

THE

# Desert

M A G A Z I N E



JUNE, 1948

25 CENTS

# "PUT THAT HAMMER DOWN, MISTER"



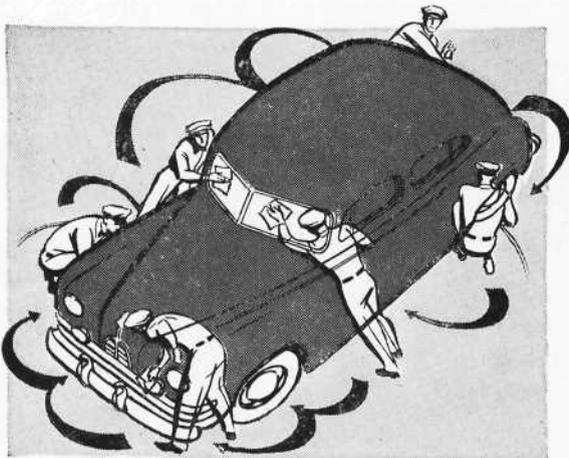
**1.** YOU MAY BE COMPLETELY FED UP WITH A STREAKED AND FILM-COVERED WINDSHIELD THAT NO ONE SEEMS TO CLEAN PROPERLY. BUT DON'T KNOCK OUT THE GLASS, MISTER, BECAUSE HERE'S A BETTER WAY TO GET RID OF THAT ANNOYING BLURRED VISION AND EYESTRAIN. TRY UNION OIL WINDSHIELD SERVICE.



**2.** CHAMOIS AND WATER WILL TAKE OFF MOST SURFACE DIRT, ALL RIGHT, BUT THEY LEAVE BEHIND A FILM CAUSED BY WEATHERING OF THE GLASS. THIS FILM REFLECTS NIGHT LIGHTS, CATCHES DUST, SMOKE AND MOISTURE.



**3.** THE UNION OIL MINUTE MEN CUT THIS FILM WITH A SPECIAL GLASS CLEANER THAT LEAVES YOUR WINDSHIELD SO CLEAN IT ALMOST LOOKS AS IF THE GLASS WEREN'T THERE. AND THEY USE A FRESH MINUTE MAN TOWEL ON EVERY CAR — A SOFT, ABSORBENT PAPER THAT WON'T SCRATCH OR LEAVE LINT.



**4.** YES, FOR A WINDSHIELD CLEAR AS A CRYSTAL, SEE THE MINUTE MEN. AND FOR EFFICIENT SERVICE ALL AROUND, REMEMBER THAT EVERY MINUTE MAN OPERATION IS FAST AND THOROUGH—CAREFULLY PLANNED TO GIVE YOU THE GREATEST POSSIBLE ATTENTION IN THE SHORTEST POSSIBLE TIME!

IF IT'S SERVICE  
YOU WANT,  
SEE THE  
MINUTE MEN!



**UNION OIL COMPANY  
OF CALIFORNIA**







## *Pictures of the Month . . .*

### *Metates . . .*

The photograph above, of metates and manos once used by the ancient inhabitants of Tuzigoot ruins near Clarksdale, Arizona, to grind their grains, won first place for Gladys Diesing, Long Beach, California, in the April Desert Magazine contest. The picture was taken with a No. 33 Reconar camera, Super XX cut film, exposed 1/25 at f.16.

### *Christmas Tree--Desert Style . . .*

This snow-clad Joshua, photographed by Nicholas N. Kozloff, San Bernardino, California, placed second in the April contest. It was made with a 4x5 Speed Graphic, Super XX film, 1/100 at f.32, no filter.

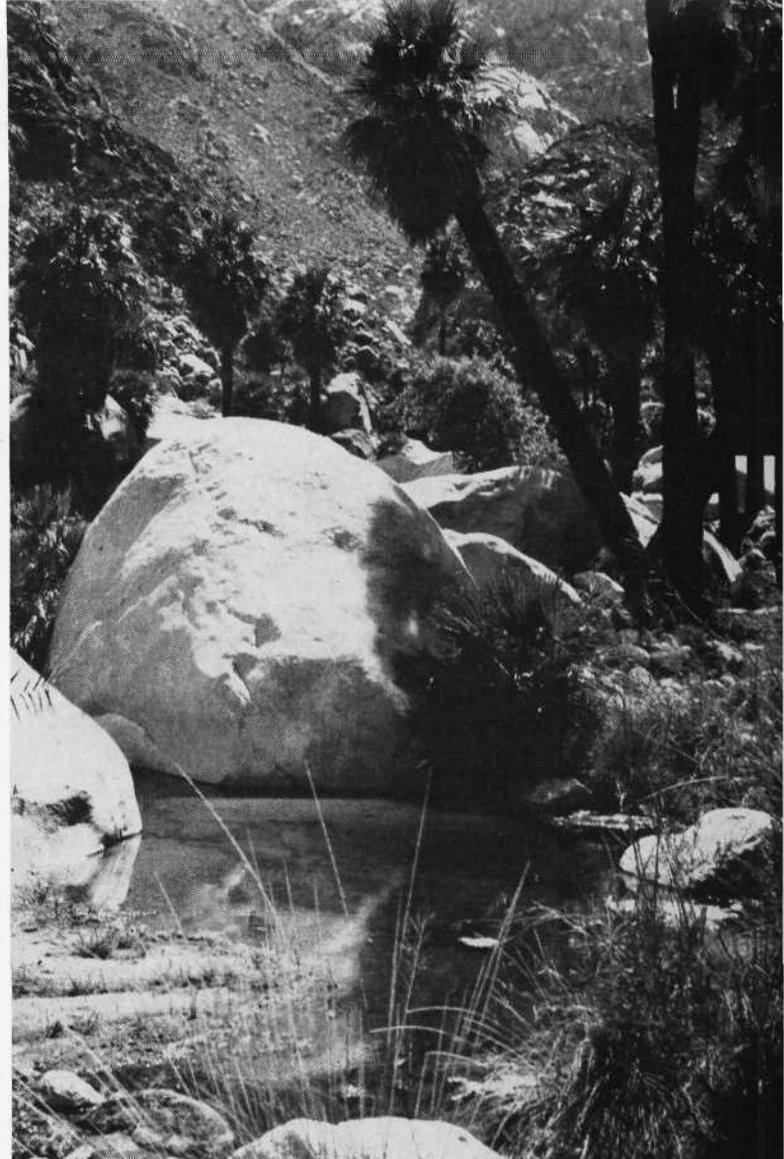
### *Special Merit . . .*

Other fine entries in the contest were:

"Old Wagon," by Russ Eckerstrom, Santa Barbara, California.

"Mexican Boy and Raccoon," by Dr. Lauren C. Post, San Diego State College, San Diego, California.





*Granite peaks tower above the palm forest in Tajo canyon, and wildlife drinks from crystal clear pools seldom disturbed by humans.*

## Daddy of the Palm Canyons

On a 15-mile hike from the summit of the Sierra Juarez to the floor of Laguna Salada in Baja California, Desert's palm tree reporter discovered what he describes as the canyon home of more native palm trees than are to be found in any other one spot in the Southwest. And even if you are not interested in palm trees, it is still a gorgeous canyon for here are to be found 50-foot waterfalls, old Indian campsites, and boulders studded with tourmaline crystals. Here within 40 miles of the California border is a scenic wilderness that deserves the status of a national park.

By RANDALL HENDERSON

**W**ITHIN a radius of 150 miles of my home town of El Centro, California, I have tramped the length of many palm canyons—and now I have found the daddy of them all.

It is in Baja California, approximately forty miles south of the boundary established many years ago when United States and Mexico settled their dispute over the ownership of 1500 miles of rich coastal terrain along the Pacific. United States got Alta California, and Mexico

retained the peninsula, designated by the Jesuit padres as Baja California.

The palm trees which grow wild in the southwestern sector of the Great American desert do not know anything about boundary lines. I have found many lovely oases on both sides of the international border.

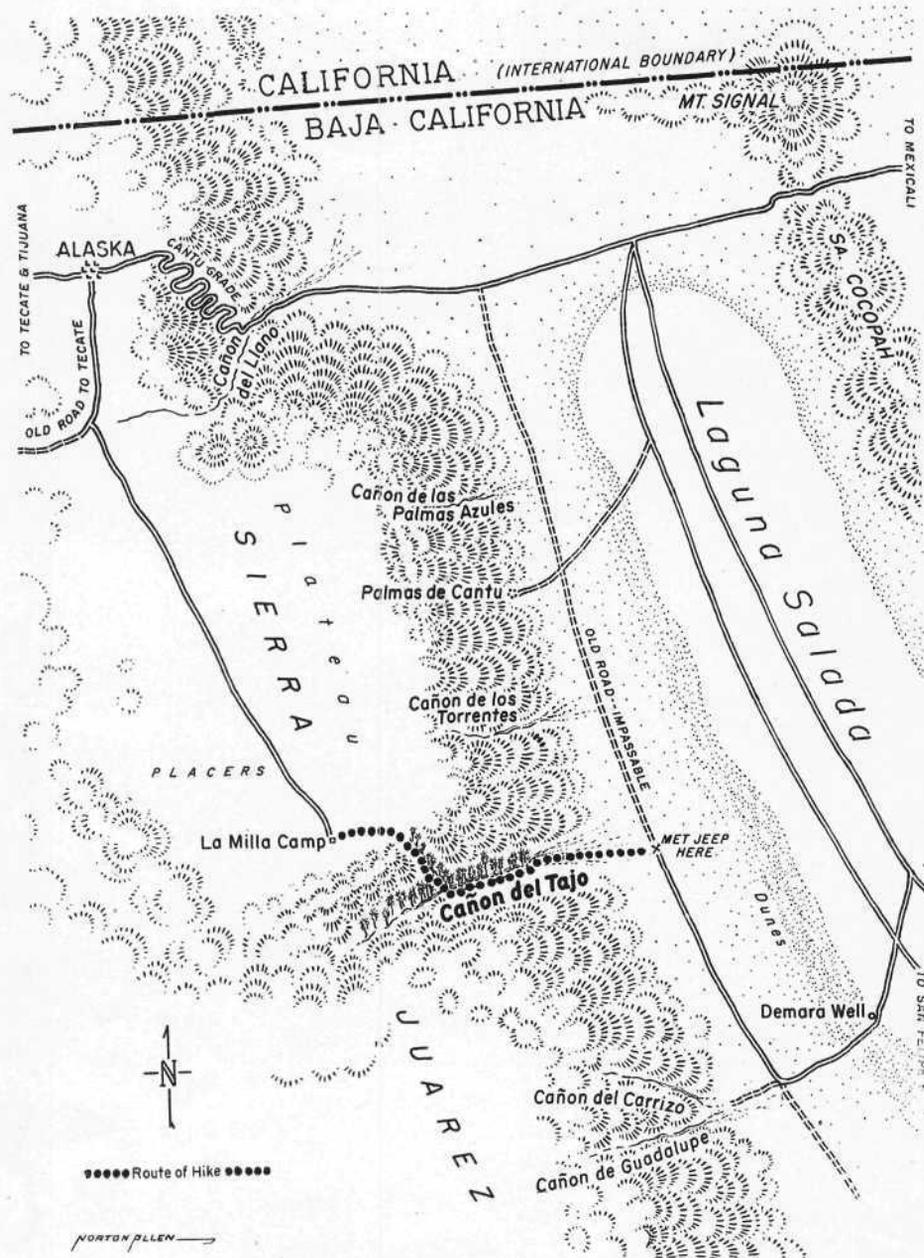
The best known and largest forest of palms on the Alta California side of the line is the famous canyon at Palm Springs where between 3000 and 4000 Washingtonias extend along a tiny stream for seven

miles. Many thousands of visitors go to Palm Springs every year to marvel at the scenic beauty of this gorgeous canyon. (*Desert Magazine*, Jan. '41.)

But Baja California also has its champion palm canyon, although few visitors, even among the Mexicans, have ever been within its rocky walls despite the fact that it is only 50 miles from Mexicali's 40,000 population.

The daddy of the Mexican palm canyons, as far as my explorations have gone, is Tajo—*Cañon del Tajo*. The word means cut or opening in a mountain. It is a pretty name, but it does not do full justice to the great gorge which slashes through the western slope of the Sierra Juarez range and empties its periodic storm waters onto the normally dry floor of Laguna Salada, the great inland basin just south of California's Imperial Valley. Tajo really is the *Gran Cañon del Sierra Juarez*.

My first glimpse of this spectacular can-



yon was 11 years ago when Malcolm Huey and I maneuvered our jalopies far up into the rocky fan which spreads out at the mouth of the gorge. We spent a day hiking along an old cattle trail which led up into the canyon. Four miles from our parking place we came to a little stream with an occasional palm tree on its banks. Two miles above where the first palm was seen we found an old Indian cave with pictographs in a sheltered crevice. It was growing late, and there we turned back. One day was not long enough to get acquainted with this canyon.

Later I told my friend Dr. Warren Fox about those pictographs, and being an amateur archeologist, he gave me no peace until we had arranged a trip to the cave. We backpacked our sleeping bags up the canyon and slept that night in the cavern. Then while he roamed over the rocky slopes looking for prehistoric campsites and artifacts, I hiked up the canyon to become better acquainted with the palm forest.

The doctor found abundant evidence of Indian occupation, but no artifacts worth bringing home. I had not gone far before I realized that most of the palms in Tajo canyon were of a different species than the *Washingtonia filifera* which grows so plentifully on the California desert to the north. The Tajo palms were of the fan type, but of shorter stature, and their fronds had a blue-white cast I had never seen on the Alta California trees. Then I came to one with a great cluster of fruit as big as marbles and about the same color as a green olive. Since the fruit of the *Washingtonia* is the size of peas, and almost black in color, I knew I had found a botanical stranger.

I brought out some of the fruit and frond stems and sent them to Don Admiral, botanist at Palm Springs. He relayed them through friends to Dr. L. H. Bailey of Cornell university, leading authority on the palm family, and in fact on all botanical subjects.

Several months later, on one of his

periodic trips to the West coast, Dr. Bailey asked me to guide him to the canyon for positive identification of the trees. We made the trip on a hot May day, yet despite his 79 years the scientist hiked the eight-mile round trip into the canyon with amazing agility, and along the route entertained us with stories of botanical discoveries all over the world.

Dr. Bailey confirmed what he already had suspected—that these were the blue palm *Erythea armata*, a native of the Lower California and Sonora deserts. This palm has spread from its southern habitat almost to the California border—but has never jumped the line. Since then I have found them within 15 miles of Alta California, but never have discovered a single tree in the many palm canyons I have visited north of the border.

Although I had made three trips into this canyon, my journeys had never extended beyond the lower portions of it, and I looked forward to the opportunity of exploring its full length.

Later, comparing notes with Arles Adams, I learned that he also was eager to make the trip. Arles had looked down into the canyon from the top of the Sierra Juarez range, and had seen miles of palms extending along the winding floor of the gorge. "I believe there are thousands of them," he said.

We agreed that a round trip up the canyon and back to our starting point could not be made in a day. And neither of us relished the prospect of carrying bedding and food for a two or three day backpack up along that rocky floor to the mile-high headwaters near the top of Sierra Juarez.

We solved the problem by arranging with Walter Gatlin to ferry us to the top of the range, which was accessible by a passable jeep road, and then meet us at the bottom the next day. We would make a one-day trip of it—downhill all the way.

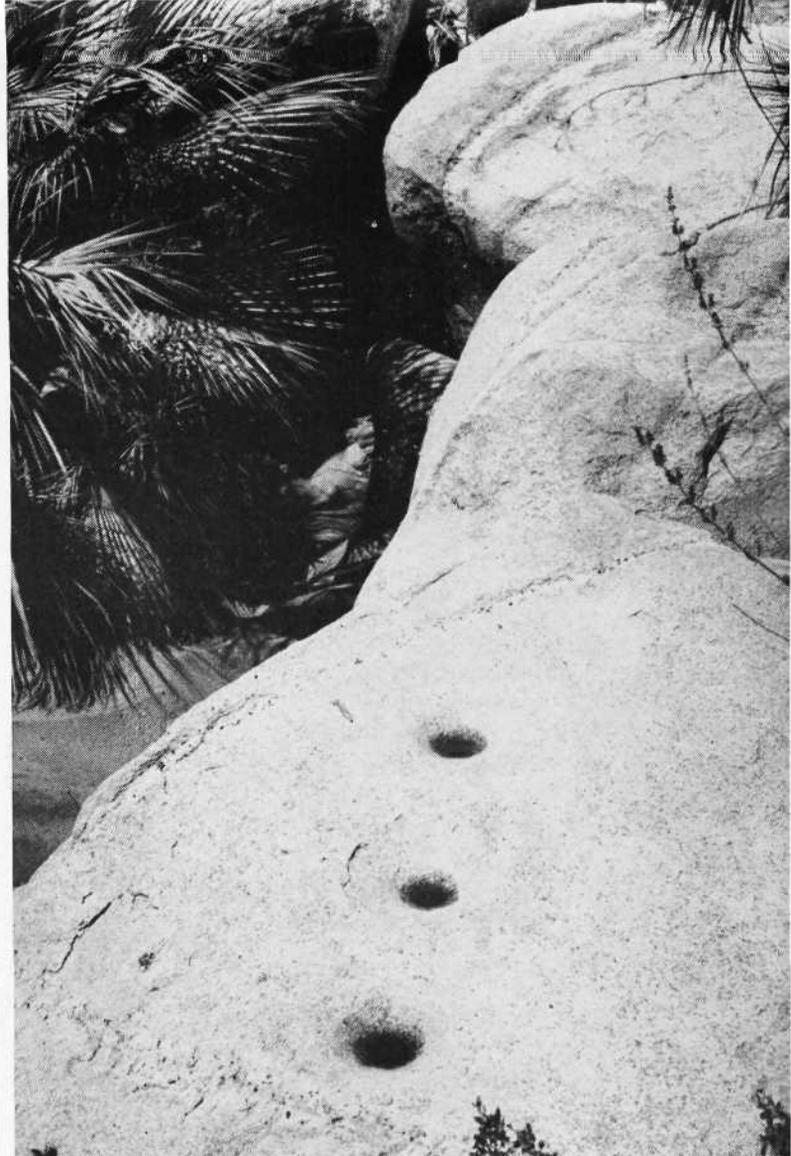
It was April 12 last year when we crossed the international line at Calexico port of entry for the adventure. In addition to Walter and Arles our party included Bill Sherrill and Luther Fisher of the U. S. Border patrol.

From Mexicali we followed the old Cantu road toward Tecate and Tijuana. The first 38 miles was a fair dirt road through the cotton and grain fields of the Colorado river delta and across the floor of the desert to the base of Sierra Juarez.

When former Governor Cantu gave his engineers instructions to build this road in the early days of the present century, he evidently told them to get to the top of the mountains by the shortest possible route. They did just that. They zig-zagged right up the face of the steepest slope they could find, and between the zigs and zags they put in hairpin turns which are easy enough for a burro, but somewhat awkward in places for a modern automobile. However, Mexican truckers and stage drivers go over the road daily, with surprising-



*Left to right—Arles Adams, Bill Sherrill and Luther Fisher, who accompanied the author on the Tajo trip. The cairn is a mining corner on the bluff above La Milla.*



*Prehistoric Indians dwelt in this rugged canyon, and the grinding holes in this granite boulder probably were used to grind mesquite beans.*

ly few casualties. It was easy for the jeep, but I would not recommend this road for tourists.

At the top of the grade is Alaska, so named by former Governor Abelardo Rodriguez who built a summer palace for his territorial government at the 4500-foot elevation. Alaska has long since been abandoned as a summer residence for territorial officials, but there remains a little settlement of Mexicans and two tiny stores to serve passing motorists.

South of Alaska the Sierra Juarez extends for 50 miles as a great pinyon-covered plateau. In the 1880's placer gold was discovered in the decomposed granite which covers this plateau, and power equipment was later brought in to recover the gold on a big scale. The field has long since been worked out, and only an occasional prospector goes there to pan among the great piles of waste material deposited by power shovels. Driving along the road through the pinyons one passes scores of abandoned campsites and quantities of rusting equipment.

The placer area covers many square miles, and its main camp is today referred

to as La Milla, the mile, or El Topo, the top. The elevation there is just a mile.

From Alaska two roads take off across the plateau, one going west to Tecate, and the other south to La Milla, a distance of 25 miles. We arrived there late in the afternoon and camped that night in the shelter of a huge block of rock that stood near a little pond fed by a spring—the headwaters of Tajo canyon. The landscape here was cluttered with the debris of a long-abandoned mining camp—timbering, pipe, the wrecks of automobiles of the Model T era, and before. Everything of value had been taken away, but a huge scrap-pile remained to mark the site.

That evening Arles broiled our steaks on an old stone fireplace which probably had served Mexican miners 50 years ago. And before them, the Indians had camped by this spring for in a large flat boulder which served as a windbreak for my sleeping bag were the grinding holes used by aboriginal women to prepare their meal.

Before dark we climbed a 600-foot dome near the camp to plot our route across the plateau for tomorrow's trip to the head of the canyon. There was a cairn on top of the

granite dome, and we left a record of our expedition in the usual tobacco can.

Walter Gatlin camped with us that night, then departed at daybreak for his return trip down Cantu grade and across the floor of Laguna Salada for the rendezvous we were to keep at the end of our canyon journey 12 hours later.

From the top of the dome we had been able to trace the shallow arroyo in which our camp spring was located to the point where it entered a cleft and then dropped down the side of the mountain to the floor of the desert beyond. This was Tajo canyon.

After Walter departed we shouldered our light backpacks containing lunch and camera equipment and set out along the watercourse. Occasionally we saw where recent prospectors had dug down through the sand to bedrock, evidently on the theory that since this arroyo drained a field once rich in placer gold, there should be some color in the drainage channel. It was a plausible theory, but the test holes evidently had not yielded a satisfactory showing of gold for they had been abandoned.

For a while we followed a gentle grade

through a luxuriant growth of mountain vegetation. Then as the streambed dropped away more rapidly granite walls rose on both sides, and soon we were in the bottom of a V formed by cliffs many hundreds of feet in height.

Then suddenly the canyon floor dropped over an almost vertical fall of 50 feet. Standing at the top of this fall we could see a series of them below, as if some prehistoric giant had hewed great steps on which to climb the side of Sierra Juarez at this point. A tiny stream of water trickled over the precipice. Around this waterfall and the others below we were able to detour without undue hazard. Working around one of these falls I saw a ledge of quartz thickly embedded with black tourmaline crystals, some of them  $\frac{3}{4}$  inch in diameter. There is much of this black tourmaline in the Sierra Juarez, but it is not of gem quality, and this occurrence was at a point where we were too busy clinging to the face of the cliff to be interested in gem collecting.

We had worked our way around three of these falls—and then I saw the first palm

tree. It was a healthy blue palm 30 feet high growing in a lovely setting. At its base were ferns, and on the mountainside nearby were mountain lilac in blossom, wild apricot in fruit, ribbonwood or red shank, scrub oak, pinyon, *Rhus ovata*, agave and buckhorn cactus. My altimeter showed 4600 feet—and this is the highest point at which I have ever found a native palm growing in the Southwest.

Then we passed a four-foot palm of the *Washingtonia* species, and below that a tree so unusual as to leave a permanent imprint in my mind. It was a blue palm, a giant of the species such as I have never seen before. Slender and naked as a flagpole it stood there along with a tiny topknot of fronds at its crown. Members of our party guessed its height to be all the way from 45 to 60 feet, and my estimate of its age would be 200 years. Because it was twice the height of any blue palm I have ever known, it will take its place in my mental picture gallery with a few others of conspicuous charm—the Queen palm in the narrows of Andreas canyon, the Hunchback palm of the Borrego bad-

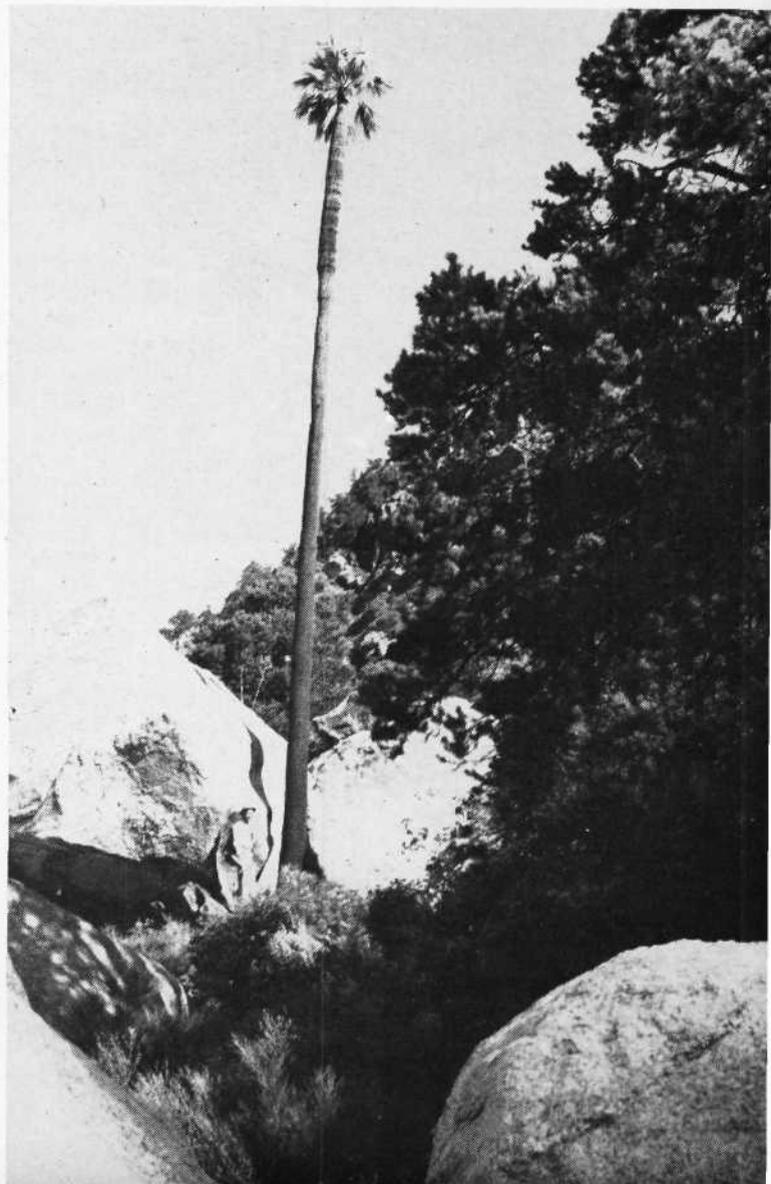
lands (Desert Magazine cover, Dec. '37), the gnarled Old Man palm growing on the vertical sidewall at the entrance to Magnessia canyon back of Rancho Mirage, and the Sentry palm in Palomar canyon. In my notes I recorded this majestic palm as "The Chief."

