tests show that yucca fiber is twice as strong as that of jute. Its tensile strength as tested by Professor Botkin is 66.9. This compares with hemp at 52, jute at 24.5, cotton at 23 and silk at 30. Binder cord made from yucca fiber will stand a 3000-pound test and $\frac{3}{4}$ -inch rope will stand a 4000-pound test.

The gun that roared at Lordsburg may some day be heard around the world. It may lay the foundation for a great American industry in producing material for cordage, sacks, furniture padding and oakum for ship caulking. Its by-products may be as valuable as the fiber. It may give hundreds of persons the chance for outdoor living in a region that seemed to offer little in the way of earning a livelihood. The desert may have produced another possible treasure.

MONGOLS MAY HAVE TRAVERSED ARIZONA . . .

That the Mongols traversed Arizona land on their way through the Americas from Asia and that in ages past Arizona may have been a highway for migrations of the human race toward Central and South America is the theory of Dr. Daniel P. Quiring, anatomist of the Cleveland, Ohio, clinic.

Citing the discovery of the Folsom man in New Mexico and recent findings near Point of Pines and Fort Defiance in Arizona, Dr. Quiring said:

"I would not be surprised if the remains of the original Mongol man are found in this region." The scientist, who has traveled the world studying various types of humans and their origin, expressed his opinions while in Ganado, Arizona. He said the work of his clinic is to determine why different types of humans have various characteristics of appearance and behavior.

He calls Americans "the Faustian type—dynamic builders who often destroy themselves in the effort." A way is being sought, he said, to "keep the energetic type from destroying itself."

. . .

Clearing Sagebrush Land . . .

The desert Southwest may have more range land if heavy equipment being used to clear sagebrush proves practical. A demonstration in Summit county, Utah, recently showed cattlemen and farmers the operation of a wheatland plow, brushland disc and the new Noble plow, imported from Canada.

HELICOPTER RESCUE IN RUGGED DESERT CANYONS . . .

Easing down in a brief and dangerous landing on a mountain slope in the rugged canyons behind California's Mount San Antonio, an Air Rescue pilot in a helicopter from March air base recently succeeded in rescuing a stranded jet fighter pilot who had bailed out of his speedy ship.

It took all the skill of Lt. Jack Batty, Kansas City, to maneuver his helicopter into the rough region, but he set it down long enough for 2nd Lt. Robert E. Farley, Selah, Washington, to scramble aboard.

Farley was suffering from cuts on the face and injuries to his feet. He was flown by Batty to Indio, California, for hospital treatment. Farley spent five hours on his 3200-foot perch after bailing out of his jet plane, said he improvised a shelter from his parachute to shield himself from the hot August sun.

. . .

May Dam Coyote Creek . . .

BORREGO SPRINGS—Creation of a lake in Coyote canyon by building a dam across Coyote creek, an all-year stream that wastes its waters in the sands of California's Borrego valley, is proposed by Fred W. Marlow and Robert Ransom of the Borrego Springs company. They believe it would make a new paradise for fishermen and duck hunters, and create a scenic lake as well. The U.S. bureau of reclamation has accepted plans for consideration. The proposed road to Hemet through Coyote canyon could border the lake.

Sacred Mushroom of the Aztecs . . .

By CLAIRE MEYER PROCTOR

Photograph by the Author



The Sacred Mushroom, or Lophophora Williamsii

IN THE YEAR 1529 the good Padre Bernardino de Sahagun arrived in Mexico from Spain to convert the idolatrous Aztecs to the gentle teaching of St. Frances. Among the feasts he described in his valuable histories is one called "The Feast of Teonacatl."

On the day of the great feast, the first thing eaten before the break of day, was a certain black mushroom mixed with syrup made from the sap of the maguey plant, resulting in a

peculiar kind of intoxication. Some of the people danced, others sang, still others wept. Some seated themselves around a ceremonial fire in meditation, enjoying the colorful visions caused by the effect of the mushroom on the optic nerve. The good Father never saw the plant but only the dried black tops that were brought to the Aztecs by messengers consecrated to their task.

Botanists of modern times finding the description of the Sacred Mushroom in the Padre's history, searched for it

far and wide, believing it to be a species of fungus, and it was not until 1915 that a botanist of the United States department of agriculture succeeded in identifying it with the Peyote or Mescal button used by the American Indians of the Southwest. The Peyote or Mescal button is of the genus *Lophophora*, whose geographical distribution ranges from the southern border of Texas to Queretaro, Mexico.

Known botanically as *Lophophora Williamsii*, this plant does not resemble any member of the family Cactaceae, being completely spineless and depending upon its bitter taste for protection against animals. The glaucous flower-like top is a simple hemisphere with six or eight converging grooves and faint lines connecting them, a small tuft of matted gray wool is borne in the center of each groove, the pale pink flowers one inch in diameter occur on the newly formed areoles in the center of the plant. The top of this cactus rises only an inch or two above ground, while the thick tap root may be three or four inches long.

The use of the Peyote or Mescal button has become widespread and extends to Indian tribes as far north as the Canadian border. To the modern Indians its use is distinctly religious, having taken on an outward form of Christianity. Its adherents claim many unusual results from its use, such as being cured of tuberculosis and other diseases. The missionaries have worked hard and long to break up the Peyote Cult without success, even appealing to the Government to pass laws prohibiting its use.

This sacred gift of the Indian gods contains three alkaloids: viz., mescaline, lophophora and anhalonine, and when eaten raw, dried or cooked into a concoction and sweetened with a syrup to eliminate the bitter taste, the physiological effect is an impression of energy and intellectual power, followed by a peculiar effect on the optic nerve enabling the eyes to see images kaleidoscopic in character, in every conceivable color and tone, objects appearing in jewel-like splendor unknown to a natural world, and resulting in a sensitivity to light and shade with a deeper appreciation of color.

Scientists who have made experiments with the drug derived from this cactus, say it is neither intoxicating nor habit forming, but the physical after-effects are not pleasant. In most cases, nausea and indigestion followed by a hangover headache is the exacting price paid for this unusual experience.

MINES AND MINING . . .

Winnemucca, Nevada . . .

Schwabrow, Schendel and Chapman believe they have a gold mine in their perlite mine. They control a huge deposit near Cow Creek, and things are looking up for the mining men with receipt of an order for 1000 tons of perlite from a Maryland engineering firm. The material is used in the plaster of houses, is noted for its strength, lightness, insulating, waterproof and soundproof qualities. Prospects are that it may come into much more general use in building.—*Humboldt Star*.

Window Rock, Arizona . . .

Sealed bids for mining leases on two tracts of Navajo tribal lands have been invited, according to Allan G. Harper, superintendent of the Navajo Indian agency at Window Rock. Descriptions of the two tracts are contained in circulars which have been issued formally calling for bids. One is in northern Apache county, Arizona, approximately 15 miles southwest of Boundary Butte, Utah, in unsurveyed territory. The other is in San Juan county, Utah. The first is offered for copper and other minerals that may be found, the second is offered for vanadium-uranium and other minerals that may be found. Each tract is offered separately to qualified bidders who are willing to pay highest cash bonus per acre for the privilege of leasing the lands, in addition to stipulated production royalties of 10 per cent of the gross sale price of all mineral products recovered and sold, plus annual acreage rentals on a sliding scale. Primary term of the lease will be for 10 years.—*Gallup Independent*.

Phoenix, Arizona . . .

Uranium mining is no get-rich-quick proposition. Authority for that statement is Charles H. Dunning, director of the Arizona state department of mineral resources, who warns that despite stories of rich uranium finds the chances are all against a prospector—particularly an amateur—locating uranium-bearing ore that will pay a profit after the costs of mining and hauling to the processing plant. Average yield from uranium-bearing ore is only one-fourth of one per cent crude uranium per ton, and since average raw uranium will bring about \$2.75 per pound, average return is only \$13.75 per ton. Hauling costs usually will eat up that gross return. Some uranium mines are of course paying handsome returns.—*Moab Times-Independent*.

Salt Lake City, Utah . . .

It wasn't uranium, but 65-year-old Robert Elliott is pleased just the same with results of the assay on ore from his mine located about 50 miles north of Barstow, California. He was after uranium and found ore that made his Geiger counter hop, but experts in the Utah department of commerce reported that samples submitted by Elliott weren't even close to uranium. The assay report did show, however, that the ore contained gold worth about \$28 per ton. That's almost high grade these days, according to Kenneth B. Dyer, field office manager, department of commerce, Salt Lake City. So Elliott is happy, says that with three companions he will this fall begin to work with picks and shovels at his California mine.—*Salt Lake Tribune*.

Randsburg, California . . .

Mining activity at the Big Gold Annex has been resumed following leasing of the property to William Jenderzy, Caspar Tabler and G. H. Senor. Owners are Mr. and Mrs. John M. Kreta, Randsburg. Prospecting for future development has been occupying the time of the lessees, who reported recently that one vein running 10 to 20 feet in width carries average values of \$14.37 per ton and has been opened for a length of 60 feet. The Big Gold Annex is located about two miles southwest of Randsburg, was originally located in 1903. Ore from the Annex will be milled at the Kreta mill in Randsburg.—*Times-Herald*.

Reno, Nevada . . .

Although many samples of uranium-bearing ore have been found in Nevada in recent months, the uranium content is so low that it won't pay to ship it to the nearest buying station—which is in Colorado, according to Jay Carpenter, director of the state bureau of mines. Nevada has no Atomic Energy Commission field office and no buying station. If a buying station were located in Nevada, some of the ores discovered might be worth shipping, Carpenter believes. "At the present time," he concludes, "the outlook isn't too encouraging unless somebody finds a very high grade ore body."—*Humboldt Star*.

Tonopah, Nevada . . .

A promising tungsten-scheelite discovery that may develop into a power shovel operation has reportedly been made by George Rong and a companion north of the Carver ranch near here. Exact location was not disclosed.

Reports indicate the vein shows a width of 28 feet, can be traced on the surface by lamp for 3000 feet. Sampling has not been completed.—*Tonopah Times-Bonanza*.

Julian, California . . .

The old Owens mine at Julian, from which nearly a million dollars in gold—at today's prices—was taken in the 1870's, is being reopened by the Julian Mining and Milling company. Company engineers say there appears to be enough quartz left in the mine to last 10 years on the proposed operating schedule. A shaft is being sunk 1000 feet from the old Owens workings, will reconnect with the old tunnel at the minus 400-foot level. The now peaceful mountain village of Julian was once a lively mining town.

Gabbs, Nevada . . .

Within a few months two companies are expected to be making finished products from the mountain of magnesium ores at Gabbs, said to be largest deposit in the western hemisphere, according to representatives of the two firms, Basic Refractories, Inc., and Standard Slag company. Gabbs is in Nye county, 80 miles southeast of Fallon. These magnesite deposits supplied the huge electrolytic reduction plant at Henderson during the war. Now it will supply material for producing a variety of refractories which will be shipped through Mina to distant points. The war-time town of Gabbs is being repopulated, and the two processing plants are expected to employ close to 200 men.—*Fallon Standard*.

Fallon, Nevada . . .

On property which adjoins the Summit King mine, well-known producer in the Sands Springs district 26 miles east of Fallon, the Twilight Gold Mines company is sinking a vertical shaft in hopes of tapping the ore zone at a reasonable depth. According to Albert Silver, consulting mining engineer of Reno who is technical adviser and manager for Twilight, the shaft will be vertical, is expected to reach a depth of 500 feet with exploratory cross cuts at indicated intervals. The Summit King has an excellent record of production and profits, Silver thinks the Twilight Gold mine can equal the production.—*Fallon Standard*.

Los Angeles, California . . .

A new booklet, "Minerals of the Southwest—1949", has just been issued by the mining committee of the Los Angeles County chamber of commerce and is designed for distribution to miners, prospectors, mineral consumers and those in allied industries.



Photograph by Charles Shelton, Glendora, California

A STORY INCOMPLETE

By GEO. E. PERKINS
Overton, Nevada

Just a broken down rig, and a pile of bones
Left to bleach in the sand and heat,
Some scraps of harness, and pots and pans
But the story was incomplete.

Where was the man who had left them
there?

Far out on the desert grey,
So far from the busy haunts of men
That no one e'er passed that way?

Perhaps he had wandered for miles away
Crazed with thirst, 'til the demons of hell
Who had goaded him on, and on, and on,
Were content when at last he fell.

While the buzzards circled 'round and
'round,
Just biding their time to feast.
For the desert relentless, grim and old,
Shows no mercy to man or beast.

COMPENSATION

By GEO. M. AMES
Indio, California

I looked at the mess in the dooryard —
My neighbors of course; not mine,
The litter of weeds and of papers
And the flagstone all out of line.

Then I raised my eyes to the sunset,
The clouds, and the hills to the west,
And thought not of people's shortcomings
But of things with which people are blessed!

THE DESERT

By KATHLEEN J. KENNEDY
Modesto, California

Endless as eternity;
Hot as the depths of Hell;
Still as a summer evening;
Dry as a forsaken well.

It molds and remolds
Earth's form to its own.
Then thrusts it away
To still another unknown.

Form never the same
As sands over it blow.
Whence came the desert. . . .
To what fate does it go?

MYSTERY

By LEO F. BELLIEU
Parker, Arizona

The sun shines bright on the sage today
There's perfume in the air.
The junipers nod on the distant hill
And I'd like to wander there,
Viewing the mysteries of this ancient earth
As before me they unfold,
The mystery of life in each living thing
A secret yet untold.

Perhaps someday in the great beyond
Where we have eternal peace,
The Great Dictator of all that's good
Life's secret will release.

Silhouettes

By MURIEL EAMES POPE
Santa Ana, California

Night made a picture in the sky
Of siren birds that swiftly fly.
Cacti stood out in bold relief.
Dunes knelt in prayer as if in grief.

Night walked across the sky's dark blue
Each foot-print made a star break through
And they looked down from time and space
And framed the picture in old gold lace.

Night prowlers waited for their prey
Then left before the morning gray.
When sleepy day took one last look
She closed the covers of night's book.

