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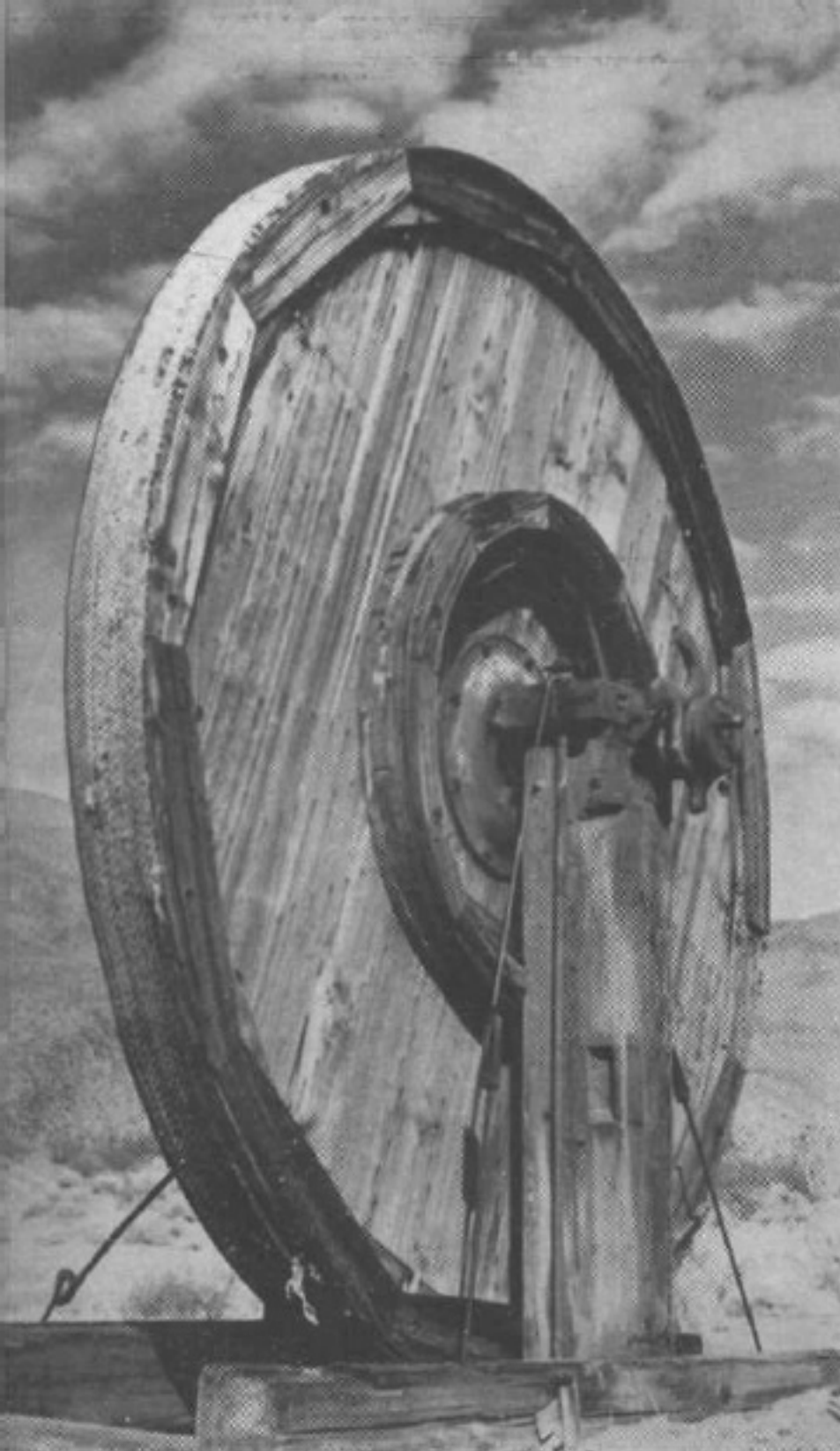
Desert

M A G A Z I N E



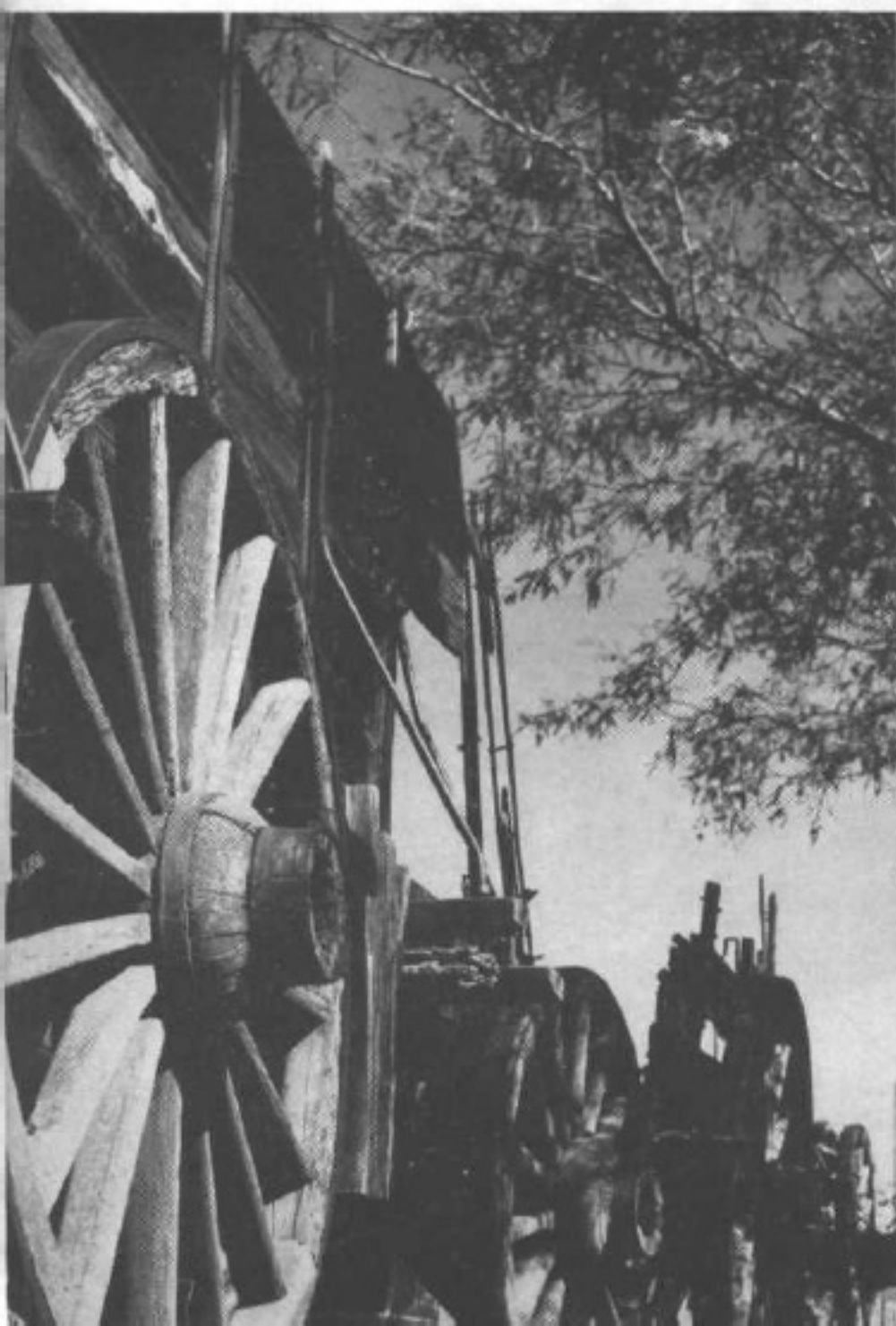
JUNE, 1949

35 CENTS



Desert Wheels ...

Everywhere in the desert land, weathering wheels are reminders of a historic past. Upper left, a 10-foot diameter plank wheel at Goler, once used on a booster pump for Randsburg's water supply, photographed by William F. Sprinkle, Jr., Tehachapi, California. Upper right, the hub of a 20-mule team borax wagon, taken at Furnace Creek ranch, Death Valley, by Ben Pope, Dinuba, California. Lower left, ore wagons from silver boom days, at Tombstone, Arizona, pictured by Carl H. Schaeffler, Pasadena, California. Lower right, pioneer wagon wheels have been built into this fence at Brigham City, Utah, photographed by Willard Luce, Provo, Utah.



DESERT CALENDAR

May 18-June 8—Exhibit Guatemalan Textiles, costumes of the Indians of Guatemala, Museum of Northern Arizona, Flagstaff, Arizona.

June 10-12—Thirty-second annual Cherry festival, parade—Saturday, 11 a.m., Beaumont, California.

June 11-12—Sixth annual show of the San Fernando Valley Mineral and Gem society, Sat.—1-10 p.m.; Sun.—10 a.m.-9 p.m. North Hollywood Recreation center, California. Admission free.

June 11-12—Sierra club hike. Climb Winnedumah, ancient landmark in Inyos east of Independence. Overnight camp.

June 11-26—First International exhibition of Latin American photography, Museum of Northern Arizona, Flagstaff, Arizona.

June 13—San Antonio day, Corn dance, Taos Pueblo, New Mexico.

June 13—San Antonio day, Green Corn dance, Sandia Pueblo, New Mexico.

June 16-19—De Anza days, annual festival combined this year with Gem and Mineral exhibit. Chuck wagon breakfast, parade, street dances, Riverside, California.

June 19—Corpus Christi Sunday, outdoor religious procession from St. Francis Cathedral, Santa Fe, New Mexico.

June 23-25—Grand assembly, Rainbow Girls, Gallup, New Mexico.

June 24—San Juan day, afternoon corn dance, Taos Pueblo, New Mexico.

June 24—San Juan day, annual fiesta and corn dance, San Juan Pueblo, New Mexico.

June 24-26—Convention of American and California State Federations of Mineralogical societies. Exhibits, field trips, bus tours, Sacramento, California.

June 24-26—State F.F.A. Rodeo, (Future Farmers of America), Santa Rosa, New Mexico.

June 26—DeVargas memorial procession commemorating reconquest of Santa Fe in 1692 and held annually since that date, from St. Francis cathedral to Rosario chapel, Santa Fe, New Mexico.

June 29-30—Lehi roundup, Lehi, Utah.

June 30—Fishing contest, awards, Parker, Arizona.

June—Fred K. Hinchman exhibit of Southwestern arts and crafts, including jewelry, blankets, costumes, pottery, baskets and Plains Indian beadwork. Southwest Museum, Highland Park, Los Angeles, California.



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Address Correspondence to Desert Magazine, Palm Desert, California

Why Tree Yucca Wears a 'Hat'

By EDMUND C. JAEGER

WHAT is it, you ask, that sometimes causes yucca trees to die off at the stem-tip and look as if they had some strange sort of "hat" pushed down over the apex of the stem.

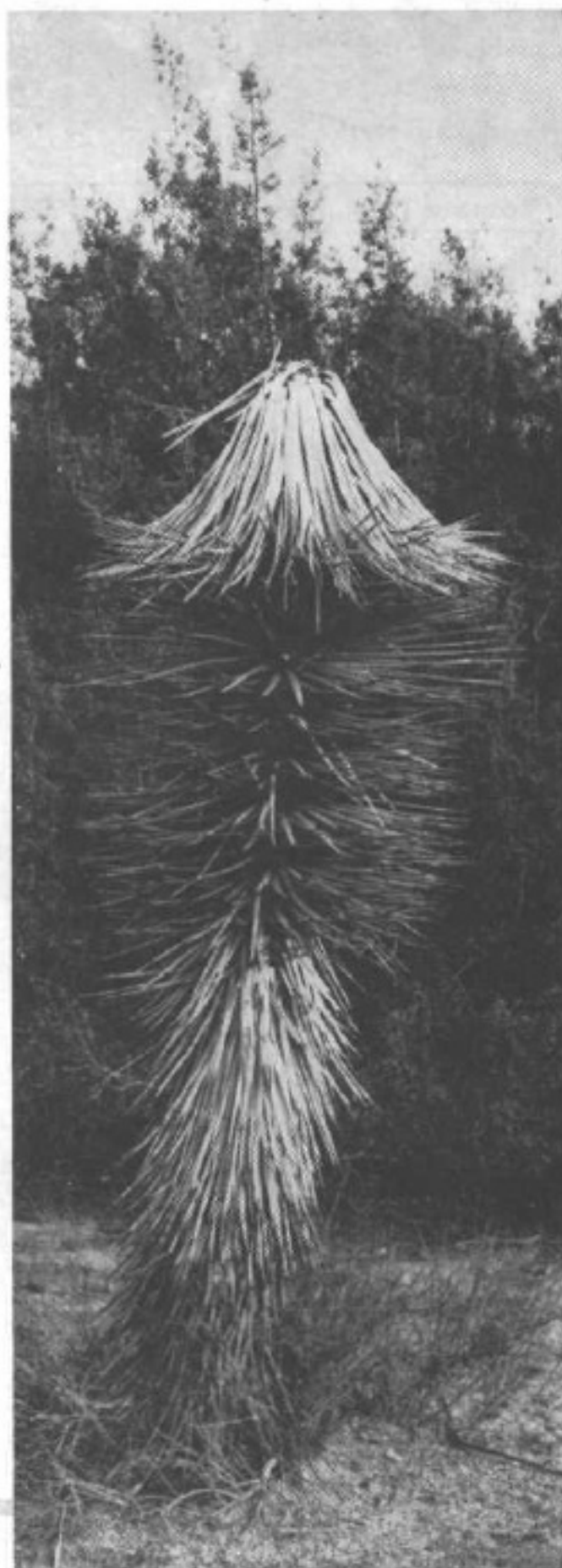
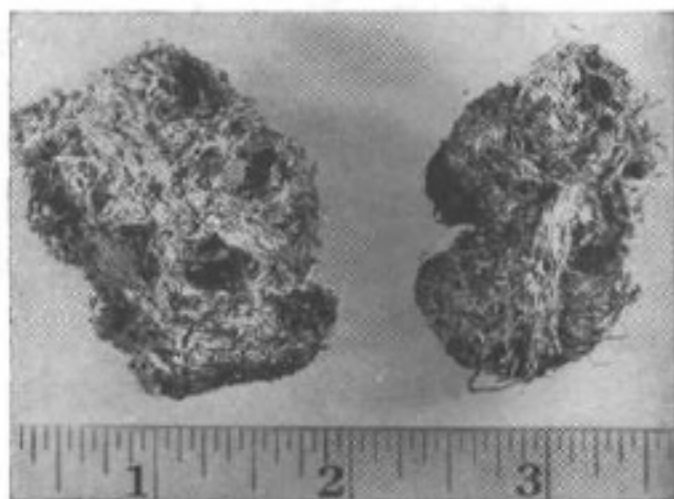
Personal investigation revealed to me some years ago that this was due to the work of a beetle (*Psyphophorus yuccae*), close relation of the small snout weevil that is such a vexatious pest of our granaries and kitchen pantries. The adult insects are large, handsome black fellows almost an inch long with a long, curved, slender, moveable beak, set marvelously like a swivel into a cup-like socket at the front of the head.

In late spring these insects may be seen in numbers crawling over and among the long saw-edged yucca needles. The mother beetles lay their eggs in the soft tissues at the base of the narrow, bayonet-like leaves of the stem-tip and when these eggs hatch, the young grubs immediately begin to feed, bringing severe injury to the plant tissues. This causes the topmost leaves to turn yellow, wither at the base and turn downward, making the top of bristling needles look like the proverbial Chinese coolie's hat.

When the young grubs have fed, they utilize the fibrous plant tissues which had previously entered and passed through their bodies, to make their queer pupal cases; cases which, at least in shape, resemble the cocoon of the silk worm moth. In these, they spend a short period of seeming rest before coming forth as restive black adult weevils.

If you will tear into one of the infested yucca stem-tips, you will find

The cases or cocoons from which the young grubs emerge as full grown yucca beetles



Mojave tree yucca, showing what happens when the yucca beetle selects it as a nesting place.

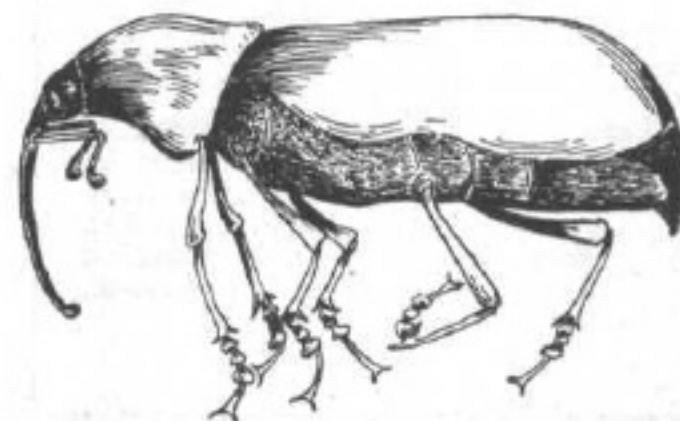


these pupal cases in numbers, sometimes whole handfuls of them, each about the size of the last joint of the little finger. They are very hard and tough to tear apart, the coarse fibers having been tightly cemented together by the maturing grub. If you are fortunate to find the skillfully constructed cases just at the right time, you may find the fat pupae inside.

Naturally the killing of the stem-terminus ends further upward growth of the tree's branch. Not discouraged, and, perhaps even stimulated by this injury, the yucca plant soon sends out one or two new side shoots. Thus, we see that this work of the weevils is really a very useful aid in causing these yuccas to have beautiful branching crowns instead of consisting of mere straight stems. Of course there are other causes of branching such as wind or fire injury or the forming of a panicle of blossoms at the stem-tip; but the weevils play a very important role nevertheless.