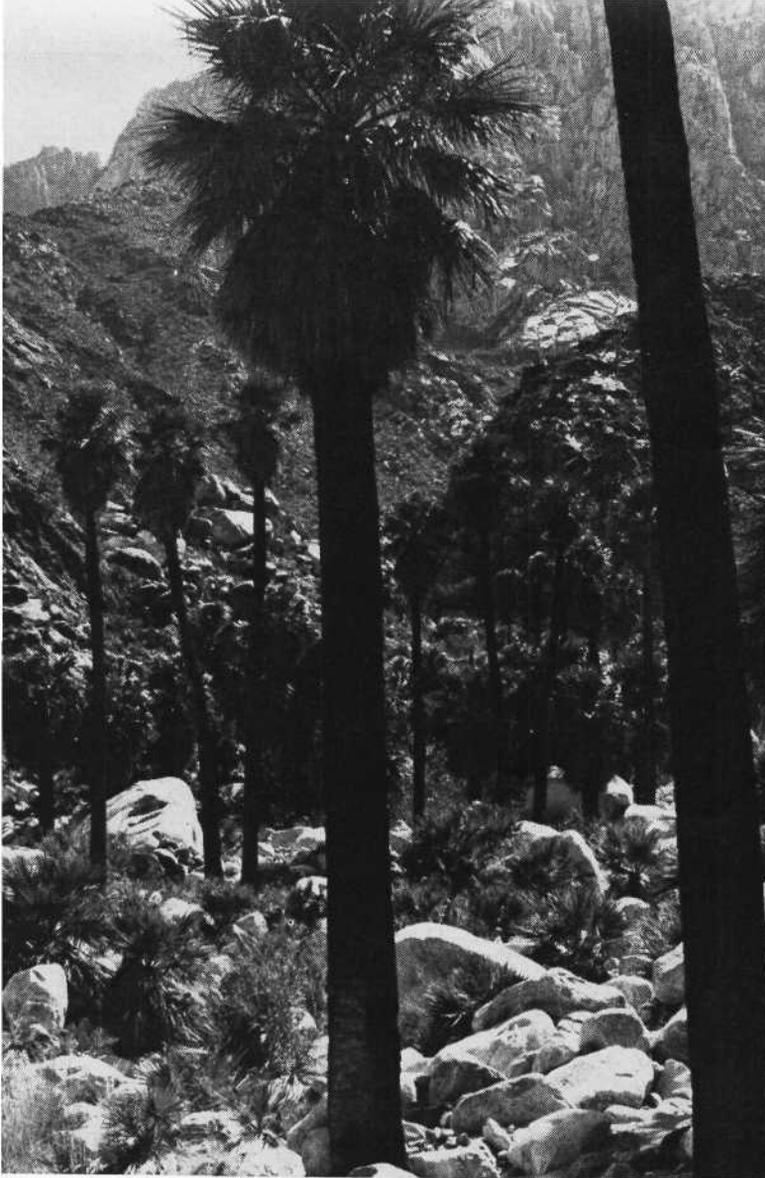
Below this there were increasing numbers of palms, but it was not until we had dropped below the 4200-foot level that they appeared in forests. Here also was more mountain lilac wearing its lavender plumes, and wild currants with the fruit turning pink.

At 9:40 we had descended to 3475 feet, and I took a picture of three Indian grinding holes on the top surface of a great granite boulder. We passed a mescal in bud—at just the right stage for a mescal roast. It resembles nothing so much as a greatly enlarged asparagus head, from  $1\frac{1}{2}$  to 2 inches in diameter, projecting a foot or more above a cluster of dagger-like blades. It is a delicate procedure, going in among those daggers to gouge the bud out of the heart of the plant. The Indians used a sharpened stick three feet long or more,

*The Blue palm produces a heavy crop of fruit, each "date" about the size of an olive. When the fruit dries the seed becomes as hard as chalcedony.*

*This unusual member of the Blue palm family grew to a height nearly three times the average elevation of these trees. Probably is 200 years old.*





Two species of palms grow in Tajo, the *Washingtonia* so well known on the California desert, and the *Erythea armata* or Blue palm, an emigrant from Sonora.

and then roasted it in a pit lined with hot rocks. Bill Sherrill harvested this one with his hunting knife, but when he announced he was going to take it home and roast it in the family oven I lost interest in his culinary adventure. I am sure Marshal South will share my disapproval of this unorthodox method of roasting mescal.

At 12 o'clock my counter showed 1554 palms, and we came to a junction where a tributary from the south brought in a large stream of water. Actually, I do not know which is the main canyon above this point. The stream coming in from the south carried a larger volume of water than the one we had been following. Perhaps we had been descending a tributary. I do not know. But looking up the other canyon I could see that its channel was lined with palms as far as the eye could follow it.

Down to this point we had seen only an occasional *Washingtonia* among the blue palms. But *W. filifera* now became more plentiful, although *E. armata* continued to predominate.

A half mile below the junction of the two canyons a great block of granite stood squarely in the middle of the gorge. There

was a cave beneath it, and on a level platform of stone outside the cave were 24 grinding holes—the most I have ever seen in one boulder. We ate lunch here, and would have liked nothing better than to spend the afternoon exploring this old campsite for relics of its prehistoric dwellers. But there were miles yet to be covered before we would be out of the canyon.

At the 1280-foot elevation we passed another conspicuous campsite—a sandy bench where the ground was covered with broken pottery. The sidewalls of the canyon at the lower elevations were sprinkled with elephant trees. I have often wondered whether the Indians ate the rather bitter fruit which grows on this tree.

Also, I am curious to know whether or not the Indians found the fruit of the blue palm palatable. If they did, then this canyon would provide a grand feast for the aborigines during March, April and May. For this palm yields a generous crop of "dates." They grow in great clusters, some trees bearing as much as 125 pounds of them. We came through the canyon at the peak of the fruit season and saw literally thousands of tons of fruit hanging in clus-

ters, often so close to the ground it easily could be picked.

The fruit consists of a seed as big as a marble, covered with a thin green skin. When it matures the skin turns brown. I brought some dried seeds home and tried them in the nut-cracker. It wouldn't even put a dent in them. Then I tried the hammer, and it required a heavy blow to crack one open. The meat is about the color of chalcedony, and about as hard. If the Indians ate them, I am sure it was only during their green stage. There is little flavor to the green nut, but the Indians who roamed this desert country ate food for nourishment, not because it pleased their palates. And their tasting apparatus had not been traduced by many generations of pie and ice cream and chocolate pudding. Perhaps these blue palm seeds were good eating—to an Indian. And I hope they were, for it would seem a pity that such a prolific crop of fruit should forever have been wasted.

At 4:30 in the afternoon we came to the place where the last trickle of water seeped into the sand, and here also we saw the last of the palms. Cattle which graze on the ba-

jada along Laguna Salada had beaten a path up to the water—and we followed this trail another four miles before we reached Walter and the jeep. We met him just at dusk.

We estimated the hike from La Milla at 15 miles—and it had taken 12 hours to make the trip. We had counted palms along nine miles of the 15. Arles and I both carried mechanical counters, but we had seldom compared notes during the day and it was gratifying and rather surprising to both of us when we compared figures at the end of the trail. His counter showed 4444, mine 4518. And if you don't think that is amazingly close, you do not realize the difficulties involved in tabulating palm trees while scrambling over boulders and down waterfalls along nine miles of a canyon which loses a mile of altitude in 15.

Along the way we got glimpses of many palms in tributary canyons—but there was no time to explore them on this trip. In the entire Tajo canyon system there are perhaps twice as many as we encountered along our route. We were in close agreement on another estimate—that fully 80

per cent of the trees in the canyon we traversed were *E. armata*—the blue palm.

If the commissioners who established the boundary between Baja and Alta California had moved the line a few miles further south, and left Tajo canyon on the northern side of the border, I am sure this canyon would long ago have been set aside as a national monument. Flanked in its upper reaches by colorful domes and battlements which rise 1500 feet above the floor of the canyon, exhibiting a gorgeous botanical variation that ranges from Lower Sonoran to the Canadian zone, broken with waterfalls which make sheer drops of 10 to 50 feet, and set with lovely pools which carry the reflection of both palm and fern, this canyon with a trail to make it accessible would be a mecca for botanists and photographers and hikers.

But there are too many lovely places on this earth for all of us to see all of them. and perhaps it is just as well for the present that Tajo should enjoy the protection provided by its inaccessibility. The beauty will be there—even though human eyes seldom look upon it, and half the fun of

living is in dreaming of the places we would like to go—and sensing the fact that Nature is preserving the charm of these hidden beauty spots for the day when perhaps we may have the opportunity to see them.

## Hard Rock Shorty

### of Death Valley



"No, there ain't much water in them mountains," Hard Rock Shorty was saying to the stranger who had arrived at Inferno store earlier in the day in a shiny new station wagon.

"An' what water there is ain't much good fer a thirsty man or animal. Some springs has got arsenic in 'em. Some is too salty even t' cook potatoes with. But the wust one of all is that Alum spring. It just puckers up everything that gets near it. Drop a cannon ball in it and it would soon shrivel down to the size of a BB shot.

"That remin's me o' the time me an' Pisgah Bill was camped there back in the 'twenties. I wuz settin' there leanin' against a boulder restin'. Suddenly I heerd a jelpin' and yip-pin' and down the canyon comes a coyote a-chasing a jackrabbit lickity-split right towards that alum water-hole.

"When them two animals reached the spring the rabbit jumped over it, but the coyote missed its footin' and tumbled in the middle. Well, it swim out all right, but right away things began to happen.

"That wet coyote started to pucker up, and before he's gone a half dozen jumps he's no bigger'n a pack rat. When that rabbit looked back and saw what'd happened, he turned around quick and headed for the pint-sized coyote. That coyote knew he was in trouble and he headed down canyon like a scared banshee with the big rabbit hot after him.

"Yep, that's powerful stuff, that water in Alum spring."

## Prizes for Cover Photos . . .

From the June photo contest, closing June 20, many of the pictures for future Desert Magazine covers will be selected. The cover photo contest is an annual affair with a cash award of \$15.00 going to first place winner, \$10.00 for second and \$5.00 each for non-winning pictures accepted for publication.

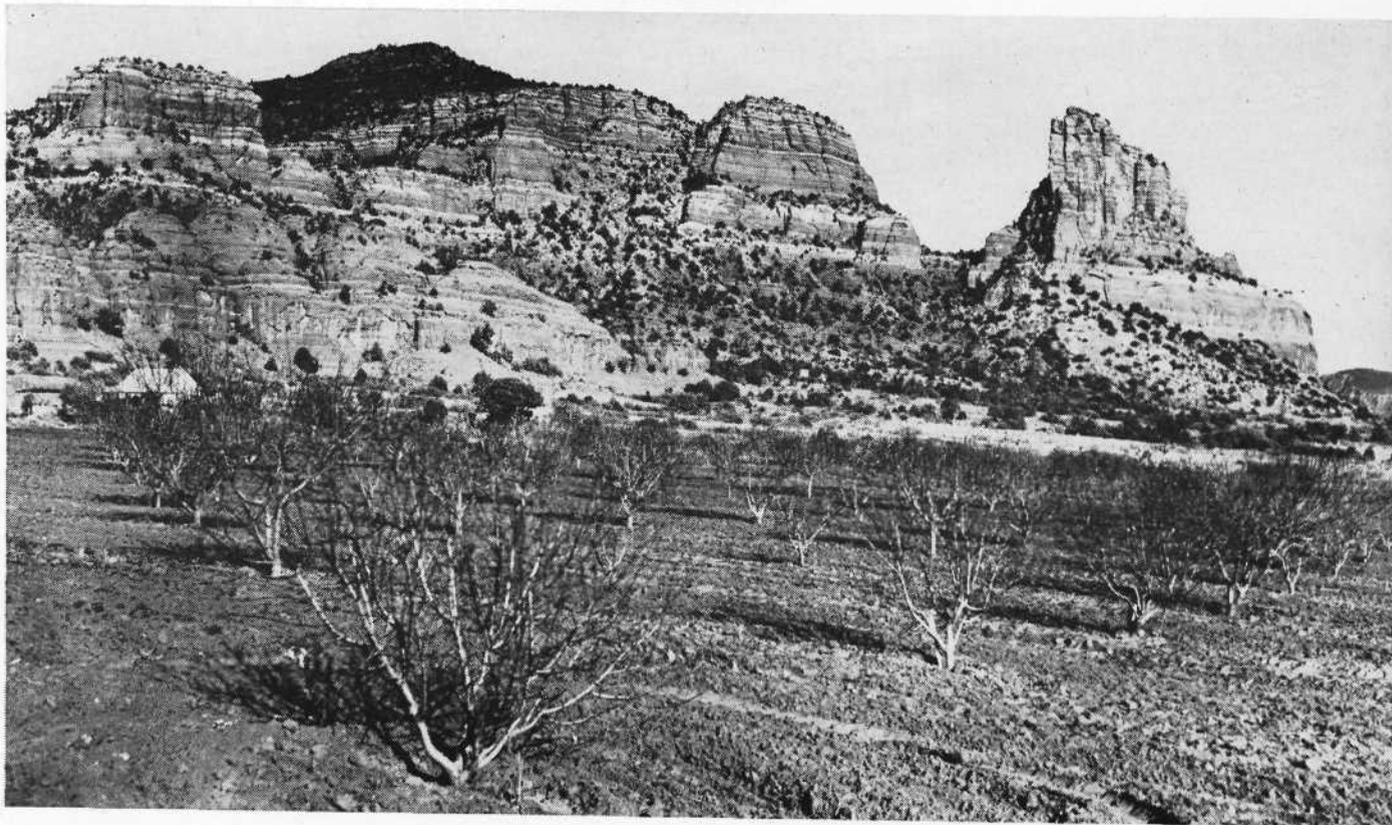
Entries in the cover contest must be 9x12 inches, or larger—vertical shots. Photographers should remember that the picture must be composed so that the masthead, printed across the top, will not block out any important part or destroy the composition. Scenics, wildlife, rock formations, flowers—anything which will make a typical Desert cover may be submitted. Strong black and white contrast is desired, and clouds often will help the picture.

### HERE ARE THE RULES

- 1—Prints must be black and white verticals, 9x12 or larger, printed on glossy paper.
- 2—All prints must be in Desert Magazine office by June 20, 1948.
- 3—Each photograph submitted should be fully labeled as to subject, time and place. Also technical data: camera, shutter speed, hour of day, etc.
- 4—PRINTS WILL BE RETURNED ONLY WHEN RETURN POSTAGE IS ENCLOSED.
- 5—Contests are open to both amateur and professional photographers. Desert Magazine requires first publication rights only of prize winning pictures.
- 6—Time and place of photograph are immaterial, except that it must be from the desert Southwest.
- 7—Judges will be selected from Desert's editorial staff, and awards will be made immediately after the close of the contest.

ADDRESS ALL ENTRIES TO PHOTO EDITOR, DESERT MAGAZINE,

THE *Desert* MAGAZINE  
EL CENTRO, CALIFORNIA



*Peaches without irrigation—where the rainfall ranges from five to fifteen inches.*

# He Grew Peaches on a Desert Homestead

By KEL M. FOX and EDWARD H. PEPLow, Jr.

ELEVEN years ago an old man of about 65, sick and broke, came home to Arizona's Verde Valley. His total assets were a meager pension, a span of mules comparatively older than their owner, an ancient wagon, a few tools, a ten-cent bag of almonds and an idea.

Without that idea and the pioneer blood and courage to try it, Doc Lay would have been just another old man, tired out by life and anxious to accept government gratuities for people over 65. But the Lays and their kind are not charity folk, never have been since their families came to Arizona when the state was still a mountain and desert frontier territory. Their kind of security lies in doing for themselves, in working the sort of inspired sweat-and-callous miracles that built the West and that built for Doc Lay not only as fine a farm as can be found anywhere but also potential recognition as one of the country's agricultural wizards.

For Doc Lay raised, without irrigation, superlative peaches, grapes and vegetables

where the rainfall is between five and fifteen inches per year. He proved that dry farming can be successful in the rainless reaches of the Southwest; and he has brought hope to hundreds of families whose crops and incomes have shriveled year after year in the searing sun of semi-desert regions.

When Doc came back to the Verde Valley 11 years ago, he first put up at his brother's ranch and took care of the stomach ulcers the doctors said would allow him only a few more years of life—if he took things easy. As a child he had loved this land, but early in his life he had been sent to live with an uncle who operated a cattle ranch.

Doc wasn't a cowman. In a country where cattle and mining were the only paying industries, farming was fine as a means of trying to feed the family. But as a means of making a living . . . well, if you want to be a farmer, you'd better go west, young man, to California.

So Doc headed west. He had to grow things; he had to probe the secrets of how and why plants grow. Perhaps it was a knowing Providence that eventually led

Since that day when Christianity was born on the desert, men and women have known that in the arid wilderness there was to be found peace and spiritual security. But economic security is something else. Who but the young and courageous would attempt on the barren frontier to wrest wealth from the soil? And yet many men and women in the arid one quarter of the United States are doing that—and not all of them are young. Here is the story of one of the oldsters who made a success of growing peach trees where only scrub juniper had grown before.

Doc to buy in Santa Rosa, California, a farm which happened to adjoin that of Luther Burbank. Soon the neighbors met and immediately the unschooled son of Arizona pioneers and the colossus of agriculture understood each other. The bond of their mutual love of growing things brooked the disparity in their backgrounds and held fast till Burbank died in 1926.

After the death of his friend and teacher, Doc held on to his land for a few years. But the depression finally forced him to sell.

After a month of inactivity at the Lay home ranch in Verde Valley, Doc's fingers began to itch to work again with growing things. He inquired about land along the Verde river and along Oak Creek, but



*Doc Lay and one of his dry-farming peach trees.*

irrigated land was quoted at figures Doc could never hope to pay. And so, he sat down under a cottonwood tree and thought things out.

The first step was to get \$100 to buy an abandoned homestead he had heard about. He could easily have borrowed the money, but he took the more independent course and worked for a neighbor who was building a house. When he had earned the hundred, he packed his few belongings in his wagon, hitched the old mules and set out for Big Park, 25 miles across the valley. He bought an 80 acres which had long since defeated the enterprising homesteader who had first tried to work it by dry farming.

A man of less courage than Doc might

*An Indian head formation, enclosed by white circle, in the redrock butte overlooking Doc's home suggested the name for the "Sleeping Indian" ranch.*



have been turned back by the staggering liabilities that were immediately obvious. He was in poor health. There was no shelter on the property for him or his animals. The nearest water was four miles away, the nearest store more than eighty. He had but few essential tools, and most disheartening, his land was covered with a scrubby growth of mesquite, cat's-claw, buck-brush, pinyon, yucca and dwarf cedar.

Doc climbed down from his wagon, picked up a handful of the rich red soil—and smiled. It was as he had known it would be. And he knew that here he would raise prime peaches where none had been able to raise even a crop of culls before.

For the next two years Doc spent every daylight hour on the mechanics of living. He talked the proprietor of a sawmill into giving him several loads of waste wood slabs and fashioned a snug three-room cabin. He knew the Indians had solved the problem of water by building dams across small canyons and then directing rain water from neighboring slopes into the pond by a series of curbs. Laboriously Doc laid up such a dam, hoisting huge chunks of red rock into place with an ancient one-man windlass he had assembled. A few days after he had finished, an unusually heavy rain filled the pond with water enough to last him for months.

Grubbing a little land free of brush, he grew corn. Ground in an old-fashioned hand mill, it supplied bread for his table. A few turkeys and chickens supplied his meat and eggs. His shotgun and rifle were kept handy for an inquisitive buck or covey of quail. And then, when he had saved a few dollars from his meager pension, Doc stocked his pond with bass and trout.

At last the time came when he could start on his great experiment. With tools

he had fashioned on his homemade forge, Doc tilled the soil in which he had planted ten cents' worth of hard-shelled almonds. When the seedlings were five months old, he grafted peach buds to the almond stock. Like a mother with a first baby he fussed over the rows of tiny trees.

Despite the blazing sun of Arizona summer which had burned out many thousands of other fruit trees, these trees thrived. Doc Lay knew that the almond needs a hot, dry climate. He knew too that the almond has more than twice the tap root of a peach, and he reasoned that the almond could search deep enough and far enough to draw sufficient water for a peach even out of this parched soil.

The second summer the little trees were covered with bright peach blossoms. Two years later Doc drove into town to sell a wagon load of big meaty peaches.

From then on his Sundays were largely taken up with showing visitors around his now famous farm. Southwestern irrigation farmers have stoutly maintained that profitable dry farming is next to impossible. So, they visit Doc's "Sleeping Indian" farm. Perplexed by the fact that he had hundreds of thousands of gallons of water stored in his pond and yet had never used a drop of it for irrigation, they have wondered if they have wasted a lot of money and effort on unnecessary ditches.

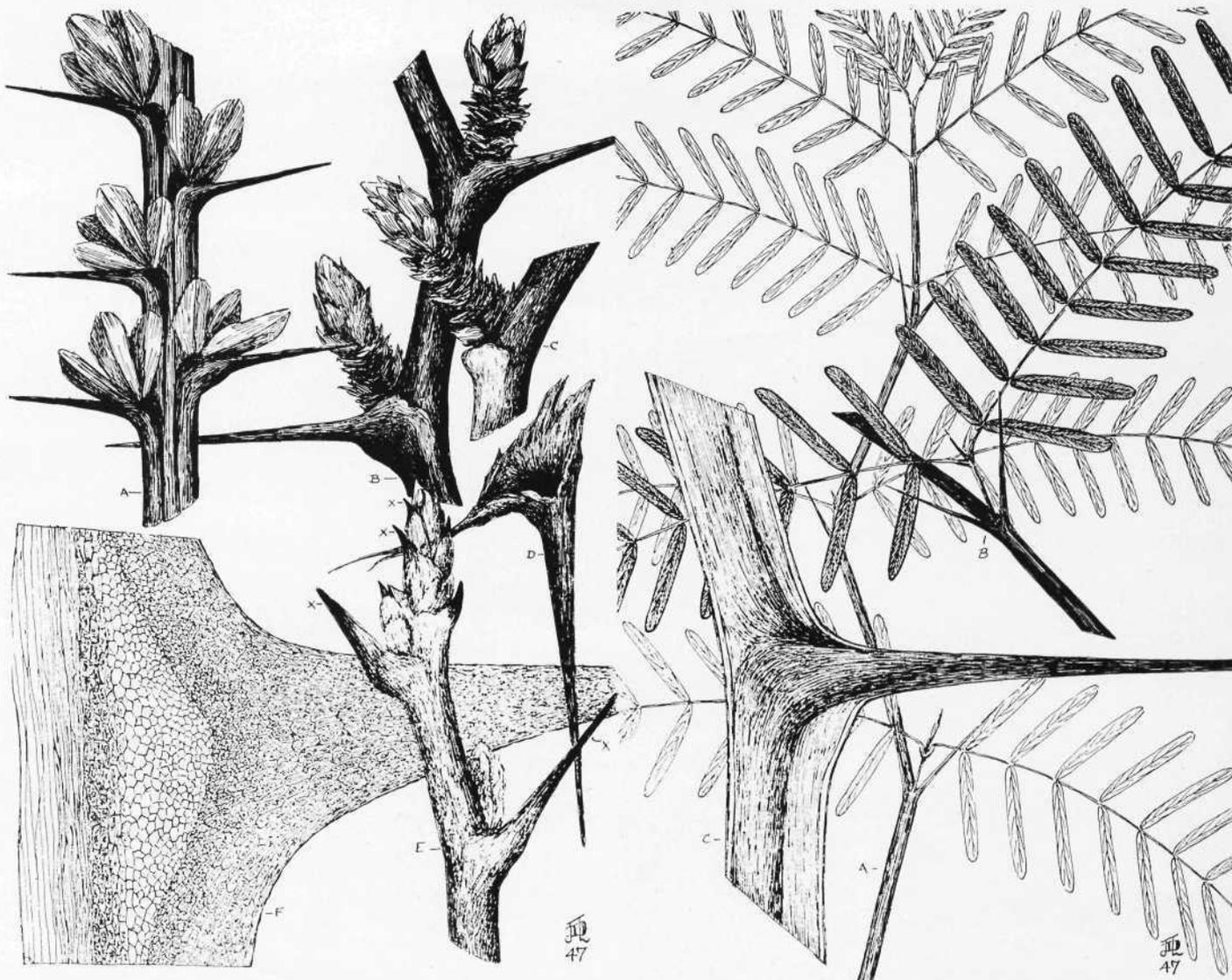
He achieved outstanding success with another crop which formerly had been considered a poor risk indeed for the dry farmer—grapes. Doc believed that plants are like humans—don't expect too much from them and they'll not disappoint you.