• • •

DESERT SHOW

By RUTH B. PHILLIBER
Weiser, Idaho

Now the stage is all set and the Queen of
the Sky—
Guest of honor tonight at the desert's new
show—

Has arrived and has taken her place there
on high,

In the box on the right in the very front
row.

She is gowned in the latest of pale golden
dresses

And is trailing soft draperies of gauzy
cloud gray,

With a diamond tiara of stars in her tresses
That are sprinkled with star-dust in splen-
did array.

Far below her the spotlight is turned on the
stage,

And the orchestra, led by the mild Desert
Breeze,

Plays the theme for the chorus of Cacti and
Sage,

As they sway round the arms of the
Joshua trees.

Then, Coyote, the soloist, enters the light—
With his head raised up high to the guest
up above—

Silhouetted, he stands on the backdrop of
night,

While he soulfully pours out his heart's
aching love.

• • •

MY TREASURE

By PAUL WILHELM

Thousand Palms, California

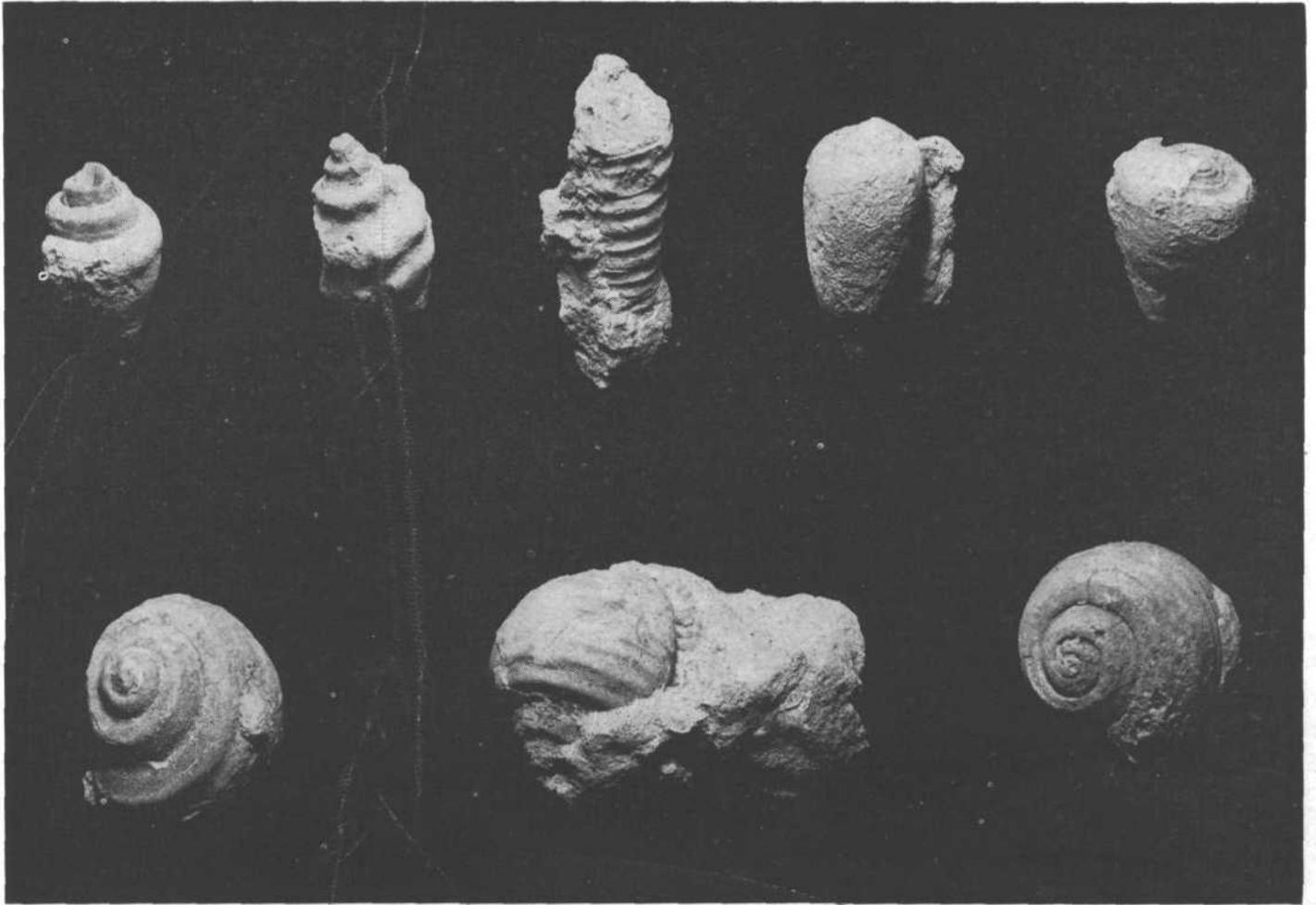
Lord God, now let the New Race find its
food

In something more substantial than deceit;
I have clear air to whet a prayerful mood,
And wind and stars far sweeter than their
meat.

Upgrade

By TANYA SOUTH
San Diego, California

Sow then the seeds of Good alone,
And Good alone will have been won.
Seek to be truthful and sincere,
And yours shall be an ordered sphere.
Live your life gently. Let no thought
Of evil or of hatred crop,
And you shall find your Pathway laid
In peaceful, sunny span — upgrade.



Casts and fossil shells of gastropods from Alverson canyon including turritella, top center; oliva, next right; cone shell, upper right; fig shells below.

Fossil Shells from a Vanished Sea

By HAROLD O. WEIGHT
Photographs by the author

IT WAS PLEASANT, in a reptilian sort of way, to lie in the shade of a little cave in the bottom of Alverson canyon, panting gently and blinking at the glaring canyon walls. Pleasant to repose with eyes half closed, staring at the tawny sediments of the cave ceiling while my mind sought half-remembered geology and history, or leaped from fact to fancy.

Alverson, a narrow twisting gash in the southern flank of California's Coyote mountain, has been famed since 1890 for its fossil corals and shells. We—Eva Wilson, Lucile and I—had driven from El Centro to collect some of the fossils, but by the time we reached our destination it was so hot

that even to think about collecting made us perspire.

Summer, of course, was the wrong time to come to this arid corner of the Colorado desert. We knew that when we started—but we had a plan. Coyote mountain is located only about 25 miles west of El Centro and less than five miles from the paving of U. S. Highway 80. If we started before daylight and arrived at the canyon by dawn, we would be able to hunt our fossils before it became too hot. Then we could retreat either to El Centro's coolers or to some shady spot to sit out the brazen afternoon. That plan has worked satisfactorily on various occasions. But this was my first visit to

The sea which once covered much of the Southern California desert has long since disappeared, but the evidence that such a sea once existed is found in many places. For those interested in the fossils of ancient marine life, here is the story of the Coyote mountain coral reef and of the many species of fossil shells found in the area.

Alverson, and there is one tricky stretch of the auto trail where it is easy to go astray. By the time we had found the right canyon and the right place in the right canyon, the shade-hunting stage of a desert summer day had arrived.

The cave was deceptive. We were out of the sunshine, but the air it had heated was still with us. The contorted walls of the gorge glittered. The few hardy plants of the wash—principally desert lavender and catsclaw—seemed tinder-dry. Above the canyon the slopes were baked and barren with a scattering of encelia and creosote and gaunt ocotillos.

You could tell, just by looking at it,

that Coyote mountain had seen hard times, geologically and climatically speaking. From its appearance it might never have known real moisture from that beginning day when Nature dumped over it the klinkers of world building.

So it looked, but the spot where I lay once had been the bottom of the sea. The cave ceiling above me was almost a mosaic of fossil shells. Only yesterday in geological times these twisted sediments had been a shore line. The dark peak of Coyote mountain had been an island in a tropic sea whose western waves lapped against the serrated shoreline of the Laguna mountains; whose waters were joined by some lost seaway to the Gulf of Mexico.

If paleontologists are right, no human being, as we know humans, ever looked through the greenish crystalline waters of that sea at the wonder-world

of Coyote's coral reefs. But we know that in those days the corals were not the grey rock-ghosts found in the badlands now. They were masses of brown and green and deep dull gold. Slender corallines, like blossoming flowers, rose from among marvelously fluted corals. In the caves and canyons of the reef and about its edges, vivid spiny sea urchins, furry purplish sea dollars, turritellas, cone shells and olivelas swarmed. And—since such life has changed but little—many other wonders and beauties of the present ocean shallows were there. Through the clear saline water swam fish much like the highly colored inhabitants of today's tropical seas, constantly alert to eat or to avoid being eaten. . . .

Now all that ferment of life has become rock and sand under a burning desert sun. W. C. Mendenhall, in charge of a U. S. geological survey expedition to the Coyote area in 1904,

has done more than anyone else to unravel the short-hand history Nature wrote in these rocks. But when it came to the period before the formation of the coral reefs, Mendenhall scratched his head. It was hard to deduce anything, he wrote, except that the underlying rocks of the mountains—the limestone which had been converted to beautiful marble, the schists and gneisses—showed that they had been buried deeply and subjected to terrific earth strain. They were "upturned, intruded and crystallized, uplifted and eroded into mountainous topography." Then came the Miocene period, ushered in with volcanic activity, when flows of liquid rock spread across the land and into the waters, and beds of tuff and volcanic fragments were laid down.

After the vulcanism subsided, Coyote and Fish Creek mountains were islands in a clear sea. The corals, small and simple marine animals which build

Fossils and casts are thick along some of the ridges of Coyote mountain, and others can be dug from the clayey shale.



ALVERSON CANYON ROAD LOG

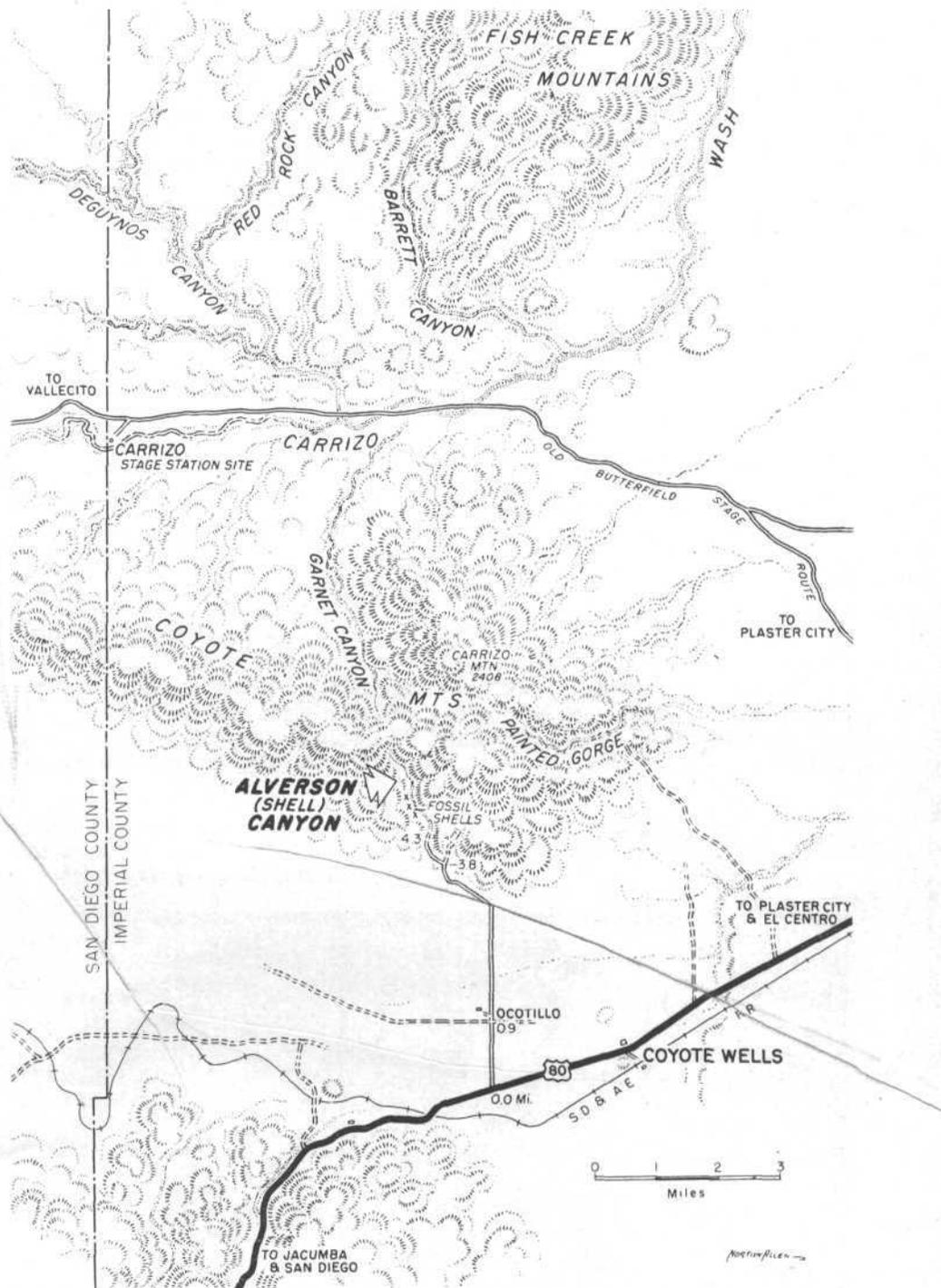
Turnoff to Alverson canyon is 27.5 miles west of El Centro; 1.8 miles west of Coyote Wells, on Highway 80.