Yuccas, other than the tree yuccas, are visited by similar weevils. Perhaps because the stemless, Whipple's yucca, sometimes called Candle of the Lord, of the coastal mountain slopes, has more tender tissues, it is most frequently attacked; much more so than the more hardy, slow growing species of desert yuccas. I have seen many a fine old plant of the wide-spread Mojave yucca (*Yucca schidigera*) with its long yellow-green bayonet-like leaves brought to an inglorious end by the activities of yucca weevils. Curiously enough, there is in Hawaii a nearly related beetle that causes great damage to sugar plantations by boring in the stalks of cane.

*This is *Psyphophorus yuccae* which lays the eggs and eventually reverses the growth of the yucca*



It seems quite fantastic today, but in 1873 Dr. J. P. Widney started a nation-wide controversy by proposing that the Southern California desert be converted to a great inland sea by diverting the entire flow of the Colorado river into the basin now known as Imperial and Coachella valleys. Newspaper editors endorsed the idea, and the territorial governor of Arizona actually went to Washington to urge the appropriation of money for the project. Here is the story of one of the strangest episodes in Southern California history.

He Planned to Change the Desert Climate

By DAVID HELLYER

ASTRIDE his sweat-flecked horse in the hot bowels of the Colorado Desert, Dr. J. P. Widney, U.S.A. paused again to search the distant cliffs. Little did he dream that the great, scorched basin would soon be hailed as "the Widney Sea," or that his theories would form the storm-center of a violent coast-to-coast controversy.

His sun-weary eyes narrowed to slits as he scanned the red rock bluffs. What he saw prompted him to write, in the Overland Monthly for January, 1873:

"For miles and miles I traced with the eye a strange, well-defined line along the mountain sides, always at the same level, as undeviating as the chalk-line of a carpenter's marking twine.

"Riding out to it, I found it to be the beach of an old sea. The rocks were worn and rounded up to that level, as by the constant washing of water, with coarse coral formations in their crevices and upon their sides.

Above that line the rocks were sharp and jagged."

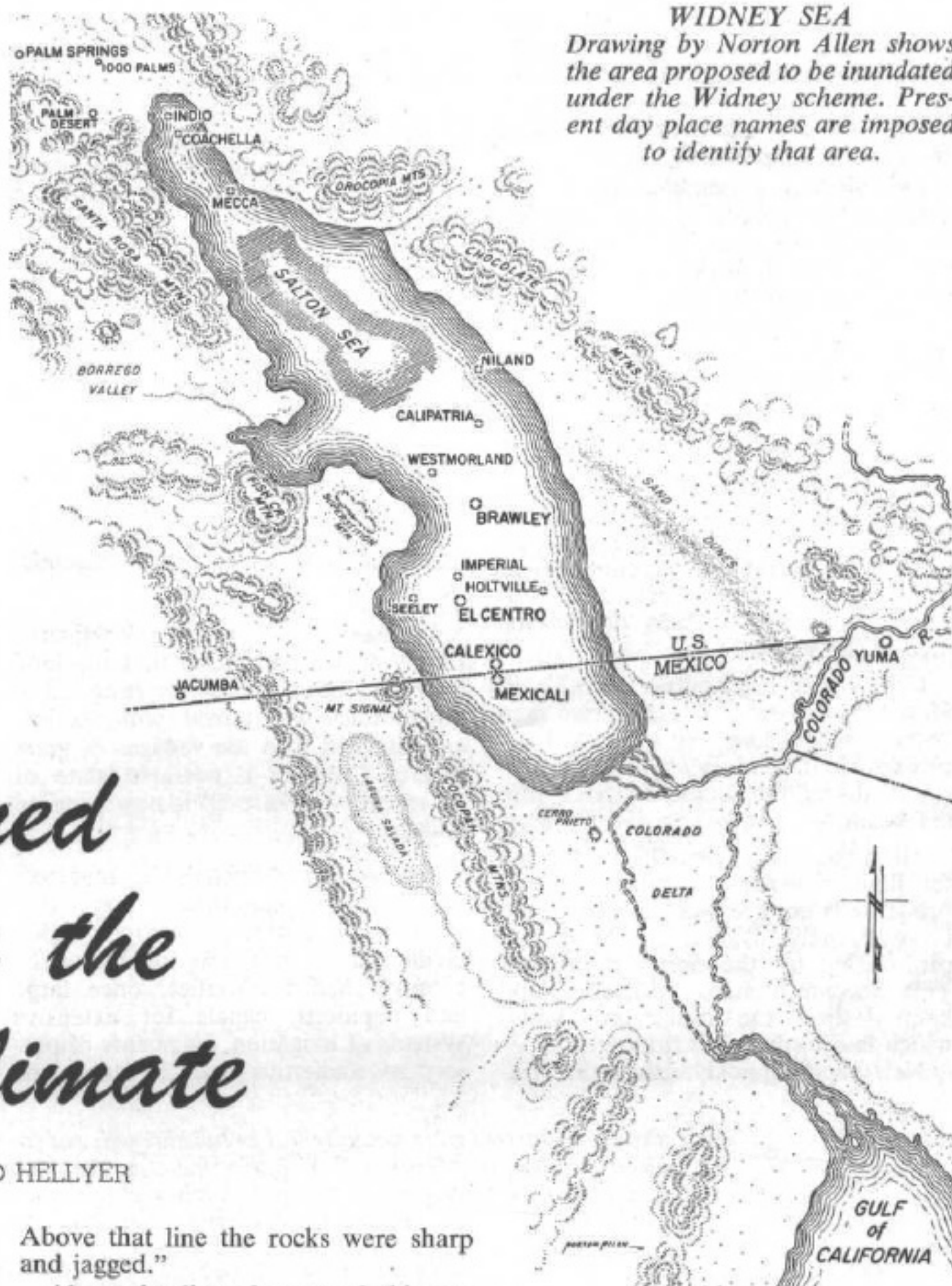
Along the littoral zone of this ancient sea, the young army surgeon found the sand white with countless sea-shells, some minute, some fragile, "such as are found in sheltered arms of the sea."

"I found numbers of them," he reported, "fragile bivalves, about an inch wide and an inch and a half long, the shells scarcely thicker than half a dozen sheets of ordinary note paper, closely pressed. These shells drift about in the restless winds, beaten upon by the raging sandstorms, scoured and worn by the constant attrition of the sharp grains."

That they were paper-thin did not surprise the doctor. He was amazed that they had not been pulverized completely by the ravages of wind and sand.

"How long could these shells withstand such constant wear," he pon-

WIDNEY SEA
Drawing by Norton Allen shows the area proposed to be inundated under the Widney scheme. Present day place names are imposed to identify that area.



dered. "Not possibly more than a few centuries, probably not more than two or three."

A man of medicine, Dr. Widney intuitively reasoned from effect to cause. Fingering the fragile fragments, the surgeon told himself that he stood on the bed of a long-dead sea. He reflected that the land once must have blossomed and bloomed where now only the "lone whirlwind rears its stately column of sand hundreds of feet in the heated air, and travels slowly on for hours."

At least twice Dr. Widney explored this thermal waste, which seemed to him "the scorched, blasted bed of some old cyclopean furnace." Further study convinced him that the Colorado river, emptying into the Gulf of California, had for centuries deposited the red mud of Arizona's northern plateaus

at its mouth, piling up a huge delta. Before this barrier was created, the desert basin must have formed the upper waters of the Gulf. As the delta grew, it choked off this inland portion, which then slowly evaporated.

Dr. Widney expounded these theories to the people of Los Angeles. He argued that great climatic changes had occurred in regions touching the desert, owing to the drying up of this inland sea. If this ocean were restored, he contended, beneficent climatic conditions would return to these stricken areas. Even California, already bountifully blessed, would be affected favorably by the restoration of this great sea.

Rainfall, too, would be increased. He estimated that evaporation from this body of water "would be enough, if all recondensed and precipitated, to supply twelve inches of rain to 86,400 square miles—more than double the area of the state of Ohio."

Critics were quick to rise to the bait. How, they jeered, could mere men "make" a sea? The very idea was blasphemous! Dr. Widney's answer was instant: divert the Colorado river into the basin.

"It is admitted," he confessed, "that the flow of water from the Colorado probably is not great enough to fill the basin entirely. But it would, in all probability, fill the northern portion. This accomplishment in itself would help destroy the desiccating winds which find birth in this furnace."

Newspapers quickly sensed the "dis-

covery's" news value. Trumpeted the Los Angeles Star:

"If Congress would take the matter up and appoint a scientific commission to visit that region and make a report as to the practicability, cost and effect, and should that report corroborate the view of Dr. Widney, a great country, almost a nation in itself, might be reclaimed from a desert, and rains be induced to fall where now a bleak and parched country is wasting away for want of moisture."

The Star praised the doctor's views as "sound in every particular," and expressed the hope that "delegations in Congress from California, Arizona, Nevada and Utah will take up this subject and demand of the government the appointment of such a commission . . ."

Further investigation strengthened Dr. Widney's conviction that the land once had been rich, supporting dense populations. He talked with explorers who had seen the vestiges of great forests, "still in a passable state of preservation, where all is now parched and dry."

"In western Arizona," he reported, "are traces of an ancient population much more dense, much more highly civilized than that now inhabiting the country. Ruins of cities, once large and populous, canals for extensive systems of irrigation, fragments of pottery so numerous that in places the

ground seems paved with them—these evidences support my theory.

"Would it be money wasted," he challenged, "if the government were to send a commission of scientific men, of engineers, carefully to examine the subject, to run levels and report the result?"

Dr. Widney's proposal instantly swept the land. The "Widney Sea" became a favored conversation topic in parlor, barber shop and bar. At least one college conferred a master's degree on the doctor for this remarkable contribution to science and the nation. Savants learnedly argued the issue pro and con.

Some of the plan's stronger champions advocated immediate formation of a company to cut a ditch from the Colorado to the basin, to begin the job of filling this great natural bathtub without delay. Others contended that all maps should be changed. "Colorado Desert" now would be a misnomer. The basin henceforth should be known to the world as "the Widney Sea."

But of skeptics, there were many. Would not the increase in moisture content of the air encourage the dread disease of malaria? Such a damp climate would produce an unnatural and fearsome animal and vegetable growth in a land already so fertile. Perhaps California's vaunted orange trees would shoot skyward to the height of the *sequoia gigantea*, bearing pumpkin-sized fruit! Harmless garter snakes

In 1905 the Colorado river actually did break through and for over two years poured its entire flow into the "Widney Sea" basin, forming the present Salton Sea. This is a picture of the old Liverpool salt works which was inundated in the 1905-6 flood.

Photo, C. C. Pierce collection.





The Salton sea of today occupies only a fraction of the area that would have been submerged had the Widney scheme been carried out.

might swell into boa constrictors, while frogs could easily evolve into alligators! Endlessly the argument raged, some of it sheer whimsy, much of it grim seriousness.

Then Arizona entered the fray. None other than General John C. Fremont, then governing the territory of Arizona, probed into the matter. The "Pathfinder" found the territory worthy of federal consideration, and straightway embarked for Washington to lay the subject before his superiors.

Meanwhile, no one had thought to consider the problem mathematically—a disastrous and embarrassing oversight. General George Stoneman, one of the more practical residents of the City of the Angels, decided the time had come to shine the light of reason on the issue. Said he to a shocked Los Angeles audience:

"Much has been said of late regarding a great geological basin lying between the coast range of mountains in California and the Colorado river on the east.

"This basin is represented as being three hundred miles long, fifty miles wide, and three hundred feet deep—about the size of Lake Erie. We are told that Governor Fremont of Arizona has just returned from Washington, where he has been for the purpose of inducing Congress to lend the aid of the treasury to enable some one to fill this basin with water.

"The governor, during his checkered life, has been engaged in some grand and conspicuous enterprises, but in this case he has evidently laid his plans before he consulted his figures. Let us make the calculation for him.

"To fill such a pond in one year, supposing the bottom to be watertight and evaporation entirely checked, would require a small stream 20 miles wide, 20 feet deep, with a current of three miles an hour. To fill such a lake by a stream 1000 feet wide, 10 feet deep, and running at the rate of three miles an hour, would take *two hundred years!*"

General Stoneman then estimated that "after this lake was filled it would require a river 250 feet wide, 10 feet deep, and running at the rate of five miles per hour—about the size of the Colorado river at ordinary stages—to compensate for evaporation at the rate of eighteen inches each year.

"Archimedes, you know, said that he could move the world, only give him a fulcrum. Fremont says he can make a sea, only give him plenty of greenbacks. When he makes his estimates he will come to the conclusion that long ere he can fill his basin with water, the great Engineer of the universe will have filled it with the sands of the desert, driven down by the ever-prevailing winds of the north."

Thus, with one well-aimed blow of his slide rule, General Stoneman

knocked the bottom out of the "Widney Sea." That the general's measurements and calculations are somewhat less than accurate may be true. But they were sufficiently potent to dampen the ardor of the sea-builders.

Years later, irrigation was to come to the vast wasteland. Farms and ranches today dot the desert floor in all save the bleakest and most inaccessible areas. Cities like Coachella, Indio, Brawley, El Centro and Calexico have brought man's civilizing touch to a land where before was "only the glare of the never-ending sand, and the silence of death."

Dr. Widney's contention that the inland sea once was part of the gulf has been variously supported and disclaimed by opposing teams of scientists. Opponents of his theory claim that the countless bivalves which litter the desert floor were of freshwater origin. Who really knows?

Today, at the site where Dr. Widney sat astride his sweat-flecked horse scanning the red rock cliffs, the silence of death still reigns. It is unlikely that the silence will ever be broken by the wash of waves on a shoreline. In the apt words of General Stoneman, the desert probably will remain devoted eternally to "the purposes intended by the Almighty—for occupation by horned toads, rattlesnakes, and the Southern Pacific railroad!"



Panoramic view across the Leonard creek, Nevada, bajada placer deposit in north Humboldt county, where water is available to extensive operations.

There's Placer Gold in the Desert Bajadas

Many of the bajadas — those alluvial slopes which lie at the base of desert mountains — contain more or less gold, and offer the amateur gold-seeker the opportunity to cash in on the existing — and lawful — domestic market for unprocessed gold. This is the opinion of the writer of this article, a consulting mining engineer and geologist. And if you want to know how to go about locating this virtually untouched store of precious metal, here are some suggestions.

By ADDISON N. CLARK

ONE need not be an experienced placer mining operator to locate bajada placer gold deposits in the Southwest deserts, if some of the simple precautions suggested in these pages are followed.

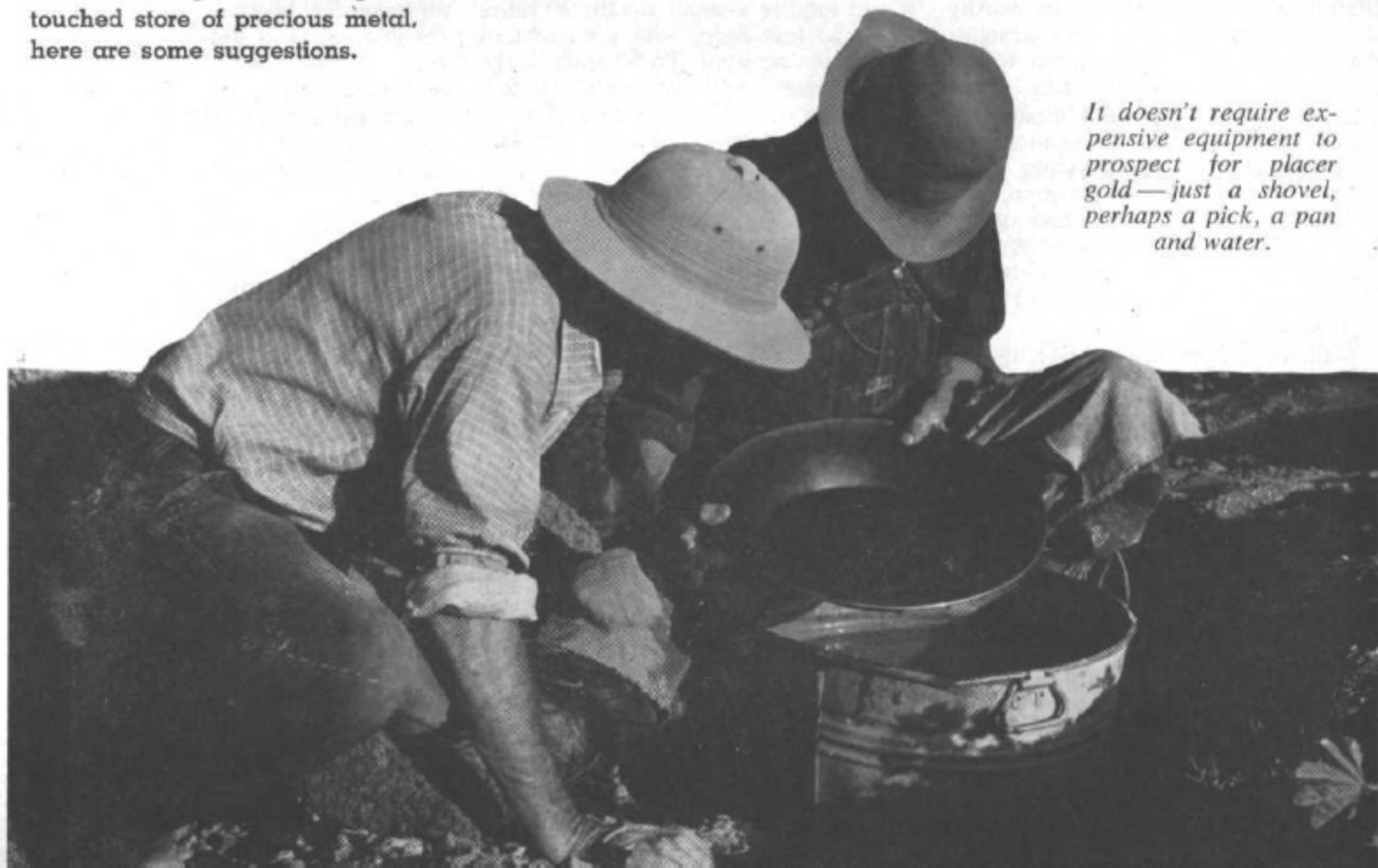
"But," you ask, "what is a bajada placer deposit?"