To grow good grapes under unusually arid conditions, Doc figured that normal roots could not support large vines. So he cut the vines back each year practically to the bare stem. In that way the root had to supply water to only a small plant and therefore each plant could produce a few good grapes. To make up for the decreased yield of the individual plant, Doc reasoned simply—put in more plants. The quality of his grapes is ample testimony of the soundness of his reasoning. In fact he developed a new variety of wine grape, which he named the "Azona."

Intensive cultivation had always been one of Doc Lay's cardinal principles of dry farming. Not a weed was allowed on his acres of rich earth.

Doc made no secret of what he had done. Anyone was welcome to drop in at his ranch anytime and ask questions. He had proved that dry farming in this area could be profitable and he wanted others to share his knowledge.

Some months ago Doc sold his model farm to new owners who plan to extend the same methods of cultivation to increased acreage. Based on the success of Doc's endeavors, it is safe to predict that in a few years the story can be told of how a ten-cent bag of almonds grew into one of Arizona's largest peach orchards.



Spines of leaf midribs. (A) Ocotillo. (B) Lote bush. (C) Joint which has shed a spine. (D-E) Bud-scale becomes a spine. (F) Spine cross-section magnified.

Spines of mesquite. (B) Developed from stipules, a common feature of the bean family. (C) Magnified section, the spine is part of the framework of the tree.

# Nature's Weapons of Defense

By JERRY LAUDERMILK

Sketches by the Author

**A**UNT Lou was invoicing the list of hazards that lay in ambush beneath the desert's outward charm; a regular desert underworld where a careless tenderfoot could have some tough experiences:

There were sidewinders that had a way of slipping into your bed roll and are bad hombres. Scorpions do the same thing and frequently hole up in your boots. The Walpai tiger (a kind of flat bug with a long bill) can raise a welt the size of a dollar and knock you flat for 48 hours. Gila monsters and hydrophobia skunks are also risks but not actually dangerous unless "monkeyed with." There are also several

**They call it "jumping cholla." But actually it doesn't jump. For, while Nature has equipped her desert plants with vicious barbs and thorns—they are purely defensive weapons—or in some instances tools, as Jerry Laudermilk so clearly shows in this story.**

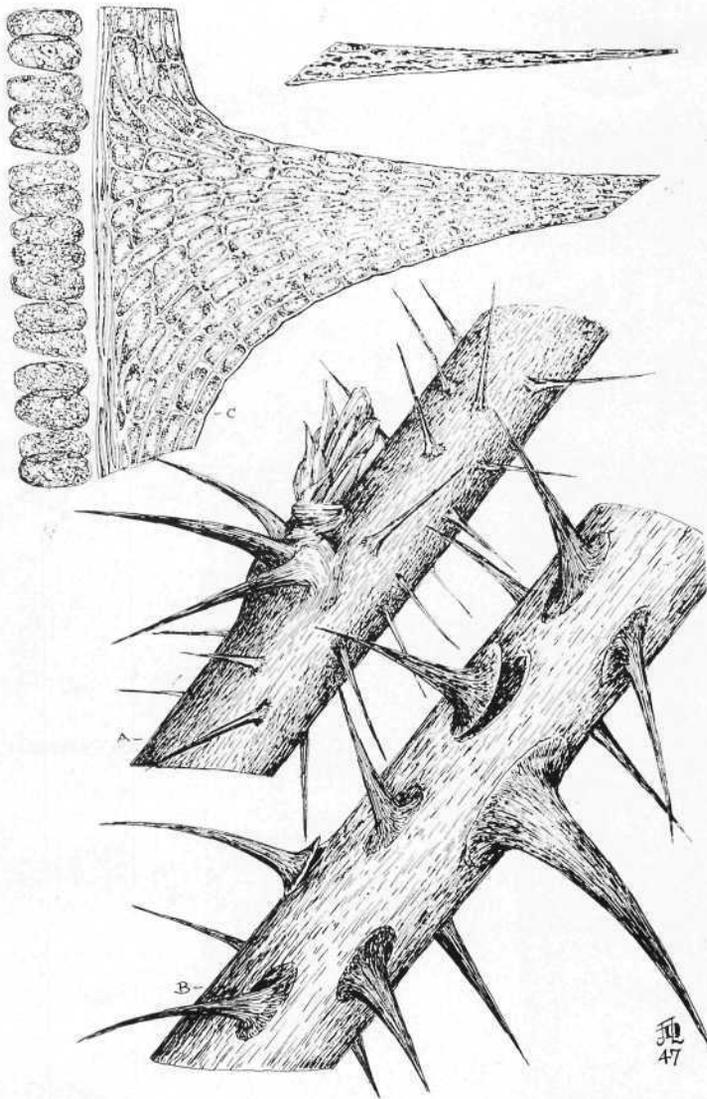
interesting vegetable curses that could do a man a lot of damage. The chief villain was something I had not met so far but had admired from a distance, the jumping cholla—pronounced *cho-ya*.

This sample of congealed cussedness was a variety of cactus. Sidewinders and other vermin might show some excuse for

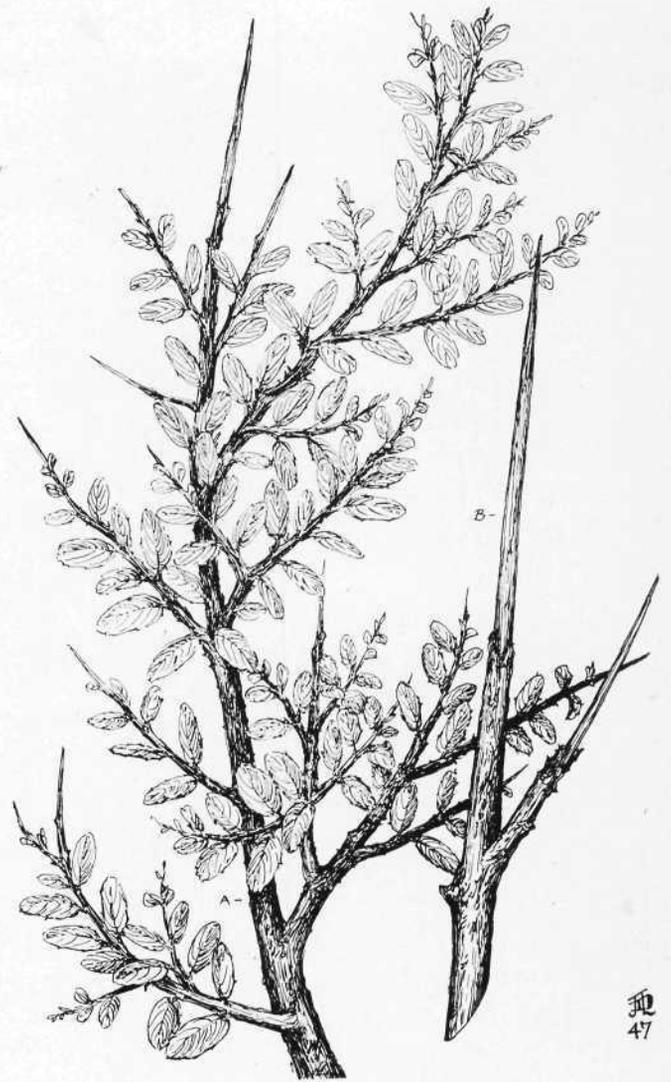
existing but this thing had absolutely none. It was said to jump as much as four feet. Once it registered a hit on you or your horse it was the dickens to deal with. The whole blasted plant didn't jump, just the ends of the branches. These things were shaped like corn cobs and bristled with two inch spines sharp as needles but worse, like glass needles that could break off in your flesh and be a nuisance for a long time. The things could even penetrate rawhide.

According to my Aunt, the only way to handle a cholla ball after it once landed was to break a forked stick from a creosote bush, slip it under the cholla like a couple of hardwood fingers and yank it loose with a jerk.

This warning about a vegetable porcupine with such a strong personality made me want to meet one as soon as possible.



Stickers that are tools: (A) Wild gooseberry. (B) Wild rose. (C) Magnified section through a rose thorn.



True thorns are modified twigs. (A) Buckthorn with spears. (B) Enlarged twig—Nature's armament.

Inside an hour after my Aunt's admonition I had looked up one of the things and now had my boot firmly skewered to my heel by an absolutely devilish object shaped like an oval ball of yellow needles. It hadn't jumped of course. The ball simply let go and bounced in my direction when I poked the plant with a piece of a stick. Aunt Lou knew what she was talking about when she said not to be any chummier with a cholla than I could at four feet.

My experience didn't leave much room for doubting that while it is all true enough about plants being dumb, somewhere in the plant story there is a definite urge to inflict punishment on intruders. While I sat in the shade of a catsclaw gathering first-hand information on the cussedness of the cholla (*Opuntia bigelovii*) I gave a good deal of thought to the subject of "stickers" in general.

Genuine thorns and spines, actual weapons apparently designed for punching holes in luckless animals, are a late development in the plant world. Although one of the first plants to take up a life ashore

— *Drepanophycus* (Gr. "scimitar-seaweed") which lived during the Silurian period or about 381 million years ago, sported well developed spines, these may have served some other purpose than defense against marauders. Anyway, the facts are that it was not until after the rise of plants of modern type that the elaborately designed daggers, spears, bayonets and lacerating hooks appeared. This happened in the early part of the Cretaceous Period, say, a hundred million years ago.

Nature's models cover all the basic schemes for sticker construction. Some are modified twigs. These are the only true thorns. Some are superficial outgrowths from the bark, prickles. Some are modified leaves, midribs of leaves, tips of leaves or leaf-stalk appendages (stipules). These are true spines. The spine as an instrument of torture culminates in the fantastically perfect glochid of the cacti.

With a whole host of plants the stickers are more properly described as tools rather than weapons. These species usually have limber, vine-like stems and favor a scrambling growth habit like blackberry bushes

and roses. These rose-type thorns are mere excrescences from the bark and frequently have their tips directed backward so that they serve as hooks to be used by the plant as it climbs over other vegetation. The more fascinating thorn types show a sterner application of the sticker principle.

Many shrubs favor the modified twig design in developing real thorns. Here the twigs taper rapidly to sharp, hard points. In the young branches of buckthorn (*Rhamnus crocea*) for instance, the leaves and buds grow all the way to the ends of the twigs but in the following year some of the twigs will die back for half their lengths and when the bark falls off the result is an array of miniature hardwood spears. Some desert shrubbery armed in this way is completely goat and burro proof but one variety of buckthorn (*R. ilicifolia*) that grows in central Arizona is thornless. This species has a struggle to survive against animal competition.

Development of spines from leaf midribs is shown to perfection in the ocotillo (*Fouquieria splendens*) and the lote bush (*Condalia* sp.). In ocotillo the spines are

the modified petioles and midribs of leaves of first year's growth. All stages of transition from a leaf to a spine are displayed especially well by the lote bush. Young branches of this plant have zigzag stems with the spines at the angles of the zigzags. If you confine your observations to the spines along the stem you might never suspect that here you deal with a modified leaf. It's the end of the branch that tells the story because at a growing tip there is always a terminal bud. This bud is surrounded by bud scales which are simply modified leaves, and, as is shown in the illustration, the scales show all transitions from leaves to spines.

Modification of organs to produce spines is carried to such an extreme in some species that it is difficult at first to see how they ever happened at all. At the bases of the leaf stalks of many plants there are two small, leaf-like outgrowths, the stipules. Stipules are a strong feature with the *Leguminosae* or bean family. In alfalfa, clover, vetch, etc., the stipules act as auxiliary leaves and help the other green cells in the work of making food from carbon dioxide and water. But in many trees of this tribe, the mesquite, screw bean, cat-claw (*Acacia greggii*) etc., the stipules are specialized into spines and are outgrowths from the woody axis of the plant as you can see in the drawing of a section through the spine of a mesquite.

The different routes that Nature has

taken to reach the same goal from widely separated beginnings is a subject with awe inspiring implications in many cases. A remarkable case of Nature using the means available to produce a certain result is shown by many grass-like desert plants such as yucca, agave, nolina, etc. The problem was to arm a fibrous, rather weak and limber leaf blade with a dagger point and razor-sharp cutting edge to protect the growing axis of the plant, an organ gorged with sugar and consequently a dietary prize for many animals.

There was very little promising raw material here for Mother Nature to begin with: no twigs to be pointed up into spears, no midribs, no stipules, simply long, strap-shaped leaves with veins like strands of limp string. But the problem was solved beautifully by carrying the strands of fiber clear through to the ends of the leaves and then welding the whole bunch of string into a hard, horn-like awl. The work didn't end here. The leaves are also provided with keen slashing edges built up from the tough epidermis. In some species the edge takes the form of a sharp saw blade. In yucca the teeth are microscopic and offer a continuous edge that cuts like an obsidian knife. When the leaves of *Yucca whipplei* have died back and dried out they become terrible weapons.

I once slipped over a jump-off at the end of a fire break and landed with my

head and shoulders in a clump of young yucca. Although the leaves were only about ten inches long I was punctured in a dozen places. If one of these had penetrated an artery it would have meant the end of an ardent amateur naturalist. *Y. whipplei* has still further refined the sword blade idea by having a rib of thicker tissue down the blade that stiffens the leaf to the point. Finally, these leaves are so constructed that they are concave down one side like shallow troughs. The gain in strength through a concave cross section is shown by a simple experiment: A sheet of typewriter paper is a rather weak piece of material, but bend your sheet into a cylinder and glue the edges and then stand the tube on end. It will now support a heavy book.

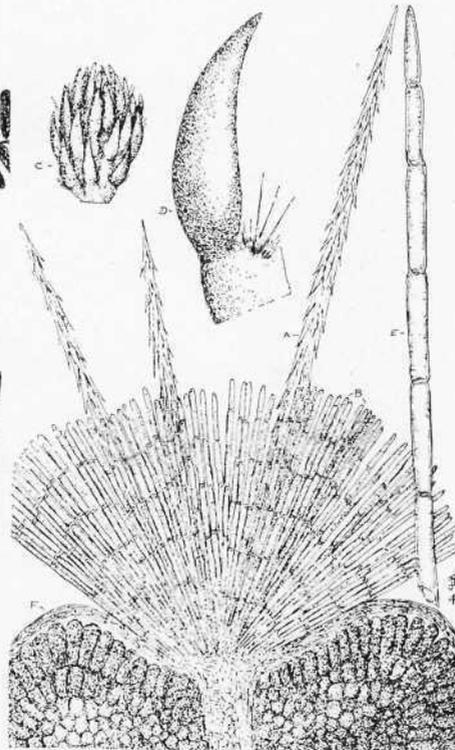
Another modification of the leaf tip method of making a spine is found in the case of tumbleweed (*Amaranthus graecizans*) and related plant hoboos. These stickers are developed from the epidermis which projects beyond the leaf proper. This strand of tissue is then drawn out into a keen, glassy point in much the same way that you might wrap a cigar in cellophane and then twist the loose ends into points.

A lot still remains to be learned about the way in which the cacti developed their spines and glochids. Some botanists think they developed from leaf midribs and there is evidence to support this view. One of the most primitive cacti, the Barbadoes

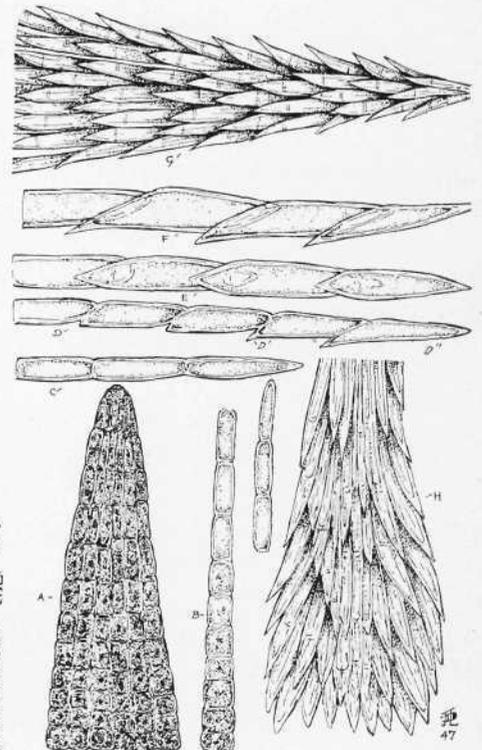
*Ant Acacia. (A-B) Belt's corpuscles (gumdrops) greatly enlarged. (C) Single gumdrop greatly enlarged. (D) The "bull's horns" hollowed out as shelter for guardian ants. (E) Doorway of ants' home.*

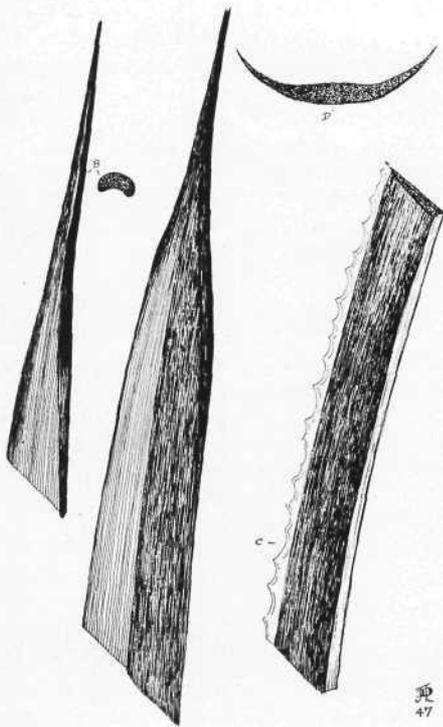


*How the prickly pear developed weapons. (A) Single spine. (B) Hairs. (C) Vestigial leaves. (D) Magnified leaf. (E) Trichome magnified. (F) Epidermis.*

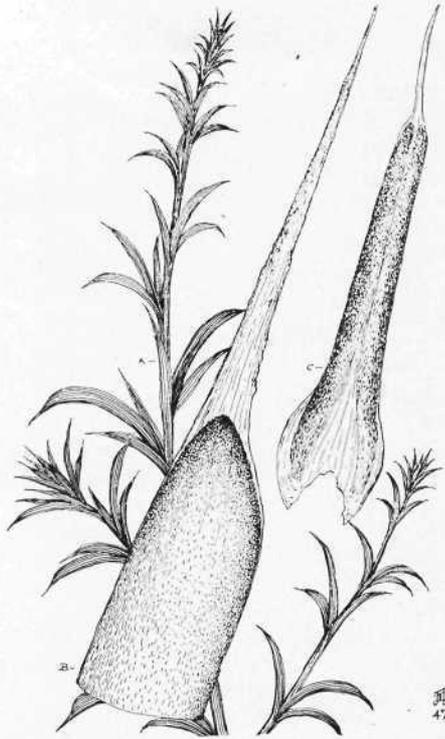


*How prickly pear develops barbs on spines. (A) Young spine. (B-C-D) Development of cells. (E-F) Walls thicken and become a chain of barbs. (G-H) How barbs overlap.*

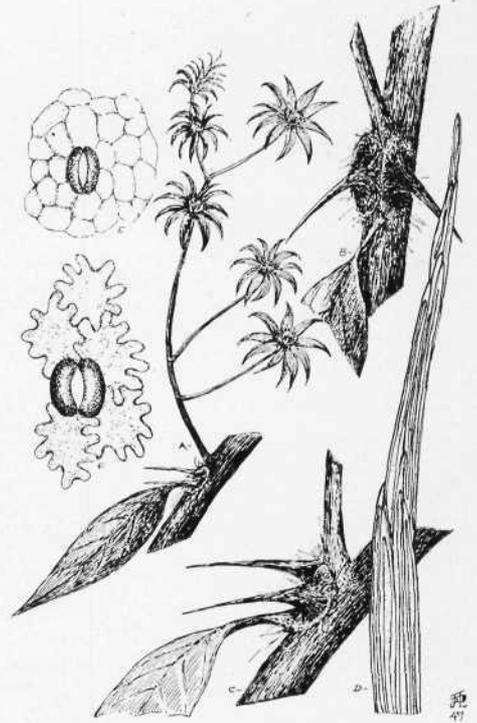




Weapons of the yucca. (A) Armed leaf tip. (B) The strands of fibers form an awl. (C) Cutting edge. (D) Cross-section of leaf or blade.



Arms of the tumbleweed. (A) Young shoot. (B) End of leaf greatly magnified to show development of spine. (C) Leaf from below.



Spines of primitive cactus. (A) Barbadoes gooseberry. (B-C) Showing plant hairs. (D) Magnified hair. (E-F) Structure of cells.

gooseberry (*Pereskia aculeata* Miller) has pairs of spines located at the leaf bases and a section through the spines and branch shows that like the spines of the lote bush these also have a cushion of corky tissue between the base and the wood of the stem—a clue to their origin as modified leaves. There are also clusters of fine hairs growing around the spines and these show no resemblance to either the spines or the leaves.

In a typical prickly pear cactus (*O. vaseyi*) there are not only spines and glochids (the little hair-like spines) but also true plant hairs or trichomes which grow at the bases of the spine clusters. The long spines are simply old glochids and in *O. vaseyi* they continue to grow for years. A microscope will show all stages of spine development from just a few strands of cells to the finished product. Since the spines and glochids grow from the areoles where leaf buds would normally appear and since the young cells all contain green cell sap it is probable that the spines are all that is left of a cluster of tremendously modified leaves. The way by which the cactus spines produce their microscopic barbs is downright neat and clearly shown in the illustration.

The barbs are a devilish refinement added to a normally cruel weapon but one variety of cholla (*O. ramosissima*) a common pest in many parts of Arizona, actually piles refinement on top of refinement. Here the spines are covered with a thin

sheath of paper-like tissue that makes an extra hazard. Although you may be able to pull out the entire spine, shreds of the sheath will remain in the wound. Since it is altogether likely that more or less dirt and spores of germs would be carried into the wound along with the sheath, these punctures amount to wounds by a poisoned weapon. Nature seems to favor this underhanded way of driving home the fact that certain plants are not to be meddled with.

The date palm is an outstanding example of defense by poisoned spikes. The younger leaf blades at the bases of the palm fronds are actual vegetable bayonets placed at exactly the right place to guard the most vulnerable part of the plant; the central shoot of the growing crown. If this shoot is broken the whole tree dies. These spikes are grooved just back of the hard, sharp points and the groove contains a film of wax which retains dust particles that lodge on the leaf. This dirt is frequently a carrier of spores, even the spores of lockjaw and a date leaf puncture is sometimes a serious proposition.

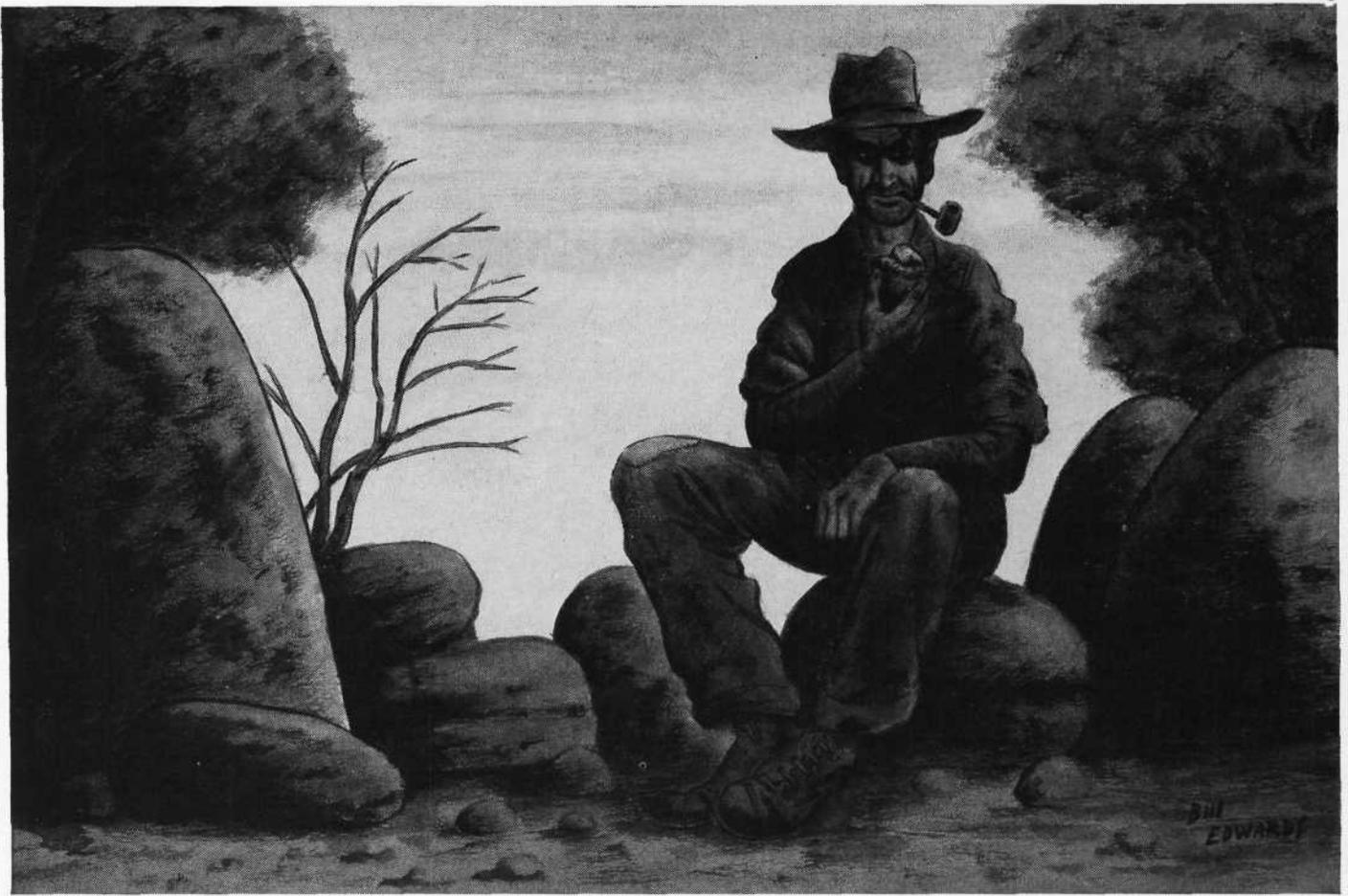
Looked at in an off-hand way, all these stickers are simply a darned nuisance. But when you look closer you begin to wonder if blind chance and evolution explains the whole story. So next time you rip your skin on a catsclaw or punch it full of holes on a cholla hold everything. Just remember—you have had a personal contact with one of the most remarkable phenomena in the vegetable kingdom—stickers.