- 00.0 Take dirt road north from highway. Road cuts off just west of watertank and is marked for Ocotillo village.
- 00.9 Ocotillo. Road which angles left is the impassable proposed Imperial highway. Continue north toward Coyote mountain.
- 03.5 Road enters wash, and zig-zags right, then left, going up sandy wash. Drivers are advised to check road to see if they wish to drive farther. Sometimes very sandy.
- 03.8 Leave road up wash for trail, left, which cuts out of canyon and follows stream bed at base of ridge. Rough road.
- 04.0 Entrance to Alverson canyon.
- 04.3 Easy trail to fossil areas on ridge west of Alverson canyon leaves canyon on left.

a limy external skeleton about the bases of their bodies, started their reef-building. The little creatures themselves, called polyps, reproduce by branching, and as the older ones die the reef builds upward upon the lime skeletons they leave behind. But these reef-forming corals demand clear, shallow normally saline ocean water, and they cannot survive if its temperature is below 68 degrees. So we know that for a long period, the sea was warm and clear. Then something happened. The waters around Coyote became impure and brackish. Many kinds of oysters found the new mixture much to their liking and great beds of them succeeded the corals which could not survive the change.

Heavy silt from these muddy waters built thick layers around Coyote. Then the land must have risen again, shouldering the seas aside. Beds of mud and clay and sandstone, layers spiced or packed with the skeletons of long-dead mollusks, masses of cemented shells and reefs of coral—all of them were exposed to the work of wind, rain and runoff. The clay beds eroded swiftly into badlands, but where they were overlain by the more solid blocks of coral or shells or sandstone, flat topped peaks were created. Storm waters cut deep canyons which drained, as ages passed, into the extended arm of the Gulf of California, into freshwater Lake Cahuilla, and finally into a barren desert sink. Through those centuries Coyote mountain, beaten by storms, faulted by earthquakes, assumed its present guise.

Marine fossils can be found over a wide area in western Imperial county. They are exposed at many places on Coyote mountain—especially in Alverson and at the head of Garnet canyon. They are found in Barrett canyon



in the Fish Creek mountains, which lie to the north, and in the valley and badlands of Carrizo creek between the two mountains. They have been known to science for a long time and at least a dozen collections for museums, schools and institutions have been made in the region.

Apparently Dr. Charles C. Parry, botanist and geologist with the U. S. boundary survey, was the first to note the occurrence of the fossil oysters along the wash, in a reconnaissance in 1849. And the indefatigable William P. Blake, early geologist over half the Southwest, was the first to collect specimens and send them to Washington.

Blake was with Lieutenant Williamson's party in 1853, seeking a practicable route for a transcontinental railroad. And Dr. A. L. Heermann, naturalist with the expedition, found a specimen of the large oyster still common in the area and which was named *Ostrea heermanni* for him.

Charles R. Orcutt, who made extensive collections in 1888, and Dr. Harold W. Fairbanks, who studied the region for the California state mineralogist about 1893, were the first to tell of the great coral reefs, and Fairbanks sent coral samples to the survey in Washington. Dr. Stephen W. Bowers collected in Coyote and Fish Creek

mountains in 1901 and issued a report on the area. He named Alverson canyon for C. S. Alverson, civil engineer of San Diego who was active in the oil drilling excitement which swept the Colorado desert at that time. The corals Bowers sent to Dr. T. W. Vaughan of the U. S. geological survey resulted in the expedition of 1904, with Bowers to study the fossils and Mendenhall the geology.

Based largely on the 400 corals which this expedition reportedly sent to Washington, the geological survey issued a professional paper in 1917: *The Reef-Coral Fauna of Carrizo Creek, Imperial County, California, and Its Significance*. This publication by Dr. Vaughan remains one of the most important on the region. The particular significance, according to Dr. Vaughan, was that the corals more closely resembled those of Florida and the West Indies than anything known in the Indo-Pacific region, thus proving that once there was a seaway, probably across Central America, connecting the two regions. Since that time, the corals of Coyote have been found to resemble many of those found in the Gulf of California.

Paleontology of Coyote Mountain, Imperial County, California, by G. Dallas Hanna, issued by the California Academy of Sciences in 1926, brings the story more closely up to date. Hanna suggested that the coral reef exposed in Alverson canyon be called the Imperial formation. The 200 feet of sandstone above the reef, which was thick with fossils, he named the Latrina sands. Above it are huge deposits of silt which he termed the Coyote Mountain clays and above them the great oyster beds which he identified as the Yuha reefs.

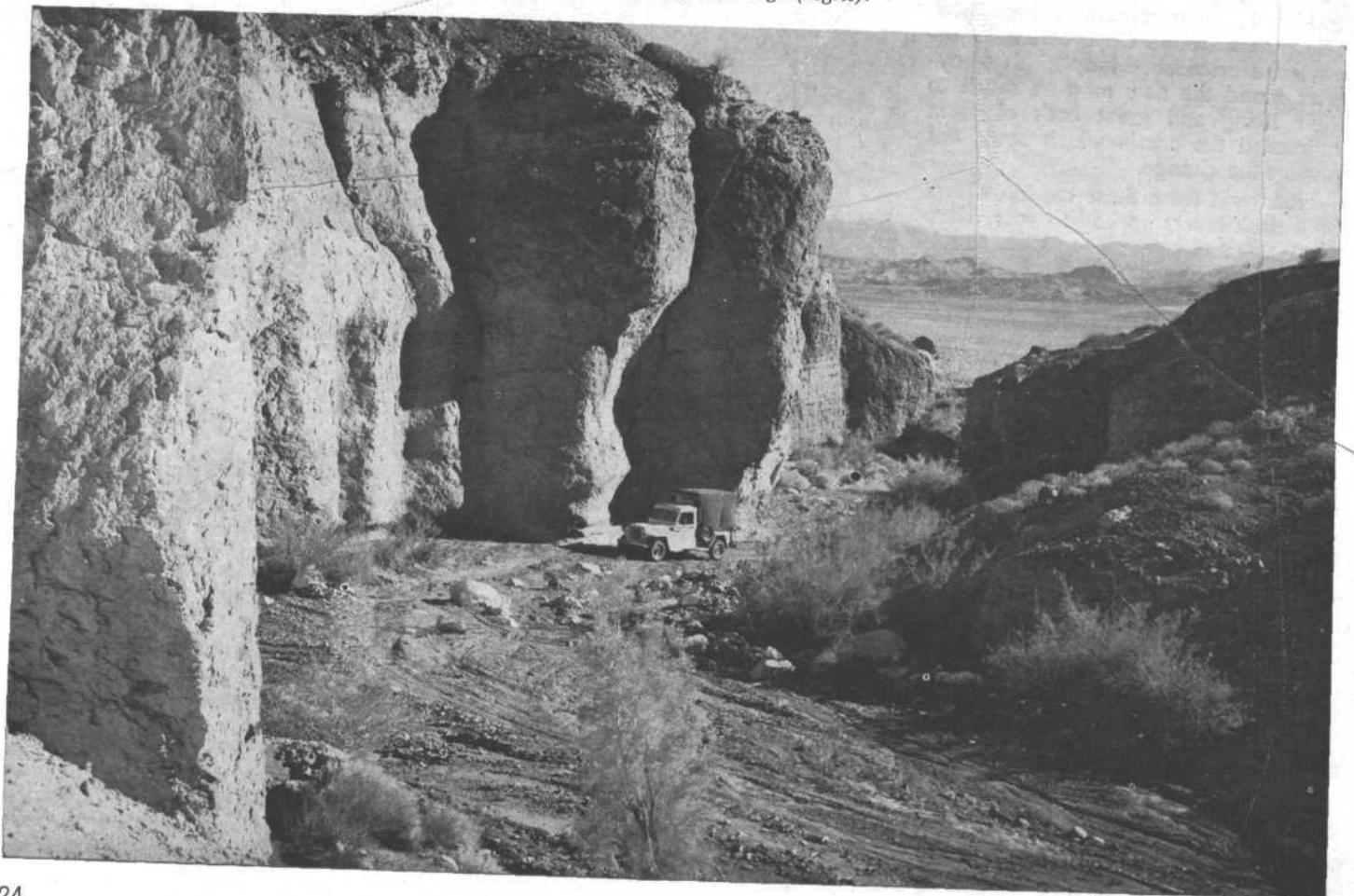
Before the war, the entire fossil region was open to collectors and visitors. In fact, *Desert Magazine* readers and other interested Californians paid filing fees which made the area part of Anza state park. However, our dryland Navy has done a very successful job of closing off most of the region by throwing a corner of a bombing range across the old Butterfield stage road, the only passable way into Carrizo creek, and by occasionally bombing along about 100 yards of that road. Warning signs now keep visitors out of the badlands and from the site of old Carrizo stage station, and the area

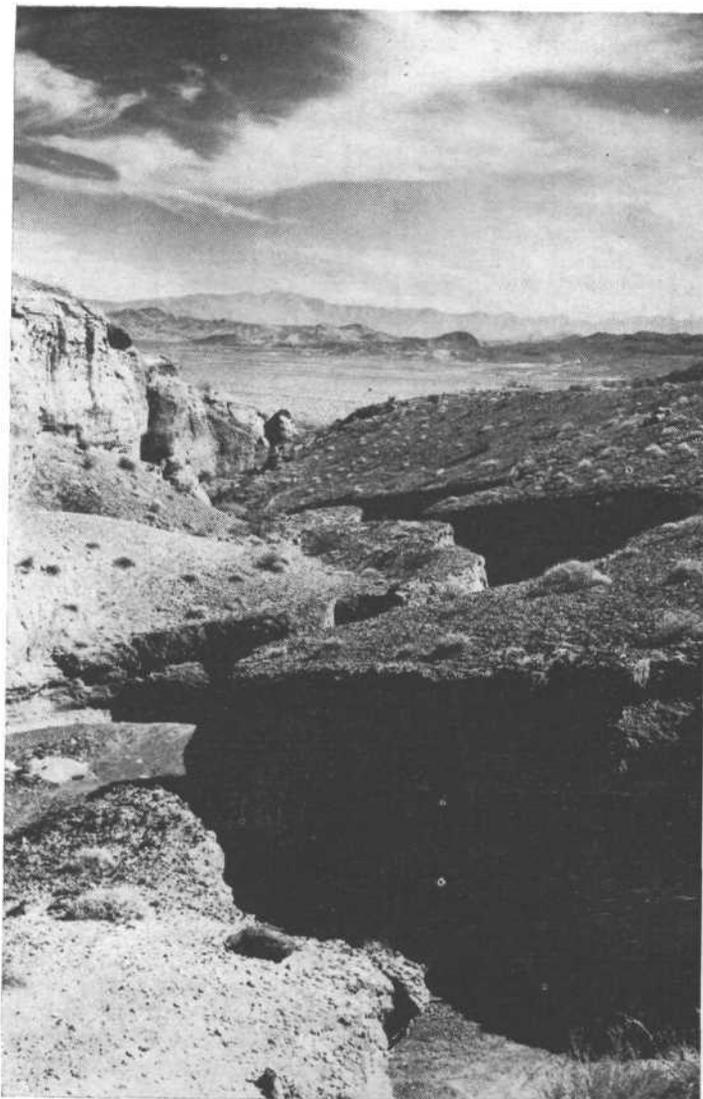
the Navy is not using has been leased to cattlemen. There is talk of making the historic trail part of the proposed Imperial highway, and if so the Navy may be asked to explain why it cannot bomb on other sections of its big range and reopen the road.

At any rate Alverson canyon, the last time we visited it, had not been "liberated" for desert lovers by the Navy. And some of the best fossil hunting ground in Coyote mountain is found near it. In case some visitors might become confused, it might be well to explain that Coyote mountain also is known as Carrizo mountain, and that Alverson canyon is also known as Shell and Fossil canyon. The turn-off to the canyon is 27.5 miles west of El Centro on a road to the north which is signposted for the small desert community of Ocotillo.

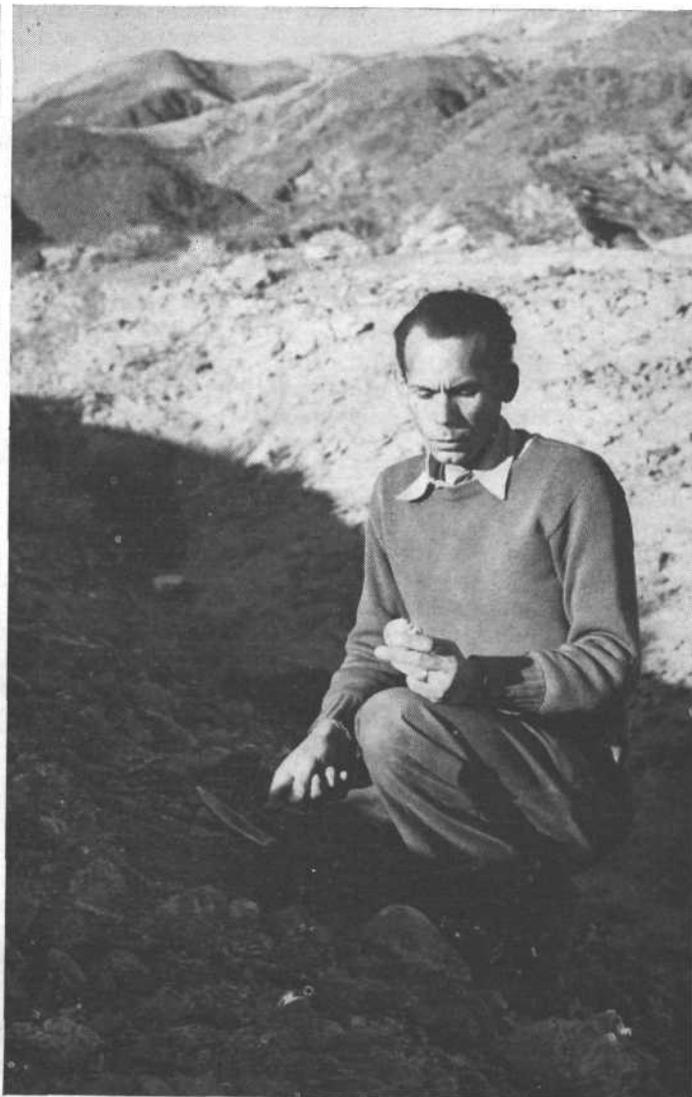
Through Ocotillo, .9 miles from the highway, the road is good. Beyond the community, it continues as two ruts up the bajada. There are a few traces of road to the right, but the driver should keep left to 3.5 miles where the road zigs sharply right up a wash, and then zags left. The gravel of this wash sometimes is firmly packed and some-

Cars can be driven up the bed of Alverson canyon, but drivers should proceed with caution. This spot, three-tenths of a mile from the mouth, offers easy access to fossil beds along the ridge (right).