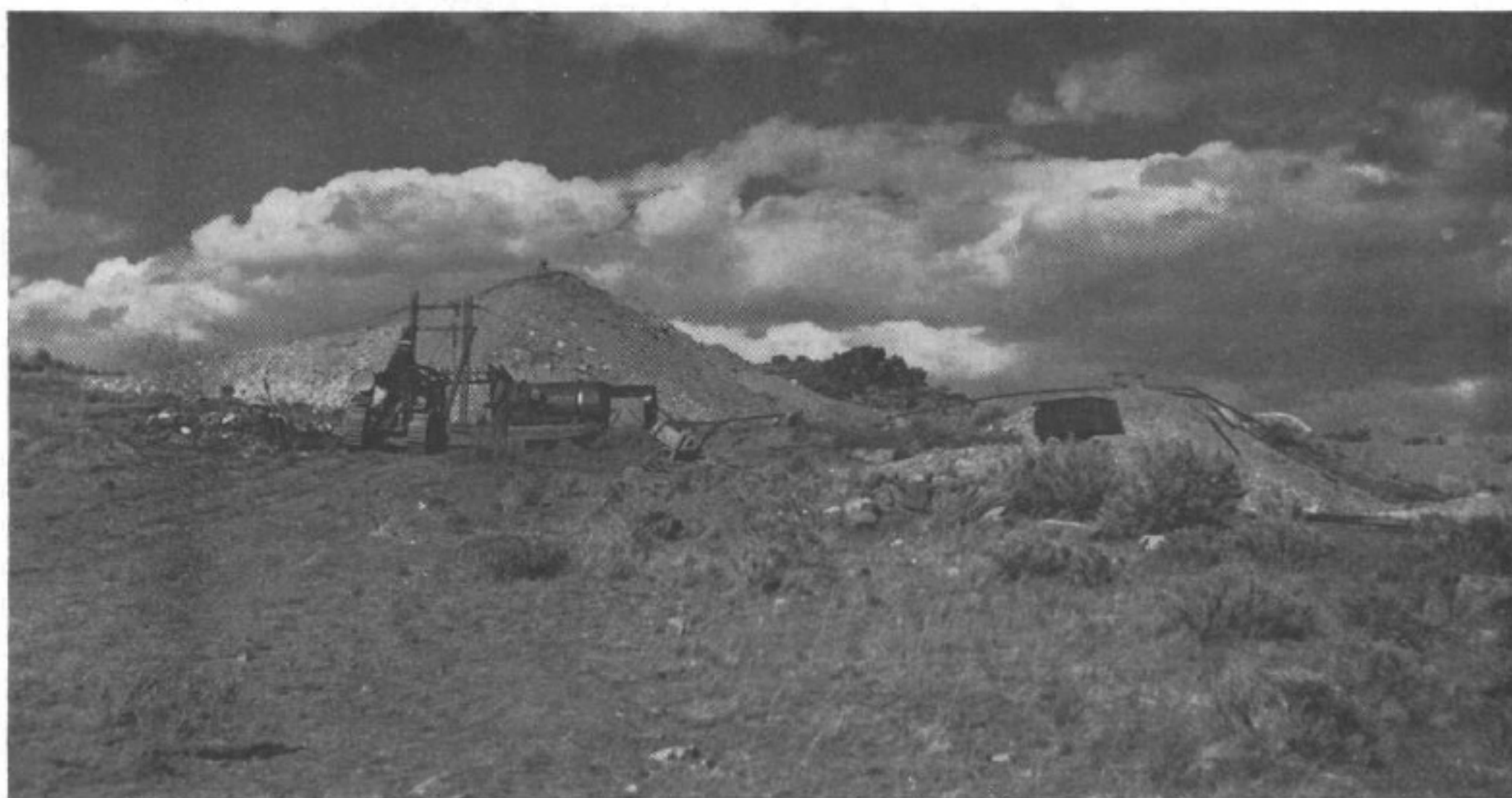
It is a type that has lain untouched

under the noses of uncounted thousands of old-time rule-of-thumb desert prospectors throughout the arid Southwest, for countless decades. Only in recent years has the bajada type of gold placer deposit, which is strictly indigenous to the arid regions of the Southwest, come to be recognized by geologists and engineers. And it is still virtually virgin soil, a *terra incognita* to almost all save the geologists.

In a recent publication of the California State Division of Mines (Bulletin No. 135, "Placer Mining for Gold in California") Doctor Olaf P. Jenkins,

It doesn't require expensive equipment to prospect for placer gold — just a shovel, perhaps a pick, a pan and water.





Inexpensive placer operation in the Leonard creek field.

now Chief of the Division of Mines and then Chief Geologist, in the chapter on "Geology of Placer Deposits" says: "Recent study of the geologic processes at work in the desert has led to a better understanding of the desert placers, which offer a practically virgin field for exploration, holding a potential wealth not yet known."

However, with placer mining operators who for years have dredged and draglined the gold gravel deposits of California now actively scouting for new fields to work—and more and more of them turning from well-watered California mining regions to the arid and semi-arid desert regions, with increasing success in the latter—the bajada type of auriferous deposit inevitably will come into its own as an added source of gold production.

The word is of Spanish parentage (*bah-HAH-dah*) and is the Spanish term for slope, locally used in the Southwest to indicate the lower or foot slope of a mountain range—the part consisting of rock debris, standing at a much lower angle than the rock slope of the range proper. The term was first used by C. F. Tolman for confluent alluvial fans along the base of a mountain range, in an article on erosion and deposition in the southern Arizona bolson region, in the *Journal of Geology*. In my field work I have likened the bajadas to ruffles of a formal gown around the feet of a range, between the alluvial fans at the mouths of arroyos and canyons.

In the clear desert air you can spot them for miles. They merely are

stretches of eroded detritus from up the mountain—not water-worn gravel and pebbles such as you'll find in the arroyos, but just plain dirt. Unimpeded by timber or anything more stable than sagebrush roots, the dirt has slid down the steep slopes of ranges for uncounted seasons—perhaps thousands of years—and carried with it the gold eroded from apexes of quartz veins up in the range.

And the gold is utterly unlike any preconceived idea you may have of placer gold, such as is recovered from river or ancient beach gravels, or from the lava-buried Neocene Age river channels of the Sierra Nevada which for decades have been mined by drifting and "breasting." That placer gold usually has been transported a considerable distance by fast-running water, and hammered and worn smooth by pebble and boulder impact and abrasion. The gold found in bajada deposits along the feet of desert ranges is what in engineering reports and published technical articles I have christened "short-haul gold"—a term that appears to have caught on with professional associates. It is sharp and angular, and bright yellow instead of rusty, or in some cases blackened by iron and manganese solutions as is the "long-haul gold" of California's present-era or Neocene Age placers.

Another characteristic of some bajada deposit gold I have studied is that much of it remains "frozen" to the bits of the quartz matrix from veins whence erosion wore it and washed it to the base of the granite-back-boned range.

In the accompanying panoramic photographs, taken by the writer in 1947 for his report on a large Leonard Creek placer property, those bajadas can be seen plainly between the steep rock-slopes and the more level abutting ground. The captions of those pictures explain them in more detail.

I have found bajada gold in quartz matrices in sizes from mere granules to pieces as big as pencil erasers. That makes it hard to recover gold by ordinary washing-plant sluice-riffles, because the lighter quartz too often carries it along over the riffle-lips and on down to the tailpile; especially where heavy black sand is present in quantity, as it often is. In design of any washing plant for such recovery, means eventually must be provided for grinding or roll-crushing of such frozen matrix, else too high a percentage of gold will be lost. That, of course, is where we engineers come in—when a discovered and tested bajada deposit has proved that it warrants commercial-scale development and operation, and requisite capital has been enlisted.

But this article is for readers of *Desert* who are mine-minded and like to comb the Southwest's most fascinating regions for sign of history's most stable legal tender—for the amateur prospector who isn't hidebound by hoary traditions, who can read plain signs, and who has some knowledge of the procedure of filing placer mining locations under federal and state mining laws. The commercial phases will come along later, after he's found such a deposit, filed on it, and worked out

ways and means for testing its gold content. Pamphlets covering claim location and recording procedure can be obtained from the California State Division of Mines at San Francisco; the Nevada State Bureau of Mines at Reno, or the Arizona Bureau of Mines at Phoenix, depending on which desert region is involved.

As for Nevada's bajadas, a couple of paragraphs from my article published in the *Mining World* for July, 1947 ("Nevada Desert Placer Mining") bear directly on this:

"You need only drive up and down and across Nevada to see a thousand *bajadas*—hundreds of them from her arterial highways alone. If they abut against the right kinds of ranges, and the geology and topography below them are right, every such *bajada* can be a potential source of short-haul placer gold. However, as to its degree of concentration or distribution, certain simple facts govern, and only a proper test sampling, and a wash test with water, will disclose whether values be commercially recoverable or too disseminated to warrant acquisition and development. So few of the old-time, or even recent, prospectors have recognized these *bajadas* as possible sources of revenue, and they are mostly far from available water or else well above, that today they are almost a completely virgin field for exploration.

"The keys to whether they offer possibilities or not are simple: One, the uplift against which they lie must be an amply-mineralized range, built of the right brand of rocks—rocks that make gold (batholithic granite is ideal). Two, the eroded detritus must necessarily have been estopped from transportation to and dissemination in the great open spaces of flat desert country, and burial there under prohibitive depths of alluvium."

The property shown in the accompanying photographs has an almost ideal detritus catchment condition. But that is only one spot in the Nevada desert. Offhand I can name half a dozen other spots, within a few hours' drive from there, where definitely favorable conditions exist for *bajada* placer gold deposition. In his article which I have cited Dr. Olaf Jenkins says: "There are probably many examples of typical *bajada* placers in the Mojave desert and the Great Basin regions of California, but recognition of them as such has not yet reached publication." In my Arizona engineering safaris I've spotted likely ranges along the feet of which I'd be willing to put down a bet, at reasonable odds, I'd find *bajada* placer gold.

True, the water problem in the desert regions can be a hard nut to crack. But it is far from insurmountable. I can name two Nevada mining areas whither water has been piped a dozen miles merely for use in commercially-successful mining—in one case a large scale bucket-line gold dredging operation. For any early-stage ground-testing, samples of dirt can always be taken by light truck or jeep to where there's plenty of water for simple wash-



Addison N. Clark, mining consultant and author of the accompanying article on bajada placer mining.

ing tests. And if the "plain dirt" tentatively tests up to your hopes and expectations—well, I'll quote a letter received from Jay A. Carpenter, director of the Nevada State Bureau of Mines and head of the Mackay School of Mines of the State University:

"Introduction of new mechanical equipment has expedited sampling of placer ground. Thus, the modern jeep can travel off the highways to placer ground, and with an auger attachment (as used for post-hole work) can sample shallow ground rapidly for fine material. Likewise, heavier truck equipment for modern well-drilling can rapidly put down holes up to 30 inches in diameter to 30 feet depth, allowing lowering of men for removal of large rocks and for inspection of gravel layers." Those factors, Prof. Carpenter adds, plus available modernized gold-saving apparatus and dirt-moving cost figures, take much of the former uncertainty and risk out of placer mining and put its operation more on a calculated business basis.

So—now that you know you don't have to hunt for and find old-school *placer-gravel*, characterized by water-worn pebbles and "long-haul gold"—and know how to spot and recognize a *bajada* deposit with its characteristic "lag-line"—perhaps you may be lured to prowl your favorite desert region for such likely-looking spots.

Especially since, although the U. S. mint price of gold has been stubbornly pegged down by the secretary of the treasury at its pre-war level of \$35 per troy ounce while about everything else has doubled in price, recently the director of the mint issued official sanction

and instructions for lawful disposal of "unprocessed" gold (i.e., in its native raw state, never having been cyanide-dissolved, smelted, melted, amalgamated or retorted) and its marketing and transportation within the Continental United States through negotiable warehouse receipts. Such unprocessed gold has been disposed of and traded in, during recent months, at prices well above the treasury-pegged \$35 per ounce.

Many economists believe a raise in the U. S. mint price inevitable. I myself can see no way it can be arbitrarily held down, in the face of the well known law of supply and demand, much longer. Gold is selling in open markets abroad (Argentina, India, Egypt, the Philippines with their famous and rich gold mines, etc.) up to \$100 and more per ounce. That Congress will sooner or later create an American free market for gold is the reasonable hope, even conviction, of long-handicapped western mining interests, and of forward-looking senators and congressmen who have been continuously working to that end.

QUARTERLY MINE JOURNAL'S NEW ISSUE PUBLISHED . . .

Full text of the "Atomic Energy Act of 1946" and a chapter on Mineral Resources of Kern County are of particular public interest in most recent issue of California Journal of Mines and Geology, just published by the State of California department of natural resources.

The Journal is a quarterly publication printed and distributed by the division of mines, Olaf P. Jenkins, chief. Copies may be purchased from division headquarters, Third Floor, Ferry Building, San Francisco 11, California.

Other topics treated in latest issue of the Journal are:

Water-Flooding as a Method of Increasing California Oil Production; State Geological Surveys; Industrial Uses of Limestone and Dolomite. A list of new division of mines publications is also included.

The mineral resources of Kern county are covered in a report by W. B. Tucker, R. J. Sampson and G. Oakeshott. It is a comprehensive report, technical for the scientist, understandable for the amateur.

Letters of inquiry addressed to the California division of mines, department of natural resources, will be answered by technical staff members familiar with the particular field involved.



This is the author's original cabin on her Morongo valley jackrabbit homestead.

I Got My Five-Acre Title

It took a long time—10 years to be exact—for Uncle Sam to get around to the detail of issuing titles to those entrymen who have been leasing their 5-acre homesites under the Small Tract Homestead Act of 1939. But now those who have qualified by erecting cabins on their sites are being given the opportunity to acquire deeds—at a cost of from \$10 to \$20 an acre in most cases. Melissa Stedman was one of the first to file on a "jackrabbit homestead" and the accompanying story is a sequel to one she wrote for *Desert Magazine* readers in December 1945 in which she related her experience in locating the homestead.

By MELISSA BRANSON STEDMAN

JACKRABBIT homesteading has finally come of age. I got a government deed to my desert paradise, but it came only after eight years of working, worrying, and wondering.

I never really doubted that eventually my government would carry out its part of the contract—and issue a patent to my homestead. But it required much time and many letters. I wrote to the secretary of the interior, to my congressman, and to my senator. No tangible results were forthcoming.

Finally as a last resort in May, 1948, I wrote to President Harry Truman, little dreaming that so busy a man would have time to bother about an unimportant school teacher's five-acre homestead. But I was wrong. He did bother. I got a reply from the department of interior in quick order. Appraisals were made, a price was set, and now the five acres are mine.

My memorandum permitting purchase came through early in October, 1948. I lost no time in remitting the

\$95, which was \$20 an acre less the 1948 rental. Acreages in Morongo Valley and in the Coachella and Joshua Tree areas sell at \$20 an acre. Those east of Twenty-nine Palms are appraised at \$10 an acre.

The U.S. office of land management began issuing certificates of sale to qualified homesteaders several months ago, but it was only recently that grant deeds actually were received by those homesteaders who have made the required improvements on their property. Only a few of the 12,000 entrymen have qualified for deeds so far.

Eight years seemed a long time when I was anxiously awaiting action from the government, but now that it is over, it seems only yesterday that I started homesteading.

I first filed on a five-acre tract near Twenty-nine Palms in 1940, but in the spring of 1941 I had the claim transferred to a tract near the foothills in Morongo valley.

My present cabin was built in No-

vember 1941, and I applied for purchase in 1942. My application was denied at that time because appraisals and inspections had not been completed. The excuse the inspector from the San Francisco land office made was that his men could not make desert inspections during the hot weather.

The slowness with which the small tract homestead act was put into operation is not strange when we realize that the law passed in 1938, permitting employed persons to lease five-acre tracts for health and recreation, was a radical departure from any previous plan for disposing of public lands. Every move had to be worked out step by step without precedents.

From the first I did everything the hard way. When I started in 1940, determined to own a desert cabin, determination was about the only resource I had. However, I supplemented my determination with a very fair credit rating, and the bank loaned me the money for necessary labor and materials to complete the cabin.

Ray Finlay, a friend, took weekends off from his business to build a sturdy 12 by 14-foot cabin. We had our Thanksgiving dinner and family reunion at the cabin in 1941.

During Christmas vacation, 1941, my sister Nancy Beitzer went with me to the cabin for a few days. Water was our big problem, so while Nancy did the house work I dug a hole in the ground for a rain water cistern. When I started plastering to make it water tight my troubles began. I finished the bottom first, and it was soon hard enough to stand on while plastering the walls. Then it rained and snowed, and sleet came down in hard



With her own hands, Melissa Stedman is now spending her weekends building a permanent cabin, with glass coffee jars set in cement.

little pellets. My feet were icy, but still I worked. Nancy is resourceful. She gathered rocks and heated them in the oven and kept me supplied with hot rocks to stand on while I worked. The job finally was completed, and it did hold water. From that day to this the cistern has never been empty.

The installation of a six-volt battery and a Wincharger to keep it charged for lights and radio was the next project.

I wanted a larger cabin, but materials were too scarce until the summer of 1946. While spending my vacation working in a glass factory, I got the idea of a house made of cement and discarded glass coffee jars. In September of that year I started the coffee jar house. I laid out the base line for a 20 by 20 cabin and started the wall. I laid jars neck to neck making a wall the thickness of two one-pound jars, with the bottoms forming the two sides of the wall, and cemented them together, being careful to get no cement into the necks to block out the light. The direct rays of the sun come through only two or three minutes at sunrise and sunset in March and September when the sun is due east or west.