#### GLEN CANYON SITE FAVORABLE FOR NEW COLORADO RIVER DAM

Results of test drills and surveys for the proposed Glen Canyon power dam on the Colorado river 15 miles north of Lee's Ferry, Arizona, are favorable for construction of the dam at that site, Bertram Lucas, field engineer in charge, declares. However, final decision will not be made until cores of rock obtained by diamond drilling are laboratory tested by the bureau of reclamation for strength, and the surveys are analyzed.

A 35-man crew has spent nearly two years on the preliminary surveys, which will continue through the summer in search for gravel and other construction materials. The surveys were said to have cost \$120,000, to be paid equally by California and the reclamation bureau.

Present plans call for a 400-foot dam with an estimated 400,000 kilowatts capacity output. Vertical red Navajo sandstone walls at the dam site are 600 feet high on the north side, 700 feet on the south. This solid rock extends more than 434 feet below the surface of the river, more than 300 feet below the soil and rock which form the river bed. Test holes have been drilled 350 feet into the sides of the canyon walls, and 6-foot drifts have been driven into these walls. The canyon, at this point, is 800 feet wide at the top, 400 feet at the bottom. Tests made at the original site, 4½ miles above Lee's Ferry, uncovered too much shale and softer rock.



*"The fresh surface was rich with free gold—gold that Tim could see with his naked eyes."*

## Tim Cody's Lost Ledge . . .

By HAROLD O. WEIGHT

Illustration by Bill Edwards

SOMEWHERE near the base of Cedar mountain, which lies on the border between Nye and Mineral counties, Nevada, is a little knoll crowned with gnarled juniper, or desert cedar. One of the junipers—if it still stands—shows cuts and scars where Tim Cody marked it nearly 40 years ago. And near the base of the marked juniper is a ledge of iron-stained white quartz, spotted with the yellow shine of free gold. Tim stumbled on the ledge in 1908, then lost it and never was able to relocate it.

Tim Cody really should not have been a prospector, since he lacked one of the most important single qualifications for the job—a good sense of direction. Tim could lose himself easily even when sober—and he was not always sober. He was an old-country Irishman, good-hearted, friendly, but poorly educated and not always able to think a situation out. He was a big, rawboned man with sandy hair and complexion, about 40 years old, when he found

**The prospector who found this gold ledge—and then lost it—has been dead only a few years, and old-timers still reside in Nevada who saw the rich specimens brought in by Tim Cody—and who believe he was telling the truth when he described the place where he found them—the knoll with the junipers on it. But the location of the gold deposit remains one of the unsolved mysteries of the Nevada hills.**

and lost the only real strike of his prospecting career.

Tim may not have had the qualifications for prospecting, but he had a real love for the job. He worked willingly enough in the mines, but as soon as he earned enough for a supply of bacon and beans, he packed his outfit and headed for the hills. In 1908, he was camped at Stewart springs, about 20 miles northeast of Mina, prospecting the area which later became part of the Simon district.

One day he decided to walk from his camp to the mining town of Golddyke

about 15 miles to the north, at the base of the Paradise range. Perhaps his food supply was running short or perhaps he felt the need of a sociable time with the boys. At any rate, he struck directly across country toward the mining camp. He carried only a small supply of water and no food, expecting to reach his destination in a few hours.

To reach Golddyke, Tim had to cross parts of an old lake bed which had been thoroughly eroded in the thousands of years that had elapsed since the lake had vanished. Somehow Tim became lost and wandered throughout the day. Toward nightfall he found himself at the foot of a knoll covered with junipers. Hoping to orient himself he climbed to the top of the knoll. Paradise peak, north and east of Golddyke, is the highest mountain in the area, and from the top of the knoll Tim saw and recognized it. And to the west he saw the black pyramid called Pilot Cone, which rises near Rawhide. The two peaks gave him his directions again, and with a sigh of relief, he sat down to rest.

"I lit my pipe," he said, "and looked down at my feet. There was a lot of white quartz stained with iron." Tim was a pros-

pector. He picked up a piece of the quartz and broke it. The fresh surface was rich with free gold—gold that Tim could see with his naked eyes, even in the gathering dusk. He dropped to his knees and kept breaking the quartz which lay about him. Every piece contained gold. The Irishman knew that at last fortune was within his reach.

It was nearly dark, but Tim had gold fever. The thought of waiting until morning was unbearable. But he knew that he must mark the spot somehow so that he could find it again on his return. He took his prospecting pick and chopped savagely at the nearest juniper. He didn't think of

burning some of the trees—or perhaps he was afraid that the fire would attract unwelcome investigators.

When he was certain that he could recognize the tree again, he loaded himself with all the ore he could carry and struck out again for Golddyke.

And then Tim got lost again. What happened, he never was able to explain. "I seemed to kind of go blind," he said. "I couldn't find my way."

He wandered dazedly for three days. Then he found himself at the abandoned Pactolus mine less than 10 miles from his starting point at Stewart springs. He still had pieces of the ore with him, but

his only interest was in water and food. Normally there would have been no water at Pactolus but someone had left a supply in the old dugout at the mine. In the dug-out Tim also found some flour. The rats had been in it, but he wolfed it down hungrily.

After resting, Tim went on to Golddyke, and reached the town without difficulty. From Golddyke he returned to his camp at Stewart springs, looking for the cedar-crowned knoll on the way. He did not find it. He had no idea of where his wanderings had taken him during the nearly 100 hours from the time he left Stewart springs until he found himself at Pactolus. All he knew was that somewhere in the area he had covered, among the many juniper-topped knolls was one from which you could see both Paradise peak and Pilot Cone, and that a fortune in gold was waiting for him on that knoll.

Tim was certain that he could find his vein again. He went into Mina and showed his specimens there—probably with the idea of obtaining a grubstake. He did finance himself in some fashion, and returned to Stewart springs and spent a full year searching for the knoll. He did not find it. Until his death in the early 1930s in the hospital at Hawthorne, Nevada, Tim talked about his lost ledge, and hunted for it when the opportunity arose.

Men still alive in Mina saw the ore Tim Cody brought in. Many have tried to find it, to retrace the course Tim followed in those four days of wandering. They couldn't do it. But about 1915, Bill Robinson and Bert Whitney found a piece of float just over the summit of a little hill about three quarters of a mile from Stewart springs. It was white, iron-stained quartz rich in free gold. Try as they would, they could not locate its source. Perhaps they were close to Tim Cody's lost knoll—and perhaps it was a piece of ore that Tim had dropped in his wanderings.

Just before he died Tim told Carl E. Sullivan, now county commissioner of Mineral county: "I think all the time I was looking too low down." Perhaps he meant too low in the lake bed. Perhaps too far south.

Carl Sullivan knew Tim well. He brought Tim's body back from Hawthorne and buried him in the cemetery at Mina.

"I liked the old fellow—liked him fine," Carl told me. "And I believe he really found the gold there—and I don't think it was more than two or three miles from Stewart springs. It's a gold country out that way. Two gold mines, the Warrior and the Omco, operated near there. But neither is the vein that Tim lost—the gold isn't visible. It's so finely divided that if you get one color in a pan, the ore will run \$15 a ton. You have to grind it to 200 mesh to save the values.

"No, Tim's gold is still out there—but there are just too many knolls with juniper on them."

## TRUE OR FALSE

If you are one of those vain persons who find it very painful to be wrong, then do not take this test. For unless you are some

kind of a prodigy you'll probably miss some of these. But if you don't mind that, then the test will be fun, and perhaps you'll learn something from it. The average Southwesterner should get 12 of these right. If your score is from 13 to 15 you have done well. Sixteen to 18 is superior. Answers are on page 36.

- 1—Scotty's Castle in Death Valley is a reconstructed prehistoric ruin.  
True..... False.....
- 2—Smoke trees commonly grow on sand dunes. True..... False.....
- 3—The chief industry of Searchlight, Nevada, is sheep raising.  
True..... False.....
- 4—Water is diverted from the Colorado river near Parker, Arizona, for the Metropolitan Water district of Southern California. True..... False.....
- 5—An arrastre was used by prehistoric Indians to kill buffalo.  
True..... False.....
- 6—Blossom of Larrea, commonly known as creosote or greasewood, is yellow.  
True..... False.....
- 7—Vallecitos stage station was a relay point on the old Butterfield overland stage route. True..... False.....
- 8—Camelback mountain is visible from Phoenix, Arizona.  
True..... False.....
- 9—California's Salton sea now covers a much smaller area than in 1900.  
True..... False.....
- 10—Brigham Young was leader of the westward Mormon trek to Utah.  
True..... False.....
- 11—Going west on Highway 66 across Arizona the traveler passes through Holbrook before arriving at Flagstaff. True..... False.....
- 12—Meteorites often contain nickle. True..... False.....
- 13—The Little Colorado river enters the main Colorado below Bright Angel trail. True..... False.....
- 14—Wyatt Earp helped Kit Carson round up the Navajo in Canyon de Chelly.  
True..... False.....
- 15—Santa Fe is the capital of New Mexico. True..... False.....
- 16—The Havasupai Indians sell their pottery from little stands along the roadside leading into their village. True..... False.....
- 17—The Chaparral Cock and the Road-Runner are two names for the same bird.  
True..... False.....
- 18—The Indian pueblo, San Ildefonso, is located in Arizona.  
True..... False.....
- 19—Many of the sheep-herders in Nevada are of Basque ancestry.  
True..... False.....
- 20—Charleston peak is the highest in Nevada. True..... False.....

*"Feet of the Desert Wind, so softly shod  
That on the dunes no trace your passing leaves,  
Where are the Towns and Roads and all the Gear  
Of centuries fled, o'er which the starlight grieves?"*

*Is this the end—that in the silting sand,  
Soft as the snow, which spreads its winding sheet,  
Man and his works are doomed to pass and go,  
Down blotted trails, lost to forgotten feet?"*

*Thus asked I. And the Silence made reply:  
"Not so. Be not dismayed by 'loss' or 'strife.'  
Dust covers up the old. But, like the seed,  
The 'old' springs up to 'new,' in deathless Life."*

—M.S.

## Desert Trails

By MARSHAL SOUTH

**W**RAPPED around by Silence and the sun, old Borrego springs broods on a mysterious past. For the ancient desert watering place Time does not exist. The clock has stopped.

All Nature has a sublime indifference to those hectic scurryings and mound-buildings which mankind imposes upon the face of the earth. The winds blow through the forests and the leaves fall and cover man's works. The sands of the desert drift and engulf them also. Man scratches in the earth like a lizard. And like the traces left by the lizard his marks are soon gone. Silence rolls in like a wave to blot the sound of his bickerings.

Particularly is this true of the desert. The desert is inscrutable—and wise. And of everlasting patience. The old spirits stand aside with an enigmatical smile until the shouters and noise-makers have gone. Then the old spirits of the land come back. This they have done at the old Borrego springs.

An ancient Indian watering place of importance long before the advent of the white man, the springs today are probably more lonely and deserted than they have been for centuries. And this is surprising. For, not many miles away, Progress is again in the land. Human ants rush to and fro with much business and clamor. But the old springs sleep—and smile in their dreams. The wind makes wire-thin harp notes through the mesquites. The dry reeds rustle in the stirring air and the hot desert sun casts ebony patterns from the spindling creosote bushes upon the bleak surface of the flood-flats. There are a few traces of broken clay pots as record of the Indians, and a few rotting timbers that tell of the one-time presence of the white man. The rest is loneliness—and Peace.

Though only a few miles eastward from the present activity center of Borrego valley, the location of the old springs is today unknown to a great many people. In fact the original spring is not only little known but has in reality ceased to exist. The desert has buried it and planted arrowweeds and a sprinkling of crowding brush to cover its grave. But the springs themselves, like the immortal soul that dwells in man, still live. For, across the wash, a scant half mile away, the underground flow which fed the ancient Indian waterholes, rises to new life in a different setting. The springs have died—yet they still live.

The ancient history of the springs—and it must have been an interesting one, for Borrego valley was a popular territory with the Indian people—is hidden in mystery. We may build theories about it by studying the contours of the surrounding country and by noting the many fragments of old Indian pottery which strew the region. Old burial grounds were not uncommon in the district. And the sand dunes and the desert ridges



*Marshal South's companions sample the water at the new Borrego spring.*

still yield abundant evidences of old and populous encampments. The background of desert mountains that rise to the north and northeast holds a rich atmosphere of legend to this day. There are tales of pre-Spanish gold mines which the Indians worked.

The ancient history of the springs can never be written, though it affords a limitless playground for a deductive imagination. But, coming down to the time of the white man's record, we find that the water hole, in the beginning of civilized penetration, was known as "Nigger Springs"—this because "Nigger Jim" Green, well known around Julian and Banner in the early gold boom days, once made his residence there. Jim, whom reputable legend has connected with the lost Pegleg mine, was a mysterious character whom Time has buried, appropriately enough, in an even deeper mystery. His residence at the springs is, by now, an all but forgotten fact.

About the first white claim made to the springs was established by that well known desert character, John McCain, who homesteaded the spot and built a cabin, the tattered, weather-worn remnants of which are today visible beside the ancient mesquite tree which marks the spot of the old spring. There are not many of these derelict timbers remaining, for the desert has done a thorough job of erasing the traces of the old cabin. But the few sticks and fragments lying amidst the crowding brush speak as eloquently of the transitory nature of all man's works as do the crumbling bricks of Babylon.

The era of McCain's homestead was in the days when the original spring was in existence. About 35 years ago earthquake shocks and floods obliterated this first, ancient spring. The same floods also cut off the shoulder of a nearby ridge, exposing a forgotten Indian burial ground of great antiquity. Nearly all traces of this, however, have been wiped out by the elements and by souvenir hunters.

Neither floods nor earthquakes, however, sufficed to quench the Spirit of the spring. The life giving waters rose again through a new opening half a mile away, across the wash. This new uprise is, today, the Borrego springs location. It is just a small "ojo," or eye—a grass-rimmed hollow filled with water, which is a welcome enough sight in the sere austerity of the desert. The shoulder of a ridge rises behind it, and to one side there is a dense thicket of mesquites. Sunlight plays through the thorn trees and the silence, that is the soul of the desert, presses down heavily with a sense of peace. Most of these desert waterholes are ghostly—if you are sensitive to such things. And by this I do not mean anything terrifying or repellent; for desert ghosts are rarely that. But it is in such places that one comes to a deeper understanding and a sensing of Life. And of undercurrents which are not apparent to the usual flow of existence, but which are nevertheless very real and vital.



*The old government signpost at Borrego springs is now the marker on a lost trail that leads to nowhere.*

I spent some time wandering around the site of the springs—both the old spring and the “new,” or resurrected one. No two desert places are alike, and there was an atmosphere to old Borrego springs that was peculiarly its own. Back of the new spring, on the shoulder of the ridge, was an old metal road sign marking the trace of an abandoned dirt road to Brawley and El Centro. The traces of the old wheel tracks have all but vanished in the pressing ranks of the stunted desert bushes, and the old sign stands up gaunt and lonely and bullet scarred—another signpost of mystery. It is a government one. For it antedates the era when the Auto Club of Southern California placed markers on the desert roads. Somehow it intrigued me by its desolate loneliness . . . Signpost on the road to nowhere. Guardian of forgotten trails.

The huge, gaunt mesquite tree beside which the McCain cabin once stood at the site of the old spring, had a funeral look. Its black limbs, even in the brilliant sunshine, seemed to give a somber cast to the few rotting timbers that remained of the old house. It might have formed an appropriate roost for buzzards. And the rustle of the wind through the ranks of the dead cane-grass that marked the site of the obliterated waterhole was like the mutterings of dusky spirits, jealous of the white man's intrusion in their old haunts. But in spite of the loneliness of the place the harsh glint of the high sun on the white sand of the wash made a brilliant foreground to an alluring desert picture that was backed by the glow and shadow-deeps of distant mountains.

Salt grass and dead tules crowded about the sand buried grave of the spring from which both Nigger Jim and John McCain got their water. And clump grass and yerba mansa helped out with a pattern that held a compelling fascination in spite of its loneliness. It is significant that the old spring, despite its burial, still shows signs of life. The sands have covered it. But the evidence of moisture indicates that with a little digging in the right

place it could doubtless be restored. However, with the new water hole just across the wash, there is really no need to wake the sleeper.

Which calls to mind that this vanishing of springs is quite a common occurrence. In the case of the Borrego spring there was a simultaneous new opening. But in the majority of cases when a spring disappears it stays lost. Oldtime Indians have repeatedly told me that in the early days there were many more water holes than there are at present. One old lady went so far as to assert solemnly that the good *Dios* was so mad at the cruelty which the Spaniards inflicted upon the Indians He deliberately dried up the springs as a punishment. Making allowance for some slight wishful thinking—and he would be a rash person who would assert that the theory is all wild imagination—there is also the very practical explanation that the Indians themselves deliberately lost numbers of springs as a means of causing discomfort to their white tormentors. These oldtime Indians preserved, for a long while, accurate memories of the spots where the springs had been covered in. And, in case of their own journeyings, could go from hidden waterhole to hidden waterhole, across otherwise impassable stretches of desert. Carefully, each time, after slaking their thirst, they buried the precious water. So that the pursuing white man, and the foolhardy traveler, taking the same route, generally left their bones to bleach in the wilderness—often within just a few feet of covered water. Particularly was this true in some of the stretches of Baja California. I have had well authenticated stories told me of Indian guides who held the secrets of these buried life savers. Of course not all the lost springs were due to man's actions. Frequently earthquakes and floods, as in the case of old Borrego springs, wiped them out of existence.

Any story of Borrego springs would be incomplete without some mention of Bob Campbell. Bob was an old-timer of the region. And, being possessed of a generous proportion of Indian blood, he was perhaps particularly fitted to sense the romance and the mystery of the locality. Bob was reputed to know the location of more than one lost Indian mine. But the strain of blood from the Old People was an effective lock upon his tongue. He would not talk. What he knew—and there is reason to believe that he did know—he kept to himself. And perhaps wisely. Only the ignorant scoff at spirits and curses and the mysterious vengeance of the departed. I have seen a little of this myself. And I am not ashamed to say that I, also, am superstitious—if that is the word you want to use.

There is evidence however that Bob Campbell had a sense of humor that was not above taking advantage of the later-day white invaders. East of old Borrego springs there is a sinister, dark colored rocky mountain which, probably in some connection from the old Indian past, is called to this day Ghost Hill. (This is not the Ghost Mountain of Yaquitepec, which lies a long way to the southwest of it.) The possibility is that old burial grounds on the hill were responsible for the belief that it was the prowling ground of disembodied Indian spirits. Natives firmly believed that ghosts, carrying torches, prowled the slopes and eerie canyons at night time. Stories of lights moving on the hill during midnight hours are frequent.

At any rate Bob Campbell did nothing to dampen the interest in such tales. On the contrary he spread them. There are stories that he would frequently take out parties of the half-way credulous to view these night displays. And, having led them out into the desert in the darkness, below the old spring, Bob would manage to slip away from his confused charges. Very soon they did see lights—ghostly lights moving through the bushes and among the rocks. It was very impressive—for Bob was smart and knew how to do a good job. Perhaps he acquired merit from the ghosts of the Old People for thus hoodwinking the white interlopers in the ancient lands. At any rate the ghost seekers saw lights. And they were willing to swear to it. Ghost Hill had maintained—and it still does maintain—its shivery reputation.



*Dr. A. L. Inglesby with Geraldine, Tim and Colleen Hamilton gathering agate, jasper, wood and polishing conglomerate east of Cainesville, Utah.*

# Rock Hunters' Wonderland

By CHARLES KELLY

**E**AST of Torrey, Utah state highway 24 is unpaved, winding through the scenic and geologic wonders of Capitol Reef national monument, through the narrow gash of Capitol gorge, and out into the desolate, little-populated sand, sandstone and clay desert of eastern Wayne county. Beyond the gorge it is often rough, very slippery when wet and almost without facilities for motorists. But every year more and more seasoned rock hunters follow this desert trail to rich collecting grounds. For in this country the bones of the dinosaurs have been turned to stone and prisoned in cemented conglomerate, highly colored petrified forests have been broken up and scattered on buttes and in washes, and jasper, agate and chert of cutting grade are distributed plentifully.

Utah 24 runs through Wayne county from west to east, but is not paved east of Torrey. The scenery through which it runs will compensate for a good many jolts. Water is scarce and a supply should

be carried in the car. Your gas tank should be filled at Torrey.

This expedition begins at Fruita, Utah, where our speedometer was set at zero for the eastward journey. Before starting, however, all rock hounds should inspect the collection of Dr. A. L. Inglesby, one of the largest in the state. Doc has hunted over nearly every square mile of Utah, has brought in tons of material, and would leave a steak dinner anytime to talk rocks. His specialty is variscite and snowflake obsidian.

The red cliffs of Capitol Reef national monument are unusually scenic but contain little to interest collectors. At their base lie the Chinle shales which always contain petrified wood, but in this section it is not of polishing quality, and specimens may not be removed from the monument.

At 7.5 miles east of Fruita the road enters Capitol Gorge, a narrow, winding canyon bisecting Capitol Reef. In ordinary weather this passage is safe, but should not

**The Wayne Wonderland, Wayne county, Utah, was named for the beauty of its highly colored cliffs and eroded canyons. But more and more rock hunters are finding the area a treasure house of petrified wood, jasper, chert, dinosaur bone and a great variety of cutting material. Here Charles Kelly gives a log of some of the more accessible localities where collectors can combine their hobby with a visit to one of the Southwest's most scenic regions.**

be attempted in August if rainclouds appear. In this gorge, at 9.8 miles on the left, near an old Indian campsite, is a group of typical Fremont culture petroglyphs. Originally they were colored as well as incised, and some traces of ancient paint remain.

In the narrowest part of this gorge, 10.3 miles, pioneers of Wayne county cut their names on the smooth walls as they passed in early days on their way to found Hanks-ville, for many years the most isolated town in Utah.

The gorge ends at 12 miles, and at Notom, 13.8, Pleasant creek is crossed. This is good water in case your canteen needs refilling.

East of Notom the road continues over a short dugway. At 1.2 miles beyond Pleasant creek, in the first small draw (left) are found quantities of highly colored good quality chert which can be worked into attractive cabochons. While various shades of red predominate, it also comes in pur-



*Worthen Jackson digs out of the mud in a "dry" wash. Rimrock in the background contains large dinosaur bones.*

ple, yellow, black, white, and intermediate shades. The deposit has been picked over near the road, but the vein extends southward through a broken country for ten miles, so the supply is practically inexhaustible. Untouched beds can be found within less than half a mile. Here also, in crevices of the country rock are nice groups of calcite crystals, but they do not fluoresce.

On the left of the road at 15.3 miles are several small knolls of loose sea shells of value as specimens. Opposite a ranch house at 21.4 miles stands the Cutler Behunin cabin, first home erected in Blue Valley. The little settlement of Cainesville is reached at 24 miles, where some local

specimens of wood and other rock may be seen at the gasoline pump. Spectacular buttes in this vicinity furnish good camera subjects, but the Mancos shale contains no material of interest.

On the right at 30 miles, just before entering a small canyon over a steep dugway, is a large field of agate, jasper, wood, and hard conglomerate, lying on the slopes of rolling hills. Some of the agate is good, jasper nodules are of fine quality, and some specimens of wood contain good colors. The most unusual item here is the conglomerate, which occurs in small boulders. It is fine grained, very hard, nicely colored and takes a high polish when cut, forming a beautiful mosaic pattern. While its uncut

surface is not spectacular, it makes beautiful bookends and cabinet specimens when polished. All this material has been deposited in an ancient river bed and wood sections are waterworn, but usually have few fractures.

Hills near the road have been picked over, although good material may still be found. Dirty Devil river runs just south of these hills. On the other side of this stream is a large field of the same material which has never been worked. Unfortunately there is no ford at this point, and everything has to be packed out. The sandy streambed is wide, but water is seldom more than ankle deep. Collectors ambitious enough to explore this untouched

*Tim Hamilton examines highly colored chert nodules near the highway east of Notom. The supply here is practically inexhaustible.*





*Fossilized dinosaur bones gathered from the Morrison formation near Hanksville, Utah.*

ground will be well rewarded, but should not attempt to cross the river in August when it may be flooded at any time by storms in the country above.