Alverson canyon, in the south flank of Coyote mountain, has been famous for its fossil shells and corals for more than 60 years.



The author examines one of the Coyote mountain fossils dug from the side of a shallow wash west of Alverson canyon.

times causes cars to stall. At 3.8 miles the fossil-hunter should take a faint track which cuts left over a little rise and out of the canyon. This is the point where it is simple to become sidetracked. The left branch continues up a rough streambed beside a ridge, until it bumps over boulders to the mouth of Alverson canyon at 4 miles from the highway.

The condition of the wash and the type of vehicle will determine whether you want to drive up Alverson. If so, a point .3 miles from the canyon mouth is the best place to stop and there a faint trail over the ridge to the west will lead to fossil areas. However, most drivers may prefer to stop even farther back on the bajada just before the road zig-zagged at 3.5 miles. The hike is pleasant in the cooler months, and the strange gorge of Alverson can be seen best on foot.

The stream has undercut the walls in places, making shallow caves. So it

is possible, no matter how high the sun, to find some shade in Alverson canyon.

Even when the afternoon was the hottest, our retreat was relatively pleasant. Provided with plenty of water, shade and a little common sense, men have little to fear from even more intense desert heat. Exertion and direct exposure are sunstroke's greatest allies. And when the sun had dropped far enough to form patches of shade in the canyon, our rock-hunting instincts came out of hibernation. There were many fossil shells in the walls around us and in huge blocks of sandstone in the wash. Oyster shells were plentiful, *heermanni* and the small *vespertina*, and probably other varieties that we did not recognize. There were places where we found both halves in place, and it was in this canyon that Hanna told of seeing specimens a foot in diameter.

Eva chipped the almost perfect fos-

sil of a large sea dollar from the rock while Lucile was extracting turret shells from a great block of sandstone in the wash almost beside the car and I was recovering oyster shells from a softer deposit. As it grew cooler, we found a way up the west wall of the canyon. Coming back to a spot almost above our cave, we found the top of the ridge covered with shell casts, and in some cases the actual fossils, which remained after the softer matrix had weathered away. Most of them were fretted through long exposure to moisture and erosion. But across a miniature wash, still farther west, we discovered a layer of soft shale or clay which contained many specimens and which could be dug into quite easily with the little pick and shovel we carried.

Digging in those clayey banks had, for us, all the uncertainty and fascination of playing a slot machine—with none of its financial headaches—and the payoffs were more frequent. You

never knew what you were going to hit—cone shells, turritellas, pectens, clams, olivelas, fig shells, coral. Possibly even some specimen which has not yet been reported from this area. Most of them, as they came reluctantly from their bed, were only casts, or casts coated with a thin layer of brownish crystalline calcite. But the details were preserved well enough on most of them that they could be recognized, and every now and then a perfect fossil was recovered. We found that careful work was necessary to get the specimens out in good shape, and we were glad that we had brought newspaper and cotton to wrap them in.

Our grab-bag collecting was so fascinating on that first trip that it was dark in the canyon when we returned to the car. That was regrettable, because I had driven just about one-tenth of a mile farther up Alverson than I should have and, because of the heat, I had failed to turn the car around while there was light enough to see what I could do. It was impossible to judge distances in the dark of the narrow gulch, and it was only after much flashlight waving by Lucile and Eva that I managed to get pointed down stream. At that, I cracked a windwing on the sloping roof of the cave as I turned into it.

At the mouth of Alverson, it was necessary to get out with a flashlight and search for the disturbed places where our tires had passed earlier in the day in order to determine where the road ran. It was with real relief that we reached the deep ruts of the sandy wash again. I would not recommend a collecting trip to Alverson in the summer and I would suggest that those visiting it get out before dark.

While these fossil shells are fascinating reminders of ancient life, they are not "pretty" in the rockhound sense of the word and they cannot be cut or polished. Nor should visitors go to Alverson expecting to see fossil reefs towering above the clay. Actually they are so covered with sediments and eroded that in the lower parts of the canyon, at any rate, they can only be located by finding pieces of coral float or digging into the formation. But the fossils of Alverson will be fascinating for those interested in desert geology and for anyone who would like to step out of the pattern of man's self importance for a moment and glimpse the vast antiquity of our world compared with the tiny time scale we have thus far occupied in the scheme of things.

Those corals of Coyote mountain certainly were no great shucks at thinking. Had they been, perhaps they wouldn't have stayed corals. But I suspect that in an indefinite sort of way they felt the life-long task of cementing

themselves away from their fellows and into their own tombs, while absorbing anything in the food line that came within their reach, was pretty important stuff. Their coral city, undoubtedly, was the whole world.

Well, that world passed away, destroyed by so simple a thing as a change in the character of the sea water, and today it is buried and jumbled in the lonely desert. And while we human beings haven't much time, as we rush about the important business of eating and building our

own shells, it might just possibly be worth while to go out and get acquainted with the fossil coral of Alverson canyon. Yesterday there was an ocean above Alverson. Neither you nor I nor the learned geologists nor the physicist who is fiddling with the ingredients of the atomic bomb can tell what it will be tomorrow. But today it is a fascinating page in the book of wonders of the world we live in. And even though the book is only half opened, there are lessons on the page for those who will read.

Rock Climbers Reach Bottom of the Cave of the Winding Stairs

Two expeditions have attempted in recent months to complete the exploration of the mysterious Cave of the Winding Stairs in the Providence mountains of California.

This almost vertical cave was discovered by Jack Mitchell nearly 20 years ago, and he almost lost his life in an attempt to reach the bottom of it on a rope lowered from a windlass at the entrance.

Since the publication in 1941 of Edwin Corle's book *Desert Country*, in which the story of Mitchell's adventure was told in detail, interest in the exploration of this cavern has been revived.

A year ago John Scott Campbell, instructor at California Tech, undertook to measure the depth of the cave with radar. The attempt was unsuccessful due to the zig-zag formation of the cavern, and to the moisture at lower levels which has caused a heavy accumulation of dust on the rock surfaces. The dust absorbed the sound waves, making accurate readings impossible.

Later a party headed by Walter S. Chamberlin of California Tech and William R. Halliday representing the National Speleological society descended into the cave. This was purely a scientific expedition, and the results have not been made public.

More recently Pete Neeley, speleologist, teamed up with five rock climbers of the Sierra club—Clem Todd, Lee Lewis, Carlton Shay, Wayne Mann and Ruby Wacker—to prowl the subterranean depths. Their adventure was reported in a recent issue of *Mugelnoos*, publication of the Sierra club's Rock Climbing section.

Belayed on ropes from the surface, the climbers found that the cavity consisted alternately of narrow chimneys which they barely were able to squeeze through, and spacious chambers with ceilings as high as 50 feet. The descent

required all the skill of the expert rock climber.

Stalactites line much of the route, and when the rough walls closed in to form narrow chimneys the climbing was painful in places. The three members who finally reached the bottom returned to the surface with their clothes in shreds.

Based on the lengths of rope used, they estimated the depth of the cavern at 500 feet. The descent required 2½ hours, and the climb back to the surface 9½ hours.

They used carbide lamps, and extra carbide was lowered in the same knapsack with lunch. The sack would hang up on ledges and then fall long distances—with the result that the food became well seasoned with carbide and ammonia inhalant before it reached its destination deep in the hole.

At the bottom were four rooms with fantastic formations of stalactites, stalagmites and crystalline columns.

The climb out was made more difficult by the elasticity of the nylon rope they used. As one of the explorers exclaimed, "it gives one a frustrated feeling, like trying to swim up a waterfall."

Once during the ascent Carlton Shay's light went out, and that further complicated his difficulties.

Twenty years ago when Jack Mitchell was pulled out unconscious after spending two days in the cavern, he closed the entrance and turned his attention to the development of more accessible caverns. He built trails and guest accommodations and has provided scenic guide trips for thousands of visitors annually.

Recently he announced his desire to retire from active management of the caves, and a movement has been initiated to have the property taken over as a California state park. He has stated his willingness to relinquish the caves for park purposes.

LETTERS . . .

When a Gila Monster Bites . . .

Boulevard, California

Desert:

You have printed a lot of guesswork about venomous reptiles. Here's something from one who really knows. In 1930-31 I was manager of the Mountain lion farm, zoo and reptile garden at Two Guns, Arizona. There I saw a young man bitten by a gila monster.

There is a simple and quicker way to open a gila's jaws when he clamps on than using a screwdriver or pliers. In the winter of 1931-32 I ran a snake show at Long Beach.

My partner handled the rattlesnakes like I would a gopher snake. But he was scared to death of my two gila monsters, while I handled them as a chuckawalla. If properly handled they are not likely to bite. But if they do, just jab a sharp instrument, a match, a toothpick or a twig into their nostrils, and they will immediately unclamp their jaws.

As to the poison of the gila monster: They do not have fangs like a rattler. They grab and hold on, and chew while they are inflicting the wound, and all the time they are pumping in the poison which is in their lower jaw. If he hangs on long enough you may not survive. The anti-venom serum ordinarily used is of no value in the case of gila poison, which is the same as that of the cobra.

GUY O. GLAZIER

• • •

Mt. Timpanogos Is in Utah . . .

Los Angeles, California

Desert:

Your Desert Quiz in September was very interesting, but the quiz editor failed to tell us where to go to climb Mt. Timpanogos. The answer to question No. 20 was omitted.

Perhaps he has no desire to climb Ol' Timpanogos. Neither do I, with all the climbing I have yet to do in the High Sierras — and a peak 40 miles southeast of Salt Lake City is too far away, when bigger and better horizons can be seen from the top of Mt. Whitney.

W. PHILLIPS

Apologies to Reader Phillips and others who wondered why we omitted the answer to Quiz Question 20. We asked the printers, and they didn't know either. But anyway, Ol' Timpanogos is in Utah — and a very respectable mountain even if it cannot be seen from the top of Whitney.

—R.H.

History From an Old-Timer . . .

Rowood, Arizona

Desert:

I have been reading about Camino del Diablo in your September issue, and I wish to correct your information as to the death of the Mexican family where the rock circle and the crosses were erected along the road near Tinajas Altas.

About 65 years ago I was down there with two old Papago Indians who were living near the head of the gulf at the time of the tragedy. I asked them about the crosses. They said Mexicans were buried there.

"What caused their death?" I asked them.

"We killed them," was the reply.

"Why did you do that?" I asked.

"For the loot," they said.

When I pressed them for further details they explained that they obtained some tobacco and other things, including some buckskin bags with gold in them. They said they had no use for the gold, so they emptied it among the greasewood bushes, but kept the bags, which they could use.

Later I married the daughter of one of the old men. When I read your article I asked my wife if she remembered the massacre. She said she recalled what her father had told her about it, and that it was just about as I have stated above.

In those days Mexicans did not travel with horses and wagons, but in oxcarts made from mesquite wood. They used prickly pear cactus to grease the axles. Also, they carried water, not in demijohns, but in goatskin bags. So the version of the tragedy could not have been as written in your magazine.

Having lived so many years on this southern Arizona desert, I know much of its history. The Papagos committed so many murders along Camino del Diablo that the Mexicans finally sent in troops and rounded up many of them and took them to Caborca where they were turned loose.

Please pardon my intrusion, but I know your editors try to get the true facts when they can and I happen to have an old-timer's knowledge of this country.

THOMAS CHILDS

• • •

More Color for the Desert . . .

Long Beach, California

Desert:

May I make a suggestion — that we rockhounds and others help beautify the desert country by taking a few California poppy seeds on our trips and toss them out the car window and let the winds disperse them. There are other flowers that would do well also.

V. P. CUTLER

Pro and Con of Meteor Crater . . .

Philadelphia, Pennsylvania

Desert:

My attention has been called to your editorial concerning Meteor Crater, in which you take a strong stand in favor of the nationalization of the Crater, apparently on the grounds that the scenic aspects may be injured by the small amount of excavation that is going on on the southern rim in the way of mining silica sand.

I am afraid you have taken this stand without giving much attention or study to the other side of the question. As president of the company who owns the Crater, I can tell you that we have given both sides of the question the most thorough consideration.

Our motives are only in part actuated by the chance of private gain from exploitation of the Crater. We are just as importantly motivated by a desire to serve the public, to acquaint as many people with the facts about this unique phenomenon, and to serve the ends of pure science by carrying the exploration for the meteorite just as far as possible. . . .

No public organization could be more careful of the needs and interests of the American public at the Crater than we are. We charge an entrance fee, it is true. So does every National Park and practically every National Monument. In fact our scale of fees is lower than that of any National Park in the United States.

Without such an entrance fee it would, of course, be impossible to keep at the Crater the intelligent and courteous curators, who are devoting themselves fervently to one of the toughest jobs I know—16 hours a day 7 days a week — of receiving visitors, operating the lecture machine, and caring for the wants of travelers. They have carried out this assignment for the past two years while living in an automobile trailer parked on a hillside. I am delighted to say that more adequate quarters will be built for them this fall—including an attractive reception room for tourists.

We are engaged in mining silica sand (which incidentally is of such excellent composition that it can be shipped to the California coast in competition with any other such operation in the West) in a small area on the southern rim. The lessee who is doing this work has signed an agreement not to allow his excavation to cut into the southern skyline of the Crater, or to deface the Crater from the tourists' point of view in any way. He is also to record the geology of the ground he digs, and thus add his contribution to the scientific knowledge of the Crater. . . . The funds which we obtain from this opera-

tion will be devoted, in every way that we can devise, to the further exploration of the main problem of the Crater — the whereabouts and condition of the meteoric mass that made it.