People ask strange questions about the bottle house. One stock query is: "Suppose someone should throw a rock at the house, or shoot holes in it?" To that I say, "It's easier to repair one small bottle hole than a whole plate glass window."

Another question that men think very funny is: "Why don't you use

beer bottles?" To that I say, "I don't drink that much beer."

The coffee jar house is now almost half finished. One wall with window and door is complete, and another wall has one window frame in, and the wall is about half finished. If I run out of jars before the walls are finished I will use window glass or rocks, for of rocks I have plenty, since about one acre

of my lot has enough rocks on it to build a skyscraper.

My land is now my own, and I have reached that stage where I realize that anticipation was almost more fun than the realization, but I am building other hopes and anticipating the completion of the coffee jar house and looking forward to the time when I will have more leisure to enjoy it.

Hard Rock Shorty of Death Valley



"Sure it gets hot here," Hard Rock Shorty was telling the salesman who had arrived for his semi-annual call on the proprietor of Inferno store. Shorty continued:

"Last summer it melted the anvil over in the blacksmith shop, and that sheet-iron roof on Pisgah Bill's cabin all melted and ran down the sides o' the house."

"But how do you live when it gets that warm?" the salesman asked.

"We all wear asbestos clothes," Shorty answered.

"What an awful place to spend the summer," exclaimed the visitor.

"Aw that's nothin'," said Shorty. "Summer 'fore last we had one day so warm the lizards all got blisters on their feet, an' a

lot o' the jackrabbits died from sunstroke.

"That was the summer Pisgah Bill whittled hisself a pair o' chopsticks and learned to eat like a Chinaman. Yep, burned his tongue eatin' beans with his knife—an' made him so disgusted he threw all his metal eatin' tools out the window an' he's been eating with mesquite chopsticks ever since.

"Got so hot he had to keep a wet blanket on the cookstove to keep it from meltin' and runnin' through the cracks in the floor.

"Then one day a big storm blew in over the Panamints and the temperature dropped down to 100. An' if we hadn't had a big pile o' wood and kept stokin' the fire we'd all froze to death."



One of the glyph rocks on Rattlesnake peak. These ancient Indian pictures were chalked with limestone for photographic purposes. Keith Dewey, who accompanied the writer, is a soldier at White Sands Proving Grounds.

Ancient Artists Lived on Rattlesnake Peak

By THERON MARCOS TRUMBO

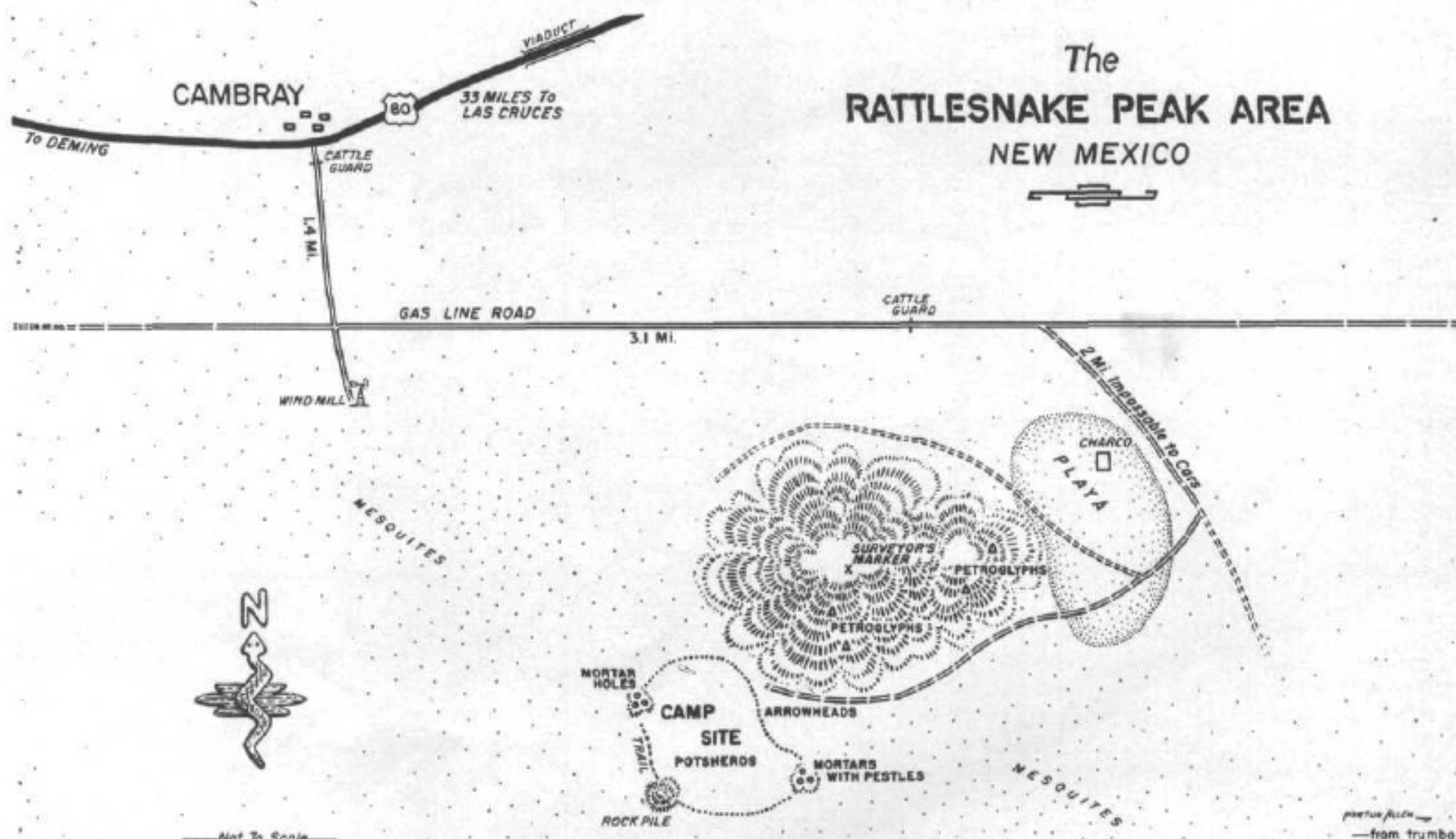
No one today knows from whence they came or where they went, but hundreds of years ago a tribe of prehistoric Indians dwelt around a desert playa at the base of New Mexico's Rattlesnake peak where mesquite beans probably were their principal item of food. The story of these ancient dwellers is partly revealed in the tools and the glyphs found here by the writer of this story.

THE ancient ones bundled up their belongings in their blankets, pulled them wearily upon their backs and walked down the dim, sandy trail leading away from the Rattlesnake peak campground. They left the corn-grinding pestles still in their mortars. Others came and went. And finally, after long desperate years, there were no travelers on these desert trails. The vermillion sands drifted over the campsite, covering the dead ashes of their fires, the broken cooking pots, and the rock with the grinding holes . . .

Several centuries later, I stood on this same spot. The mortars still had

the pestles of stone in them. Here in the desert, time had stood still. I might have stepped suddenly out of the twentieth century back into the fourteenth!

On many occasions, Rattlesnake peak had drawn my attention, for it is plainly visible from U. S. Highway 80 at Cambray, New Mexico. The fact that it rises sharply from the level desert floor, with no mountains other than rounded cinder cones within many miles of it, makes it a conspicuous landmark. A local photographer stirred my interest by telling me that Indian artifacts could be found around its base.



Keith Dewey was easily persuaded to accompany me on my first trip to the peak. He is a soldier from Pennsylvania, stationed at the White Sands Proving Grounds, and has often been my companion on such jaunts.

When we finally reached the trail leading directly to the mountain, we found it blocked with fine blow sand, passable to a car only after a hard rain. It was July, and the sun blazed in characteristic desert fury. Our enthusiasm waned somewhat, yet neither of us wanted to quit, after getting this close. So, with canteens and camera, we struck out across the hot sand to cover the remaining two miles to the base of the mountain on foot.

We did not find much on that first trip. More time was spent covering the land and trying to locate the interesting points. But we did discover one exquisite petroglyph on the side of the mountain, and consequently, the "Singing rocks."

Keith had gone up to explore a shallow cavern in the south face of the mountain. I stayed at the foot because I was unwilling to tote my camera up over the rocks. But when he shouted, "Petroglyphs!" I scrambled up to see them. They were beautifully carved in the side of the cliff. Nearby were others less discernible. In an effort to make them more distinct to photograph, I

took a bit of limestone and began tracing the old marks. The instant my piece of stone touched the rock, a strange melodious sound echoed about me. At first I thought it was the wind, yet it sounded more as if someone were gently stroking a huge bell. Both of us were a trifle awed. I tried tapping gently, and at the merest touch, the monolith rang out. Investigation showed that the glyphs were inscribed on a rock slab no more than a foot thick. This was leaning against the solid side of the mountain, making a sort of crude sounding board. Nearby were other boulders that spoke strangely when we stepped upon them.

That discovery ended our adventure for the day. By the time we pulled our feet through the two miles of sand back to the car, we were nearly exhausted. We both felt that there was much more to see in the area.

The opportunity to return came sooner than we expected. I became acquainted with Howard Rankin, the owner of a jeep. Recently from the east, he wanted to see something of the desert, but did not know exactly where to go. I was eager to show him Rattlesnake peak.

Our companions were Keith Dewey, his 12-year-old son Harold, and a Turkish student at New Mexico A. & M. We started from Las Cruces at 7:00 a.m.

By 8:30 we were ascending the bold south facade of the peak. Our goal was a cairn of rocks, erected by surveyors, on the top of the mountain. From this point we got a splendid view of this part of New Mexico and across the Rio Grande to Chihuahua, Old Mexico.

At the east base of the mountain is a playa or dry lake. Possibly the existence of this once-permanent lake accounts for the popularity of Rattlesnake peak as a campground for the prehistoric Indians. This big desert waterhole may have been the convergence of several old trails, connecting the many pueblos of southern New Mexico. A sentinel on top would provide protection against ambush. The entire area for miles around is covered with mesquites, assuring a generous supply of food.

From the top we surveyed the desert immediately at the foot of the mountain and located several sites to explore for artifacts.

Since Rankin, Harold and the student had only leather-soled shoes, they took an easy way down. This left Keith and me to explore the face of the cliffs for further petroglyphs. We found many, but some were almost obliterated by time, being recognizable only at a distance. Most of them were pictures of snakes, turtles, mountain-goats or deer—not crude sketches, but graceful, almost modern-looking designs.

"There are so many snake patterns," Keith remarked, "they must have called it Rattlesnake peak, even then."

The most unusual picture of all was scrawled over about six feet of solid rock at the base of the mountain. It represented some sort of prehistoric animal, long and reptilian with fins rising from its back. It may have been only a gila monster, a horned toad, or a lizard. But the thought occurred to us that, in that ancient day, some prehistoric survival might have inhabited the rocky crevices of Rattlesnake peak! The petroglyph lay at such an awkward angle I was unable to photograph it satisfactorily.

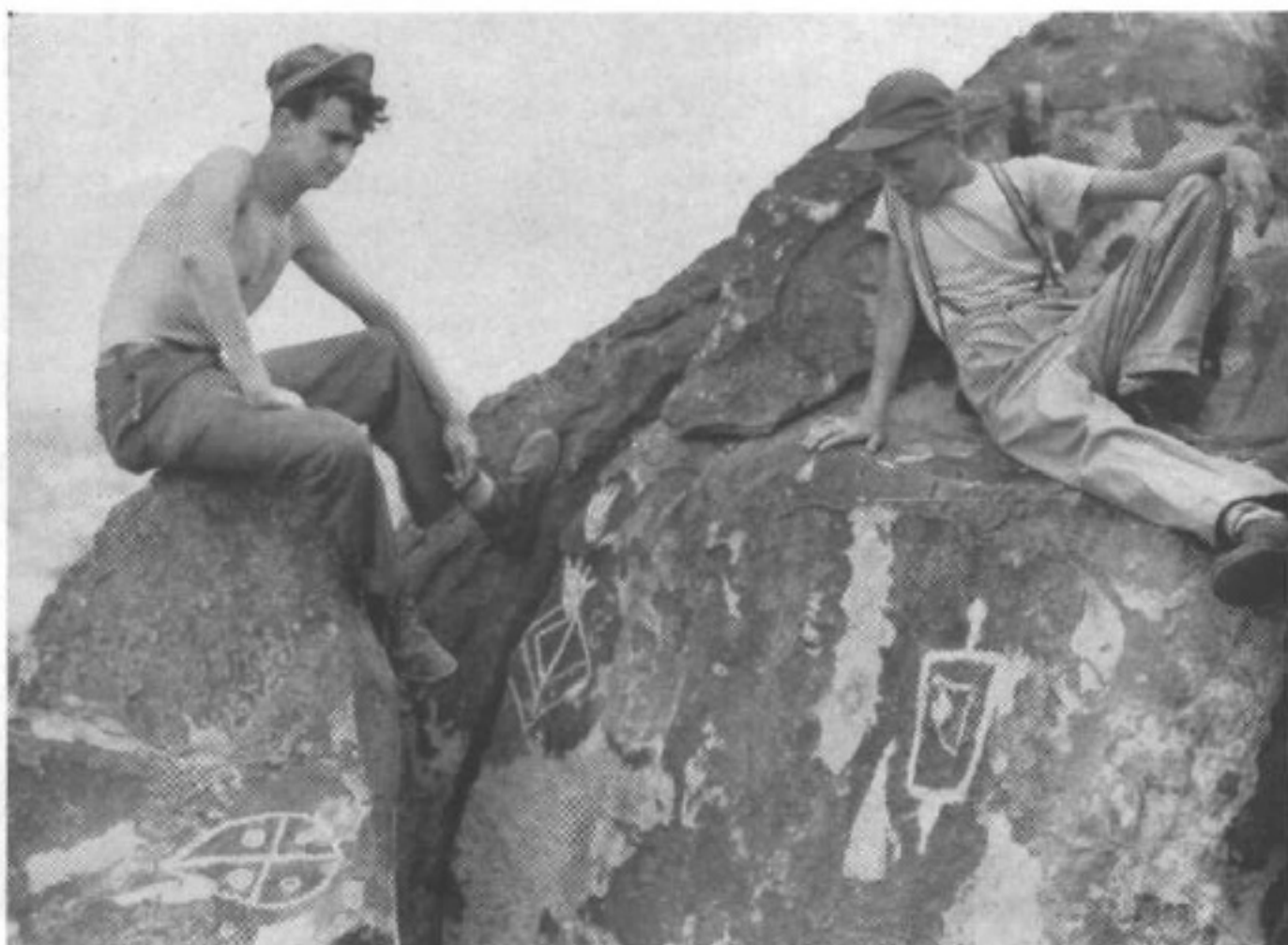
In several places on the mountain-side we found hand-worked cavities in the rock filled with rainwater. The ancient people must have tired of drinking alkali water from the playa, and enlarged the natural tanks available.

At noon, in earth already blackened with numerous ancient fires, we built our own campfire to make coffee. While it boiled, we strolled around, looking for relics. The sand here was strewn with pottery shards, mostly plain undecorated cooking ware. Occasionally we would find a bit of polychrome vessel, indicating commerce from the lake region of Chihuahua, a hundred miles to the south.

A bit of Mimbres black-on-white ware showed that the trail from the Mimbres mountain pueblos must also have crossed here. And scattered over the whole area were dozens of shards worked into rough discs. These, identified as gaming chips, have been found in almost every excavated pueblo or campground site in the Southwest. Authorities say that the ancient Indians must have had a checker game similar to that played at Zuni today, in which rounded stones or bits of pottery are used as "men." From the numbers of discs found, we concluded that the travelers at Rattlesnake peak must have spent much of their spare time around gaming boards outlined in the sand.

We spent the afternoon scouting the desert in the jeep and discovered three grinding holes with the pestles still in them. Usually such loose objects have been carted away by enterprising, if not conscientious, relic hunters. This one rock, nearly level with the surrounding sand, contained about a dozen of such mortar holes. It may have been covered with sand, only recently blown away to reveal the prehistoric home equipment. As a matter of record, we, too, left the relics intact. We found a huge boulder covered with shallow grooves.

"What do you suppose that could



Keith Dewey and Harold Rankin puzzling over some of the glyphs left by ancient tribesmen.

have been used for?" Rankin wanted to know. We could only guess. It may have been used for sharpening stone axes, or for straightening arrows.