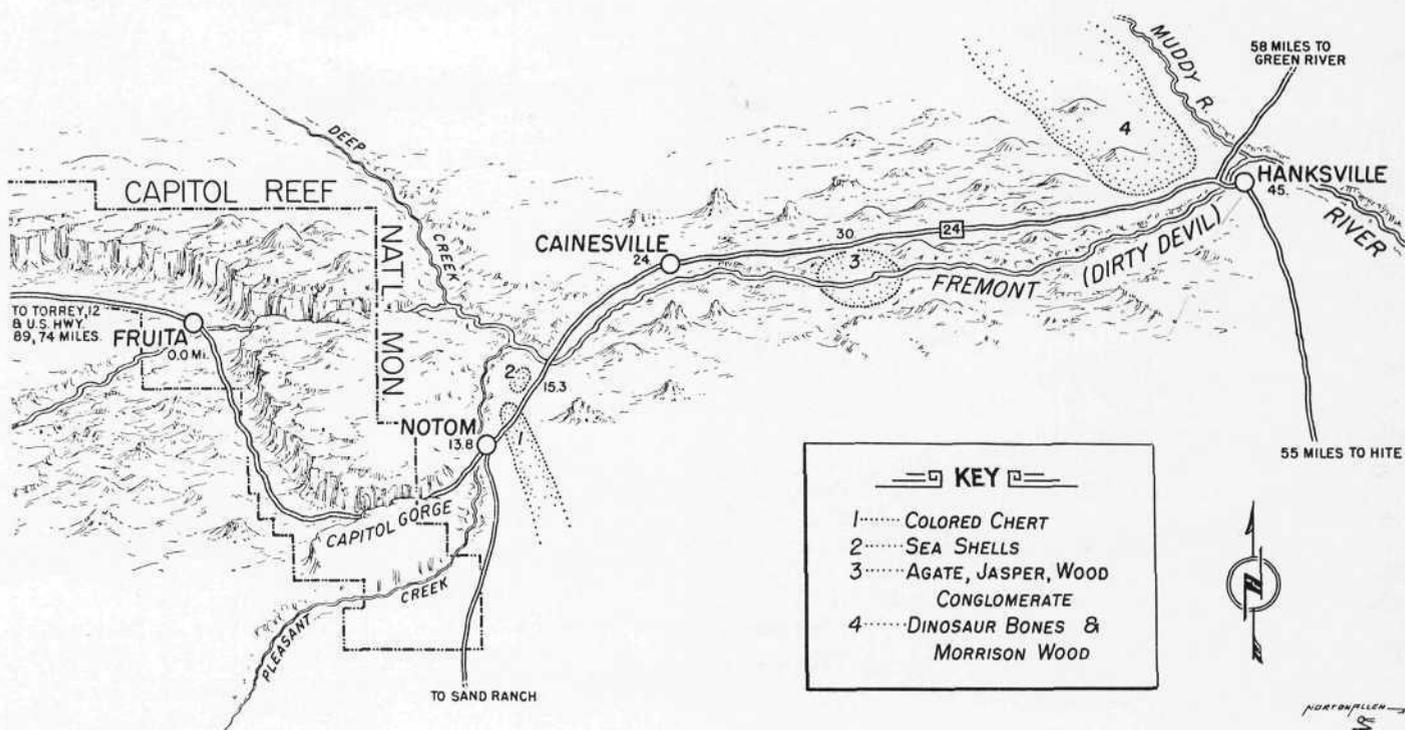
Continuing east another ten miles the road winds between Pinto Knolls in the highly colored Morrison formation. Just beyond is a comparatively flat desert (left) dotted with rounded knolls and flat-topped buttes. The eastern buttes are capped with a rough conglomerate containing quantities of large dinosaur bones. Rounded knolls toward the west show brightly colored stratification. Almost anywhere on

this desert one can find small fragments of petrified wood in the brightest possible colors—red, orange, salmon, pink, lavender, purple, etc. Few pieces are larger than a baseball, mostly smaller, but most of them will make cabochons of extraordinary beauty and polish. The original wood seems to have been cypress and was eroded out of the Morrison formation, but its source has not yet been discovered.

On and around the flat-topped buttes have been found great quantities of dinosaur bone, some eroded free and others still embedded in conglomerate. Most of

those on the surface are somewhat weathered and few are of polishing quality. However, some unusually fine sections of bone, partly crystallized, have been found in places, and no doubt much more remains to be discovered by careful search. Many gastroliths have been picked up in association with these bones.

Nearly every mile of the route described contains outstanding scenery of great variety, so bring plenty of color film. Both rock hunter and photographer will be well rewarded for a trip through Wayne county's wonderland.





Greatly enlarged photo showing head and fangs of the tarantula.

## It Wins no Beauty Prize . . .

By RICHARD L. CASSELL

OF ALL the insects—and those creatures resembling true insects—the tarantula is among the topmost in infamy, and entirely without justification. Their shining fangs and shaggy coat, together with their enormous size, often being large enough to span the palm of one's hand, give the appearance of intense ferocity. However, their poison glands are very small and the toxicity very feeble in its effect upon man.

During the day the tarantula hides in burrows lined with spider-silk and emerges evenings to wander boldly about in quest of food. Like the *Lycosa* or wolf spiders the tarantula depends upon fleetness of foot to overtake its prey which sometimes is quite large. The cockroach, for example, although very swift, falls easy prey to the big hairy marauder. In a few minutes this great spider not only will have drained the fluid contents of its victim, but there will be left only chitin pellets to mark the spot. The food of tarantulas in general encompasses all manner of creeping insects large enough for this species of spider to discover and manipulate with its long talon-like fangs. But it also departs from the conventional spider diet and has been known to kill little snakes, toads, or even birds.

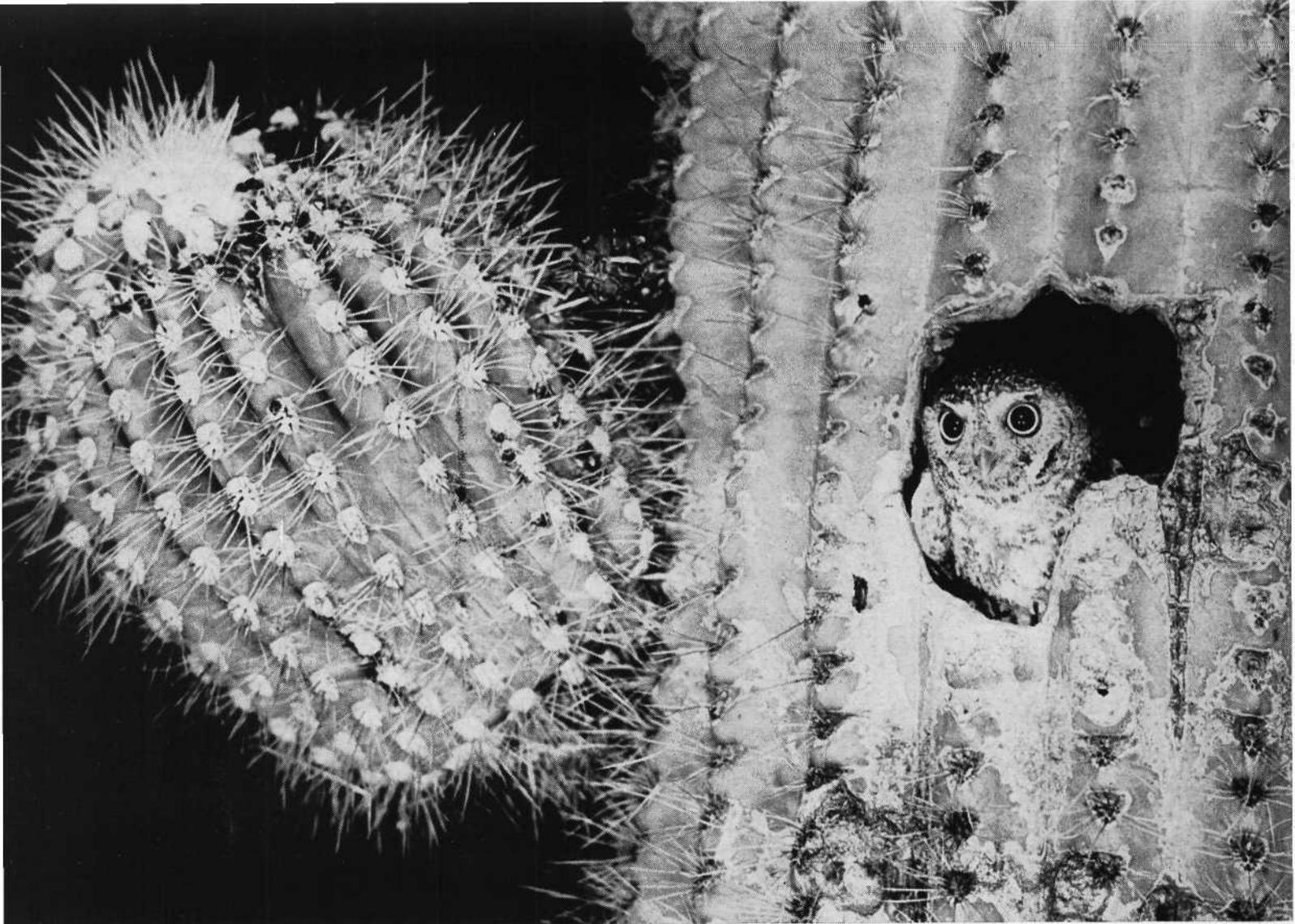
The three most commonly known tarantulas in western United States are *Eurypelma californicum*, *Eurypelma hentzii*

and *Avicularia californica*. None of them would win a prize in a beauty contest.

Scientific experiments have proved the tarantulas of Europe and America are rather harmless creatures. As in any spider bites, the thing to fear is secondary infection which may and does occasionally take place in the wound inflicted by the fangs of a spider. From South America a more venomous tarantula occasionally reaches this country in a bunch of bananas.

During the growing period in the life of the tarantula, as in all spiders, there is a frequent moult or shedding of skin to allow the expansion of the soft parts of the body. This is accomplished by the old skin splitting along the sides of the body. This differs from the method of the insect, which usually splits down the middle of the back. During this moulting period, the spider is soft, helpless, and vulnerable to many predators.

As to enemies, the tarantula is fairly exempt but for the great spider wasp which paralyzes her prey, then drags or carries her huge quarry in the general direction of her burrow where she lays an egg on the defenseless body which later will furnish fresh meat for the larva. Scorpions, too, are the tarantula's arch enemy, and the spider is no match for that creature's armored body and potent sting.



*Photograph by Lewis Wayne Walker of San Diego near Kofa mountains in Arizona.*

### DESERT WINDS

By IVA POSTON  
Kalispell, Montana

Desert winds  
Do little more  
Than circle a cabin  
And try the door;

Or jiggle the latch,  
Amazed and shocked,  
Whenever they find  
A door that's locked!

### THE OLD OLLA

By MARY PERDEW  
Santa Ana, California

An olla once swung  
From a cottonwood tree.  
Where sun never shone,  
And the winds blew free.  
A cooler of water,  
Well fashioned of clay,  
By patient brown hands  
Toiling day after day.  
Through long summer hours,  
The old olla swayed,  
Dripping with coolness,  
Within the deep shade.  
And many came strolling,  
Along that way,  
To dip from the vessel  
Of pottery clay.  
While the skillful brown craftsmen,  
Whose work was well done,  
Placid and silent,  
They sat in the sun.

### TO A DESERT ELF OWL

By ROBERT B. MCCULLOCH  
Denver, Colorado

You softly dwell within the guardian thorn  
And in the heart of cactus make your home  
To steal at dusk, a phantom lightly borne  
On downy wing, a fleeting sparrow-gnome  
That gathers food at fragrant blossoms rife  
With agave's nectar; but ere dawns the light  
Flee swiftly homeward in the whispy morn;  
How well we see the dusty deserts of our life.  
Yet miss the quiet secrets of the night.

### OCOTILLO

By ELIZABETH CANNON PORTER  
Puente, California

A scarlet splash stands out 'gainst grey sand  
dune  
Like altar flame before some ancient tomb.  
Its courage with the desert is attune;  
Color flamboyant to dispel the gloom.

### TO GOOD LIVING

By TANYA SOUTH

Give then your all. And count no cost  
To do the things you know you must  
To live uprightly. Put your will  
And every effort in you still  
To doing good. Let crosses come—  
Laugh at the burdens they impose.  
And know that every cake or crumb  
Is counted. And God knows!

### DIGGIN' SAND

By CHARLES V. POWER  
Desert Hot Springs, California

Out on the desert—down on your knees  
Diggin' sand—cutting thorny trees.  
Ain't no trouble in this here land  
Like freein' a car that's stuck in the sand.  
Your throat gets dry and your thirst gets vile  
But there ain't no water for twenty mile.  
You wish for a phone that's not at hand  
And wind up diggin' once more in the sand.  
Garages you vision—a towing truck—  
Then you rage and curse your luck.  
But you dig once more as the sun sets red  
And think of home and a nice soft bed.  
You're ready to quit but you try once more  
And at the sound of the motor's roar  
You find that you roll into the clear  
And you sing to the desert you're glad you're  
here.

### DESERT RAINBOW

By CHRISTINA FEHLING GARRISON

I watched a rainbow grow  
Full and high  
It rested lightly on the earth  
It kissed the sky  
The magic of the halo that it made  
Reached you as you wandered in the glade.

At first I thought the halo must be thine,  
Facetiously I thought that it was mine.  
Such reasons were not adequate, not true,  
I groped about and suddenly I knew,  
As forcefully its beauty and its glow  
Reflected Desert Glory  
Soft and low.



## *Silt Report on Lake Mead . . .*

How soon will Lake Mead become filled with silt?

No one can give a precise answer to this question, but the Lake Mead reservoir probably will bring benefits to the Southwest for many centuries, according to the opinions of E. W. Lane, consulting hydraulic engineer, and J. R. Riter, chief of the hydrology division for the Reclamation bureau, reporting in the April issue of *Reclamation Era*. Whitney Borland assisted in preparation of the article.

A detailed survey of the volume of sediment deposits in Lake Mead is being undertaken by the bureau and when it is completed a more accurate estimate of the length of time before the reservoir is filled can be made. In planning Hoover dam, the bureau estimated conservatively that if no sediment flowed out of the reservoir, if none was deposited above the spillway level, and no reservoirs were created upstream, it would take more than 200 years, at a rate of 137,000 acre-feet per year, to fill the reservoir.

This estimate did not allow for currents of heavy muddy water which tend to flow along the bottom of the reservoir, under the clear lake water. As soon as the reservoir fills to the lowest gate, these currents, laden with sediment, will begin to flow out through the power plant. The amount of

silt carried out of the reservoir will thus increase in future years. Neither did the estimate allow for the fact that all the sediment coming into the reservoir does not flow smoothly down and level itself off like water. Much of it accumulates in a delta-like formation at the upper end of the reservoir, and builds itself above the water level. This deposit may eventually rise 100 feet above the spillway level.

Another factor which may lengthen the original estimate is the sediment erosion control measures to be taken in the Colorado river watershed. These measures should reduce the sediment load considerably. There is very little doubt that it will be necessary to construct additional dams upstream to provide the storage necessary for flood control, water supply, irrigation and power long before silt accumulates to a point where it is detrimental to the functioning of Lake Mead and the Hoover dam and power plant.

The desirability of constructing dams on the Colorado above Lake Mead, at Bridge canyon and Glen canyon, is being investigated. At Glen canyon a dam with storage capacity more than twice that of Lake Mead will be possible if rock strong enough to support such a structure can be found. Such a reservoir would keep most of the sediment out of Lake Mead for a century or

more. Also under consideration is construction of reservoirs on the San Juan and Little Colorado above Lake Mead for the specific purpose of storing sediment.

When the original studies for the Boulder canyon project were made, it was estimated that dams would be built upstream which would so reduce the sediment inflow that only about 10 per cent of the reservoir capacity would be filled in 50 years. At the present time it appears that these estimates will be close to the actual result. Present estimates, however, do not have too much importance since it is probable that before silt deposits in Lake Mead seriously reduce the capacity of the reservoir, control measures in the upper tributaries will have completely changed the situation.

While accumulating sediment will slowly but surely reduce the storage capacity of the reservoir, it will not necessarily lower the power output. On the contrary the power potential might be increased, for the reason that the total fall of the dam would then be used whereas it is utilized now only when the reservoir is full.

It is evident, the authors conclude, that the life of the project is assured for centuries, and benefits to the Southwest will continue as long, in this day of rapidly advancing science, as humans may foresee the future.



## Joshua Tree Controversy . . .

Shall Joshua Tree national monument in Southern California be opened to unrestricted mining operations? Or shall the 838,258 acres in this park area be divided—310,000 acres for mining, the remainder for recreation as is proposed in H.R. 4703? The highlights in this controversy are presented in two accompanying letters, one representing the mining interests, the other in support of H.R. 4703, known as the Sheppard bill.

### For the Mining Interests!

Twentynine Palms, California

Dear Mr. Henderson:

I have read and admired Desert Magazine since Vol. 1, No. 1. I also began cruising the California deserts in 1919. Going into the Mojave, pavement stopped at Mojave. Entering the  
*(Continued next page, first column)*

### For the Sheppard Bill!

El Centro, California

Dear Mr. Davis:

While I cannot concede that all the implications contained in your letter are true, nevertheless I believe it represents an effort on your part to present the miner's side of the Joshua  
*(Continued next page, second column)*

Colorado Desert you hit the dirt on leaving Redlands. Palm Springs was a not too wide spot in a sandy trail. Since those days I have seen a lot of ore.

April Desert arrived today. Your remarks concerning mining and Joshua Tree national monument are sincere from the viewpoint of a remote editorial desk. At close range you would, I believe, find yourself so far off the beam, no known radar device could orient your bearings.

You refer to miners rejecting H.R. 4703, the Sheppard bill. Buried in this bill was a loop-hole for a land deal possibly smaller than the Inyo-Kern grab, but having the same results in home and real property condemnation. At the U. S. Senate Public Lands Committee hearing No. 28, San Bernardino, October, 1947, the author of this bill walked out of the hearing rather than answer property owners' questions. An ex-Custodian of the Monument was sent from Omaha, Nebraska, to San Bernardino at federal expense to testify. He remembered an important outside business matter and walked out of the meeting. He did not testify. H.R. 4703 also carried a clause giving the Secretary of the Interior full power to void all mining in the removed area "at his discretion."

That is only a brief outline of the miner's objections to and rejection of a bill you term a "fair compromise."

You refer to lack of paying mineral in the Monument. There is a long list of rich ore deposits in the area. I do not refer to gold alone. Today gold is a comparatively unimportant metal. There are also a large number of patented claims in the Monument. Many miners prefer not to patent ground due to the tax burden, especially in this period of high property and income taxes.

After nineteen years of travel in the Monument area I can state beyond doubt or controversy that there is no more unique scenery in the east one-third of the Monument than there is on my own 160 acre homestead, if you allow for area ratio. That same non-scenic east one-third is rich in needed minerals.

Desert Magazine devotes much space to rockhounds. I am one and proud of it. Under present Washingtonian rules the poor rockhound who pockets a pecan-sized specimen inside the Monument is a criminal.

Desert Magazine would have profited by staff coverage of the regional meeting of Western Mining Council, incorporated, held at Twentynine Palms on March 11. During World War II we heard much talk of metal shortages. A well known local miner and loyal American was prevented by the then Monument custodian from working a rich lead molybdate deposit. This official did not care "whether the war needed lead or not." His little book of rules said no mining. The little book out-rated the war effort.

Re Fort Knox gold: The dollar bill you or I lay on a store counter is only backed by 23 cents in gold. The Fort Knox "glory hole" needs a lot of filling.

As of this date 72 per cent of San Bernardino county is federal property; or was before the Mojave No. 2 range deal. The taxpayers who own the other 28 per cent pay for roads and other improvements on this federal land. When you move to Palm Desert in Riverside county you will find 68 per cent of the county is owned by Uncle Sam.

Every foot of pre-Monument road in that area was built by miners. Washington bureaucrats used those same roads to condemn good mines.

Four per cent of actual sales value is too low a bid on any kind of property; and is asking too much in name of patriotism.

When controversy appears in Desert Magazine it is always friendly. The above facts are offered in the same friendly spirit, as the miners see the issue, and from a ring-side seat. I believe you will find all the information is documented or easily verified.

Scenery has an undoubtedly high cultural and recreational value. It will not support a payroll or win the next war.

Most sincerely,

RICHARD G. DAVIS

Tree national monument controversy fairly and without malice.

If I were a mining man perhaps I would feel as you do about the issue. In my role as editor of a widely-read magazine I must serve the interests of a much larger group. With the best of intentions, you are placing yourself in the position of espousing the cause of a small minority whose chief interest in Joshua Tree monument is private profit. In our democracy that is a legitimate motive—but only to the extent that it does not conflict with the interests of the citizenship as a whole.

Your use of the words "loop-hole" and "grab" would imply that the sponsors of the Sheppard bill, with the connivance of federal representatives, have some knavish interest in the passage of H.R. 4703. That is a viewpoint which I cannot share. I prefer to regard our government as a friend seeking to protect the interests of myself and my children, rather than as an enemy trying to deprive me of something. When Uncle Sam sets aside large areas in San Bernardino and Riverside counties for national forest and park purposes I believe he is acting for a majority of our citizens, as opposed to the self-interest of a minority.

If there are patented claims within the monument there is no law to prevent the owners from working them. They are private property, protected as such by the same benevolent government which also is protecting other lands for the benefit of all its citizens.

Actually, the Sheppard bill was designed as a concession to the mining interests you represent. Under its terms 310,000 acres of known mineralized lands would be deleted from the Monument boundaries and made available for prospecting.

If the miners are sincere in their desire to provide metal for a possible war emergency, they have the opportunity to prove that interest by supporting a measure which was drafted in their behalf. But when they take the attitude—as they have—that they must be granted prospecting rights in the entire Monument, and will accept nothing less, then the patriotism of their motives becomes open to question.

The Sheppard bill represents an honest effort to give to the miners that part of the total area which offers greatest promise of mineral return, and to the much larger group—those who seek outdoor recreation—the opportunity to find beauty and relaxation in one of Southern California's rarest natural gardens.

As our Southern California population daily becomes more congested, the need for recreational areas increases. We have none too many of them. The scenic 550,000 acres remaining in this Monument after the deletion of mineralized areas proposed in H.R. 4703, although under the custodianship of Uncle Sam, still belongs to you and me. The little book of rules to which you refer merely says, in brief: "Enjoy but don't destroy."

The natural resources of our nation are being used up too rapidly. If you would understand the extent to which this is true, let me suggest that you read *Our Plundered Planet*, written by Fairfield Osborn, and just recently off the press. I am unalterably opposed to the idea that we must get all our minerals out of the ground and cut down all our forests as quickly as we can. There has been too much of that. You and I already are paying the price for the greed with which previous generations have robbed the earth of its riches.

Thanks to the vision of some of our citizens, a few areas have been set up within our great land as sanctuaries where he who strives only for commercial gain may not enter. Joshua Tree national monument is one of those places. It belongs to you and me—and may we always have an equal share in its enjoyment.

Very cordially,

RANDALL HENDERSON

# Desert Ash Trees

By MARY BEAL

**I**F YOU know the desert only in crossing it enroute to other destinations, you'd never suspect that it harbors native species of one of the finest deciduous forest trees of temperate regions, the Ash tree, which for usefulness and handsome appearance ranks with the Oaks, Walnuts, Elms and Maples. The wood is tough and pliable, adaptable to many uses, such as the making of furniture, agricultural implements, tool handles and wagons. Most of the desert Ashes are not large enough to have much value as a timber tree but they add interest and beauty to their natural locations along stream banks and drainageways, in canyons or on mountain slopes, and are valuable for shade and ornamental planting.

The family commonly is called the Olive, or sometimes the name Ash is used, that branch of the family being so widespread and important in both the Old and New Worlds. As with other trees prominent in the Old World, there are traditional superstitions connected with the Ash. In Norse mythology it was honored as the "World Tree" and the whole race of men was said to have sprung from its roots, and wisdom to have gushed from its base like a fountain. The Ashes have as cousins the Olives, and several favorite garden shrubs, such as Lilacs, Forsythias, Jasmine and Privet. The largest and most widespread of the desert species is the Velvet or Arizona Ash, botanically listed as

## *Fraxinus velutina*

This species is so extremely variable that several varieties have been segregated, and these divisions in turn show more or less variability, so it is simpler, within the limits of this page, to consider them as a whole. The Arizona Ash usually is a small tree, seldom over 30 feet high, though it occasionally reaches 40 feet. The grey bark of the main trunk is much fissured and the branches spread out into a broad-crowned head. The season's shoots and leaf-stalks and mid-veins are densely silky-hairy, the under side of the leaflets also being velvety with fine hairs. This hairiness is diminished or entirely lacking in the varieties and the leaflets often leathery in texture.

The compound leaves have 3 to 5 (rarely 7) pointed leaflets, lanceolate, oblanceolate, elliptic, or ovate in outline, finely or coarsely saw-toothed, or entire, more or less velvety underneath with short silky hairs, or smooth and hairless, from thin to thick texture. They are light-green and smooth above, paler beneath, 2 to over 4 inches long. The tiny flowers have no petals and appear in March and April, the staminate and pistillate clusters on separate trees. The staminate ones, with minute yellowish calyx and 2 conspicuously long yellow anthers, are crowded into very dense clusters, the greenish pistillate ones bunched less densely. The fruit is a samara, an inch or more long, the body cylindrical, the flat wing terminal.

The species and some of the varietal forms are most abundant in Arizona but also native in the mountains along the western borders of the Colorado and Mojave deserts in California, north through Inyo county into southern Nevada and southwestern Utah, east through New Mexico to western Texas, and south into Mexico. You'll also find it in many towns, cities and ranches of the Southwest, planted for shade and ornament, along streets and in door-yards.

## *Fraxinus anomala*

Dwarf Ash or Single-leaf Ash is a small tree 10 to 20 feet high or sometimes a shrub. The branchlets are noticeably 4-



*Tiny petal-less flowers of the Arizona Ash appear in March and April. Look for this small tree, with grey bark and broad-crowned head, in Southwest mountains. Beal photo.*

angled and hairless, the leaves usually single or occasionally with 2 to 3 leaflets, 1¼ to 2 inches long, dark-green above and paler beneath, smooth and hairless on both surfaces. In outline they are broadly-ovate to almost round, entire or sparingly round-toothed. The flowers are greenish, disposed in short compact panicles, blooming in April and May, and are polygamous, which means that perfect flowers, staminate ones, and pistillate ones all grow on the same tree. The samaras are ½ to ¾ inch long, the rounded wing surrounding the body.