M. MOREAU BARRINGER

Flippin, Arkansas

Desert:

For several years I have been thinking that Meteor Crater was a National Monument. Since reading the August issue of your magazine I have been questioning some of my friends and they too were under the same impression. I feel that many people will be disappointed to learn what I have learned.

I for one am going to see what can be done about it. Attached are copies of letters I already have written. Will write more. If we can get the National Geographic society interested in a move to save the Crater I feel it will be done.

LEWIS N. STEWART

Wausau, Wisconsin

Desert:

I am fully in sympathy with your editorial on Meteor Crater. I have visited the Crater and regard it as interesting and important as the Craters of the Moon, Saguaro Forest, Organ Pipe Monument and Joshua Tree Monument. I hope you people in the area can bring enough pressure on your congressmen to make Meteor Crater a National Monument.

JOSEPH M. SMITH M.D.

Tucson, Arizona

Desert:

I agree with your editorial view, that there are some natural assets in our great land which properly belong to all the people of the United States, and should not be exploited for private gain — and surely Meteor Crater is one of them.

Our state of Arizona undoubtedly has been delinquent in not having taken the initiative to place this unique natural monument in the custody of the National Park service many years ago.

I believe the present owners of the Crater have, now provided guide service for tourists, and have announced plans for some improvements there. But for many years they allowed it to remain there unattended and accessible only by a very rocky road. And now they are hauling great quantities of sand from the rim. This cannot continue without destroying values which can never be restored. Isn't there some way this destruction can be halted before it is too late?

G. C. NORCROSS

Desert MAGAZINE CLOSE-UPS

J. Wilson McKenney, who was associated with Randall Henderson in the launching of the *Desert Magazine* in November, 1937, and who later returned to the newspaper field, recently sold his Yucaipa, California, News, and plans to devote his time to freelance journalism.

"Mac" wrote many feature stories for *Desert Magazine* during his association with this publication, but the editorial and mechanical duties of weekly editor and publisher have made it impossible for him to do feature writing the last six years.

Following the sale of his property he purchased a jeep and plans to devote his time largely to illustrated western feature articles and travelogs, spending considerable time in the field gathering material. He and Ruth and their three children will continue to make their home in Yucaipa.

Ilon Barth, who has written about Manuel and Alyce Archuleta of Albuquerque for this issue of *Desert Magazine*, is a newspaper woman employed on the weekly *Beacon* at Grants, New Mexico.

She sells advertising, reports local

Protection for Ancient Relics . . .

Long Beach, California

Desert:

I would like to call your attention to something. About 15 years ago my husband and I heard about some giant Indian figures on the hills along the Colorado river north of Blythe, California. After walking miles in all directions we found them and considered them wonderful.

A few weeks ago I was with friends on my way to Blythe from Needles, and we saw a marker along the highway pointing to the figures, and a good road leading to them. But I was disgusted to note that people have been digging up the gravel mesa and cutting their names in the ground around the figures. Unless something is done to protect them I am afraid it will not be long before they are destroyed.

ELIZABETH CAILLAND

Two Varieties of "Sandspikes" . . .

Clemenceau, Arizona

Desert:

"Sand Spikes!" Your correspondents seem to be at a loss for a theory as to how they are formed. Well, the writer

news and reads proofs on the newspaper — and writes magazine feature stories in her spare time. Having spent all her life in New Mexico and Arizona, she knows the Indians well, and enjoys the warm personal friendship of many of them.

Norton Allen, artist of La Mesa, California, whose accurate and informative maps have been one of the most popular features in *Desert Magazine* since it was started, is now preparing a drawing showing the new Trona-Wildrose highway into Death Valley. The road is scheduled to be completed before the '49er Centennial pageant is staged on November 19, and will shorten the distance into the Death Valley Monument for many Southern Californians by 50 miles.

Norton's map will accompany a feature story written by Pat and George Sturdevant of the *Trona Argonaut* describing the ghost towns and other scenic features which will be made accessible by the new paved highway.

The story and map, with photographs, is scheduled to appear in the November issue of *Desert*.

A later number of *Desert* will carry a story written by Betty Woods about the experiences she and her husband have had in touring the desert country in an auto trailer. Both of the Woods are writers, and their trips often take them into remote regions where trailer drivers seldom venture.

can give you his theory, and it is backed by the opinions of scientists who have described similar formations found in many places. Some of them at least are the result of lightning striking in moist sandy places. The heat generated by the high voltage lightning partially melts the silica and leaves a near glassy core. They are numerous along sandy beaches in thunderstorm areas, and as you say are often found in the sandy deserts also. I have heard them called "petrified lightning" in some localities. We enjoy *Desert Magazine* immensely.

J. B. ARMBRUST

Mr. Armbrust: The "sandspikes" you are discussing are known as *fulgerites*. Often they are hollow. As you suggest, they are formed by the fusing of silica by the impact of lightning. In the sandspikes discussed in Harold Weight's story in September *Desert Magazine*, the crystalizing agent generally is calcite. They are never as hard as *fulgerites*, and never hollow. Also the shape differs from that of *fulgerites*.

—R.H.

HERE AND THERE . . . on the Desert

ARIZONA

Hopi Teacher-Artist Honored . . .

HOLBROOK—Fred Kabotie, 49-year-old Hopi Indian whose home is at Shongopovi village, on Second Mesa in the heart of the Hopi reservation, has been nominated as a candidate for the high honor of Indian of the Year. This annual selection is made by the Council of American Indian tribes from a field of 12 candidates. Kabotie is the first outstanding Hopi painter to come from the desert mesas. He has won honors at many art centers: Philbrook at Tulsa, Grand Central gallery in New York City, the New Mexico museum at Santa Fe. His Kachina Dance water color won first prize at the Arizona State fair art show in 1946, he won the Guggenheim Award of Merit in 1945. Refusing to commercialize his art, Kabotie teaches art and design in the high school at Oraibi, a neighboring Hopi village. He is revered and respected by his own people, has brought to them a new knowledge of fine art. He works both in water colors and oils.—*Tribune-News*.

Arizona Cotton Crop . . .

PHOENIX—Arizona's 1949 cotton crop has been estimated at 450,000 bales, an increase of 37 percent over last year's record crop of 328,000 bales. Cotton was planted earlier this year, weather was favorable, most patches had a full stand.—*Yuma Daily Sun*.

Dinosaur Added to Museum . . .

FLAGSTAFF—Bones of the smallest, most ancient dinosaur yet discovered have been given to the Museum of Northern Arizona by Dr. Edwin H. Colbert, American Museum of Natural History, New York. The bones were found at the Ghost ranch at Abiqui, New Mexico, in deposits of Triassic age. These deposits are called the Chinle formation, are the same as those in which the petrified forest south of Holbrook occurred. Although the popular idea is that dinosaurs were of tremendous size, this most recent find was only about six feet tall. Carefully packed in plaster and burlap, the bones are now at the Flagstaff museum and by next summer will be on display if work progresses according to schedule. The animal was small, slender, walked on its hind feet like a kangaroo, scientists have decided.—*Cocoino Sun*.

Deer Hunters' Paradise . . .

KAIBAB NATIONAL FOREST—An opportunity to bag one of Arizona's famous Kaibab buck deer will be given to not more than 4000 hunters in two special open seasons this fall. The Kaibab North National forest, in the Grand Canyon National Game preserve on North Rim of the Canyon, is a special wildlife management area. The open season periods will be from October 6 to 13, and from October 15 to 23. Two thousand permits will be granted for each period. Both resident and non-resident licensed hunters may apply for the Kaibab permits. Application blanks to apply for a permit may be obtained from any hunting and fishing license dealer, must be mailed to state headquarters at Phoenix, Arizona. Non-residents must include a \$50 non-resident deer hunting fee, in addition to the \$5 application fee. Money will be returned if permits are not granted.—*Tombstone Epitaph*.

Fox Joins Dogs in Pound . . .

YUMA—Dogs held in the Yuma city dog pound on banks of the Colorado river vociferously protested, but Poundmaster Woodrow Thorn admitted a gray fox just the same. The thin little animal was picked up in a cabin on the Yuma mesa after a telephone call had asked the poundmaster to come and take out a coyote.—*Yuma Daily Sun*.

Navajo Surgeon to Retire . . .

GANADO—Dr. Clarence G. Salisbury, who came to the Navajo Indian reservation 23 years ago on a temporary assignment and who has been superintendent of the Ganado Mission and medical director of Sage Memorial hospital ever since, has announced he will retire next spring. During the past quarter century the doctor has been successful in making the powers of the white man's medicine known in some of the most remote hogans on the 26,000 square miles of Navajo land. A 12-bed hospital greeted the new superintendent in 1927. The hospital is now a 150-bed institution. Known as Dr. Tso, or Dr. Big, the physician has been an outspoken critic of some of the U.S. Indian Service policies, particularly the lack in preparing Indians for absorption into off-reservation life.—*Gallup Independent*.

Petrified Forest Hours Changed . . .

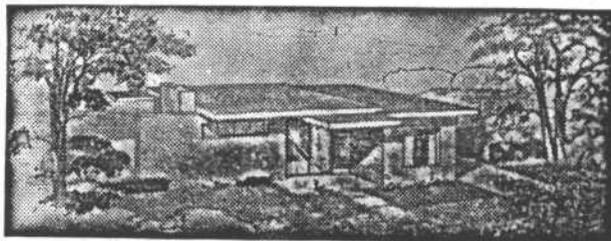
HOLBROOK—Hours during which the Petrified Forest National Monument is open have been cut to 12½ hours daily, it is announced by Thomas E. Whitcraft, superintendent. Gates are open from 6:30 a.m. to 7:00 p.m. Distance between gates is 14 miles, visitors are not permitted to enter the Monument after 6:30.

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MISCELLANEOUS

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Want to Lease a Cavern?

PHOENIX—Ready and waiting for development by someone with from \$75,000 to \$100,000 are the Coconino caverns, just off U.S. Highway 66 between Peach Springs and Seligman. The caverns are on state land, have never been fully explored, but are complete with stalactites, stalagmites, bats and a real Wild West history. The caverns are for lease to someone who will develop them as a tourist attraction. Some work was done prior to the war by the old WPA, but there is much more to be done before the caves could be exploited. The Coconino caverns are believed to wind seven or eight miles underneath the ground in the rolling cedar-dotted country. Explorers at one time found several skeletons in the caverns, with U.S. mail pouches lying near by. Although never identified, the skeletons were presumed to be the remains of hold-up men of the early days.—*Galup Independent*.

Bisnaga In the News Again . . .

MORRISTOWN—While the controversy still continues over whether or not the bisnaga or barrel cactus can or cannot maintain human life by furnishing its liquid to thirsty desert travelers, another incident favoring the cactus has been reported. Lost overnight on the hot desert out of Wickenburg, 60-year-old Edward Ashurst, attorney, was found next day by searchers. He was chewing on the pulp of the barrel cactus. He said that several hours earlier he had smashed open a bisnaga and relieved his thirst with the moist pulp. He carried some of the pulp in his shirt as he started crawling across the desert. He said he rubbed his face with the pulp to keep from losing consciousness. Ashurst had just broken open a second cactus when found by members of a sheriff's posse. A tire blowout left Ashurst stranded on the desert.—*Los Angeles Times*.

Antelope, Elk Plentiful . . .

TOMBSTONE—Big game hunters of Arizona had a chance at the fleet antelope in four specified areas of the state late in September, and from November 17 to 30 will be permitted to shoot elk, Arizona's biggest game animal. Application blanks for elk hunting licenses are available from hunting and fishing license dealers, the 2850 lucky hunters will be chosen by lot.—*Tombstone Epitaph*.

TO LEASE FOR DRILLING—Potential Borax land. Sec. 35, T. 11 N., R. 7 W., S. B. B. & M. Five miles from Boron, 1/4 mi. from Kramer. Good terms. 1700 51st St., Sacramento 16, California.

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Famed Indian Scout Dies . . .

WILLIAMS—Believed to be probably the oldest Indian known, Jim Mahone, 120-year-old scout who helped trail and capture Geronimo, last of the outlaw Apache chiefs, has been buried. He died August 6 at Peach Springs, was buried at the Seligman cemetery after he had been honored with both Indian services by his Walapai brethren and military services in recognition of his services to the U.S. army. When General Crook was put on the trail of the warring Apaches with orders to subdue them once and for all, he called upon Jim Mahone. Many other Indian scouts had been captured, tortured and killed by the Apaches, but Mahone stayed on the job until the last renegade band was brought under control. An old man 40 years ago, Jim had been for the past four decades a familiar figure about the streets of Seligman, Ashfork, Williams and Prescott. —*Williams News.*

Coachella to Remove Palms . . .

COACHELLA—A long-range program aimed at removing palm trees from main streets of the city and replacing them with evergreens or Chinese maple has been approved by the Coachella city council. Palms, councilmen decided, are too expensive to maintain.—*Desert Barnacle.*

Indian Country Art Display . . .

LOS ANGELES—A selection of paintings by Louis Perceval, principally landscapes and Indians of the Navajo country, will be on display at the Southwest museum in Los Angeles during October. Both oils and watercolors are included. The special exhibit may be viewed daily except Mondays from 1:00 to 5:00 p.m.

Centennial Event Announced . . .

DESERT HOT SPRINGS—October 8 and 9 are the dates announced for an old-fashioned '49er Centennial celebration which is to be held in this desert village. General chairman of the event is L. W. Coffee, and the affair will celebrate the discovery of gold in California 100 years ago. A parade of mounted horsemen and horse-drawn vehicles will be a feature of the two-day celebration.—*Desert Hot Springs Sentinel.*

Dam Flood Damage Suit . . .