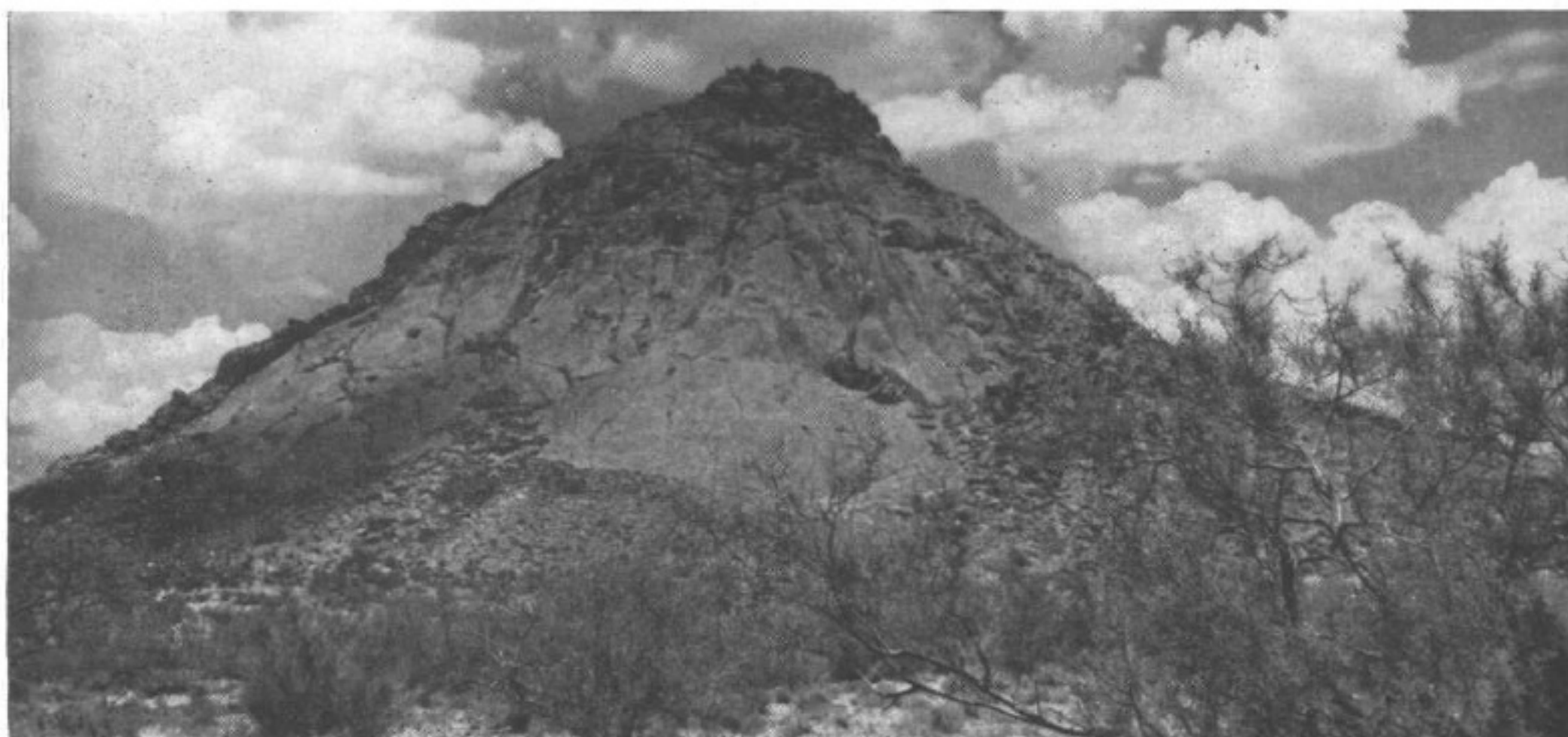
Stone metates were strewn over a considerable area nearby. They were made of separate stones about 18 by 24 inches in size, with a long hollow in the center. Every one of them was broken! At several old campsites, I

have seen these broken metates. Archeologists have offered various theories to explain these broken metates. Generally they weigh from 18 to 50 pounds. Indians leaving a site could not take them along. Possibly an ancient version of the scorched earth policy! More likely a superstition! We do not know for certain.

At four o'clock, we headed the jeep

Three ancient Indian grinding holes, probably used for making meal of mesquite beans, were found here with the pestles in them.





Rattlesnake peak, with the surveyor's marker visible at the top.

along the return trail. We were five weary sunburned humans, with a 40-mile ride home. But it wasn't our weariness alone that made us silent on the way. It was something else. We had just been in close contact with those long-gone people who once lived in this desert land of ours. We had had a glimpse of ancient American history. Not enough to satisfy us, but just enough to lure us on to other trips, in a vain effort to solve the enigma of Rattlesnake peak.

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ANOTHER HUGE LAKE CREATED IN DESERT . . .

Davis dam on the Colorado river, which will create a lake extending miles upstream to the tailrace of Hoover dam, is virtually complete only 10 months after the river was diverted at the dam site, Regional Director E. A. Moritz of the reclamation bureau at Boulder City, Nevada, has announced. The earth and rock-fill embankment across the old stream bed has been brought to its maximum elevation of 655 feet, approximately 138 feet above the original river bed level. A powerhouse and installation of power generation equipment will not be completed until next year. First energy is expected to be generated in the late summer of 1950.

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The house appropriations committee has granted \$28,056,000 for the National Park service of the interior department. This was near the \$29,485,600 figure requested.

TRUE OR FALSE

Here are 20 more of those brain-teasers for the folks who think they know a great deal about the Southwest desert country—or for those who would like to learn more about this fascinating region. The questions include geography, history, botany, mineralogy and the general lore of the desert. Twelve to 15 is a fair score. Sixteen to 18 is excellent. Any score above 18 is exceptional. Answers are on page 24.

- 1—The Colorado desert is located in the State of Colorado. True..... False.....
- 2—Several species of hummingbirds live on the desert. True..... False.....
- 3—Yucca is a member of the cactus family. True..... False.....
- 4—If your hostess served piki bread you probably would be at a Navajo hogan. True..... False.....
- 5—The tarantula is more poisonous than the sidewinder. True..... False.....
- 6—Flagstaff was once the state capital of Arizona. True..... False.....
- 7—Monticello is located in the southeastern part of Utah. True..... False.....
- 8—The White Sands Proving Grounds are in New Mexico. True..... False.....
- 9—The Virgin river of Nevada empties into Lake Mead. True..... False.....
- 10—An arrastre was used in connection with the mining of placer gold. True..... False.....
- 11—Azurite is found in copper ores. True..... False.....
- 12—Color of the agave or wild century plant flower is yellow. True..... False.....
- 13—Moro Rock, sometimes known as Inscription rock, in New Mexico, is under the custody of the National Park service. True..... False.....
- 14—Father Escalante accompanied Juan Bautista de Anza on the trek that brought the first white settlers to California. True..... False.....
- 15—Brigham Young's Beehive House may still be seen in Salt Lake City. True..... False.....
- 16—The Humboldt river of Nevada is a tributary of the Colorado. True..... False.....
- 17—A Mescal Pit was used by prehistoric Indians for burying their dead. True..... False.....
- 18—Juniper trees are seldom found below the 2000-foot level. True..... False.....
- 19—The door of a Navajo hogan always faces north. True..... False.....
- 20—Pisgah is the name of an extinct volcanic crater in Southern California. True..... False.....

Cowgirl of Brown's Hole

The cattle business in the West was a rough and tumble game a half century ago when big outfits were extending their domains and sheep men were edging onto the range. But Ann Bassett was able to hold her own with the roughest of them—in a region where six-shooters were more potent than laws.

By CHARLES KELLY

ONE day in the spring of 1882, Slippery Jim, handyman on Bassett's ranch in Brown's Hole, was busy mending fence. Ann Bassett, 7 years old, had been tagging his heels all day. She was dressed in a buckskin suit given her by a friendly Indian and wore a fancy headdress which sat on her head like a crown. Because of this, cowboys on the ranch nicknamed her "Queen Ann."

"Listen, Ann," Slippery Jim said, "how come you foller me around all day wearin' that Injun suit? Why'nt you wear dresses like a gal should, and stay in th' house? You're gettin' big enough to learn to act like a lady."

"I don't want to stay in the house," replied Ann, who already had a mind of her own. "I don't want to wear dresses and I don't want to be a lady. I want to be a cowboy."

Ann never outgrew that ambition and never allowed anyone to call her "Miss." She spent most of her time on a horse, learning to ride, rope and shoot. When she found a stray calf she roped and branded it herself and was started in the cattle business. By the time she was 16 she had a fine saddle horse and a herd of her own, was rated the best cowhand and best shot in Brown's Hole, and already had become, through force of personality, recognized leader of the stockmen in that wild section. She held her own against some of the roughest characters the west ever produced, maintaining the dignity of her title, Queen Ann.

When she was about 15 an Indian woman she had befriended gave her a beautifully beaded buckskin riding habit consisting of fringed jacket, divided skirt and laced leggings. Afterward she had others made on the same pattern and believes she set the style for cowgirl costumes. While she may not have been the first girl to own cattle, the introduction of this distinctive



Ann Bassett Willis. She was "Queen Ann" of Brown's Hole.

costume gives her priority to the title of "first cowgirl."

To appreciate the story of Queen Ann, one should know something of the early history of Brown's Hole, which lies in the extreme northeast corner of Utah, where the Utah-Colo-rado line joins Wyoming's southern boundary. Parts of it lie in all three states. It actually is a deep hole or valley almost completely surrounded by high mountains, through which runs Green river. Being protected from severe winds, it was an ideal wintering ground for cattle.

Between 1825 and 1840 Brown's Hole became a favorite winter camping place for the old Fur Brigade and their Indian friends, boasting a trading post known as Fort Davy Crockett. Queen Ann remembers old trappers like Jim Baker, his brother John, and Uncle Louie Simmons, Kit Carson's son-in-law, who remained there even after it was settled. Soon after the Civil War great herds of cattle were driven into Wyoming from Texas and the Hole was their favorite wintering ground.

Queen Ann's uncle, Sam Bassett, an army scout, first saw Brown's Hole in

1852, and wrote his brother, Herbert, describing the place as a wonderful location for a cattle ranch. Herbert Bassett came west, worked for a time as bookkeeper for A. C. Beckwith & Co., in Evanston, then went to the Hole to become one of its first settlers. Queen Ann was born there in 1875.

After the railroad came to Wyoming in 1868 this hidden valley became the hideout for a number of desperate characters. Because it was so well hidden and difficult of access, it remained an outlaw rendezvous until 1900. The McCarty brothers, Matt Warner, Butch Cassidy, Elza Lay and many others were well known there, even after the place had been occupied by several pioneer families.

Since the law never ventured into Brown's Hole, settlers had to get along with the outlaws as best they could. These bad men usually behaved themselves while living in the Hole and were tolerated, but their presence gave the place a bad name and outsiders considered everyone living there to be an outlaw or cattle thief.

Before many years all of Wyoming's

range land had been occupied and the homesteaders in Brown's Hole found themselves surrounded by big operators owning up to 100,000 head of cattle. These cattle barons wanted the Hole for a wintering ground, and tried in every possible way to squeeze out the original settlers. Some left, but Queen Ann and a few others decided to stay and fight it out.

Since every kid in the valley was an expert rider and roper, a miniature rodeo was in progress every day. Queen Ann was always the leader in these activities. One fall, when she was 14 years old, a herd of 50 strange cows was found grazing in the valley. They had been run in by one of the big outfits just to see what would happen. If they were not molested thousands more would be brought in.

Without notifying any of the parents, Queen Ann and other young buckaroos in the valley rounded up the cows, drove them across Green river and scattered them on Diamond mountain so effectively some of them haven't been found yet. When these animals could not be found, Ann was accused of rustling cattle. Newspapers began calling her Queen of the Rustlers, a name that stuck for many years. But it served notice on the owners to keep off her range.

After a few years other big operators tried similar tactics. When this happened Ann would organize a drive and push the cattle off her range, scattering them in the hills. This was illegal on public domain, but it was the only way to keep from being overrun. Because of

these activities a cowman once had her arrested for cattle stealing, but failed to prove his charge.

Finally, to stop such trespassing, Ann conceived the idea of herding sheep over a wide strip entirely surrounding the Hole. Cattle would not voluntarily cross ground on which sheep had grazed. When driven over it they were shot. Such activities made her very unpopular with the big outfits.

The following incident will illustrate the kind of fool-hardy courage Ann possessed. When she was 17 years old she started with two cowboys to deliver a herd of cattle on Little Snake river, a dry drive of 45 miles. Arriving at Thompson's ranch she learned that two overzealous game wardens had tried to arrest a young Indian for killing game. The boy's mother had tried to resist the officers, whereupon they shot both mother and son.

Ann knew trouble would follow. When the wardens tried to leave she forced them at gunpoint to remain and help defend the ranch, after telling them exactly what she thought of their action. Then, although she had been in the saddle for 18 hours, she rode directly to the Indian camp, hoping to explain to her Shoshoni friends that she did not approve of the killings. When she got there, long after dark, no Indians were in sight, but smoke signals were rising among the hills. Recognizing her horse, the Indians did not molest her. After an all night ride she reached Brown's Hole at sunrise to give the alarm. Those left at Thompson's ranch abandoned it during the

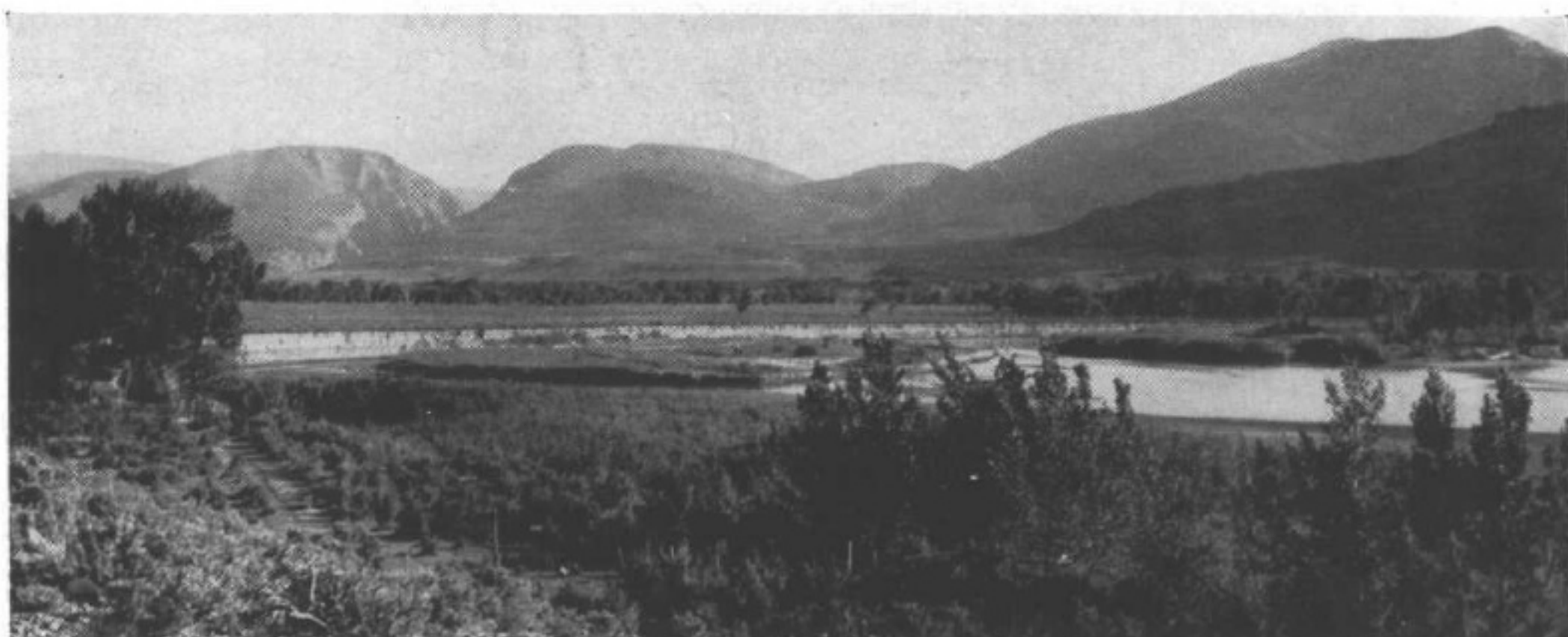
night, just before the Indians burned it to the ground.

During the 90's Butch Cassidy, notorious Utah outlaw, and his Wild Bunch were frequent visitors in Brown's Hole. They attended all local dances and were well liked personally. Elza Lay, Cassidy's partner, was a tall dark dashing young man, originally from Boston. Queen Ann met him at one of the dances and they struck up a lasting friendship. When Cassidy and Lay held up a train at Wilcox, Wyoming, and took \$30,000 from the express car, they rode straight to Brown's Hole, knowing they would not be followed. Making camp in a hidden side canyon, Elza Lay went to the Bassett ranch after dark, called to Ann, and asked for food. She fixed him a big basket which he took back to camp. He told her he had buried his share of the loot in a certain spot, gave her a map of the place, and asked her to send it to his mother if he failed to return within a year. He later retrieved the money, but in another train holdup at Folsom, New Mexico, was caught and sentenced to the pen. After being pardoned he went straight and Queen Ann kept in touch with him until his death in Los Angeles in 1933. Butch Cassidy avoided entanglements with women. While Ann knew him well, she never liked him. She also knew Matt Warner, another well known outlaw, who was good company when sober but a terror when drunk. He later became a peace officer in Price, Utah.

In 1897 Harry Tracy, a desperate

Grave of Jack Bennett, outlaw who was hanged on Bassett's corral gate in 1898.





Brown's Hole was a hidden valley 30 miles long, watered from the Green river.

killer, escaped from the pen in Salt Lake City, hiding out in Brown's Hole. There he joined Pat Johnson, a minor outlaw who had just shot a young boy living in the Hole. Settlers following Johnson unexpectedly ran into Tracy, who shot Val Hoy, a rancher. It was then decided to invite the law to take a hand, so sheriffs from Utah, Colorado and Wyoming were sent for. After a long chase the killers were captured and taken to Bassett's ranch, headquarters for the posse. Here they found Jack Bennett, an accomplice, hanging from Bassett's high gatepost. He was later buried behind the ranch house.

By 1898 cattle stealing had become so common that stockmen had to organize for protection. When legal action failed, the association hired Tom Horn, an ex-Indian scout, to pick off the thieves one by one. After he had "dry-gulched" two minor outlaws in Brown's Hole, the others left between days and it has been a law abiding place ever since.

When the forest service was organized, Queen Ann took an active part in her district, and was appointed forest ranger. This appointment was later cancelled because the service would not accept women rangers.