The Single-leaf Ash is native high up in the Panamint mountains, bordering Death Valley on the west, in the Providence mountains of the eastern Mojave desert (which is where I first saw them), in southern Nevada (I found them in the Charleston mountains on the west side), southern Utah, northern Arizona, and northwest New Mexico, being noticeably common in the Grand Canyon. My introduction to them was under most favorable circumstances, on a day's botanizing jaunt with California's dean of botanists, Dr. W. L. Jepson, under the guidance of Jack Mitchell (of the Caverns), up Gilroy canyon. The small group of these Ash trees almost filled a narrow, gorge-like stretch of the canyon and coming upon them suddenly and unexpectedly was a happy experience for botanically-minded climbers.

## *Fraxinus macropetala*

Commonly known as Flowering Ash or Fringe-bush, it usually is a large shrub about lilac-bush size, one of the few Ash species in the far-flung domain of the genus that adorns its flowers with petals. In full bloom it is as ornamental as any of its garden-favorite cousins, its charm enhanced by a fragrance that is equally pleasing. The 3 to 5 bright-green pointed leaves are broadly-ovate to lanceolate, their margins entire or obscurely toothed, an inch and a half long, or less. The dainty sweet-scented blossoms have 4 very narrow white petals ½ to ¾ inch long, borne in attractive clusters that look like copious bunches of delicate fringe. The oblong body of the samara is flat and thin, the wing blunt or square at the apex, frequently notched.

Until a few years ago it was thought to be native only in Arizona but in recent years the southernmost part of Nevada has been added to its range. It flourishes in delightful abundance in the Grand Canyon area and those fortunate ones who travel the Bright Angel Trail in May or June have the pleasure of enjoying its fragrant beauty in a magnificent setting.

# LETTERS . . .

## Bite of the Gila Monster . . .

Mecca, California

Dear Editor:

In a recent issue of Desert Magazine, the Quiz section, it states that the Gila monster is poisonous.

In Field and Stream magazine in April, 1928, an article on desert reptiles stated that science formerly regarded the Gila monster as deadly poisonous, but that it later was found to be harmless.

I have had a number of them in my possession over a period of years, and have been bitten several times with no ill results. Many years ago a friend at St. George, Utah, made a test by having a Gila monster bite a guinea pig. It left no ill effects.

CARL WM. JOHNSEN

Hobart M. Smith in "Handbook of Lizards" writes: "The glands which secrete the venom are in the lower jaw, where the lips are swollen. The venom is secreted into the mouth between the teeth and the lips, through separate openings opposite the anterior 3 or 4 teeth on each side, and unless the lizard retains its hold for a considerable period, permitting the venom to find its way by sheer chance into the wounds caused by the large teeth, there is little opportunity for the full effect of the venom to be realized. Although the teeth in the lower jaw, as well as the upper jaw, are grooved, these grooves have no connection with the poison sac or gland; they may aid in affording a place for the venom to work into the wound by capillary action." —R.H.

## Gold in Volcanic Lava . . .

San Gabriel, California

Desert Editor:

Some time back your true and false column stated that gold is never found in volcanic rock. I can cite three instances to prove your answer is incorrect:

About the beginning of this century gold was produced north of Ludlow, California, from a mine composed entirely of volcanic rock. I am told it was a producer for several years.

In August, 1932, at Ashfork, Arizona, I met a cattleman who told the following story: "About 10 miles northwest of Ashfork is a lava flow where there are chimneys or bottomless holes. About 15 years ago I had been missing some calves and when I went out to investigate I decided they may have fallen in some of the lava pockets. So I cut some timbers to cover them up. While covering one of the chimneys I saw what appeared to be a gold nugget. Searching the area I found

more of the nuggets and eventually picked up a small fortune in gold."

In the early 1920's the Santa Fe agent at the town of Amboy, California, took his wife and two children out for a Sunday ride along the west side of Amboy dry lake and around Amboy crater. While hiking over the crater the 8-year-old girl saw a black lava rock the size of a cup with gold spattered over all sides of it. Her daddy took it home and sent it to an assayer, and was informed it was gold. The agent spent many Sundays searching for the source of the nugget, but failed to find more of them.

FRED EADS

## From One Who is Tolerant . . .

Pasadena, California

Dear Mr. Randall:

The "Old Man Adam" in me agrees heartily with Steve Ragsdale as regard those rock nuts, but a body has to endure a lot from those who hold different opinions. This would be a drab world if we all held the same views.

In spite of the space given to those rock boys, I am mighty well satisfied with Desert Magazine.

THOMAS R. GAINES

## The Ol' Cuss Needs Educatin' . . .

Flagstaff, Arizona

Dear Desert:

Reading the May issue of Desert Magazine I was dumfounded to read Steve Ragsdale's blast at your rockhound department. I've never met him, but only a man who is friendly and understanding and tolerant is entitled to call himself "Desert Steve." For those are the qualities of a true desert man.

I know Steve did a lot of rough pioneering in the early days at Desert Center, and for that he deserves full credit. But he also should appreciate the fact that men and women in the quest of rocks and the riches often found in them made an important contribution to the success of his desert service station.

I like everything in the desert—including rocks—and after living among them all his life it is time for Desert Steve to go out and get better acquainted with them.

AL VERASCO

*Friend Al: In defense of Desert Steve, I want to say his bark is worse than his bite. Actually, Steve would be the first to help a rockhound in trouble. He's done it many a time.*

—R.H.

## Canadian Hospitality . . .

Aldersyde, Alberta, Canada

Dear Desert Staff:

It has occurred to me that quite a few of our neighbors from the south may be coming to Canada to do some rock-collecting, and tour the Alaska highway. This region will be a gold mine for rock hunters, and the trip should include a visit to the Dinosaur Graveyard 80 miles from Calgary.

I would be pleased to show them around as I have been collecting in this area for 20 years. I live five miles north and one mile east of High River, on the main highway to Alaska.

If they hear strange sounds as they approach my ranch it is not the timber wolves, but merely an old Scotchman playing his bagpipes.

Best of luck to Desert Magazine and may your *lum reek*.

BOB HADDEN

## Upside-down Printer . . .

Fullerton, California

Dear Mr. Editor:

Just because the world is all topsy-turvy is that any reason why you should start running the cuts upside-down in Desert Magazine? I refer to the mud-pot picture in your April issue. But we like your splendid magazine.

MRS. CARLETON S. SAWYER

*Dear Mrs. Sawyer: To you and the other readers who got an upside-down picture of the mud-pots, Desert's pressman offers apologies. Several hundred of these came off the press before the printer discovered the error.—R.H.*

## Friend of the River Rats . . .

Torrey, Utah

Dear Mr. Henderson:

I enjoyed the story of "Winter Dig in Yampa Canyon" particularly because I visited the big cave while on a river trip in 1937 and realized the possibilities of scientific excavation.

However, I think Mr. Lohr overlooked one important point. Ever since Mrs. Charley Mantle located on Yampa river she took a personal interest in that Basketmaker cave, gathered and cataloged surface artifacts which would otherwise have been lost, and personally prevented looting and vandalism, preserving its contents until it could be explored by archeologists. She was, and is, a careful and conscientious amateur archeologist. Except for her volunteer guardianship contents of the cave would have been destroyed by pothunters, and I think she should have due credit for scientific interest, which preserved one of the most northerly Basketmaker camp sites. She is also a hospitable hostess to hungry and battered river rats.

CHARLES KELLY

## Tale of the Tortoises . . .

Wickenburg, Arizona

Dear Sirs:

Did you ever hear of thousands of tortoises going some place?

Old Bill Geoglein, who works for me as an assayer, is a very dependable man and relates the following: In 1921 he went to Los Angeles and bought a new Ford car and started back to Arizona over Highway 66. When 10 miles west of Amboy he encountered thousands of tortoises crossing the road from south to north. Tortoises to the south as far as he could see and tortoises to the north as far as he could see. Road was unpaved. Ruts were deep and full of tortoises. All around five inches in diameter and spaced about three to four feet apart.

He got tired of waiting and started through them. It was a band of tortoises one-fourth mile wide. When he arrived at Amboy he stopped and dug the tortoise meat out from under his fenders and cleaned up his new car.

Recently, or rather last summer, I met a man in Wickenburg who had just arrived over Highway 66 from Los Angeles and just west of Amboy he encountered a similar migration. This man had never heard the Bill Geoglein story.

Being interested in these stories, I have asked all the Desert Rats in Arizona if they had ever seen such a migration. None ever had. Today I have the following from George Blodgett, an old cow puncher. He saw the same thing over in New Mexico.

They were piled up against the rails of the Southern Pacific trying to cross. There were a lot of Indian women gathering them up in gunny sacks. One of the Indians told George that all the desert tortoises met in a certain district favorable to laying eggs and after the eggs were deposited the tortoises migrated to new fields, leaving the old range for their young. This happened only every ten years or so. It was a very logical explanation.

JOHN C. HERR

## From the Other Side of the Hill . . .

Twentynine Palms, California

Dear Mr. Henderson:

After reading "Just Between You and Me" in the April issue I just have to put a plug in for this side of the hill.

You are very blunt when you say the mining men "got what they deserved—nothing."

Perhaps you are right in your way of thinking, perhaps. We all have a right to voice our thoughts as you have shown. Some of us will voice them in a more considerate manner than you have. In the position you have, with a living depending on the magazine, my suggestion would be to ride the middle of the road.

Every story has two sides, print them both and that will be good business judgment.

Come over some time and get ideas from the other side of this hill, and I believe your circulation will stay the same, or maybe increase. As you can see I am not a miner, but I do live very close to this monument, and possibly you may get another article for your magazine.

CHAS. P. TANNER

*Friend Tanner—Desert's editor has been wrong many times, and may be again—but heaven forbid that he should ever become a pussyfooter. Desert's pages have always been open for the miner's side of the story. However, it has been my observation that among those seeking to open Joshua Tree monument to mining, less than one in twenty is a real honest-to-goodness miner. More on this subject in this issue of Desert.—R.H.*

## The Princess E-vee-Taw-Ash . . .

Winterhaven, California

Dear Desert:

We were alternately happy and sad when we read in the April issue of Desert, your interesting story "We Scaled El Picacho." We were happy to know that you found the shrine of E-vee-Taw-Ash worthy of mention in your excellent magazine. But we were saddened when you expressed the thought that perhaps the legend I have associated with the shrine was of my own invention.

Let me assure you that the synopsis of the legend of E-vee-Taw-Ash, tacked to the underside of the cover of the box holding the registry at the shrine of the same

name, is as near a true story of the legendary character impersonated by the hill to the west of the shrine as I could write from memory.

The legend is quite lengthy, and some of the stories indicate that the "Princess" like many other Quechan (Yuma) deities was possessed of a dual personality—sometimes good, sometimes bad.

E-vee-Taw-Ash is only one of the many petrified deities dwelling close by El Picacho. In fact, El Picacho (Called by the Indians *Milket*), is a petrification of old A-whey-yem-ka-sum, the original granddaddy of the Quechan people.

The primary purpose of the sign erected at the shrine of E-vee-Taw-Ash was to prevent—if possible—treasure hunters from digging into the pile of rock surrounding the large ceremonial boulder. The registry was an afterthought, and the coins just a happenstance. Recently we turned over to the Quechan Athletic club all the moneys collected by us from the shrine.

ED ROCHESTER

## Artistry of Nature . . .

Los Angeles, California

Dear Sirs:

Was the woman's face on the ammonite on page 24 of your May issue drawn by one of your artists, or did Nature put it there?

MRS. CLYDE HARTMAN

*Lewis Walker, who wrote the story, assures us no retouching was done. That is a bit of Nature's handiwork.—R.H.*

## JALOPY JOE . . .

By Frank Adams



"Is this that spring nobody knows about but you?"

# HERE AND THERE . . . on the Desert

## ARIZONA

### Fight Federal Edict . . .

PHOENIX — Arizona will fight a ruling of the United States department of interior in a Skull valley land trade case, that control of water originating on federal land in the state is vested in the federal government. State officials fear if the ruling is unchallenged, the government might undertake in the future to regulate use of such water after it flows from federally owned land which comprises 76 per cent of the area of the state. First step will be filing of a brief asking the ruling be rescinded, which will be followed by court action if necessary. Basis of the government claim lies in the terms under which Arizona was acquired from Mexico and stipulations under which it was admitted to the union.

### Excursion to Tinajas Altas . . .

YUMA — Tinajas Altas, famed watering place on *El Camino del Diablo*, was the setting for a Sunday tour and barbecue sponsored by Yuma county chamber of commerce and Yuma recreation commission, Apr. 4. The ancient trail between natural water tanks on the southern Arizona desert was used by F a t h e r Kino, Captain De Anza and thousands of early travelers. Adventurers from Mexico and the eastern states followed it to California during the gold rush. Four hundred persons reportedly died along the route, and scores of graves once were visible at Tinajas Altas. For the excursion, the county road department scraped the route from Highway 80 to Tinajas Altas, and 250 Yumans and visitors, feasted on turkey in the cove where men once died of thirst because they lacked strength to climb to the water in the upper tanks.

### Quonset by Air . . .

SUPAI VILLAGE — The Indians who live in beautiful Havasu canyon, below the rim of the Grand Canyon, are connected with the outer world only by a thread of trail impassable for vehicles, but they have a new steel quonset church and dispensary. Section by section, the hut was flown down to the village by helicopter from Hualapai point on the south rim. The quonset, weighing three tons and donated and delivered by Great Lakes Steel corporation of Detroit, was set up under direction of Protestant Episcopal Bishop Arthur B. Kinsolving of Arizona. It was christened St. Andrews missionary chapel. One of the first items flown in by helicopter pilot Fred Bowen was a large white cross which was dedicated April 12.

### Pinyon Resin for Varnish? . . .

WINDOW ROCK — Laboratory tests recently completed by the National Paint, Varnish and Lacquer association have demonstrated the resin from pinyon trees to be extremely valuable as a base for manufacture of spar varnish, according to Mark W. Westgate of the association. The investigation was requested by Max N. Drefkoff, then industrial consultant to the Indian bureau, who was searching for new sources of income for the Navajo. Drefkoff said his personal investigation had shown a vast supply of pinyon resin, naturally produced, on the ground under the trees. Navajo income from the edible nuts of the pinyon averages \$100,000, according to Indian bureau figures.

### Drefkoff Leaves Bureau . . .

WINDOW ROCK — The Indian bureau and Max M. Drefkoff, consultant on developing small industries on the Navajo reservation, have parted company. Drefkoff, who had been quoted as criticizing the bureau and accusing it of "acting behind the secretary of interior's back," was called to Washington to explain some of his actions and statements, it was said, and his resignation followed. Acting Indian Commissioner William Zimmerman, Jr., said Drefkoff had been employed on a temporary basis to make a survey and had completed that study.

### Wild Horse Roundup . . .

WICKENBURG — Bob Cooper, who said he found his ranch northeast of Wickenburg overrun by more than 200 wild horses when he returned from the war, had a wild horse roundup planned for late April. He offered volunteer helpers the pick of the wild horses. For hunters without mounts of their own, horses are to be for rent on the day of the roundup. Cooper declared there would be enough experienced cowhands present to handle the hazardous part of the work. The herd has been roaming the mountains east of Yarnell hill.

### Aerial Elk Survey . . .

COTTONWOOD — More than 50 hours air survey of the Coconino range has led to the estimate there are not more than 1500 elk in the entire area, according to O. N. Arrington, big game supervisor of the state game and fish department. Starting a few minutes before dawn, the observers took off looking for elk tracks. Finding tracks, they would cover the entire area in close flight lines, flying within 50 feet of the treetops to make an actual count of the animals. Next the flyers checked nearby canyons to find any stragglers. The survey was undertaken because estimates of

the elk in the area by stockmen and forest service rangers varied so widely from those of the game department.

### Camellias Come High . . .

QUARTZSITE — A Michigan tourist found his fondness for camellias expensive. Turned back by a border inspection station when he refused to surrender two camellia plants which are barred because they may bring damaging insects into the state, the motorist made arrangements to have the plants flown over the border. But the Ehrenburg inspection station was informed that a car had met a plane from California at Quartzsite and received something from the pilot. Investigators found the Michigan man—and his camellias. Driver and pilot were fined \$50 each, the motorist paid the fines and the plants were confiscated.

In April, Maricopa, Pima, Yuma, Chemehuevi and Hualapai Indians commemorated the 85th anniversary of the signing of a peace treaty with the United States which, it was said, has never been broken. Mary Juan, Maricopa custodian of the original treaty which was signed April 11, 1863, was present at the dances, games and barbecue held at Laveen.

President Miguel Aleman of Mexico has told Sonora officials that paving of the Hermosillo-Guaymas link of the international Pacific Highway will be undertaken immediately.

Florence Iva Begay, 16-year-old Navajo Indian student in Flagstaff high school won 98 out of a possible 100 points in a statewide contest to choose four nominees for college scholarships awarded by the Elks. Thirty scholarships will be awarded to winners among 190 students selected from high schools all over the nation.

A department of commerce map received by Phoenix U. S. weather bureau shows that all the southern part of Arizona, including Phoenix, Tucson and Yuma, leads the nation in sunshine, with 3800 hours out of a possible 4380 hours a year. The only part of the state with less than 3400 hours of sunshine was a strip north of the Grand Canyon extending into the Indian plateau country.

## CALIFORNIA

### New Village for the Mohave . . .

NEEDLES — Lumber from barracks at Poston, Arizona, is being moved to new Mohave Indian reservation at Needles' western city limits to build a village for tribesmen there. Since water from the Colorado river destroyed their old homes after construction of Parker dam, the Mohaves have been living in shacks along the river on bureau of reclamation land. The new reservation was bought with tribal funds and the Indian agency approved purchase of the Poston barracks.

Fifty three-room homes each with bath, hot and cold running water and electricity will be built. Members of the tribe have been busy the past few months clearing the brush and laying out their new village.

### Baja California Dam . . .

WINTERHAVEN — The first stone in the Morelos dam on the lower Colorado river, two miles south of the Baja California border village of Algodones, was dedicated by Mexico's President Miguel Aleman in April. The dam, when completed, will bring under cultivation thousands of fertile acres of the Lower California delta. A platform with a canopy of green, white and red, Mexico's national colors, had been erected across the railroad which parallels the river. The president and many Mexican officials signed the long testimonial scroll which was sealed in a copper tube and placed under the inscribed foot-square granite block which President Aleman set in place.

### Snake Season is Here . . .

PALM SPRINGS — If a snake should bite you, first make absolutely certain it is a rattler, Palm Springs Desert Museum advises, either by buttons on the snake's tail or the fact that the wound consists of two punctures and not a row of punctures or teeth marks. Then remain calm, and remember that less than one per cent of persons bitten by rattlesnakes have died from effects of the bite. Tie a tourniquet—handkerchief, shoe string or necktie—between the rattler bite and the heart, tight enough to stop flow of venous blood back from wound to heart but not tight enough to stop arterial blood flowing between heart and wound, which will help wash out the venom. Most of the venom, which is injected in a mass just below the surface, can be removed by bleeding and suction if done immediately after the bite. Speed the flow of blood, if you have proper clean instruments—knife or sterilized piece of glass—by cross incisions over each puncture just deep enough to promote flow of blood. If you have a suction cup or your mouth is free from sores, it is safe to suck out the venom. See a physician as soon as possible, but do not run since exertion will speed up circulation. Do not, says the museum, drink alcohol, use potassium permanganate or cauterize the wound.

### Rocket Mail Slowed . . .

TRONA — Rocket mail swooshed across Searles Lake on schedule March 27, making a mile in 13 seconds. But most of the travel was up and down, and for days after the landing the mail was undelivered. Trona Postmaster John MacPherson refused to admit the rocket mail to U. S. Mail, producing a Washington directive to back his contentions. Chief objection seemed to be that the rocket stamps of the Reaction Research society were too similar to U. S. postage. The

difficulty was finally overcome, reportedly, by hand-stamping the postage "Not U. S. stamps." Eight rockets were fired, and one exploded in midair, the others arriving at their destination.

### Protest Tecopa Land Transfer . . .

TECOPA — *No Trespassing* signs posted about Indian well, hottest spring at Tecopa hot springs in the Mojave south of Shoshone have caused residents and health-seeking visitors to protest action of California division of state lands in allegedly aiding a private individual obtain control of the land. According to W. Donald Blake, Tecopa, prospectors and campers improved the spring, believed to be on withdrawn land like the two Tecopa springs used for bathing, by lining the pool with timber and carrying the water through overflow pipes to spots where anyone could do laundry. Attempts in the past to obtain the springs as mining claims and by other means had been defeated. A. P. Ireland of the division of state lands said the purchaser made an affidavit that the land contained no hot springs with curative values. Protests against transfer of the land may be made to the general land office at Sacramento, he said.

The Riverside board of supervisors has officially requested the state park com-

mission to establish a recreation area to be known as Salton Sea park, in accordance with plans prepared under direction of the county planning commission.

Official opening of the Mexicali-Mexico City railroad on April 8 was attended by 35,000 persons who greeted the arrival of President Miguel Aleman's special train at Mexicali.

After a 26-hour truck trip through Nevada, 20 deer have been released in the Providence mountains north of Essex, the second load of a herd of 150 authorized for transfer from the overcrowded range in Modoc national forest.

Beveridge D. White, who prospected the desert areas of Arizona, Nevada and California and was active at Prescott, Goldfield and Barstow, died in Los Angeles on April 10. He was born in Ogden, Kansas, in 1856, spent his early years in Junction City and came west by oxteam with Callen's second expedition to Prescott in 1875.

Mt. San Jacinto aerial tramway is a very live issue, Earl Coffman, tramway authority chairman, declared after a general progress report meeting. Supplies for a project the size of the tramway would be available, he believed, within a year.



## Capture the Rainbow

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## BOOKS — MAGAZINES

**GOLD PANNING** for profit. Healthy, outdoor occupation. Beginners' big instruction book, blueprints, photograph—\$1.00. Desert Jim, 627 Lillian, Stockton, Calif.

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

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

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## NEVADA

### Game Fish That Hop . . .

CARSON CITY — Armed with the authority of the fish and game code, the Nevada fish and game commission has accomplished what nature and evolution have not done in the last million years. The commission made the bull frog a game fish. Classified as game animals under state law, the amphibians have been subject to controversy as to whether Nevadans needed a hunting or fishing license to catch them. Sportsmen are now notified that to be within the law, a fishing license is needed for the frogs.

### More Water in Lake Mead . . .

BOULDER CITY — There will be plenty of water in Lake Mead this year for irrigation needs of lower Colorado projects, power production and improved recreational features. Forecasts based on the winter snow pack in the watershed for the April through July runoff, announced by Rolland F. Kaser, chief of operations, bureau of river control, indicate an increase of lake storage over the last three years. Forecast for July 31, practically the peak of the season's inflow, varies from a maximum of 29,859,000 acre feet to a minimum of 25,150,000 acre feet. The maximum forecast exceeds all totals since 1942 when the lake reached a level less than seven feet below the crest of the spillway.

### Fire at Silver Peak . . .

SILVER PEAK — Fire which broke out on the morning of April 3, completely destroyed five buildings including post-office, grocery and theatre, at the old gold camp of Silver Peak about 25 miles west of Goldfield. Entire stock of the store was lost and the town's 75 inhabitants temporarily were without a source of food. Most of the records, stamps and papers in the post office were saved. One of the buildings burned was an old adobe built about 1870.

### Clark Carts Colt . . .

TONOPAH—When Tom Clark, long a desert mining man, drove up to his Tonopah home with a gangling four-day-old colt on the front seat with his dog, neighbors weren't surprised. Jack is a soft touch for animals in distress, as stray

local dogs and cats well know. Jack reported the animal had staggered down the wash and tried desperately to make friends while he was collecting juniper firewood back of McKinney tanks. When Jack drove off, the colt followed as long as its wobbly legs would permit. Jack stopped, picked up the colt and brought it home where he turned it over to Mrs. Magnus Peterson. Mrs. Peterson, feeding it goat's milk, reported the colt famished. "It's a good thing Clark didn't live when there were camels in the back country," a friend said. "Wouldn't he look funny lugging home a baby camel?"

### Ghost County Recalled . . .

CARSON CITY—The third edition of the booklet *Political History of Nevada*, by John Koontz, secretary of state, tells the story of Nevada's lost county of Roop. Lake county was created by the territorial legislature of 1861 and its name changed to Roop in 1862. Roop wanted to be part of Nevada, but Plumas county, California,

claimed its best territory and taxes and the state boundaries were indefinite. The two counties came into armed conflict and the two sheriffs arrested each other. A joint boundary survey put most of the county and the county seat, Susanville, in California. The remains of Roop became part of Washoe county.

W. T. Holcomb, state highway engineer, and state planning board and national park service representatives spent five days in the Forty Mile canyon country, checking possibility of establishing a national monument. Roads into the area where Indians long ago held ceremonials were reported almost nonexistent, and it was said no further recommendation to establish a monument will be made.

Uniform fishing regulations for Arizona and Nevada, so far as they affect Lake Mead and the Colorado river, are being worked out by Nevada and Arizona fish and game commissions.

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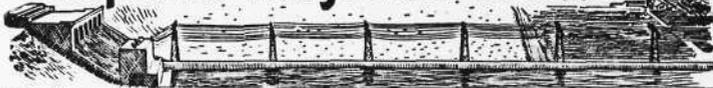
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The state fish and game commission is experimenting to determine whether the trout population of Pyramid lake can be restored. Fingerlings are being raised in containers holding water from Pyramid lake, which has a salt content one-seventh that of the ocean. All the artificially raised fish survived.