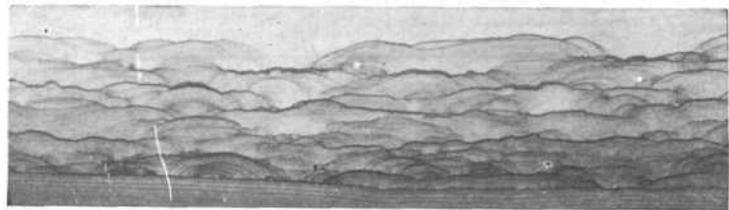
NEEDLES—Uncle Sam has said the City of Needles can sue him. So action in the southern California federal district court is expected to be instituted soon in an attempt to recover flood damages caused by the construction of Hoover and Parker dams on the Colorado river. Damages

claimed amount to approximately \$54,000 for the City of Needles and \$94,000 for the California-Pacific Utilities company. A bill authorizing the suit against the government has been approved by congress. To sue Uncle Sam, the plaintiff has first to get his permission.—*The Desert Star.*

Watering Troughs for Deer . . .

INDIO—The Coachella Valley Game Propagation club is considering a project to install watering troughs along the Coachella branch of the All-American canal where it skirts the foothills on southwest edge of Coachella valley. J. H. Snyder, Coachella Valley County Water district manager, has indicated some type of water troughs might be permitted. Death of a three-point deer in the canal, where he evidently sought a drink of water, brought the matter up for consideration.—*Indio Date Palm.*

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WORLD'S MINERALS

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CALIFORNIA

Home-Building Authorized . . .

VICTORVILLE—When President Truman signed the military housing bill, this desert community was assured of a \$5,000,000 home-building program for the reactivated Victorville Air Forces base. The government will underwrite 90 percent of the cost of the project. Actual construction is slated to begin this fall. The Victorville project involves 400 housing units on

the air base, 250 in the city. The homes will provide housing for the 3000 military personnel to be stationed at the base. There will be in addition some 300 civilian workers. Monthly payroll is estimated at more than a million dollars.—*Victor Valley News-Herald.*

Annual Salton Sea Races . . .

DESERT BEACH—The American Power Boat association's 1949 motor boat regatta will be sponsored again this year by the Coachella Valley Yacht club and dates of the speed event are October 7, 8, 9 and 10. Kay Olsen is the club's commodore. In the October races approximately 200 leading power boat racers will attempt to break existing world's records on the Salton sea, the world's fastest water course. Lying 258 feet below sea level, the Salton sea has been officially recognized as "the fastest body of water in the world." Some 35 of the 55 world's records have been established on the inland desert sea. The Indio chamber of commerce is lending support to the 1949 event.—*Desert Barnacle.*

Death Valley Pageant Nov. 19 . . .

DEATH VALLEY—A historical pageant commemorating the trek of the Manly-Jayhawker parties through Death Valley in 1849—just 100 years ago—is to be presented as a Centennial celebration in Desolation canyon the weekend of November 19. The affair is being sponsored by the Death Valley '49ers, Inc., with active support of four southern California counties—Los Angeles, Kern, Inyo, San Bernardino. Supervisor John Anson Ford of Los Angeles is secretary of the organization. Money-raising efforts have been highly successful, and interest in the historical observance is spreading to adjoining states, particularly Nevada, from where a great deal of support has already been offered. The pageant will portray the hardships encountered by the early-day emigrants virtually trapped in the valley, will tell the story of their escape.—*Inyo Register.*

Camel Corral Proposed . . .

INDIO—To add photographic background and atmosphere to the site of the Riverside County Fair and National Date Festival, construction of a colorful camel corral at the fairgrounds is being considered. A model has been completed by Harry Oliver, editor of Desert Rat Scrapbook. The proposed camel shelter will probably have to wait until after construction of a new \$60,000 exhibit building has been completed. Real camels are a feature of the Date Festival held each year in February, if the corral can be built the fair board hopes to obtain camels as permanent livestock.—*Indio Date Palm.*

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Lure of a Lost Mine . . .

BRAWLEY—Defeated by the desert on his first try, a Brawley prospector has returned to his search for "Hank's Lost Mine" which he believes is near Borrego Springs. On his first attempt in August, he was driven back to civilization when he ran out of water and couldn't locate a well he sought. After a short rest he returned to his quest. His story is that a friend, Hank, had told him how to reach a mine which Hank visited six weeks out of each year. In those six weeks Hank claimed he took out enough gold to finance him for remainder of the year.—*Indio Date Palm.*

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NEVADA

Range Conditions Better . . .

BATTLE MOUNTAIN — Range conditions in the 17 western states were much better this past spring and summer and are holding up well this fall, according to the U.S. department of agriculture. Range feed in New Mexico, Arizona, Nevada, Utah and other grazing states was rated the highest since 1941, cattle are in good flesh. On the Navajo reservation and other reservations in Arizona, New Mexico, Utah and Colorado sheep and cattle were in top condition — much of the usually barren Navajo land looked the best it has in years. — *Battle Mountain Scout.*

Speeding Cars Kill Rabbits . . .

TONOPAH — Between Tonopah and Carver's ranch, a distance of 64 miles, 150 freshly-killed jackrabbits were counted on a recent Sunday morning, all victims of Saturday night automobile traffic. The desert rabbits are attracted to the highway by green growth along the shoulders. They come after sundown. Blinded by the lights of speeding cars, they become confused and are run down in great numbers. The rabbit population is apparently up, for more dead rabbits than usual have been seen this summer on most of the paved highways of the Southwest. — *Times-Bonanza.*

Large Chunk of Aragonite . . .

TONOPAH — A chunk of aragonite weighing 16½ tons — believed to be the largest ever mined — was taken from a 50-foot shaft on the C. C. Boak property 40 miles north of here recently, and now rests on cribbing especially built for it. Eddie Connolly, with one helper, Frank West, hoisted the huge burden from the shaft. He has the Boak property under option. Aragonite takes a beautiful polish, the Nye county deposit is said to be of excellent quality. Connolly is installing one of the largest rock saws in the country at his Tonopah shop, will reduce the huge aragonite chunk to ornamental pieces. — *Times-Bonanza.*



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Hawthorne Will Remain City . . .

HAWTHORNE—Citizens of Hawthorne have voted by a close majority to retain the city form of government. A recent special election called on the question of disincorporation resulted in Hawthorne remaining a city. The vote was 311 for disincorporation, 345 against. The village has 873 registered voters.—*Mineral County Independent.*

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Reseeding Program Unsuccessful . . .

WASHINGTON—Attempts to reseed Nevada and some other western range lands by dropping clay pellets from airplanes reportedly have failed. A survey by Gerald M. Kerr, chief of range management for the bureau of land management, revealed the experimental area in Nevada showed no indications that any of the seeds in the clay pellets had germinated. The Nevada area was seeded with crested wheat grass during November and December of 1948. "From these experiences it appears that the millions of acres of western lands in need of reseeding will have to be planted with drills," Kerr said. The 11,000-acre test is located in northeastern Elko county. Reseeding was tried on both sagebrush land and on a large acreage burned in August of 1948. Earlier experiments had been carried out in Arizona and other western states. While the pellet program was being carried out, seeds were drill-planted in other plots. These now have a fair stand of grass. Crested wheat grass is native to Russia, is used for most reseeding projects on western grazing lands because it is a good grazing grass and is drouth resistant. It grows a foot and more in height.—*Caliente Herald.*

Resort Hotel Construction . . .

LAS VEGAS—Apparently no drop in the tourist business is anticipated by those who make it their business to watch the trends, for more than three million dollars worth of resort hotel construction is planned or underway in Las Vegas alone, according to the chamber of commerce. Biggest single project is a new hotel estimated to cost \$2,000,000. It will be called the Desert Inn, is scheduled to open New Year's eve. Permanent population of Las Vegas is now reported to be more than 25,000. In 1940 it was 8000.—*Salt Lake Tribune.*

Water High in Lake Mead . . .

BOULDER CITY—Lake Mead is at its highest point since 1941 and run-off water into the reservoir is just holding its own with discharge through the powerhouses, according to a recent report from Hoover dam. Late summer rains, it was considered possible, might raise the level in the lake even more.—*Caliente Herald.*

FALLON—Fred Wright, previously employed at Tule Lake, California, has been named wildlife biologist for the state of Nevada fish and game department and has established headquarters in Fallon. His main work will be migratory waterfowl investigation at the Sillwater Wildlife Management area. Development of the area has drawn the attention of U.S. Wildlife service engineers, a group recently inspected the project in Carson Sink.

For the first time since 1943, hunters of Nevada this season were permitted to legally shoot sagehens. Open season was August 21 and 22. Out-of-state sportsmen were not let in on the two-day open season.

**NEW MEXICO
Creosote Bush May Have Uses . . .**

LAS CRUCES—The lowly creosote bush or greasewood may contain components of economic value. A study is now being conducted at the State college, New Mexico agricultural experiment station, to find out. First step in the research is reported in a new bulletin with a high-sounding title, "The Nordihydroguaiaretic Acid Content of the Creosote Bush." This acid is used to delay rancidity in animal fats, was much in demand during the war, but under present conditions a very small amount fills the market demand. So the New Mexico scientists are seeking other more valuable components in the creosote bush, believe they are on the trail of some worthwhile discoveries. Creosote is one of the most abundant growths on the Southwest desert.—*Las Cruces Citizen.*

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Inter-Tribal Ceremonial Praised . . .

GALLUP — Blessed with perfect weather during its four days August 11-14, the annual Inter-Tribal Indian Ceremonial with its afternoon and night dances and exhibit of Indian crafts, was this year the "most successful ever," in the opinion of visitors and members of the Ceremonial association. M. L. Woodard is association secretary. Plains Indians from Wyoming, Montana, South Dakota and Oklahoma joined with the Southwest Navajos, Pueblos, Apaches and others in staging typical dances of their tribes and villages. Dances ranged from wild war chants with frenzied leaping and contortions to the sedate harvest and healing ceremonies. Grand prize for all dance groups went to the dramatically-costumed Kiowas from Oklahoma. Quality of craftsmanship shown at the 28th annual Inter-Tribal exhibit was better than ever before, showed an increasing interest among the Indians in their native crafts.—*Gallup Independent*.

A New Approach . . .

LORDSBURG—Casting himself in an unusual role, State Game Warden Elliott Barker has issued a statement declaring that "more fishermen should get into the Charette Lakes and take some of those big trout and ring perch out of there." According to Joe Hendricks, game department fisheries biologist who recently completed a survey of the two lakes, the lakes aren't fished "half as much as they could stand." They are located about 20 miles northwest of Wagon Mound, New Mexico. The lakes have been heavily stocked with both rainbow trout and perch starting in 1947.—*Lordsburg Liberal*.

Farm Wage Rates Higher . . .

ALAMOGORDO — Farm laborers in New Mexico this year are receiving an average of \$107 per month with board, \$8 more than last year and \$5 above the U.S. average, according to the U.S. bureau of agricultural economics. Farm wage earners with houses furnished are receiving \$126 per month, \$4 below the national average. A significant change is that in the past five years output per farm worker has increased 250 percent, the report stated.—*Alamogordo News*.

Winter Cuts Wool Production . . .

LAS CRUCES — Wool production from the 1949 clip is the smallest on record in New Mexico, Arizona and the other western sheep states. The drop was largely the result of sheep losses during last winter's severe weather and the big blizzard. Average weight per fleece was above the 10-

year average, but number of sheep shorn was down 7 per cent below 1948 and 37 per cent below the 10-year average. New Mexico's 1949 production was 10,697,000 pounds compared with a 10-year average of 14,867,000 pounds; in Arizona the production was 2,615,000, the 10-year average is 4,081,000 pounds.—*Gallup Independent*.

UTAH

Indians Favor Oil Lease . . .

FORT DUCHESNE — Acceptance of a joint offer made by the Carter Oil company and the Continental Oil company to pay a \$5.63-per-acre bonus on lease of 4160.06 acres of land on the Uintah-Ourray reservation has been recommended by the Ute tribal council. The commissioner of Indian affairs in Washington must finally approve the lease. The Ute council also is considering bids on two other sections of land. In the proposal the companies agree to drill a 7500-foot well within a year, and to pay a one-eighth royalty on all oil produced. The tribal council has also recommended acceptance of a \$447,000 bonus offered jointly by Carter and Stanolind Oil companies on some 16,500 acres of reservation land near Bluebell, Duchesne county.—*Salt Lake Tribune*.

Utah Reseeding Is Praised . . .

MOAB—While attempts in Nevada apparently have met with failure, reseeded of high range lands on the Elk mountains in San Juan county, Utah, has been quite successful in the opinion of stockmen who recently inspected the area under guidance of Ranger Julian Thomas of the La Sal National forest. Stockmen visited the Round Mountain, Long Park and Kigalia areas where artificial seeding has been going on for the past few years. Various methods have been tried in reseeded desirable varieties of range grasses—including broadcasting from airplanes, the method that produced no results in Nevada. Reports of the inspection said there is a "luxuriant growth of grass," and that there is "no question as to the program's feasi-

bility." Profiting by information gained from these first experimental plantings, the program is to be continued on an enlarged scale.—*Moab Times-Independent*.

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To Improve Park Facilities . . .

CEDAR CITY—A \$100,000 improvement program that is expected to be completed in time for opening of the 1950 season is to be carried out by the Utah Parks company in Zion, Bryce and Grand Canyon National parks and Cedar Breaks, according to Arthur E. Stoddard, president of Union Pacific railroad and Utah Parks company, a subsidiary. Facilities, lodges and hotels will be improved and modernized, Stoddard said. He believes the Utah parks are among the most scenic areas in United States.—*Salt Lake Tribune*.

Engineers Face 'Operation Beaver' . .

FORT DOUGLAS—A colony of beavers living five miles above the mouth of Red Butte canyon east of here has created a problem for Utah's army reserve engineers, a problem not found in military textbooks. One of several dams constructed by the beavers has diverted the left fork of Red Butte creek, spilling its waters down the canyon road for half a mile. The road has been virtually washed out. Problem is to get the stream back into its channel and rebuild the damaged road.—*Salt Lake Tribune*.

Dry-Farmed Wheat Produces . . .