Queen Ann's worst battles had always been with the Haley Cattle Co., but she was able to hold her own. Hi Bernard was foreman for Haley during most of the trouble. In time he acquired a great admiration for the spunky Ann and quit his job and married her. For eight years they operated together; but when Ann found that her husband had been instrumental in bringing Tom Horn to that section, she left him. Later she married her present husband, Frank Willis, who had also worked for Haley, and at one time

had refused a \$500 bribe to manufacture evidence against her.

By that time the days of great cattle ranches were about over. Sheep had ruined the range. Eventually Queen Ann sold out and left Brown's Hole. Her husband became a mining engineer and now they travel from place to place wherever his work calls him.

While writing the book "Outlaw Trail" I heard many stories of Queen Ann, some true and others fabricated. I had formed a mental picture of her as a hard-bitten, leather-faced old woman. When we finally met in 1943 she proved to be a handsome, poised, well-read and charming woman of 68. Even as I listened to her it was difficult to believe she had ever been a part of the wild frontier life of old Brown's Hole, that she had been the sweetheart of a celebrated bandit, and that almost single handed she had defied and beaten some of the biggest western cattle barons at their own tough game.

But it was evident that behind those gray eyes and calm exterior lay the unconquerable will and flashing spirit which had made her, even at the age of 16, a recognized leader of men in one of the west's roughest pioneer communities. Her nickname of "Queen" had not been bestowed without reason. She left her mark as one woman who could not be intimidated, held her ground against ruthless antagonists, and finally gained their admiration and respect.

Western fiction is full of cowgirl heroines, but so far as my research extends, Queen Ann of Brown's Hole is the original of all those fictional characters, the only woman who actually performed those imaginary exploits, and the first genuine western cowgirl.

CHARGES WILL BE MADE FOR USE OF CAMPGROUNDS . . .

National Forest officials at Flagstaff, Arizona, have announced that charges will be made this season for camping facilities at Camp Townsend forest camp and the four forest camps in Oak Creek canyon. The new plan is expected to go into effect early in June, in accordance with instructions from regional headquarters of the forest service.

This policy is being carried out partly on an experimental basis, it is explained. Theory is that proceeds will be used to maintain the areas, keep them clean, provide improvements.

Forest service headquarters has instructed each regional office to apply charges in two recreational areas. In the Arizona-New Mexico region, both areas where charges will be made are in Coconino National forest.

Under one system to be tried, concessionaires will collect the charges, will in turn be responsible for maintaining the camp. A second plan calls for forest service personnel to handle collections and maintain camps. Tentative basic charge is 50 cents per day per car for camping, 25c per day per car for picnic parties.

A forest service explanation states that in recent years, since the recreational areas have become so popular, the maintenance and sanitation level has dropped because of lack of appropriations.

Before charges become effective in any area, the area will be posted and arrangements made for tickets and other details.

Charging at campgrounds was inaugurated in some California areas last season, but there has been no definite conclusion announced as to whether the system is financially practical.



The jasper in Bear hills, near Brenda, is scattered over the lava-strewn slopes, washing down from a ledge in the hill in the background.

Rocks By the Roadside

By HAROLD O. WEIGHT

MANY rockhounds—and I am one of those—just naturally seem to figure that the rougher the road and the deeper the sand, the better the rocks at the trail's end.

But it isn't always true. Take the Bear hills near Brenda, Arizona, for instance. I have passed through those hills on Highway 60-70 many times on rock collecting trips without giving much thought to the rash of dark lava boulders in that area. Probably I never would have stopped to investigate if Bill Keiser of Quartzsite hadn't shown me some colorful material he found there.

Quartzsite, where Bill Keiser has his mineral specimens in his rock and relic museum, is another example of the deception of outward appearances. It isn't much of a town as numbers go. Motorists generally stop there only when they are in trouble, or need supplies. Nevertheless, the little community, like all desert towns both large and small, has an interesting record.

Most of those interested in western history catalog Quartzsite as the place where Hadji Ali, the Greek-Arab camel driver, is buried. But the little community has many things of interest

Thanks to the guidance of an old-timer in Quartzsite, Harold Weight this month has been able to map a mineral field where collectors may find good cutting material close by one of the main transcontinental highways. The Quartzsite area not only is rich in minerals, but also in history and legend—as you will discover in the reading of this story.

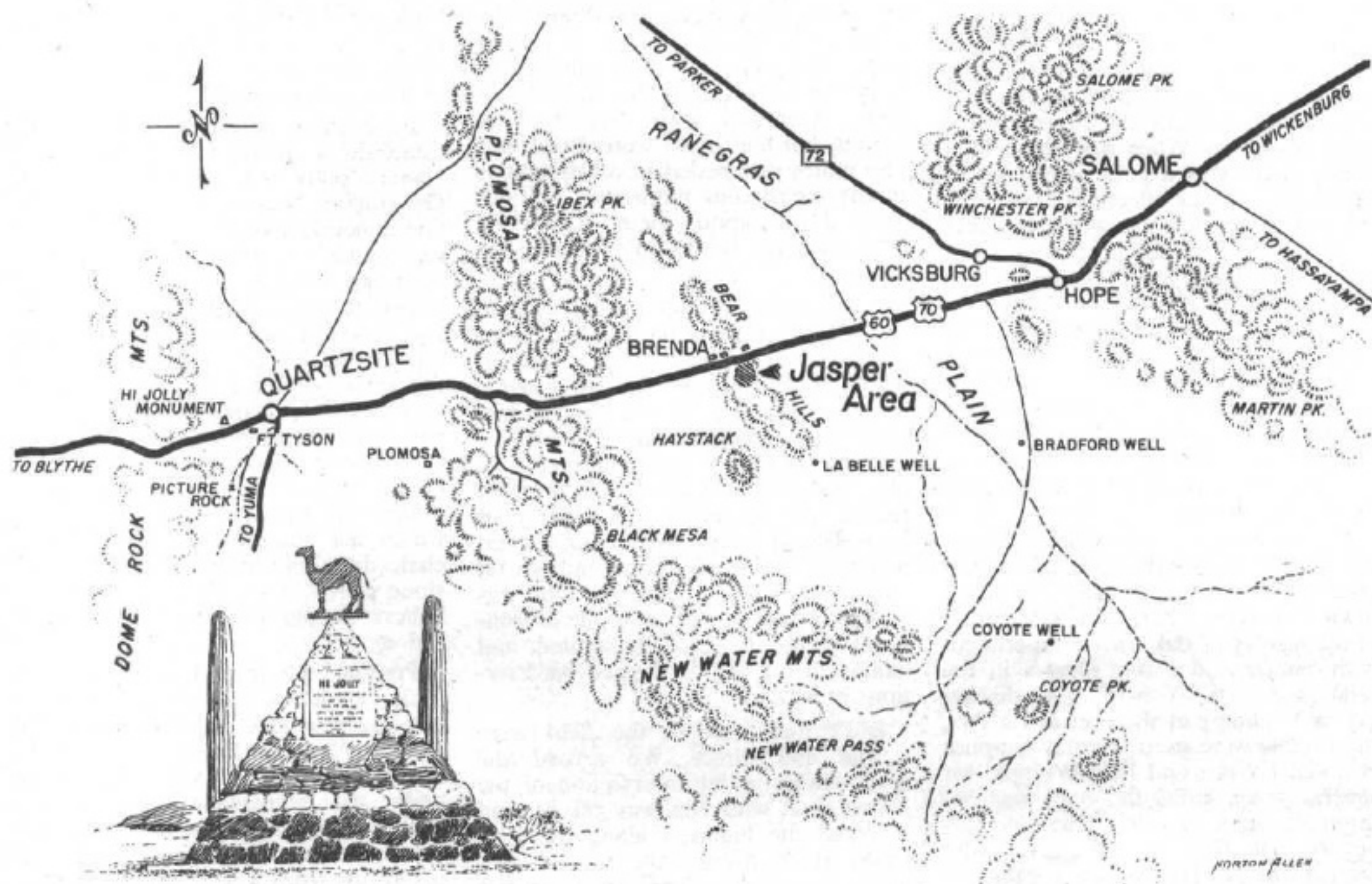
besides its camel driver. I learned something of its history the night before the Brenda field trip while I sat beside a hot ironwood fire in Bill Keiser's home. Bill and his wife Mary and Bert Hart, old-timer of Quartzsite and Cibola valley, interrupted the playoffs of a pinochle tournament to act as local historians.

There was a settlement here long before it was named Quartzsite. The U. S. postal authorities must accept responsibility for that name, according to Bill Keiser. You will find it spelled Quartzsite, Quartzite and Quartsite, but the citizens of the community didn't pick any of the three. There was so much white quartz in the area

that, when they petitioned for a post-office, established in 1893, they asked that it be named Quartz Valley. As there was another Quartz Valley in Arizona, the postoffice department cooked up Quartzsite which, according to their definition, meant the site of quartz. Since another member of the quartz family, which is not common in the area, is spelled quartzite, confusion was bound to result.

When Pauline Weaver discovered placer gold near the Colorado river in 1862, the booming town of La Paz resulted. La Paz became Yuma county seat. But, Keiser and Hart declare, it was the gold from La Cholla, Middlecamp, Plomosa and other back-country placers which kept La Paz going. The diggings close to the river were too poor to satisfy many of the old-time placer miners. If they couldn't average a pound of gold per day they moved on. Charles V. Genung, pioneer Arizonan now dead, once declared that only those who were too timid to go out among the roughnecks of the Quartzsite area, where the real gold was being dug, remained in La Paz.

The settlement which eventually became Quartzsite was first located two miles south of the present town at a



spot on the pioneer wagon road known as Picture Rock and Point of Rocks. At Picture Rock a big natural tank—a gravel-filled depression in the arroyo bed—furnished a semi-permanent water supply for settlers and travelers. Half-obliterated petroglyphs on the rock show this spot to have been a desert watering place in ancient times. Exact date of the first white settlement at the tank is uncertain, but a man named Valenzuela ran cattle there in the early '60s.

The end of the settlement at Picture Rock came abruptly in 1870 when a cloudburst obliterated the community. Just before the flood, the storekeeper at Picture Rock and his wife visited the home of Mrs. Joe Martinez, half way between the old town and the present one, to return some borrowed sad-irons. When the waters subsided so that they could return, it was impossible to locate even the spot where their store once stood. Before the storm, the wash had been only 200 feet wide and the store was on its east bank. After the torrent, the merchant could not determine where the bank had been.

And there Quartzsite's lost treasure story started. The storekeeper asserted there was \$50,000 and his wife's jewelry in the store safe when it washed away. For 15 years, according to Bill,

the merchant returned to the old townsite and prospected for his lost safe. Since then, many others have searched, but no one has reported finding it.

Down in the valley, in the meantime, Charley Tyson found shallow water at the spot which became known as Tyson Wells. The washed-out villagers set up their new community at the wells. Today only a tumbled rock wall and holes dug into the hillside to act as crude ore-reducing furnaces, mark the old camp at Picture Rock. Tyson Wells became a stage station on the Ehrenberg-Prescott road, and not a particularly attractive one, according to Martha Summerhayes, army wife, who passed through it in the '70s. In *Vanished Arizona*, she reported it as reeking "of everything unclean, morally and physically."

Not far west of the Yuma road intersection and on the south side of Highway 60-70 stand the partially reconstructed adobe ruins of old Fort Tyson. Soldiers never were stationed there and, so far as I know, it never underwent siege. It was built by the settlers around Tyson Wells as a protective measure when trouble with the Apache-Mojave Indians loomed. When the threat of Indian warfare passed, it became the Oasis hotel—the town's finest. Finally it was abandoned, and has weathered away. But the citizens

of Quartzsite were not content to see their principal historical monument melt back into the soil. After much effort, in which Bill Keiser was a leader, the state reconstructed Fort Tyson. Then, apparently, there were no funds to furnish accommodations for a caretaker, and fires and vandals wrecked it again. More reconstruction has been done, and Bill and other Quartzsite residents are not going to give up until the work is completed and old Fort Tyson preserved.

Quartzsite had a boom during the mining excitement which swept the Western states in the first decade of this century. Between 1900 and 1906, a man named Beamer built a road from the area to the Congress mill, and planned to run gold placer through a huge stamp mill to be located west of Quartzsite. Foundations for a 65-stamp mill were put in before experts told him the "cement" placer he planned to work was not amenable to that method of recovery. Beamer installed three stamps and proved the experts were right, then abandoned the enterprise.

Miners were scratching about all over the area, and some were making wages and better. Promoters were even more successful than the miners. They would "beg, borrow or steal" specimens, go to the coast or back east and

sell stock on the strength of the samples.

"O. A. Pease bought up all the nuggets he could get," Bill told me. "He gave a big dinner in San Francisco for stock prospects. When they lifted their plates, there was a gold nugget under each one." It was effective promotion, but not much help in actual development of Quartzsite properties. The boom passed and the 11 saloons which once dominated the town's main street vanished. Mining has continued sporadically. Bill and his partner have shipped eight carloads of ore from their Humdinger lead mine. Most of the residents hold claims and prospect the hills and wait for the price of gold to go up or the cost of labor and equipment to go down.

For most tourists, the item of principal interest at Quartzsite is the monument to Hi Jolly, over his grave in the town cemetery. There is a fascination in the history of our army's experiment with camels and native drivers in the western deserts. With the gold discovery and opening of the port at La Paz, the camels were used to carry supplies between La Paz and Fort Whipple for several years, while the road was being built. Some time after the gold discovery, Hi Jolly quit cameling and started mining. He was not a prospector, according to Bill, but he would follow the strikes and wash out enough gold for his needs, which were chiefly of a liquid nature.

Hi Jolly is Americanese for Hadji Ali, the driver's Mohammedan name. He also was known as Philip Tedro, probably the name his mother gave him. He reportedly was a Syrian, half-Greek and half-Arab. The Arabs raided Greek settlements and carried off women, and Hi Jolly and his brother were said to be the result of such a union, and were raised as Arabs.

It was a surprise to me that Hi Jolly had a brother, but Bill Keiser knew them both. The brother, whom they called Blackie, was a barber at Ehrenberg. Blackie told Bill some interesting things about the camels. They could, he said, carry 600 pounds 60 miles a day and go three days without water. But they never were loaded that heavily and were watered every day. They performed well in the desert, but their pads became sore on terrain different than that to which they were accustomed.

And if Blackie was correct, he has explained something which always puzzled me—the difficulties mule drivers and freighters had with camels stampeding their animals. Why couldn't the outfits be kept apart? According to Blackie, camels, mules and burros went together in caravans in the old coun-

try. And whenever, over here, the camels saw mules, burros or freight outfits, they insisted upon joining the party and could not be held back. Their intentions were friendly, not vicious, but the results were disastrous. The mules stampeded in all directions as the weird and monstrous animals bore down upon them. Desperate freighters even resorted to shooting the camels.

It was late and cold when I went to my cabin, and during the night the temperature dropped below freezing. But a bright morning sun promised a perfect December desert day. I had come to Quartzsite more or less as an advance scout, to locate an accessible rock field. My wife, Lucile, and Marion Hewes and Martha Berry drove over from Desert Magazine's Palm Desert pueblo Saturday afternoon and we set out for the Brenda field. Bill, who was chopping energetically at a pile of ironwood snags he had dynamited and hauled in for wood, stopped his exertions to wave.

Bill's directions to the field were simple and direct. We zeroed the speedometer at the intersection of the Yuma road with Highway 60-70, and followed the highway along the long valley slope toward the rugged Plomosa mountains. The great washes along the highway were crowded with palo verde trees and ironwoods, or *palo fierro*, and spotted with grotesquely posing saguaro. At 8.3 miles we passed the dirt road, right, which eventually winds to Bill's lead mine on the slopes of Dos Picachos, and to the old Apache mine.

The highway reached its highest elevation in the Plomosas nine miles from the Yuma junction, and curved down toward the Ranegras plain. We passed Brenda service station at 16.3 miles and started looking for the Indian on the hill. The Indian was one of Bill's chief points of identification—a white-painted figure with outstretched pointing arm—on the north side of the road. I don't know why the Indian was placed there, but he is handy for rockhounds. His hand points a little to the east of the jasper field, but he did not miss it far.

Our two-car caravan pulled off the road 17.2 miles from Quartzsite. I opened the pickup door and there, on the scraped shoulder of the highway, was a bit of red moss jasper. We scattered over the slope and wash, south of the highway—and soon dropped the first small specimens we had picked up as bigger chunks came into view. There seems to be a great deal of material here, and many colorful varieties. The jasper most closely resembles that

found near Lavic, although we did not locate any of the beautiful moss in chalcedony which sometimes is found in the California field.

Incidentally, I wish someone would establish a Board of Mineralogical Names, patterned after the Board of Geographic Names, to name and define minerals and gem stones. It would save much confusion. Few stones mean so many things to so many people as jasper, jasp-agate, jasp-opal, moss jasper, flower jasper, paisley—and all the other official and unofficial names for this group. When I say moss jasper, I mean a rock at least slightly translucent with a tangle of what looks like moss in it. Some collectors insist that if it is at all translucent it isn't a jasper. Others say that a moss jasper is one which has tendrils of moss in clear chalcedony, but to my mind that is the stone called flower agate, but which I believe should be called flower chalcedony.

Perhaps we should look at some basic definitions. Dana identifies jasper as impure opaque colored quartz, and *Quartz Family Minerals* further describes it as being essentially fibrous under the microscope, which sets it apart from other quartz minerals. There are many varieties. Usually jasper forms from a jelly-like solution of silica and it frequently is found in places where there are recent lava flows, which fits both the Brenda and Lavic fields.

Two quartz rocks similar to jasper are flint and chert, the principal difference being in the manner in which they originated. Flint occurs as lumps or concretions in chalk and limestone and is composed of a mixture of quartz and opal. It may have formed from silica in the muds at the bottom of the ocean. Chert, once classified as an impure form of flint, now is believed to be beds of limestone replaced by silica.