Petitions are being circulated in White Pine county and Las Vegas requesting construction of a highway from Ely south through Lund and Sunnyside to Las Vegas. The new road would eliminate 50 miles between Ely and Las Vegas.

### NEW MEXICO

#### Cavern Development Planned . . .

CARLSBAD — The national park service has drafted a six-year, \$300,000,000 development program for Carlsbad Caverns, according to Thomas C. Vint, chief of the park development service. The plan calls for better roads, more parking space and an end to the long wait for a turn at the elevator descent into the caverns. The plans did not provide for overnight facilities at the park, which lies on the desert 30 miles out of Carlsbad. Carlsbad was said to be high on the list

for improvement because it is one of the few parks that pay their way, the \$1.25 admission fee in some years netting the park service a profit. The park is handling almost 10 times as many visitors as in 1929 when the two 12-passenger elevators were installed.

#### New Mexico Had Many Names . . .

GALLUP — Probably no state has had more names assigned to it at various times than New Mexico, says Wallace Barnes, editor of the *Gallup Independent*. Coronado called it Tiguex and Antonio Espejo named it Nuevo Andalucia and in 1563 Diego Ibarra gave the name Nuevo Mejico. But the next group of explorers termed it San Felipe in honor of King Philip. The name New Mexico finally stuck when Oñate called it that in 1598. Then, when statehood was granted in 1912, there was agitation for a change of name and Lincoln, Montezuma, Hamilton and Acoma were suggested. But the weight of public opinion brought official adoption of the centuries-old name.

#### Tribes Sign Treaty . . .

ALBUQUERQUE — A treaty of mutual friendship and assistance designed to include all Indian tribes of the United States and Alaska received its first ratification in Albuquerque April 11, when the governors of 15 New Mexico Indian pueblos signed. The Pueblo Indians were given the honor because of their long record of intertribal cooperation and harmony, according to District Judge N. B. Johnson, president of the National Congress of American Indians. The treaty was prepared by the Indian congress at its latest convention in Santa Fe. "We feel that through this organization we can speak to the American people in a strong, effective way," Judge Johnson said. A peace pipe lay symbolically on the table, but the signers contented themselves with keeping the pens used to sign the parchment.

#### Topsy Fell In . . .

GALLUP — Topsy, a mare, was ambling along nipping grass clumps and minding her own business when she suddenly disappeared into the earth. Her owner, Ray Frasnille, found that unusual quantities of water had washed out supports of the old Black Diamond mine tunnel and Topsy had fallen twenty feet to land in the shaft 55 feet from the sealed entrance. Frasnille furnished the mare with alfalfa and water through the hole she had made and went for help. Frasnille, Joe Crane, Tuya DiPauli, and Frank Traintell used a bulldozer for 58 hours before reaching Topsy, who came out of the adventure without a scratch. The Black Diamond was sealed 12 years ago when a fire could not be controlled. Frasnille reported the fire still burning, with fumes so strong the rescuers had to return to fresh air frequently.

#### Indians Trained on the Job . . .

SANTA FE—Santa Fe Indian school is attempting to train students directly for places in the industrial world. At present the plan is limited to senior girls who work for one month in a store or cafe, then are rotated. Hours are from one to five, Monday through Friday and the girls receive no pay, having a paid clerk supervising each group of three. Principal W. C. Schlosser explains: "The average student doesn't know the first thing about getting a job or even how to ask for it. Once he gets it he doesn't know how to conduct himself with his fellow workers or the public." The course is now part of the curriculum required for graduation.

#### Colored Maps for Gallup . . .

GALLUP — Gallup chamber of commerce has placed an order for 50,000 colored picture maps to aid tourists in finding and enjoying attractions in the area. The map will have detailed information, showing mileage and routes, and a dozen scenic spots to be visited from Gallup will be pictured and described. The map will be produced by the firm which makes the New Mexico state picture map, and first shipment was promised for mid-May.

Rev. J. W. Brink, 83, pioneer missionary to the Navajo and Zuni for the Christian Reformed church, died in Rehoboth in April. He helped develop the missions at Rehoboth and Zuni from the first of the century until his retirement in 1944.

Former Governor Ralph L. Carr of Colorado, attorney for the United Indian Traders association, announced that the group would fight any government subsidization of tribal stores. He said that a subsidy would make it possible to put

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#### TRUE OR FALSE ANSWERS

Questions are on page 18

- 1—False. Scotty and his partner built the castle.
- 2—False. Smoke trees shun the dunes.
- 3—False. Mining is Searchlight's time-honored industry.
- 4—True.
- 5—False. An arrastre was used for grinding ore.
- 6—True. 7—True 8—True.
- 9—False. There was no Salton Sea in 1900.
- 10—True. 11—True. 12—True.
- 13—False. The Little Colorado enters the main stream above Grand Canyon.
- 14—False. Wyatt Earp was of a later generation than Kit Carson.
- 15—True.
- 16—False. No motor roads lead into Havasupai village.
- 17—True.
- 18—False. San Ildefonso is in New Mexico.
- 19—True.
- 20—False. Boundary peak is tops in Nevada.

the traders out of business. The traders have said that they will continue present policies, extending credit and accepting pawn, until June 1, effective date of new price and rental regulations being imposed upon them.

The southernmost of the three Truchas peaks, located between Taos and Santa Fe, has been considered the highest peak in New Mexico with an elevation of 13,308 feet. Harold D. Walter, using a paulin type altimeter and checking by transit triangulation, found the peak to be 200 feet lower than the accepted figure. A federal survey crew probably will make an official check in the near future. The revised figure would place Wheeler peak, northeast of Taos, in the high spot, elevation 13,151.

## UTAH

### Scouts Run the Colorado . . .

HITE — Forty-nine senior Boy Scouts and scouters of the Salt Lake area have successfully completed a 167-mile voyage down the Colorado river from Hite in rubber boats. The group were first of an estimated 200 who are scheduled to make the river run during the summer. The river was high and rapids reportedly rough. The eight-boat flotilla ran into severe wind storms and high waves, according to Ray C. Hatch, field executive, and for safety's sake the boats were kept 100 yards apart and life belts were worn at all times. The expedition ran the Paria rapids, and made side trips to Aztec and Bridge canyons and to Rainbow bridge.

### State Publishes Color Book . . .

SALT LAKE CITY — The first all-color magazine-book prepared by the state was sent to the printers in March. The book, entitled "Utah, Land of Color," contains 40 pages of color photographs of the state's scenic areas, Rulon S. Howells, of the department of publicity and industrial development said. When the 50,000 copies ordered have been printed, they will be distributed free of charge, principally to tourist bureaus, information centers and booking centers outside Utah. Included are photographs of Great Salt Lake, Uinta mountains, Navajo Indians, Zion and Bryce, Wayne Wonderland, Monument Valley, Rainbow bridge, the state capitol, Temple Square and other temples of the Latter-day Saints.

### Roadside Park Planned . . .

ST. GEORGE — Negotiations are under way for the state department of publicity and industrial development to acquire a site and water rights for a small roadside park in the southwest corner of Utah near the Arizona line. Surplus water from Welcome spring would be made available by extending the present Welcome spring pipeline to a 200 by 400 foot area which would be fenced and

landscaped. Plans called for a portal of native stone, restoration of native plants, a bowery and possibly a shelter for a guide.

### Ox-Team Journey Told . . .

SALT LAKE CITY — While rummaging around an abandoned adobe at the corner of Denver and 4th South streets, City Fire Marshal Willis J. Smith uncovered the diary-ledger of an unknown Utah pioneer who crossed the plains by ox-cart. Preparing to go west from New York City in 1859, the emigrant listed purchases of numerous needed articles. Butter and eggs cost 10 cents per pound and per dozen. Ferry charges across the Missouri from Council Bluffs to "Omahaw" were \$4.75. In New York, each entry was carefully inscribed in ink, but at the end of a hard day on the trail, the scrawls were barely legible.

### Snakes Make it Spring . . .

VERNAL — When Mrs. Joseph Hacking sees snakes, she knows that spring has come. The water snakes which inhabit her ranch in Maeser hibernate with the first touch of cold weather and usually emerge into the sunshine about February 5. This year they remained bedded until the middle of March. Mrs. Hacking said that the harmless little fellows keep the ranch free from mice and insects.

Completion of the new highway extension in Arches national monument, from the Windows to Devil's Garden and Delicate arch, was to be celebrated May 8 by the Moab Lions club with an excursion over the highway and a barbecue dinner at Devil's Garden.

Mrs. Daisy Dean Adderly, 70, reportedly the first white child born at Bingham, died there in March. She had lived in Bingham her entire life.

The board on geographic names in Washington is considering application of the name Oastler Castle to a cliff formation in the Pink cliffs on the south side of Campbell canyon, Bryce Canyon national park. Dr. Frank Richard Oastler, New York gynecologist who died in 1936, was influential in establishment of the

national park system of nature walks and lectures.

Bonneville Ltd. potash plant at Wendover, Utah, is shipping 110,000 long tons of rock salt to San Francisco, for Japan and Korea under the U. S. government's civilian relief program. It is believed the salt will be used in the Japanese fishing industry curing operations.

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# Mines and Mining . .

## Washington, D. C. . . .

The atomic energy commission is offering a \$10,000 bonus for discovery and production of high grade uranium ores from any new deposit anywhere in the United States. The bonus will be paid for production and delivery from a new location of the first 20 short tons of uranium ore or mechanically-produced concentrates assaying 20 per cent uranium oxide or better. Other major elements in the commission's plan to expand production were government-guaranteed 10-year prices for domestic-refined uranium, high-grade uranium ores and mechanical concentrates; government-guaranteed three-year minimum prices for the low-grade carnotite and roscolite type uranium-vanadium ores of the Colorado plateau; and government operation of two vanadium-uranium plants in that area. Circulars describing the ore-buying program are available from the commission's Washington, D. C. office.

## Winnemucca, Nevada . . .

The Winnemucca Mountain mine has struck ore which assays \$100 a ton, officials of the company announce. The strike was made March 23 while a crosscut was being driven from the main tunnel. While drifting a fracture leading toward the Rexall mine, miners broke into a crushed zone. Extent of the ore body is unknown since walls of the zone had not been reached when the announcement was made. Assay showed per ton values of .59 ounces of gold at \$20.65, 65.91 ounces of silver at \$59.31 and 6.93 per cent copper.

## Virginia City, Nevada . . .

An experimental airborne magnetometer survey of the Virginia City and Steamboat Springs areas will be undertaken by the U. S. geological survey this summer. Senator Pat McCarran requested geophysical tests on the Comstock to seek additional ore bodies and it was decided to make the experimental survey—one of the first in the west—with the airborne device used to locate submarines during the war.

## Moab, Utah . . .

Blair Burwell and Dr. W. G. Haldane of the Minerals Engineering corporation of Colorado have ordered launching of development and mining operations at their carnotite claims in the Yellow Cat district, 15 miles north of Moab. The company recently purchased the group of claims from P. H. Stocks of Moab, and Stocks will remain as superintendent of operations. Camp has been established and operations are under way.

## Goldfield, Nevada . . .

Jos. Mihelich and W. B. Meldrum, Newmont Mining corporation experts from Leadville, Colorado, have arrived in Goldfield to launch construction of the new Newmont 100-ton mill to be built near the Florence shaft on the site of the old stamp mill destroyed by fire some years ago. Mihelich will be in actual charge of construction and Meldrum, mill operational expert, will work with him and see that the completed project operates smoothly. Mihelich estimated that construction would take a minimum of four months and as many as 60 men could be used in the work. Ore for the flotation-cyanide mill will come from the Newmont Deep Mines operation in the Whiterock group and possibly from custom milling.

## Washington, D. C. . . .

Assessment work for the 1947-48 fiscal year must be completed on all unpatented mining claims on the United States public domain and affidavits of proof filed by noon, July 1, or the claims will be open to location, Attorney-General Tom Clark declares. The law, waived during World War II, calls for \$100 in assessment work, or its equal in permanent improvements, annually on each claim. Senator Arthur V. Watkins, Utah, has introduced a bill in the senate which would waive assessment requirements until July 1, allowing claim-holders another year to do their work. Action on the bill has not been taken.

## Moab, Utah . . .

P. A. Clark, representing a syndicate controlling 15,000 acres in the Crescent area, Grand county, has arrived in Moab to initiate development of reportedly rich magnesium and potash in the area. Deposits of carnotite and sylvite were proved to exist in a well cored by the Defense Plant corporation under the supervision of the U. S. bureau of mines in 1942. The entire area was withdrawn by the secretary of interior, but was restored to entry about a year ago. The company plans to start drilling in June and will test the property thoroughly before mining commences.

## Ajo, Arizona . . .

The Phelps Dodge corporation will build a \$5,000,000 smelter at its New Cornelia branch, located at Ajo. At the present time the copper concentrates produced from the open pit operation are shipped to Douglas for smelting. The Douglas smelter will continue to treat production from the Nacozari and Bisbee branches.

## Tonopah, Nevada . . .

A. L. Brown and M. E. Niece reportedly have resumed operations on the Wall canyon antimony property, 57 miles north of Tonopah, across Smoky valley from Round Mountain, and expect to be shipping high grade concentrates shortly. The 50-ton mill is being put in shape and will be operated by Clayton Dunham. When the mine was closed because of snow last fall, 3000 tons of ore estimated to average 20 per cent antimony had been mined and stockpiled for milling. The mill is expected to handle 50 tons daily, and the concentrates will be hauled to the railroad at Mina.

## Washington, D. C. . . .

An amended version of the Russell bill—H. R. 2455—reportedly will be pushed by mining industry representatives for the benefit of operators of small or marginal mines. The amended act would be called the National Minerals Exploration and Conservation Act of 1948 and would establish an incentive payments division within the bureau of mines. All metals, minerals or ores resulting from incentive payments would be purchased by Reconstruction Finance corporation and transferred to the national stockpile.

The interior department has set aside 40 square miles of land in southwestern Colorado for the exclusive use of the atomic energy committee, which will drill it for uranium deposits. The exploratory drilling will be done during the summer by the U. S. geological survey.

Dick Diamond, 88, resident and prospector of the desert area for many years, was found dead in his cabin near Barnwell in the New York mountains north of Essex, California, March 24. He was born in Madagascar, and had lived in the New York mountains area for 30 years. Since his wife died in 1938, he had lived alone.

The mineral found by Death Valley Curly Wright of Goldfield, in Inyo county, California, is melilite, an iron-bearing variety of gehlenite, according to Charles W. Chesterman, assistant geologist of the California division of mines. When Wright could not identify the grey, prismatic crystals, he sent samples to the division. Chesterman said that, so far as he knows, these are the first specimens of the mineral to be found in California, but they have no value except as mineral collection specimens.

John Mueller, member of Nevada's Colorado River commission, has been named by Governor Vail Pittman and State Engineer A. M. Smith to manage the affairs of Basic Magnesium at Henderson until the state has taken over the entire plant and names a general manager.

# GEMS AND MINERALS

## LARGE GEM, MINERAL SECTION FOR SAN DIEGO COUNTY FAIR

Lapidary demonstrations, competitive exhibits and colorful displays will be offered by the Gem and Mineral department of the San Diego county fair, to be held at Del Mar, California, June 25-July 5. Roy M. Kepner, Jr., superintendent of the division announces that a bench equipped with the latest types of machinery will be manned by at least one member of the San Diego Mineral and Gem society all during the fair and there will be from two to eight members evenings and weekends. Sawing, buffing, lapping and faceting techniques will be shown, and thunderegs and nodules will be cut open.

The competitive exhibits will be limited to residents of San Diego county, but there will be a variety of classifications and premiums will total nearly \$2000. There will be displays of the gems—tourmaline, beryl, topaz, kunzite—for which San Diego county is noted, mineral exhibits, collections of lapidary work and miscellaneous displays such as the formation of a gem pocket, steps in gem polishing and San Diego county's economic geology.

Non-competitive exhibits will include a spectacular fluorescent display. There will be commercial concessions where mineral specimens, gem minerals and books will be sold. San Diego Mineral and Gem society will sponsor an information stand where someone will be on duty evenings and weekends and during the days as often as possible. Robert W. Rowland of the San Diego society is chairman of the exhibits committee. His address is 4010 Alameda drive, San Diego 3.

## CALIFORNIA FEDERATION SOCIETY EXHIBITS ASKED

Each member society of the California Federation of Mineralogical societies has been asked to plan an exhibit for the federation convention, to be held at Long Beach, July 16-18. A glass show case 6 feet long and 18 inches deep will be provided for each society. The exhibit can be placed any time after noon on Thursday, July 15, or before 10 a. m. Friday. All rockhounds were invited to bring collections to the convention. There will be no cases provided for individual exhibits but plenty of tables. Those planning to exhibit were asked to let Jessie Hardman know, at 1850 E. Pacific Coast Highway, Long Beach, California.

## JUNIOR ROCKHOUNDS ORGANIZE IN COACHELLA VALLEY

Coachella Valley's newly organized Junior Rockhounds set May 1 as the date of their first field trip. A member of the Coachella Valley Mineral society of Indio, sponsors of the junior group, will act as trip director. Officers of the new organization are: Don Stanfield, president; Russell Neher, vice-president; Mary McAuliffe, secretary; Dale Stanfield, treasurer. Marion Clements, Joan Patterson and Frank Merrifield were appointed to draft by-laws.

## POP KENDRICKS CAN HUNT ROCKS AGAIN

A silversmith and stone cutter in the Mojave desert reports that when Andrew Kendricks, locally known as "Pop," was returning from a prospecting trip in the Brown mountains north of Barstow, his car broke down. Pop caught a ride into Barstow and friends drove him back with necessary repair parts. They found only charred remnants of Pop's car and trailer. His spare gas had been poured over car and trailer to start the fire, his tools stolen, his bed-roll looted and the two front tires not burned had been slashed.

Pop had no hope of obtaining another car, but rockhounds started a "Pop's Car Fund" on New Year's day, and sympathetic collectors raised enough to buy him a Model A. He is reported back on the desert, where his sign "Pop's Rocks" will be seen along Highway 66, and his information will be available to collectors.

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

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## AMONG THE ROCK HUNTERS

El Paso Gem and Mineral club of Texas met March 10 at the hobby shop of the William Beaumont hospital for a talk and demonstration on lapidary methods by Roy C. Bible. Veterans at the hospital use the shop to occupy free time and learn worthwhile avocations. Before the lapidary demonstration R. H. Miller, club president, introduced Chester R. Howard, president of the Rocky Mountain Federation of Mineralogical societies, who spoke on federation activities.

Peter Zodiac, editor of *Rocks and Minerals* was to be principal speaker at a luncheon at the Hotel Driskill, Austin, Texas, where the State Mineral Society of Texas held a gem and mineral show April 17-18.

Miss Lou Williams, University of Chicago, presented a lecture on historical geology, illustrated with Kodachrome slides, at the March meeting of the Chicago Rocks and Minerals society. Election of officers for the society was postponed until October, since work has started on the Midwest Federation convention.

Marquette Geologists association of Chicago planned to hold its annual spring auction at the April meeting.

Officers of the Minnesota Mineral club of Minneapolis, elected at the March meeting, are: president, Edwin Lambert; vice-president, Mrs. Emma Cooper; secretary, Mrs. Charles Heller; treasurer, Percy Brown; publicity director, B. E. Martin; program director, H. T. Perry; tour director, James Bingham. Pictures taken on the summer field trips were to be projected by William J. Bingham at the April meeting.

Ed Davis was elected new president of the San Jacinto-Hemet Rockhound club at the April meeting. U. G. Tallent is vice-president; T. W. Harwell, chairman of the planning commission; Mrs. Ethel Harwell, secretary; L. F. Harvey and T. V. Harwell, directors; Marian Harwell, social chairman; Mr. and Mrs. C. Jay Nichols, publicity chairmen.

Fallon Rock and Gem club of Nevada is seeking quarters to house the lapidary and mineralogy equipment which has been put at the club's disposal.

April meeting of the Oklahoma Mineral and Gem society was held at the Markwell brothers home where guests were shown the Markwell rock and gem collection and a shop equipped with polishing and cutting machinery. Mrs. Loys Lankford described the minerals and gems found on the Pacific coast and supplemented the lecture with material from the area, including a Thunderbird, constructed of rocks from the collection. Mr. Sprankle showed color slides of the state of Colorado while Mrs. Sprankle furnished the narrative. Miss Margaret Sprangle is club president and Mrs. Linton T. Riggs, 3233 N. W. 12th, Oklahoma City 7, is club secretary.

Elmer Eldridge illustrated a lecture on cleavage, fractures and light refractions, given March 2 to the Sequoia Mineral society, with diagrams on the blackboard. The lecture stressed light refraction procedure for faceting gem stones. The meeting was held at Parlier union high school, Parlier, California. The society announced plans to put two cases of specimens and lapidary work in the California federation convention at Long Beach, July 16-18.

A sound film, *The Construction of Boulder Dam*, and a silent film, *The Pacific Southwest's Most Important Resource*, were to feature the April 26 meeting of the Southwest Mineralogists of Glendale, California, at the home of Mr. and Mrs. C. R. Standridge. Plans were made for a field trip to the Kramer hills.

Eddie Pape, vice-president of the junior Rockhounds of Prescott, spoke on "Radium" at the April 16 meeting. Chip Murdock, club president, supplied information on collecting, care and identification of mineral specimens. At a special meeting April 1, Mrs. E. D. Fontaine, who formerly lived in Mexico, spoke on Mexican jewelry and rocks.

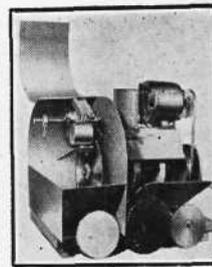
Jack Streeter of the Mineralogical Society of Southern California, entertained members and guests of the San Fernando Valley Mineral and Gem society at their regular meeting, April 8, 1948, with Kodachrome slides of the Harvard University Museum collection of minerals and gems. Field trip for April 18 was scheduled to the Ludlow area, with Harrison Stamp, president, and W. L. Cooper, field trip chairman, in charge.

The story of the "Pegmatites West of Denver" was to be told by Dr. Margaret Fuller Boos at the April meeting of the Colorado Mineral society, Denver. Dr. Boos, who is a former professor of geology at Denver university, has done much work studying the pegmatites of Colorado.

Mineralogical Society of Utah was to hear Alfred M. Buranek talk on gem cutting at the April 6 meeting in the Geology building, University of Utah. Members were to decide who should receive special awards as most active members of the society for the past five years.

Richard Crippen, geologist with the California division of mines, was to be the speaker at the April 21 meeting of Northern California Mineral society, his subject "Unusual Concretions from Templeton, California." Open house at the society's new home, 1001 Oak St., San Francisco, was held March 14, and 21 applications for club membership were received the opening day.

April meeting of the Long Beach Mineralogical society was scheduled for April 14 at Belmont recreation center. Florence Gordon, club program chairman, was to lecture on diamonds. April field trips were planned to Crestmore quarry and to Afton canyon via Ludlow. The club has 91 paid-up members.



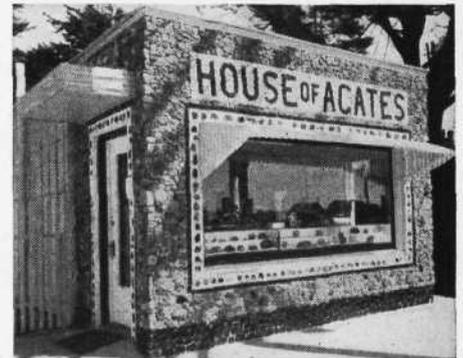
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Green moss agate . . . one to twenty dollars per slab. Priday plume agate in cut stones . . . five dollar minimum.

Information is free . . . drop in when you come this way.

Final details of the annual gem show were to be discussed at the April 6 meeting of the San Jose Lapidary society, and nominating committee for club officers was to be named. The club publication, the *Lap Bulletin*, carried a long list of various types of minerals and gem materials, and members were asked to check material they intended to enter in the show, so all exhibits would be identified.

An organized study program on various minerals has been undertaken by the Mineralogical Society of Southern Nevada at Boulder City. The opening discussion, at the March meeting, was by J. Wood, club president, who described formation of various rocks and rock types. Next address was by M. G. Mastin on the chemistry of sulphide minerals. Following this, D. McMillan, vice-president, demonstrated practical field tests for the sulphide group. May program was to cover metallurgy and refining of the sulphides and uses of their products. Besides one lecture a month, the society is giving weekly instruction in mineral identification.

Forest Ranger M. R. Stewart told the story of forest conservation to members of the Yavapai Gem and Mineral society of Prescott at their April meeting. The program was illustrated by two films, one showing how to make safe camp fires, and the other demonstrating how to fight forest fires. They were shown by Forest Ranger W. T. Anderson. Mrs. Viola Jimulla, leader of the Yavapai Indians, and Kate McCarty, pioneer Prescott artist, were made honorary members of the society.

Edwin Van Amringe, geology department, Pasadena city college, was to speak on the zircon at the April 12 meeting of the Mineralogical Society of Southern California, held in Pasadena public library. Members were asked to bring zircon samples for the display cases.

Orange Belt Mineralogical society met April 6 at San Bernardino Valley college. Hubert H. Brannon, Jr., told of his experiences forming a rock club while in Alaska with the armed forces. A. F. Combs demonstrated the art of facet cutting. Prize winning book ends from the collection of C. T. Kennedy were displayed.

A program by junior members was planned for April 2 by the Mineralogical Society of Arizona with Fred D. McDonald, junior committee chairman, in charge. April 16 meeting was to be discussion night, with members bringing specimens for discussion. April field trips were planned to Slow Springs wash for agates and nodules and to the Date Creek quartz crystal area.

April 9 meeting of the Dona Ana County Rockhound club of New Mexico was to feature history. Mrs. C. B. Archer was to speak on the early history of Mesilla valley, S. F. Sanders on the Gadsden Purchase, Don Alfredo on the battle of Brazito, Ruth A. Perkins on the Lost Mine of Father LaRue, and T. J. Kilgore on the early mines of the Organ mountains.