DUCHESNE CITY—Maturing on a rainfall of 10½ inches and promising a yield of 40 bushels to the acre, wheat planted on Blue Bench, a sagebrush-covered mesa northwest of Duchesne City, will return a profitable harvest to two Washington state men who are dry farming 600 acres of the county-owned land. First attempt at dry farming on the land failed in the spring of 1948, an unusually dry spring and summer. Last fall the land was reseeded to winter wheat. It has done well on 10½ inches of rainfall, which is the average precipitation for the Duchesne area over the past 40 years. As a result, preparations for fall planting of hundreds of additional acres was underway last month. Promoters of the dry farming project are W. F. Herrett and Fred Piatkin.—*Vernal Express*.

Pigeon Makes Long Flight . . .

SALT LAKE CITY—Crippled and weary after a 2000-mile flight from Philadelphia, a brown and white pigeon was rescued on a Salt Lake City porch roof recently. The exhausted bird wore a leg band with a Philadelphia address. Through local police the owner was to be located.—*Salt Lake Tribune*.

Utah Proud of Turkeys . . .

SALT LAKE CITY—Utah is proud of the quality of its turkeys, and the state's cooperative marketing organization of turkey producers is considering a plan to promote a Utah brand. Ray S. Tanner, Provo, is acting president of the group. Turkey production in the state is expected to be 35 percent above last year, "a marketing system that will promote Utah quality birds is necessary," Tanner believes. Utah alone is expected to market some 24 million pounds of turkey meat this year. Nothing has been said about what the housewife will have to pay for her Thanksgiving bird.—*Salt Lake Tribune*.

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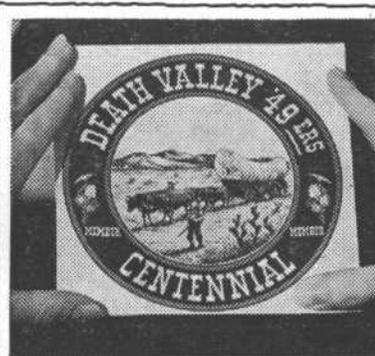
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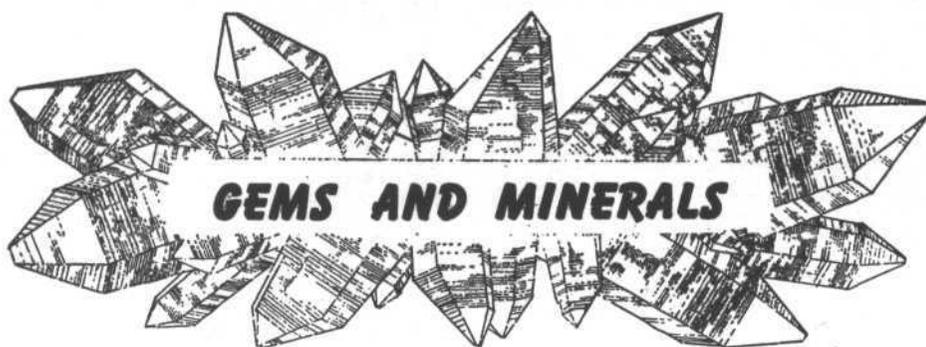
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PALM DESERT, CALIFORNIA

TRUE OR FALSE ANSWERS

Questions Are on Page 14

- 1—False. Death Valley was given its name by members of the Bennett-Arcane party in the winter of 1849-50.
- 2—False. Mirages are seen every month of the year.
- 3—True. 4—True.
- 5—False. Rainbow Bridge National Monument is in Utah.
- 6—True.
- 7—False. The fruit of the wild grapevine is not poisonous.
- 8—True.
- 9—False. The highest peak seen from the California desert is Mt. Whitney.
- 10—False. The Snake clansmen are assisted by the Antelope clan.
- 11—True.
- 12—False. The plumes of salt cedar are lavender.
- 13—True.
- 14—False. Calcite is too soft for arrow and spear points.
- 15—False. Bright Angel trail goes to the bottom of Grand Canyon.
- 16—False. Indian sand paintings are made with powdered pigment spread with the fingers.
- 17—True. 18—True. 19—True.
- 20—True.



NEW GRIEGER CATALOG IS HANDBOOK OF INFORMATION

Published for the rock collector, the lapidary and the jewelry craftsman, the 1950 *Encyclopedia and Super-Catalog of the Lapidary and Jewelry Arts* published by Grieger's of Pasadena, California, is by all odds the most complete handbook for gem-craft and its associated hobbies ever to come off the press.

Started years ago as a mere catalog, the Grieger year book has been enlarged this season to 192 pages with many hundreds of halftone and line illustrations covering a wide range of technical information, and making it in fact an encyclopedia of information for both the amateur and advanced craftsman.

A special section is devoted to detailed information for uranium prospectors including the formations in which uranium ore generally occurs, and the tests for identification.

Many new tools and products have been developed for the cutting and polishing of stones, and for jewelry craft, and Grieger's has been able to obtain photographs which present these in remarkable detail. A section on "Jewelry Making at Home" will be of interest and value to the amateur stone cutter and silver worker.

Much space also is devoted to the amazing new synthetic stone, Rutile, which many people in the trade believe will replace diamonds in popularity.

The book also includes two mapped field trips easily accessible to Southern Californians. Grieger's of course is in the business of selling the equipment and materials listed in the book, and prices are all plainly marked, but no reader will fail to appreciate the fact that this book goes far beyond the scope of a mere catalog and is in reality a handbook to be preserved as part of the craftsman's library.

A combined picnic and program comprised the August meeting of the Oklahoma Mineral and Gem society, Oklahoma City, when members gathered in the pavilion on the island at Belle Isle park.

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HERE'S INVITATION TO VACATIONING ROCKHOUNDS

Rockhounds of the Southwestern desert states who may be vacationing in the lush Northwest country are invited to attend one of the regular monthly meetings of the Rogue Gem and Geology club, Grants Pass, Oregon, held each first Friday of the month at 8:00 p.m. in auditorium of the public library.

Most recent field trip of the club was August 21 when 16 members went with Harold Wolfe, head of the local office of the state department of geology and minerals, to a mine in Evans creek valley where specimens of molybdenite were obtained. They then went to the F. I. Bristol silica quarry for more specimens. The trip took them over the old stage road through the historic town of Jacksonville, up to the Big Applegate river valley to Dutchman's peak. They stopped many places along the way to collect mineral specimens.

August field trip of the Long Beach, California, Mineral and Gem society was the group's annual picnic, and regular meeting was held August 10 in the Belmont Recreation center. Mr. and Mrs. Walter Grindle staged a nice exhibit for the July meeting, while at the August meeting exhibitors were Wm. Iondiorio, Mr. and Mrs. Harold Johnson, Wm. Jordan, W. G. Johnston, Mr. and Mrs. Charles Judd and Mr. and Mrs. E. A. Just.

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ADULT EDUCATION CLASSES IN GEOLOGY-MINERALOGY

Under the direction of the adult education program of the Los Angeles City schools, classes in geology-mineralogy are meeting in three of the Los Angeles evening high schools. The schedule: North Hollywood high school on Mondays; Hollywood high school on Tuesdays and Thursdays; Belmont high school on Wednesdays and Fridays. The time is from 7:00 to 10:00 p.m., classes are free and open to the public.

Work in the classes is designed to meet the needs of both experienced and inexperienced rockhounds, is valuable to adults who may care to make a hobby of collecting and studying rocks. Classes will also include the principles of geology, with particular attention given to the geology of southern California.

The dates of November 11, 12 and 13 have been set for the Clark County Collectors show to be held at the U.S. Naval Reserve armory in Las Vegas, Nevada. Features of the show include a display from the U.S. bureau of mines metallurgical division experiment station at Boulder City; display of specimens and lecture by Dr. H. H. Nininger of the American Meteorite museum, Arizona; guest exhibit by the Cedar City, Utah, Rock club.

The Clark County club is placing on display its half-ton block of pure selenite crystals and a memorial display honoring the late Dr. Wm. S. Park, noted amateur geologist and lapidary.

Lelande Quick, editor of the Lapidary Journal, is scheduled to attend the show.

Here's good news for rockhounds in the vicinity of Trona, California. Three new books are now available at the Trona library, according to Mrs. Lillian Best, librarian. The books: *Quartz Family Minerals*, by H. C. Drake; *Minerals and How to Find Them*, by E. S. Dana; *Getting Acquainted with Minerals*, by G. L. English.

What kind of rocks to look for on field trips and how to determine values through tests of weight, hardness, color, luster, transparency and shape was the information given to members of the Santa Monica, California, Gemological society when Geology Prof. W. R. B. Osterholt of Santa Monica City college talked at their August meeting. A series of instruction periods has been planned for future meetings. Society members will conduct the discussions.

START a Rock Collection: For yourself or shut-in. No. 1 box for \$1.00. No. 2 box for \$2.00. No. 3 box for \$5.00. Postage paid in U.S.A. Money refunded if not pleased. F. P. Townsend, Box 849, Twentynine Palms, California.

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AMONG THE ROCK HUNTERS

TWO GOOD MEETINGS ENJOYED BY GROUP

Two outstanding meetings were enjoyed in July and August by members of the Southwest Mineralogists, Los Angeles, California. At the July meeting Victor Arciniega, widely known teacher of the earth sciences, lectured on how to distinguish natural gem stones from their close rivals, the synthetics. Mrs. Al Hake, hostess, served refreshments.

At the August meeting Albert Hake entertained with colored travel slides and more of his mineral transparencies. He has collected minerals for the past 30 years, turned to cutting and polishing, now has an outstanding collection which has won him many awards at shows. Recently Mr. Hake has turned to mineral transparencies as a hobby, now has 600 patterns in his slides. He told members at the meeting that only about one in every five pieces cut is of sufficient color and transparency to transmit light. About 95 percent of the material used is of the quartz family minerals, he said.

The Georgia Mineral society, which holds monthly meetings in Atlanta, is working to establish a museum in space offered by Dr. Lane Mitchell at Georgia Tech. The club already has the start on a good collection of specimens, must set up cases in which to display the specimens.

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NOTS ROCKHOUNDS HAVE ACTIVE SIX MONTHS

The NOTS Rockhounds (California) were a busy group during the first six months of 1949. Two field trips to Lead Pipe springs were outstanding, with other field trips to Death Valley, Calico, Last Chance canyon and the King Solomon mine at Johannesburg.

At the NOTS hobby show the Rockhounds furnished the central exhibit. The display included cases of local minerals, outstanding specimens and cabochons. Punch was served from the Rockhounds' special punch bowl—a 400-pound geode from the Lead Pipe springs area.

The club did well at the National convention in Sacramento. Ralph Dietz won a cup for his display of spheres, Ralph Merrill won a cup for his display of miniatures and the club was awarded a ribbon for its recently-produced sound motion picture, "Rock Art."

At regular meetings during the year outstanding speakers have been heard on varied topics.

A new mineral society has been organized in Florida. It is called the Miami Mineral and Gem society. Henry B. Graves is society secretary, invites correspondence.

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LOS ANGELES LAPIDARY SOCIETY SHOW SUCCESS

The seventh gem show and picnic sponsored by the Los Angeles Lapidary society was held September 24 and 25 at the Montebello stadium in Montebello, California, with the best exhibits ever gotten together by this active group. Gem stones cut from virtually every type of cutting material in the world were on display, and there were representative displays from almost every lapidary and gem society in southern California. Experts conducted discussions and demonstrations on gem cutting and jewelrycraft. Modern equipment was shown in operation. An old-fashioned picnic topped off the friendly show.

The big show followed an interesting August meeting of the society at which Victor Arciniega, mining engineer and teacher of drystalography in Los Angeles public schools, talked on "Locating Gem Stones in California."

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The Feather River Gem and Mineral society continued its meetings through August, meeting once August 11 and again August 25.

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HUMOROUS TALK PROVES TO BE INFORMATIVE

A highly amusing but informative lecture on "Mining Law" was given by Victor J. Hayek, attorney, before members of the Pacific Mineral society, Lomita, California, at their August meeting. Hayek is secretary of the Mining association of the Southwest. He told of early gold rush days in California when laws were made to fit the occasion—and the territory. In 1872 the mining laws were revised, very few changes have been made since.

The attorney told how the gold rush brought people pouring into California, and said that in the mining areas gold dust and nuggets were used in place of money.

Collections made by members on field trips were displayed at the meeting.

MINERAL GROUPS HELP STAGE MINING CELEBRATION

The Rand District Mineral and Gem association, the NOTS Rockhounds and Trona's Searles Lake Gem & Mineral society all helped stage the Rand District Old Time Mining celebration held in Randsburg August 20 and 21. A mineral and gem display and an old-time rock drilling contest were big features of the event. It was sponsored by Rand post 298, American Legion. The three gem clubs were co-sponsors of the topnotch mineral display in the Randsburg American Legion hall. Exhibits by members of the groups and other rockhounds filled the entire first floor of the building.

The Searles Lake Gem and Mineral society and the NOTS Rockhounds of California got together for a potluck dinner at Valley Wells for their August meeting. A swimming pool provided recreation for the more ambitious members. A proposed trip to Telescope peak was discussed, and members were told of an active year ahead.

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FIELD TRIPS FOR BAY AREA SOCIETY

The East Bay Mineral society, Inc., Oakland, California, started off its new club year under leadership of Jerry Smith with two field trips. The July trip was a visit to the Henry Kaiser company quarry near Orinda. Forty cars of enthusiastic rockhounds took advantage of the opportunity to explore the working quarry. Specimens taken were green agate, ferrous iron, cubes of pyrite, quartz crystals, both three-sided and hollow.

On an August Sunday society members went to the New Almaden quick silver mines. Members filled their sacks with fine specimens of cinnabar, calomel, serpentine and eglestonite, plus a few specimens of native mercury in place. Excellent weather made a picnic lunch pleasant.

A third field trip was planned for the Labor day weekend. It was to be a two-day trip to Engle mine in Plumas county, camping overnight. Copper minerals, zeolites, rose quartz and petrified wood are among the specimens to be found.