Personally, I'll go along with Dake, Fleener and Wilson, writers of *Quartz Family Minerals*, that material well colored and suitable for gem purposes can be termed jasper, although actually a chert. Moss jasper, according to the same authorities, shows a mixture of colored jasper and chalcedony. Of course, it isn't really a moss in the stone, no matter how much it looks like it. The black ferns or moss in the familiar moss agates of Montana and Wyoming are due to the presence of manganese. The colors in moss jasper are believed to be due to impurities in the percolating silica from which the stone was formed. Similar moss has been made in laboratory experiments where artificial silica gel was mixed with various substances.

The collecting at Brenda is almost

too easy, but there is always the possibility that other and more varied rocks can be obtained by searching farther into the hills. The jasper is weathering down from a big dike, but there is float enough to last a long time. Much of the material has the common fault of many jaspers—the iron which furnishes some of the brilliant coloring also occurs as red and yellow ochre in tiny holes which ruin the piece for cutting and polishing. However, it is possible to find much solid jasper with lines and patterns, and there is red and yellow moss.

We collected the specimens we wanted within a short distance of the road and in less time than we expected to use. There was a chill in the air that warned us temperatures might again fall to freezing when night came, and a protected camping spot would be necessary. Many places in washes near Brenda would have been excellent for camping, but for scenic attractions and rugged country to hike over in the morning, Bill Keiser had recommended one back in the Plomosas near his lead mine, so we headed back west along the highway and turned south along the dirt mine road, into a maze of jagged hills and volcanic buttes.

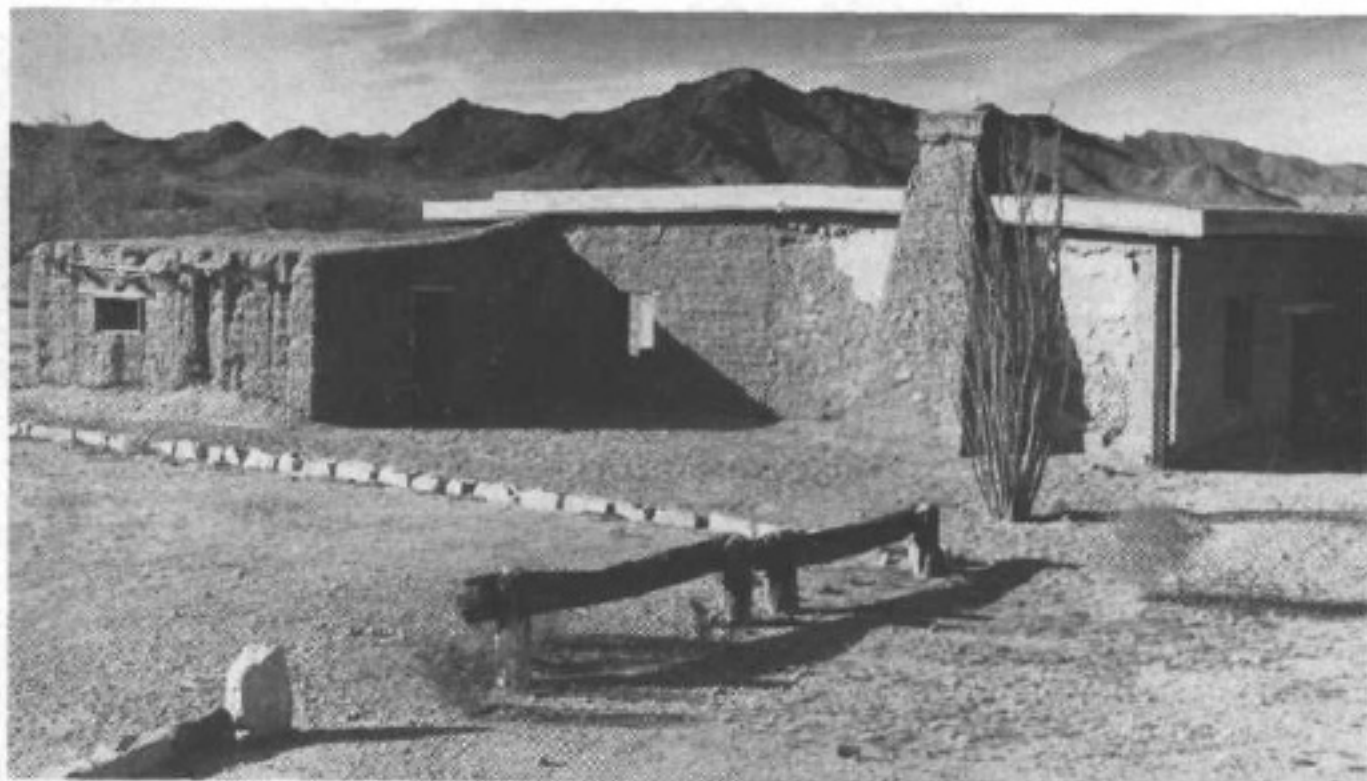
As we followed a wash into the mountains, we stopped from time to time to pick up pieces of ironwood and dead palo verde branches for use at the campfire. We reached the camping place just before dark—a spot which evidently was a long-time favorite with prospectors. It was a protected little flat, almost at the base of Dos Picachos. We found a pile of rocks in the clearing, with flat slabs on top to form a table. And there was a small rock fireplace which, after minor repairs and the addition of a grill, we used to cook our evening meal over ironwood coals.

When supper was cleared away and

Above—Old Fort Tyson was never a regular army post, having been built near the middle of the last century by settlers who feared attacks from the Mojave-Apache Indians.

Center—Picture Rock, original location of the little mining camp which became Quartzsite. A natural tank in the wash here has made this a rendezvous since men first roamed the desert, as is indicated by the half obliterated petroglyphs on the rock.

Below—William G. Keiser at one of the old mining camp ruins in the Plomosa mountains. This was used as a crude ore smelter.





Dead ironwood logs provided a warm campfire in the Plomosas. Left to right: Marion Hewes, Martha Berry and Lucile Weight.

a campfire blazing, we gathered at its warmth to talk and watch the flames. Sound carries clearly on a cold night. We could hear the engines of cars and trucks on the highway, more than four miles to the north. From that road, all this desert land looks barren and empty. People racing by on the oiled ribbon see what they think is a raw, new naked land. Human beings will never be able to exist here, they believe.

But this brooding desert has been inhabited a long, long time. Petroglyphs and painted rocks abound wherever there is a permanent or semi-permanent water supply. Mining has been carried on for a century at least—lead, silver and gold. Isolated canyons, which look as if they had never been entered since erosion commenced their making, unexpectedly reveal ancient prospect holes and shrub-grown dumps. Tumbled stone walls, worn arrastres and deep-rutted trails tell their silent story of man's ferment.

As we sat in the light and warmth created by the simple yet profound miracle of burning wood, with the pungent perfume of ironwood heavy about us, we were in a world entirely our own in which time had no meaning and space expanded and contracted with the varying light of the fire. The camps of the pioneer prospectors we talked about were there—just outside the warm circle of light. The sounds of cars where the highway cut the Plomo-

sas lost their mechanical note and identity. They became natural noises—the roar of the wind in a canyon, perhaps, or the far mutter of thunder.

To sit by a campfire and watch the dancing flames now disclose, now mask the work of vanished hands is a revealing experience. It is one of the incalculable benefits which reward those who come to the desert to hunt rocks or flowers or a silence in which they may seek themselves. It is something that the people who live on highways should know. We all like smooth straight ways—like the one to the Brenda field—but we miss so much when we cling to them alone. It is good to turn, now and again, onto the narrow rutted sidepaths which have known the feet of pioneers, into a simpler world where roads curved and twisted from spring to well to natural tank, to waterhole, driven by the simple reality of thirst.

I think some of the highway travelers are trying to outrun themselves and the lack of satisfaction in their lives—like clouds racing their shadows. If they would only slacken speed and turn aside on a rutted trail, to meet themselves face to face and sit quietly for a while beside a desert campfire, they might find in the world and in their lives an underlying unity which has been obscured by the shambles of modern living.

Indian Village Exhibit . . .

Visitors at the Chicago Railroad fair which opens June 25 will have an opportunity to see an authentic Southwest Indian village. More than 100 Indians from Arizona, New Mexico, Oklahoma and other parts of the Southwest will live in the village, working at native arts and crafts, performing ceremonial dances. Living quarters will consist of pueblos, wikiups, hogans and other exact duplicates of homes the Indians occupy on their reservations.

ANSWERS TO TRUE OR FALSE

Questions Are on Page 16

- 1—False. The Colorado desert is in California.
- 2—True.
- 3—False. Yucca belongs to the lily family.
- 4—False. Piki bread is made by the Hopi Indians.
- 5—False. The bite of the so-called tarantula is less venomous than a bee sting.
- 6—False. State capital of Arizona once was at Prescott.
- 7—True. 8—True. 9—True.
- 10—False. The arrastre was used for crushing ore.
- 11—True. 12—True. 13—True.
- 14—False. Father Escalante sought a new route to Monterey through what is now the State of Utah.
- 15—True.
- 16—False. The Humboldt river flows into Humboldt Sink.
- 17—False. A Mescal Pit was used for roasting Mescal buds.
- 18—True.
- 19—False. A Navajo puts the door on the east side of his hogan.
- 20—True.

Pictures of the Month . . .

Navajo Sheep . . .

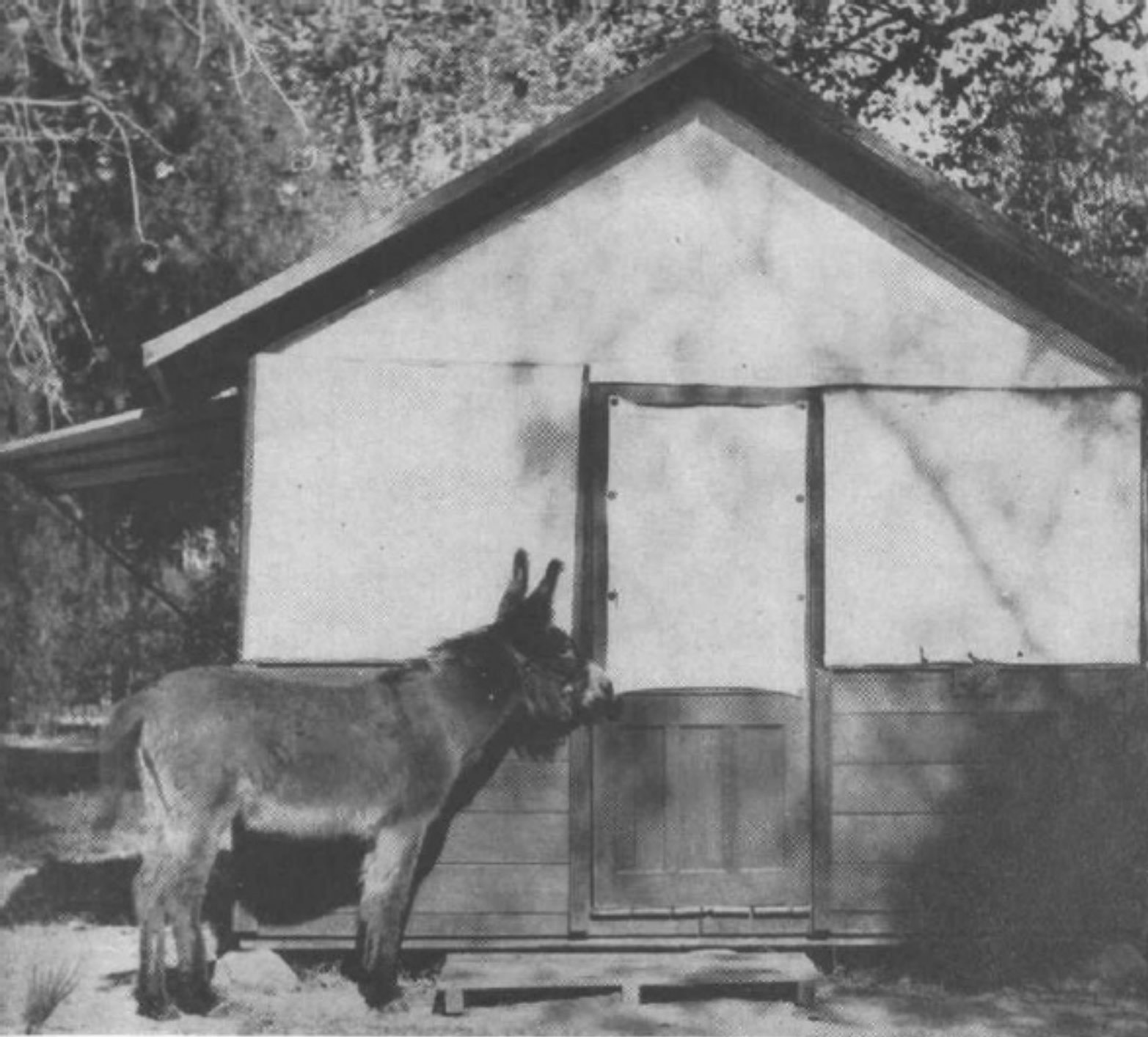
To Martha Burleigh of Glendale, California, goes first prize in Desert's April photograph contest for her unusual picture, NAVAJO SHEEP. The photograph was taken at 2:00 o'clock in the afternoon with a Medalist II using Plenachrome (Ansco) film. Exposure f.11, 1/100 second.



Old Leather Bellows . . .

Second prize in the April contest was won by Nell Murbarger, Costa Mesa, California, with her picture, OLD LEATHER BELLOWS. The photograph was taken in May, 1948, at 2:30 p.m. with an Argoflex. She used Eastman Verichrome film, a K-2 filter, set the camera at 1/50 second, f.16.

JUST A REMINDER that Desert's June contest will be the annual Cover Contest. For details please see announcement in this issue.



DESERT WEST

By NITA R. ENGLISH
Pioche, Nevada

Have you ever seen the sunset
As the day drew to a close,
Evening skies ablaze with brilliant
Orange, purple, rose?

Have you ever smelled the tang of cedars
And the stunted mountain pine?
Have you stood entranced, and gazed with
awe
At the far horizon line?

Have you searched for Yucca blossoms
Or the fragrant juniper?
Have you seen the waxen cactus blooms
And desert lilies rare?

Have you seen the old deserted mines,
With buildings gaunt and bare,
And sensed the hopes and efforts
Of those who labored there?

This is the West I know and love
With its peace and majesty,
And its mighty silence throbbing
With the pulse of centuries.

You may walk in mighty forests,
And hills in foliage dressed
But the peace of all the ages
Lies in the Desert West.

DESERT IN BLOOM

By GRACE PARSONS HARMON
Los Angeles, California

The desert in bloom 'neath a high, white sun,
Is gaudy and gay, with colors o'errun;
The desert in bloom when the sun is low,
Is rich with the warmth of the twilight glow:

But the desert in bloom, when a great moon
gleams,
Is a shrine for the desert-lover's dreams!

DESERT SAND

By E. M. BARTLETT
Angels Camp, California

Brothers of mine, who share with me
The land, the sea, and the sky,
Choose a place to call your home
To live, and toil, and die.
And leave it a name, with honor and fame—
Give it the best you've got.
But don't let them tell you the desert land
Is the place that God forgot.

Live in the cities and towns if you will
And hobble your soul in a street;
Or find you a piece of land to till
And plow the sod with your feet.
But give me the land of the cedar and sage,
The cactus, the sun and the sand.
Let me dream in the peace of a still desert
night
And commune with the Great Master-
Hand.

Oh, Dawn

By TANYA SOUTH
San Diego 10, California

Oh dawn, oh dawn, come swiftly,
while the night
Is softly shedding moonlight o'er the
plains.
Within the inky shadows terror strains,
And all the world is clamoring for
light.

Too well we sense the dangers that
are near.
Where can we turn away from death
and grief?
Oh help us, Lord, through love and
true belief
To gain that light where is no longer
fear.

Billy the Burro

By WILLIAM A. RAYMOND
Upland, California

Billy the Burro has long been dead;
Or passed away, it is better said.
A sandy grave now holds his bones,
Under a pile of desert stones.
He had followed me for many a day,
Over a hard and rocky way.

Always he patiently plodded along
Though never honored by verse or song.
When water was gone and feed was rare
He would shrink a little—but did not care.
Sometimes at night he would stand by my
bed
And waggle his ears and nod his head.

For looks he never would take a prize,
Except for his gentle trusting eyes.
His faded coat had a dingy hue.
There were saddle sores where the white
hair grew.
It seemed that his overgrown head would
fail
To balance the weight of his flimsy tail.

He had his faults, I regret to say
He would rifle the camp while I was away.
He would scatter the loot that he could find
Then leisurely chew on a bacon rind.
In spite of his faults when all is said
He was a faithful and loveable quadruped.

ELDORADO'S GONE

By CAROLYN B. BAUMAN
San Diego, California

There's a covered wagon train traveling
the sand,
Slightly south and east of Needles, going
ever westward and
The wagons creak and grumble and the
oxen strain and bawl,
But the men who drive the wagons never
speak at all, at all.

Oh, you drivers going westward, listen to
my long hello,
You'll never find the gold you seek, you
died too long ago,
For I found a rotting wheel and a bit of
chain and bone,
Slightly south and east of Needles, so there's
no use going on.

The cities you would build are already fall-
ing down,
Eldorado came and went leaving ghost town
after town.
So rest beside your whitened bones, forget
your westward vow,
The desert loves and holds its own, you'll
never leave it now.

DUSK ON CAT CREEK

By MABEL L. COOPER
Mack, Colorado

The moon rides high in the twilight sky
O'er the rim of the canyon wall,
Its silver beams through the gray dusk
streams
And the night birds softly call.
Coyotes croon to that shining moon,
And a chord within me rings;
As the rhythmic beat of my pony's feet
Re-echoes the song it sings.