Robert D. Bradley was elected president of the Seattle Gem Collectors club at the March meeting. Tom Evans is vice-president; Mrs. Harold Wells, treasurer; Winifred Mullane, secretary; John Fincke, director. The Lapidary group met at the home of Arthur and Ellen Foss, April 6, and John Fincke was elected chairman. The group discussed limiting lapidary classes to 10 members so each person would be able to develop his skill fully. After April 23, the Mineralogy group, studying changes on the surface of the earth, planned to discontinue sessions until September. Paul H. Soll is editor of the Seattle club's bulletin, *Nuts and Nodules*.

### FEATHER RIVER CLUB COMPILES SOCIETY FILE

Adeline Rankin, secretary of the Feather River Gem and Mineral society has a card file idea which she feels might be useful to other groups. On 3x5 inch index cards, using information from various mineral magazines, she types on the first line, the location of individual societies, state, county and city. On the second line is the society's name. Following lines are devoted to meeting place, date, time and whether visitors are welcome. Current officers, with addresses, are listed and note is made of any club publication. On the back of the card is a brief resume of club activities and magazine source of information. Separate cards are kept on federations, and on mineral shows, which are filed according to date and location.

When one of her club members goes on a vacation, she can tell him what club meetings he can attend and what shows he can see. If one moves into a strange community, she can put him in touch with other rock hounds. So far the information is incomplete, but Mrs. Rankin is adding to it with each issue of mineral magazines. If club secretaries will drop her an information card direct, Route 1, Box 131A, Oroville, California, it will be appreciated.

Alfred M. Buranek, geologist for the raw materials division of the Utah state department of publicity and industrial development, gave a colored pictorial on the "Story of Gems" at the March meeting of the Gem Stone Collectors of Utah, held in Salt Lake City. Members of other earth science organizations were invited, and the department of vocational training of Salt Lake public schools requested their instructors to attend. Dr. B. D. Bennion, club president, introduced the speaker to the audience of 200.

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**JUNE 13-16 DENVER SHOW  
PLANS COMPLETED**

Plans for the first annual convention of American Federation of Mineralogical societies at Denver, Colorado, June 13-16 are nearly complete, according to Richard M. Pearl, convention chairman. The convention will be held at Shirley-Savoy hotel and each of the five divisions of the federation—mineralogy, gems and lapidary, geology, paleontology, dealers and publications—will have an educational program of demonstrations, films and talks by speakers of national reputation. There will be practical demonstrations of gem cutting and jewelry making by lapidary schools.

An outdoor barbecue and western entertainment is planned at Red Rocks park, June 15 and the main banquet at the Empire room, June 16. Four field trips will leave Denver immediately after the convention and terminate beyond the borders of Colorado. They will combine intensive collecting in major localities, under expert guidance, with scenic and recreational opportunities.

Jane Fisher, secretary of the Long Beach Mineralogical society, announces that the society has a new and permanent address to which all club mail should be sent in the future: Long Beach Mineralogical Society, P. O. Box 3068, Station B, Long Beach, California. The Long Beach group is host society for the California federation annual convention and show, to be held in Long Beach municipal auditorium, July 16-18.

Regular meetings of the Douglas Gem and Mineral society are held on the last Friday of each month at 7:30 p. m. at the Gadsden hotel, Douglas, Arizona. Present officers are Mrs. Ella White, president; Don Smith, vice-president; Frank Lea, 1720 8th Street, Douglas, Arizona, secretary-treasurer. The club recently sponsored a mineral exhibit at the community center.

Otto Fisher lectured on "Pearls from Fresh Water Clams" at the March 3 meeting of the Albuquerque Gem and Mineral Society. Fisher, a pearl buyer for 40 years, exhibited clams and pearl industry equipment. Viola Murphy described calcite, its uses and occurrences. At the March 17 meeting, Oscar Branson spoke on collecting in Old Mexico. Meetings are held in the Geology department, Administration building, University of New Mexico first and third Wednesdays, and visitors are welcome.

Guy B. Ellermeier of Denver gave an illustrated talk on gems at the March meeting of the Cheyenne club of Wyoming. The club will supervise and sponsor the north field trip which will follow the first national convention of the American Federation of Mineralogical societies to be held June 13-16 in Denver.

Vincent Morgan was to describe minerals to be found throughout the Mojave desert and Death Valley at the April meeting of the Searles Lake Gem and Mineral society to be held in the Trona unified school. Annual Death Valley trek of the society, to be held in April, was called off since too few persons indicated a wish to go.

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**NO FEES AT GEM VILLAGE  
ANNUAL SHOW**

Gem Village, near Bayfield, Colorado, will hold its fourth annual Rock show June 19-20. There will be no admission charge or table fee for dealers and displays. In cooperation with the Four Corners Rock club, the Village will entertain a caravan from the convention of the American Federation of Mineralogical societies as it passes on those dates. The caravan will leave Denver on June 16, immediately after the convention—June 13-16—and will terminate at Mesa Verde national park.

All officers of the Santa Monica Gemological society were reelected at the April meeting. Clarence Chittenden is president; Vern Cadieux, first vice-president; W. R. B. Osterholt, second vice-president; James T. Curry, treasurer; Mrs. John C. Baur, recording secretary; Mrs. Alexis J. Strong, 1232 Second Street, Santa Monica, corresponding secretary. Motion pictures provided entertainment at the meeting, and plans were made for a week-end field trip to Horse canyon and Last Chance canyon.

Grand Junction Mineralogical society of Colorado has published the first issue of a club bulletin containing news of club activities and mineralogical information. The society planned a fish fry at Fruita on the Colorado river, April 10. The Grand Junction group is sponsoring one of the field trips which will follow the June convention of the American Federation of Mineralogical societies, in Denver. The tour will include Central City, Leadville, Loveland Pass, Climax molybdenum mine, Aspen, Glenwood Springs, Newcastle, Rifle oil shale experimental plant (two hour conducted tour) and Grand Junction where visitors will see the large dinosaur tracks in the Thomas coal mine.



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The Jade and Jasper club, a new rock collectors' group, has been formed at Ketchum, Idaho. The club plans to adopt systematic procedure for studying, collecting and exchanging rock and mineral specimens, and to gather a collection of minerals from the area. Club members live in Ketchum, Hailey and Gannett. Temporarily, the address of the club is Box 758, Ketchum, Idaho. Charter members were Mr. and Mrs. Glen Brado, Mr. and Mrs. Andrew Beck, the D. P., R. H., and H. E. Wescott families, Mr. and Mrs. Jesse Zimmerman, Mr. and Mrs. F. W. Crane, Mr. and Mrs. Reese Howell and Mrs. Morris Winn.

The Los Angeles Lapidary society has accepted an invitation to exhibit its current lapidary work at the convention of the California Federation of Mineralogical societies which will be held in Long Beach July 16-18. At the last society meeting, Sam Waagenaar gave an illustrated talk on diamond cutting. Mrs. Jessie Chittenden set up a large table and demonstrated the technique of displaying lapidary work. At the meeting of the Faceteers group, Vic Gunderson described the crystals of Iolite, a popular gem stone of the 19th century.

Colored movies, titled *Views of Peru*, were shown to the Pacific Mineral society at the April meeting by Clarence Woods, retired mining engineer who spent considerable time mining in Peru. The films showed a trip to the fort near Cuzco, the market at Cuzco, religious festivals and a trip to Lake Titicaca. Field trip for April was along the Angeles Crest highway where members obtained labradorite, ilmenite, epidote crystals and minute garnets.

The Texas Mineral society of Dallas met in the Baker hotel April 13. Rev. H. E. Jones, pastor of the First Methodist church of Grand Prairie, Texas, spoke on "Gems of the Bible." According to Rev. Jones, gems are mentioned 325 times in the Bible and they always signify durability, value and beauty. Ralph D. Churchill, 2003 Republic Bank Building, Dallas, Texas, is secretary-treasurer of the club.

Three of the four principal forms of iron ore—hematite, limonite and siderite—are sedimentary. They account for about 90 per cent of the iron mined, Arthur Sanger relates in the April *Pick and Dop Stick* of the Chicago Rocks and Minerals society. The fourth form, magnetite—the lodestone of the early mariners—is found in igneous or metamorphic rocks. Hematite, the red iron ore, is the most important of the four. Some of the Lake Superior deposits are soft enough to be mined with a steam shovel. Limonite, also called bog iron, is next in importance, and was the principal ore of iron mined in colonial times. Siderite, the carbonate, is third. Hematite and limonite are sometimes oolitic—forming concretionary spheres around mineral particles.

Beyerite, a carbonate of bismuth, calcium and lead, was first named in 1943. In Colorado occurrences, it is intimately associated with bismutite in pegmatite veins.

Two petrified logs replaced by uranium minerals, reportedly worth \$350,000, were found in western Colorado.

Groutite, a new manganese mineral composed of manganese, hydrogen and oxygen, was identified in January, 1945, by Dr. John Gruner and named for Dr. Frank Grout, head of the Minnesota Geological survey. It was found in Minnesota iron deposits.

### GLENDALE SOCIETY PLANS FIRST ROCK SHOW

Glendale Lapidary and Gem society is planning its first exhibit, June 26-27. It will be in a new building being erected by Member W. H. Seastrom, at the corner of Flower and Sonora streets in Glendale. Hours will be from 10 a. m. to 9 p. m. June 26, and 11 a. m. to 7 p. m. June 27. Twenty new display cases are being built by club members for the exhibit.

Mojave Desert Gem and Mineral society officers for 1948 are: President, Ernest J. McMichael; first vice-president, Dean De Voe; second vice-president, Oscar Waters; secretary-treasurer, Faith R. Moore, Box 45, Daggett, California; board of directors, Arthur Ahlstrom, Ralph Reed, Mrs. Clyde Boucher, Ray Langworthy, and William L. Gabriel. The society meets in Barstow union high school the first Thursday of each month at 8 p. m.

A highly doubly refractive synthetic rutile has been produced by the Linde Air Products company and the Titanium division of the National Lead company, according to the *Newsletter* of the American Gem society. The new synthetic has an unusually high adamantine luster, with double refraction almost five times that of the zircon. Hardness of the synthetic is 6 to 6.5. Production has been suspended awaiting satisfactory heavy equipment, but stones have been produced in shades of yellow, brown and blue.

Lee Seabridge of Norwalk suggests that delicate crystals covered with clay and dirt can be cleaned by soaking the specimen in sugar water and laying it near a hill of big red ants.

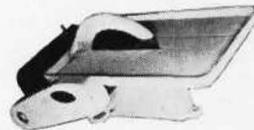
Aluminum was discovered in 1849, but was not used commercially until 1890.

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# AMATEUR GEM CUTTER

By LELANDE QUICK, Editor of The Lapidary Journal

Recently a letter from a Los Angeles woman caused us to do a lot of thinking. Her 18-year-old neighbor, a young lady in junior college, yearned to learn about minerals and gems. She found it impossible to get into any society because she was not acquainted with any members and she had to be sponsored by a member who knew her. That situation seems wrong, and yet we do not know the solution. Societies have every right to guard their membership, and folks unknown to any member are obviously doubtful quantities.

The real reason for the difficulty in joining existing societies, however, lies in their limited memberships. Most of them have a waiting list of prospective members. Why not increase the size? Because when you get an organization too large, you have politics, cliques and a group so large people never really get acquainted. Most of the groups are social and they want to remain small.

It seems to us the prime purpose of a gem and mineral society should be education of its members, and a study group can never be too large. We indulge in all manner of adult education programs in our schools and folks never give a thought to the size of the classes. They attend with a definite purpose in mind: to acquire education along a line that interests them. But rockhunters and gem cutters want to socialize first and study later. We like the sociability too and we have made many friends through society meetings. But too often the most important thing seems to be "What do we eat?" and not "What do we learn?"

Then, too, there are not enough societies to go around. In Los Angeles county, with a population of near 4,000,000 and ten times as many lapidaries as Amsterdam itself (It's a fact!) there are but a half dozen societies teaching the novice anything about gem cutting, minerals or silversmithing. In the small community of El Centro, where this magazine is published, there are two societies. The situation was eased somewhat when we organized the Hollywood Lapidary society, the Glendale Gem and Lapidary society and the San Pedro Lapidary society. It would be eased a great deal more if there were new societies in the eastern part of the county.

The Los Angeles Lapidary society realizes the problem and has appointed a permanent organizing committee to help new groups get started. We, therefore, suggest the forming of at least three new groups—in Pasadena, in the El Monte-San Gabriel section and the Pomona-Claremont-Covina section. If you are interested in associating with a new group please send us your name and address and which group you would join, and we'll notify you when an organization meeting will take place. If enough replies come in, we shall organize the Pasadena group in June and a new group every month thereafter. Or if folks want to do their own

organizing they can be guided by our article in the current *Lapidary Journal* entitled "How to Organize a Lapidary Society."

It is with high satisfaction we report the Los Angeles Lapidary society will hold its next exhibition in conjunction with the convention of the California Federation of Mineralogical societies at the auditorium in Long Beach on July 16-18. They will build 80 display cases of their own, and there is no doubt the organization will put on the greatest show they have ever held. They now have member accumulations of new gem materials cut over the past two years since they gave no show last year. Their problem has been to find a place in Los Angeles large enough for their ambitious shows. It is a fine gesture on the part of the federation to allow a non-member all the needed space.

And of course this is a big break for equipment dealers and sellers of gem materials and supplies. In the past they have not been allowed to exhibit their wares to the many thousands of interested persons who attended the Los Angeles Lapidary society's shows. Anyone in the gem business who isn't there is guilty of an extreme lack of vision. Without question now, the claim of the "world's largest mineral (and gem) convention" will come true indeed. It was smart of the federation to invite the society, and it was smart of the society to accept. Great things will come of this, and we hope Desert Magazine readers in the area will attend.

Eldon Moore of South English, Iowa, has a new idea for marking templates. He writes, "For all template markings on slabs we use a length of 1/8" bronze welding rod in preference to an aluminum pencil. The bronze pencil can be obtained at any machine shop or garage. Bronze is harder than aluminum and will not wear blunt as soon. The mark is just as easy to see, it stays on better than aluminum and you can mark closer to the template edge. We use aluminum for trim marks on rough slab trimming but prefer a bronze pencil for all template work."

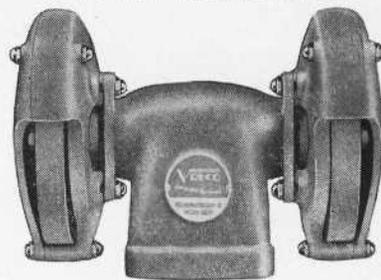
Mrs. H. R. Green of Patuxent River, Md., offers the suggestion that a plastic refrigerator bowl cover slipped over felt wheels protects them from being contaminated by wandering carborundum grit. This is similar to the idea we offered long ago. We used bathing caps for the same purpose.

Have you some short cuts you have discovered in your shop? If you have, why not share them with others? In the early days of this page we used to receive many suggestions. We would like more—many more.

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

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## Just Between You and Me

By RANDALL HENDERSON

MANY of Desert's readers are asking about progress on the new Palm Desert publishing plant we announced several months ago. I am glad to report the roof is on and the concrete floor is being poured this week—the last of April. Some of the new machinery already has arrived and we are planning to move to the new quarters in July.

The building, like the desert itself, has lots of space both inside and out. It truly is in a desert setting, with the Coachella valley sand dunes visible in one direction, the rugged escarpments of the Santa Rosa mountains in the other—and greasewood and palo verde all around.

Today the place is all littered up with lumber and cement and the other debris of a construction job—but in the months ahead we hope to make it an inviting retreat for Desert's readers.

\* \* \*

My congratulations to the jackrabbit homesteaders on a certain Section 14 on the Mojave desert. Two years ago 128 of them filed applications for 5-acre claims—and Uncle Sam finally has gotten around to granting their entries.

To celebrate the event the homesteaders got out a special edition of their little mimeographed newspaper which they call the *Desert Crier*. Also they have formed an organization known as the Desert Acres Improvement club—and now they are preparing plans for the cabins they have been dreaming about.

There are now many thousands of these 5-acre homesteaders on the Southern California desert. Generally they reside and work in the Los Angeles metropolitan area and come to the desert for weekends.

In Section 36 on the edge of the Coachella valley, the homesteaders got tired waiting for Uncle Sam to survey their land and chipped in \$30 each and had the job done themselves. And now they are discussing plans for a cooperative well.

It requires lots of patience to acquire a jackrabbit homestead. The federal government moves very slowly when it comes to parceling out its public lands. But Uncle Sam has one important point in his favor—he hasn't raised the prices. In some parts of Southern California raw desert land is being sold by private owners at \$1000 an acre and higher. Jackrabbit homesteads still cost what they did when the new homestead law was passed in 1938—\$5.00 a year for a lease until a cabin is built, and then a very nominal charge for title to the land. Actually, no deeds have been given yet—but Uncle Sam's land department will get around to it eventually.

In the meantime hundreds of city dwellers have experienced the great adventure of hewing out roads and building little cabins with their own hands. Their claims may be rough and dry and rocky—perhaps not even good pasture for a burro. But one of these days it will be theirs. And that is a grand and glorious feeling—to own a little bit of land no one can take away from you—even if it is just a dry desert homestead.

With no rent, no street assessments, no luxuries to buy, one can live very modestly on a desert claim. I know a disabled veteran whose living expenses for himself and wife average \$1.50 a day. Their pension gives them additional \$65 a month to maintain the car and buy luxuries. He is slowly regaining his strength doing the chores of a simple existence, and his wife has the cabin overflowing with the nicknacks of her own handiwork. I do not know a happier couple.

\* \* \*

With my friend Herbert Rouse I spent a weekend recently in the Cocopah range in Baja California south of Mexicali in quest of a little palm oasis said to be hidden away in a remote canyon.

We did not find the palms, but for hours we chugged along over the sandy floor of arroyos lined with red ocotillo and yellow palo verde blossom. Nature had created a landscape of color such as can be found only in sheltered desert terrain.

In one California desert community the women's club many years ago conceived the idea of lining the streets with this native tree of the desert landscape. The trees grew all right. But they didn't fit. They are neither prim enough for a conventional garden, nor gnarled and rugged enough for an exotic garden. Nor are they good shade trees. Their seeds take root in the lawns and the young trees are hard to grub out. And so, the residents are chopping them down and replacing them with trees that are either useful or ornamental or both.

In its natural setting, palo verde in blossom is one of the desert's most exquisite pictures. But as a domestic tree for parkways and shade it is a complete flop. It belongs out on the desert, not in the towns.

\* \* \*

A recent newspaper clipping tells of the experience of an 8-year-old girl who wandered away from a roadside camp and was lost four days in a wilderness terrain. When searchers found her she was as calm and unperturbed as if it were a common experience.

Similar stories appear in the newspapers frequently. And we marvel that youngsters survive an ordeal which often would bring death or insanity to an adult. Actually, a child is better able to undergo such an ordeal than the average grown-up. This for the reason that all animals, including the human species, have a strong intuitive sense of self-preservation.

We lose more or less of that as we grow older, depending on how close we live to the good earth, and to good health. Living too constantly in an artificial environment we accumulate fears and taboos, and as these grow, the native instincts which are our natural heritage become dulled and warped. As we become sophisticated and "smart" the instinctive sense of values which is our childhood endowment is lost.

But we may avoid this fate. Simple living and an eager, curious interest in the God-given laws which govern our world of Nature will help us retain the intuitive wisdom which enabled the little girl in the story to survive.



## THE LONG TRAIL THROUGH BAJA CALIFORNIA

In *THE LAND OF SHORTER SHADOWS*, subtitled "Exploring Baja California," Erle Stanley Gardner tells about the cars he and his party drove from Tijuana to the tip of the peninsula of Lower California, of how he felt about the roads, the people and the country. Gardner enjoyed the trip immensely, even when he had to work his bulky four-wheel-drive truck around the narrow reverse curve of the "Point of the Picture of Death."

He followed torrent-washed canyons, called roads, to ancient missions and green oases in the dark lava—places with mouth-filling names: Catavina, San Ignacio, Mulahe. He found the wild life fascinating, the people in isolated villages and lonely settlements friendly and genuine. The 1200 mile journey from the border to Cape San Lucas was one long entertaining adventure, and being an excellent writer Gardner makes the reader enjoy it too.

*THE LAND OF SHORTER SHADOWS* is a sort of motorist's guidebook to a primitive land. To anyone contemplating the trip, this volume would be essential. It is packed with excellent advice, most of which could be obtained only first hand, about accommodations, camping spots, supplies, gas and roads. But it is much more than a guidebook. There are bits of botany, history and legend, fishing, farming and mining. Two of the best chapters deal with coyotes and burros Gardner knew or kept on his ranch near Temecula. And through the volume runs a delightful thread of humor, culminating in some extremely funny stories.

William Morrow & Co., New York, 1948. 228 pps., many photographic illustrations by the author, end-paper maps. \$5.00.

## THUS LIVED ANCIENT MAN IN OUR SOUTHWEST

*PREHISTORIC INDIANS OF THE SOUTHWEST*, by H. M. Wormington, an outline of Southwestern archeology written for the reader with little or no scientific background, is an important addition to the desert bookshelf. The whole fascinating story of our predecessors in the Southwest is outlined in a single volume whose price makes it available to anyone interested. Wormington, who is curator of archeology at the Colorado Museum of Natural History has successfully kept his writing between the too-popularized account with almost no substance, and the

scientific report of findings which is almost unintelligible to the average person.

The book is not merely a recitation of bones and artifacts dug up. The author tells where and how these people lived—what they ate and hunted and wore, so far as the story has been pieced together. And he speculates upon the answers to unsolved problems.

After an introduction which outlines the processes of archeology, the book takes up the most ancient cultures, starting with the Sandia cave findings, then through the story of the Anasazi, the Hohokam, the Mogollon, the Sinagua and the Patayan peoples. Included are the cliff-dwellers of Mesa Verde, the canal builders of southern Arizona, and the pit-house people who lived along the Colorado.

There is a glossary, an extensive bibliography, index, and an appendix by Erik K. Reed which lists the outstanding exhibit sites, modern pueblos and local museums.

Colorado Museum of Natural History, Denver, 1947, Popular Series, No. 7. 191 pps., 58 illustrations, photos and drawings. Paper bound, \$1.50—cloth, \$2.50.

First issue of *The Magazine Tucson* was issued in March, 1948. Published in Tucson, Arizona, Walter J. Hartwig, editor and publisher, announces that it will be a quality publication "for Tucson, of Tucson and by Tucson." The first issue has a Kodachrome cover by Esther Henderson, 29 departments covering almost all Tucson activities and short features on quarter horses, the Tucson Boys' Choir, and difficulties in learning Spanish. The magazine is to be published monthly.

The standard handbook, *Gems and Gem Materials*, by Edward H. Kraus and Chester B. Slawson has been revised and issued in a fifth edition by McGraw-Hill Book company. In Part I, chapters on crystal forms, physical properties, optical properties, the cutting and polishing of gems and manufactured gems have been enlarged, and a new illustrated chapter on crystal structure and X-ray methods of analysis has been added. All gem descriptions have been revised and five new ones listed. Some identification tables have been expanded and there is a new bibliography. The book was published first in 1925. 332 pps., 403 photographic illustrations and drawings. \$4.00.

## BOOK NOTES . . .

*Landmarks of New Mexico*, by Edgar L. Hewett and Wayne L. Mauzy, reprinted by the University of New Mexico Press in 1947, contains a section on the Alamo-gordo Atomic Bomb site, and photographs of the first New Mexico explosion. The book is divided into nine sections: In and About Santa Fe, Pajarito Plateau, Upper Rio Grande Valley, Middle Rio Grande Valley, the Eastern Frontier, the Jemez Region; From Albuquerque to Zuñi, the San Juan Country, and Miscellaneous Monuments. It contains more than 100 photographs of ancient ruins, Indian pueblos, forts, towns, scenic beauties and natural curiosities, with descriptions on opposite pages. One kiva mural painting is reproduced in color. 204 pps. Index. \$3.50.

John A. Lomax, author of *Cowboy Songs and other Frontier Ballads* and *Adventures of a Ballad Hunter*, died in Greenville, Mississippi, on January 26. Lomax, who was 80 years old, spent most of his life in the search for American folk songs and ballads, and is credited with preserving "Home on the Range," "Goodbye Old Paint," "The Dying Cowboy," and other famous songs. He was associated with the University of Texas for 25 years, and the songs which he collected from every walk of life are housed in the Library of Congress.

*Truth of a Hopi*, by Edmund Nequatewa, has been published in a second edition by Museum of Northern Arizona, Flagstaff, Arizona. The author, a Hopi of the village of Shungopovi, recounts the history of his people and their legends as the Indians tell the stories among themselves. Mary-Russell F. Colton has edited the small volume and checked historical dates, but the stories remain essentially as they have been told by the clan priests. The book has been called the Hopi Old Testament, and its simply told tales make interesting reading. Cloth bound, notes and bibliography. 134 pps., \$2.00.

*Panamint Valley, California*, latest booklet in the Parcher Guide series, contains two photographic illustrations, a brief account of the valley, its history, geology, flowers and animals. There are stories of lost and found mines, old mining camps, mule teams and Indians. The booklet, including covers, contains 16 pages, 4½ by 6 inches, and sells for 15 cents. Other titles in the series are *Bishop, California*; *Pueblo Grande*; *Colossal Cave, Tucson, Arizona*; *South Mountain Park, Phoenix, Arizona*; *Tucson Mountain Park and Old Tucson*. Frank M. Parcher and his wife, who live at 505 Franklin St., Boise, Idaho, started the miniature guide series as a hobby when they were unable to find detailed and accurate information on some of the places they visited.



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