A new year began in August for the Hollywood, California, Lapidary society, and these new officers now head the group: Tom Virgin, president; W. A. Stephenson, vice president; Mrs. Mary Lovett, corresponding secretary; Dorothy Van Nostrand, recording secretary; Russell Kephart, treasurer; Art Tanner, Raymond Reese, Stuart Peck, directors. The society is planning its first show October 16 and 17 at Plummer park. On Sunday, August 29, members enjoyed a field trip to Corona del Mar.

A discussion and step-by-step demonstration of faceting given by Frank Wilcox of Oakland was feature of the July meeting of the Castro Valley, California, Mineral and Gem society. July field trip was to the Berkeley hills for nodules.

The heat of Minnesota's summer failed to dampen the enthusiasm of the Minneapolis Mineral club members. In July, 14 carloads of rockhounds made a trip to the gravel pits near Franconia where they searched for agate, while the August trip was to Lake City on Lake Pepin.

August meeting of the Sequoia, California, Mineral society was a potluck dinner at Fowler park, Fresno.

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By LELANDE QUICK, Editor of The Lapidary Journal

George Lobdell of Albany, N. Y., writes, "I have made numerous imitation star sapphires by using asteriated quartz backed with thin blue mirror. I have noted lately that the same stone is made by using blue enamel that is baked on. Can you tell me what this process is and what enamel to use? Do you have to put a polish on the back of the stone?"

To answer the last question first you should put a polish on the back of the stone if you want to enhance the reflection of light from any manner of backing you adopt. There are several commercial processes on the market where the back of the gem is coated with some substance but no information is available at this time as to the substance used. These stones look more like genuine star sapphires than any mirror backed doublets we have seen. This is probably because the gem is all stone and not partly glass, which gives the gem portion greater depth.

A word might be injected here about the new synthetic corundum star sapphires and rubies. The method of getting the star phenomenon into these truly beautiful gems has never been revealed and much conjecture has taken place about it. An accomplished lapidary friend of ours tried to "take one down" recently; to reduce the height of the cabochon to be more in keeping with a mounting he had. He ground off the top surface and whoosh! — the star was gone. It never came back when the surface was newly polished. Can it be that the star is put on after the cabochon is ground? We would be glad to receive advice on this matter, or about the so-called "enameling processes", from any informed readers.

• • •

Nothing intrigues us more than the story behind a find of a new gem material. The story of Desert Scenic Stone, recently introduced at the Sacramento convention, has brought to light some interesting facts. Reports coming to the company which is marketing it indicate that the deposit, located just west of Hot Springs, N. M., has been known to exist for over 20 years. During that time it received little attention from local rockhounds. It was carried to others by tourists and health seekers taking the baths nearby. Its possibilities as a gem and its economic value to the area were almost lost.

A few months ago A. H. Latham, chairman of the New Mexico Miners and Prospectors Association, in Hot Springs, a firm believer in the mining industry and development of local resources, located it. He placed a claim on the property and sought a broader market knowing that there could not help but be interest in such a varied gem material. The convention at Sacramento accepted the responsibility of helping find a name for the rock. They appointed three judges to select the best name from many suggestions turned in to them. They chose the name Desert Scenic Stone, presented by Mamie Cavin of Baker, Oregon.

Since its introduction many hundreds of people are reported to have purchased the material. In the apt hands of the amateur cutters it is revealing great versatility in design and color and causing wide comment when shown around. And so again a hard rock miner has brought to light a new material that will bring joy to many. Such an

opportunity can come to anyone and desert adventurers should always be on the lookout for some new gem material. Almost without exception all the great gem finds in the world have been made by people who were seeking something else, usually gold. But there is an increasing horde of gem prospectors abroad in the land.

Then there is the story of the new jadeite deposit in Utah. At least it was thought to be jadeite and there still is much room for doubt although when the mineral analysis is set down on paper and Dana's analysis for jadeite is set down beside it they agree almost exactly. In fact Los Angeles' favorite lecturer on mineralogy has given a written opinion that it is jadeite. However, we personally gave it the specific gravity test and it is the same as quartz. When we dropped it in bromoform it didn't sink. That also indicates it's quartz.

But easily 85 percent of all gems in amateurs' collections is quartz and in this material we have just about the most beautiful quartz that has come along in many a moon. It occurs in every color, the rarest being the apricot or "pink jade" color so prized by the Orientals. We defy anyone to mix a white piece of this with several pieces of mutton fat jadeite and attempt to pick it out again solely by feel and appearance. The material is waxy, heavy and hard and it takes a beautiful mirror finish polish with ordinary polishing methods.

Taken from an elevation of more than 6000 feet the new material can only be mined a few months in the year and it is costly to get. There's going to be many a fine looking display cut from this material in next year's shows. The name of this jade-like material is REGALITE.

• • •

The swank department stores in Los Angeles are selling ladies' gold rings mounted with a piece of black jade about the size of a quarter and set with a Titania. With matching earrings the set retails at \$400, plus tax. Now then if you set the Titania in black onyx no one could tell the difference and it would look just as handsome. "But there is no black onyx" some one will write. "Black onyx is agate boiled in sugar." That's right, and real black jasper then would be just as good as commercial dyed onyx. It would be as hard, as beautiful but cheaper than black jade or onyx.

Well, some rancher has found a deposit of jet black onyx on his acres in Texas and we have seen a photostatic analysis to that effect from the Smithsonian Institution. If you wish a hard black material for doublet backings, mountings for initials or lodge emblems, etc., you could get nothing better.

Three new materials from three states other than California! Desert Scenic Stone from New Mexico, Regalite from Utah and black jasper (Negrite?) from Texas. We'll tell you where to get all these materials for a stamp—but you might look over the advertisements first.

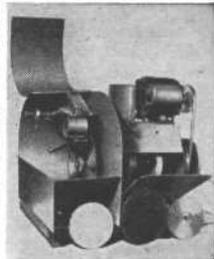
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October 4 we shall speak at the American Museum of Natural History in New York on "The Second Stone Age." Later in the month we shall speak at Cleveland, Detroit, Chicago and Kansas City. If you wish to hear us your local mineral and gem society should be able to give you information not available at this writing.

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By RANDALL HENDERSON

IN THE AUGUST ISSUE of *Desert Magazine* it was proposed that to preserve Meteor Crater in northern Arizona against mining operations recently started there, the property should be acquired by the federal government and administered by the National Park service.

Since then I have received a long letter from D. Moreau Barringer of Philadelphia, president of the company which owns the Crater, defending his company's operations. (See letters page, this issue.)

Answering Mr. Barringer, I suggested that while the merits of public or private ownership of such a natural monument might be debatable, there could be no defense for such destructive operations as are now going on, and that if private owners cannot be trusted to keep this highly significant landmark intact, then the only alternative is public ownership.

Mr. Barringer states that funds from the sale of silica mined at the Crater are to be used for further exploration of the meteoric mass believed to lie 1346 feet below the south rim.

His statement raises an interesting question: For what purpose is this exploration work to be done?

If for purely scientific studies there may be justification for such research. But if merely to determine whether or not sufficient metal lies buried there to make it a feasible mining project, then the ultimate result would be a bit of added wealth to the Barringer family fortune, a few more guns and automobile door handles, and a big hole in the ground having neither scientific nor scenic value—an ugly monument to the immaturity of a generation which permitted the destruction of this unique meteorite from the outer world.

If Uncle Sam was the custodian of Meteor Crater, I would have no misgivings as to its preservation.

Inquiries come to my office frequently from readers who want to know what laws have been enacted for the protection of wild burros. The answer: The California Fish and Game code reads as follows: "It is unlawful to kill or capture any undomesticated burro for the purpose of using the carcass thereof for animal food." So far as I know other states have enacted no regulations.

Many of us would like to see a more stringent law on the books than California has enacted. And yet it is a debatable question. The Park service men in Death Valley National Monument hold the view that when the burros increase to the point where they drive out the deer, their numbers should be reduced—for the reason that the deer is a native, while the burro is an intruder.

There are not many areas yet where the burro has become a menace to wildlife, but their numbers are increasing and sooner or later the choice may have to be

made as between deer and wild burro. The park rangers tell me it is nearly always true, that when the wild burros move in the deer move out.

During the past year Secretary Krug of the department of the interior has established a precedent of far-reaching significance to Indian tribesmen. Two tribes, the Saginaw Chippewa numbering 540 Indians and the Stockbridge-Munsee with about 500, have been released from the supervision of the federal government.

The action in both instances was taken in response to tribal resolutions asking the Bureau of Indian affairs to relinquish its control over them.

Probably few if any of the tribes in the Southwest are ready to assume the responsibilities which go with full citizenship, and would not accept it if it were offered to them. But it is encouraging to note that where circumstances warrant it, the federal government is willing to relinquish its guardianship—and that the precedent has been established.

Some of the tribes in California are approaching the day when they may be released from reservation status without hardship to their members—and the Indian bureau is working toward that day—Independence Day for the American Indian. He hasn't known such a day for more than 300 years.

One of *Desert's* readers sent me a newspaper clipping about a little desert in the State of Maine. Near the town of Freeport there are 500 acres of shifting sand dunes surrounded by woodlands and rolling green meadows. Various explanations have been advanced for this strange geological freak, one being that it was the bed of an ancient lake and the sand is in the process of boiling up from below. The owner has fenced it in and collects 60 cents admission from those who want to see what a desert is like.

That is all right for Maine. For one who never saw a desert 60 cents is a small price to pay for the privilege of getting acquainted with one. But at the rate of 60 cents for 500 acres, I get a view worth a hundred dollars every time I look out the window—and up in Monument Valley where Harry Gouling's front yard is visible for 125 miles, no one but an Indian maharaja could afford to pay the price of admission.

Our desert is big and wide and not cluttered up with too many fences. We like it that way. We hope it will always remain a place where humans can escape from the mad merry-go-round of business and social competition—where they may come, rich and poor alike, and enjoy the sense of space and peace, and release from the fetters that humans place on each other when they are crowded too close together in the towns and cities.



WISE MR. COYOTE GAINS PLACE IN LITERATURE

A much-maligned but very American character, the coyote — that small, wise, tuneful wolf of the prairie and desert — has been the subject of many tales, many legends, countless articles and much persecution.

It has remained for J. Frank Dobie, colorful raconteur of folklore of the Southwest, to portray the coyote sympathetically. In *The Voice of the Coyote*, Dobie passes on to the reader the results of 30 years of study during which he rode thousands of miles, read tens of thousands of pages, talked with hundreds of men who live in the varying types of country which the coyote frequents — and even got the viewpoint of sheepmen, archenemies of the coyote.

Added to all this research is Dobie's own acquaintance of years with the one wild animal which has thrived and increased in numbers and extended his range as man encroached upon his favored haunts. Started as a modest collection of coyote tales, Dobie's book became a real study in natural history — but it is filled with interesting stories from the life of the animal.

Published by Little, Brown & Company, 34 Beacon Street, Boston, Mass., 1949, 386 pps., index, biblio. \$4.00.

*This book may be ordered from
Desert Crafts Shop
Palm Desert, California*

IT'S NOT REFINED, BUT IT HAPPENED

Tombstone from 1880 to 1905. The worst and the best of the wild old times. Prostitutes, gamblers, drunks, train robbers and violent death. Bar-rooms, honky-tonks and the frontier underworld. Cowboys, dance-hall girls, gunmen, sheriffs and saloonkeepers.

Many old citizens and some writers insist that nine-tenths of the early inhabitants of famed Tombstone, Arizona, boom mining town, were quiet and respectable homebodies. But when a saloonkeeper tells what he knows about a community chances are he doesn't know much about the quiet, stay-at-home people. In the Old West his friends were the noisy minority who kept the doors swinging all night, the glasses clinking and the chips changing hands.

If you want to know the seamy side of Tombstone's story, if you want to meet the characters whose names are woven through the violent history of the Old West, that is reason enough to read *Billy King's Tombstone*.

Billy King, long-time barkeeper and part of the time a deputy sheriff, has told his story to C. L. Sonnichsen. Sonnichsen has tapped other sources of information to round out his roistering tale. You may or may not like the book — it makes no pretenses of being anything but what it is.

Published by the Caxton Printers, Ltd., Caldwell, Idaho, 1942 and 1946, 33 illustrations, 233 pages. \$3.00.

The lost gold of Arizona's Superstition mountains continues to lure writers as well as prospectors. Latest published manuscript on the subject is *Spanish Gold and The Lost Dutchman*, a 64-page paper bound booklet written by Ludwig G. Rosecrans of Mesa, Arizona. The author presents in brief form the many versions of the gold which according to legend was discovered originally by Carlos Peralta and later yielded a fortune to Jacob Walzer. The book is illustrated with sketches by John W. Bowers. Published by the author at Mesa, Arizona. \$1.00.

CREATE YOUR OWN HAND-MADE JEWELRY

"Most of the really great work in metal was produced with simple hand tools."

While not deprecating the use of power tools where there is a need for them, Andrew Dragunas in his craft book *Creating Jewelry* shows a definite sympathy for the hand artisan and believes that in creating an original style the craftsman will experience the greatest personal satisfaction.

His book is a complete introduction to the craft of handmade jewelry. Although designed for the beginner, it carries through to advanced techniques, provides step-by-step instruction in jewelry design from the simple to the finely wrought.

The author supplements his explicit descriptions of processes with more than 50 diagrams which illustrate methods outlined in the text. And he offers this encouragement to beginners: "There is no reason the average beginner cannot produce something worthwhile after a few hours practice, if ingenuity, imagination and patience are placed above activity."

This is of interest: necessary tools are few and relatively inexpensive, Dragunas says. No special workshop is required.

Published by Harper & Brothers, New York, 1947, 143 pps., plus index and preface, 51 diagrams, 9 photos. \$3.00.

*This book may be ordered from
Desert Crafts Shop
Palm Desert, California*

FRONTIERSMEN OF THE OLD WEST

Among the sturdy trail-blazers who came into the trail-less desert wilderness in the last century were three whose courage and prowess have given them a lasting place in the annals of the frontier country. The stories of Bill Williams and Jim Bridger, mountain men, and Jacob Hamblin, Mormon missionary, have been preserved in three books which deserve a place in every library.

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