The soft winds sigh as they pass me by;
And they carry a perfume sweet—
Of the mesquite bush and the painted cup
That is bruised by my pony's feet.
The trail leads on and I lope along
Unmindful of fret or care;
The moon climbs up to meet the dawn
And a new day, bright and fair.

Emigrant Flowers That Never Fade

By MARY BEAL

ALMOST everyone knows the vivid-hued garden Cockscomb of the Amaranth family and its cultivated relatives Love-lies-bleeding and Prince's Feather. In addition to these tropical, introduced species of old-fashioned gardens, many of their kinfolk became emigrants, and some of the most aggressive are now black-listed as obnoxious weeds. In desert regions they have colonized chiefly in cultivated areas, especially along roadsides, garden borders and in waste places. The flowers have the fadeless quality which their name Amaranth means in Greek, and the herbage quite often is red-tinged. Some of them are known as Pigweed, Chinaman's Greens, Careless Weed, Red Root, or Beet Root. The typical desert species is the Fringed Amaranth.

Amaranthus fimbriatus

The whole plant is colorful, the smooth herbage with a purplish hue and the flower spikes lavender or rose-colored. Several sparingly-branched or simple stems rise from the base a foot or two high, the linear leaves alternate, an inch or two long. The rather loose clusters of tiny flowers are scattered along the stem, crowding closer as they ascend to form a long terminal spike. The fan-shaped sepals of the pistillate flowers are thick at the base, the margin conspicuously fringed, while those of the staminate flowers are oblong and acute. There is no corolla, a family trait. This species grows in sandy and gravelly soils, particularly in washes of the Colorado and Mojave deserts, Arizona, north into southern Nevada and Utah, and south into Mexico, blooming from August to December.

Amaranthus palmeri

Another strictly desert species is Palmer's Amaranth, a stout, erect, usually branched annual, 2 to 4 feet high, entirely hairless or only slightly so. The broadly ovate leaves are 1 to 4 inches long, the petioles equal or twice as long. The spreading, awl-shaped bracts of the pistillate flowers are rigid and awn-tipped, much longer than the flowers. Under the common names Quelite and Bledo it is valued highly as greens in the young, tender stage of growth, especially by Mexicans and Indians. I've eaten Quelite greens many times and agree with the explorers' endorsement of its asparagus-like flavor, much tastier than many an ordinary dish of greens. It also makes good feed for livestock, both for fresh grazing and dried for hay. It ranges from the Mojave and Colorado deserts through southern Arizona to western Texas and central Mexico.

Amaranthus retroflexus

The most widespread Amaranth is commonly known as Rough Pigweed, found in all kinds of cultivated crops, gardens, orchards, waste places and roadsides. From the characteristic red or pink tap-root it sends up one to several stout branching stems, 1 to 4 feet high. The herbage is rough and more or less hairy, the oval, wavy-margined leaves 1 to 3 inches long, the veins prominent on the underside. The green papery flowers, subtended by 3 to 5 rigid, spiny-tipped bracts, are crowded into spikes 1 to 4 inches long, these often disposed in stiff erect panicles. The wrinkled, bladder-like fruit when ripe splits around the middle to scatter countless shiny black



This commonest of the Amaranths has the inelegant name of Rough Pigweed, but its fruit is welcome food for birds and rodents. Beal photo.

seeds, food for birds and rodents, and grist for Indian grinding stones. The plant was used medicinally by the Indians as well as for food, especially to check hemorrhage.

Tidestromia oblongifolia

Another genus of the family that follows different habits of growth is Honey Sweet, also called Arizona Honey Sweet.

A white-wooly perennial with stems widely branching into low broad bushes 9 to 18 inches high and up to twice as broad. The roundish-ovate leaves are less than an inch long, the sweet-scented yellow flowers minute but often very profuse, crowded in axillary clusters, blooming in late summer and early fall. After the flowers are gone the plant is still attractive, the leaves and stems turning lavender or red late in fall, a pleasing adornment to the sandy washes and flats they frequent in the Colorado and Mojave deserts, Arizona and southern Nevada.

Smoke Tree Will Blossom in June . . .

While most of the annual flowers on desert levels below 3000 feet will have completed their blooming season before June, many of the perennials, especially on the higher elevations, will be in color throughout the month.

Smoke tree is the most conspicuous among the June flowering shrubs on the lower levels. Its leafless branches will be carrying heavy clusters of deep purple blossom for two weeks in the early part of the month.

On the south rim of Grand canyon and on higher elevations around Death valley a wide variety of blossoms will greet those who have the opportunity to visit these areas during the month.

MINES AND MINING . . .

Delta, Utah . . .

Alta, Utah's first mining district and for years one of the most active, may come back to life. In recent years a rendezvous for ski enthusiasts, Alta at one time had all the romance and violence of an early-day mining camp. After the rich, near-the-surface deposits had been mined—with a reported production record of \$37,000,000—Alta slipped into virtual oblivion. Recent renewed interest is the result of discovery of a new ore body near the line of the famous old Cardiff and Columbus Rexall properties. From this ore body 20 shipments have already been made, ore of a grade reminiscent of the boom days of Alta. The ore was reportedly found by the second generation of a pioneer Alta family after driving only about 10 feet of new tunnel. The old tunnel had missed pay dirt by this close margin.—*Millard County Chronicle*.

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Morongo Valley, California . . .

Reopening Joshua Tree Monument to active prospecting, on the same basis that mining is permitted in Death Valley, a similarly classified National Monument, is being supported by the Western Mining Council, Inc., which held its annual desert area meeting recently. Those who argue that the Monument should be reopened for mining say mines now operating are producing tonnage quantities of good gold, lead and silver ore, even under present difficult limitations and restrictions. It is claimed that if mining is resumed on the basis permitted in Death Valley, results will be favorable so far as tourist interest and conservation of scenic qualities are concerned.—*Banning Record*.

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White Canyon, Utah . . .

Construction of a pilot mill in White canyon, across the Colorado river from Hite, is being rushed by Vanadium Corporation of America with the aim of processing ores having as little as one-twentieth of one per cent uranium, and especially designed to handle ore having a copper content. Most of the carnotite ores of the White canyon area contain copper as well as uranium and vanadium. Prospectors are now working some 50 claims in the area. Initial operations at the mill call for processing 40 tons of ore daily. Capacity will be expanded to 200 tons daily if operations prove successful.—*Moab Times-Independent*.

Tonopah, Nevada . . .

What many claim will be the greatest boon to Nevada mining and general prosperity in many years is expected to follow discovery of a satisfactory and economical method of treating Nevada's immense deposits of zinc oxide ore. At Henderson now the Basic Reduction company is preparing to treat 200 tons daily of zinc oxide ore, using facilities of the big state-owned Basic-Magnesium plant. Since mining began in the early boom days of the Comstock lode, a profitable method of treating zinc oxide ore has eluded chemists and metallurgists. After years of intensive work by the U.S. bureau of mines at Henderson and men from the University of Nevada, a satisfactory process for treating the oxide form of zinc ore has been evolved, it is claimed.—*Tonopah Times-Bonanza*.

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Goldfield, Nevada . . .

Nevada's lead production increased 32 percent in 1948, second highest increase in the United States, according to Senator Pat McCarran. The senator quoted from a report compiled by the U. S. bureau of mines, said Nevada's total production was 9480 tons, approximately half of which came from mines in the Pioche district.—*Goldfield News*.

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Esmeralda County, Nevada . . .

W. B. Naismith of Tonopah has been granted a permit by the Esmeralda board of county commissioners to prospect four claims in the Divide district known as the Belcher 1, 2, 3 and Fraction. The same property was in the news a few months ago when the Bent-Peatman company of San Francisco made overtures to purchase it, no deal was closed.—*Goldfield News*.

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Pioche, Nevada . . .

Installation of complete mining equipment is in progress at the Gold Seam mine located in the Divide district, Esmeralda county, where work was halted last December by unusually severe winter weather. Exploratory work was resumed earlier this spring. The company has uncovered several "good showings," according to Charles Mayer, Las Vegas, manager, plans now to sink to the 200-foot level from where lateral operations will be started. Optimistic about possibilities of the property, Mayer said he hopes shipments of ore can be made by early summer.—*Pioche Record*.

Las Cruces, New Mexico . . .

An extensive deposit of euxenite, valuable element used in the atomic bomb, is claimed by Bill Houser to have been discovered eight miles northeast of Las Cruces. Houser has been for 13 years a prospector operating from the village of Organ. Houser says he found the mineral with a Geiger-Mueller counter. He has samples of the ore that back his claims. Houser said the deposit is in the White Sands Proving Grounds area, and that the ore contains uranium oxide and other rare minerals.—*Las Cruces Citizen*.

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Tonopah, Nevada . . .

The Nevada Uranium Production company, first company in the state to launch a real development campaign on radium-bearing ore, has started a winze from the tunnel level on the Rainbow group of seven claims, optioned from the Henneberg brothers, Round Mountain. The winze is located on ore at a point 225 feet from the tunnel portal. Inclination of the winze is 70 degrees, it is 8½ by 5 feet in size, outside the timbers. Manager W. J. Loring recently reported that 11 samples cut the entire length of the 352-foot tunnel about 30 feet apart and cut from wall to wall, all showed uranium. Five general grab samples taken from muck also showed uranium in satisfactory amounts, he said. There was not a blank in the lot. This despite the fact the average underground depth is not more than 40 feet.—*Tonopah Times-Bonanza*.

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Round Mountain, Nevada . . .

Originally located and held for their possible gold content, an option has been taken on the Zuzzalo gold claims at Round Mountain following discovery of a vein carrying good percentages in uranium. The Zuzzalo property is located not far from the Henneberg ground, where the Nevada Radium Production company is actively developing a group of seven claims. Both these properties were originally tied up for their gold, establishment of the uranium vein came largely through accident years after the original notices had been posted. Claims are being staked all over the Round Mountain area, all based on a potential uranium value.—*Tonopah Times-Bonanza*.

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Discovery of one of the richest lead-ore deposits on the continent on the lonely shores of an arctic harbor has been reported by the *Edmonton, Alaska, Bulletin*. In a copyright article the *Bulletin* said the Gateway Gold Limited reported staking out a multi-million dollar claim at Detention harbor, Coronation gulf.

Report From Desert's Readers . . .

Late in 1948 the staff of Desert Magazine mailed out 1000 questionnaires to readers selected at random from the subscription list. These questionnaires were planned (1) as a guide to the editors in the selection of editorial subjects, and (2) as a guide to the buying habits of Desert's readers for the benefit of advertisers.

The response to this reader poll was most gratifying, and the staff wishes to express its appreciation to the 341 subscribers who took the time to fill out the questionnaire and return it.

The figures have all been tabulated now, and the staff believes they will be no less interesting to members of Desert's reader family than to the editorial and business offices of the magazine.

Desert's readers like to travel, and 94.7% of them own cars. They average 13,750 miles annually and spent \$273.08 for gasoline. Their first choice among the editorial features appearing in Desert Magazine are the travelogs with maps.

Travel Maps Are Preferred

To arrive at the comparative popularity of the various features and departments each subscriber participating in the poll was asked to name first, second and third choice of editorial subjects. The following tabulation gives the comparative ratings, based on first choice only. The totals in this column exceed the 341 replies for the reason that many of the readers indicate more than one first choice:

Travelogs with maps.....	1st
Gems and Minerals.....	2nd
Historical articles.....	3rd
Indian life and lore.....	4th
Archeology.....	5th
Nature subjects.....	6th
Editorial page.....	7th
Photography.....	8th
Desert Quiz and "Here and There" were tied for.....	9th
Readers' Letters page.....	10th
Mines and Mining.....	11th
Botanical features.....	12th
Arts and Artists.....	13th
Poetry page.....	14th

Each copy of Desert Magazine is read by an average of 5.2 persons. Based on the present paid circulation of 25,157 this makes a total of 130,816 readers each month. In 90.1% of the homes the magazine is kept for permanent reference.

Homes having an average estimated value of \$13,750 are owned by 81.5% of the subscribers. Mr. Average Subscriber spends \$22.90 for books.

By occupation, Desert's readers are classified as follows:

MANAGEMENT, including owners and executives in business, industry, farming and mining	28%
PROFESSIONAL, including teachers, engineers, doctors, artists and writers.....	23%
TECHNICIANS, including skilled craftsmen and mechanics.....	16%
CLERICAL, including salesmen, general office and public service work.....	14%
RETIRED.....	9%
HOUSEWIVES.....	7%
MISCELLANEOUS.....	3%

While Desert readers do much of their travel by automobile, they also use other means of transportation and the comparative popularity among the common carriers is as follows:

Travel by train.....	43%
Travel by air.....	39%
Travel by bus.....	18%

Destination—Pacific Northwest

Answering a question as to travel plans for the next two years, 92.5% of them expressed a desire to make extended trips, the choice of destinations being as follows:

Pacific Northwest.....	46%
Mexico.....	21%
Canada.....	19%
Alaska.....	9%
Hawaii.....	3%
South America.....	2%

The popularity of the various types of accommodations available for travelers was indicated by the following tabulation of answers received:

Prefer motor courts.....	48%
Prefer camping out.....	31%
Prefer hotels.....	17%
Prefer trailer camps.....	4%

When it came to the price range they were willing to pay for hotel or motor court accommodations, the answers were as follows:

\$3.00 or less.....	19%
\$3.00 to \$6.00.....	68%
Over \$6.00.....	13%

Majority Are Non-Residents

One of the surprising disclosures of the poll was that 28% of Desert's subscribers live on the desert. The other 72% have homes from California to Maine—but not on the desert. In answer to the question, "What desert locality would you prefer for a home-site?" the replies were distributed among 57 communities ranging from Banning to Albuquerque and from Nogales to Salt Lake City. Twentynine Palms, California, led in popularity,

with Palm Springs second, Palm Desert third and Tucson fourth. Then came the Mojave desert, Las Vegas and Wickenburg.

Answering a query as to whether or not they planned eventually to build and live on the desert, 87 of the 237 who replied to this question stated that they planned to build desert homes, and 46 expressed their intention to build income property.

In reply to the question of vacation pastimes the following preferences were indicated:

Visit scenic places.....	21%
Explore out of the way places.....	19%
Collect rocks and minerals.....	17%
Camp.....	12%
Fish.....	10%
Hike.....	9%
Prospect.....	7%
Take photographs.....	3%
Miscellaneous.....	2%

One of the queries was: "During the coming year I plan to visit the following desert areas:" A tabulation of the places named placed Death Valley first, Grand Canyon second, Borrego Valley third, Monument Valley and Tucson tied for fourth place, and Mojave desert, Barstow, Palm Springs, Southern Utah, Salton Sea in the order named.

Subscribers were asked to indicate the number of miles traveled during the previous year on trips suggested by the Desert Magazine. The average for the 341 questionnaires tabulated was 545 miles for each reader-family. This figure, if multiplied by the total number of subscribers living west of the Rocky mountains makes the amazing total of 11,831,435 automobile miles.

"I don't care much for the poetry page," wrote one subscriber, "but keep it in the magazine for those who do." This comment was rather typical of the remarks noted on the question cards. While most of the readers are interested in special subjects, almost without exception they expressed broad-minded approval of editorial content as a whole.

And so, Desert's editors will continue to feature mapped travelogs, history, gems and minerals, archeology, Indians, Nature subjects, mines and lost mines, personalities, life on the desert, and arts and poetry will have a place also—as they have always had.

The staff is grateful to its readers for their loyalty.

LETTERS...

For the Sake of Accuracy . . .

Albany, California

Desert:

On page 7 of the April 1949 issue, specimen No. 4 in the illustration is labeled, "(4) Aragonite (Uraniferous calcite. . . .)".

Aragonite is related to calcite only in that they have the same chemical composition. They are distinct mineral species, calcite crystallizing in the rhombohedral division of the hexagonal system and aragonite in the orthorhombic system. Dana states (Dana, E. S., A Textbook of Mineralogy. 4th edition, 1932, p. 511): "The Anhydrous Carbonates include two distinct isomorphous groups, the Calcite group and the Aragonite group."

As the title of the illustration was printed it would seem that aragonite is the uraniferous variety of calcite; whereas, the title should have read: "uraniferous aragonite" or "uraniferous calcite" whichever the case may be. It can not be both.

MORT D. TURNER

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Botanical Freak . . .

Blythe, California

Desert:

Attached is a print of a curiosity I thought might interest your readers—a young saguaro cactus growing in the crotch of an ironwood tree. It was discovered recently by J. Davenport of Blythe, and the man in the picture is Walter Paselk, mine owner operating near the place where the freak was found.

The location is in the Trigo mountains 22 miles southeast of Blythe.

R. D. BRAMAN



Story of Arizona's "Wild Angoras"

Cottonwood, Arizona

Desert:

Some time ago I received your January issue and was much interested in the picture on the cover. It touched a tender spot in my heart, for as a child I herded a large band of those so-called "Arizona wild goats" and in just such a rocky country as you pictured.

I did not do it of necessity, but because I loved the freedom of the outdoors—the majesty of the Arizona mountains. And because Angora goats are interesting creatures. They were a constant challenge—and from them I learned something of mountain climbing.

The purpose of this letter is to give you a little of the history of this goat and its ancestors.

Ten or 12 years ago my husband's stepfather, J. F. Dean of Phoenix, had 5000 acres of the White Tanks mountains and foothills under lease. He acquired a small band of Angoras to run this range. He established a small camp near the base of the mountains, and got a Mexican herder to take over.

The goat business was doing well when the herder decided one evening to go to town, and due to temptations stronger than his will, he failed to return to camp on schedule. Some of the goats took advantage of his absence, and left for higher ground.

After several similar occurrences most of the goats had migrated to greener pastures. I think we ate the remaining few.

The goats gradually climbed into the mountains, and the last we heard of them they were located in a remote canyon near a good spring. We never bothered to go after them, but were told that hunters had shot a few of them for sport.

I was very fond of these goats. They are beautiful creatures and in the sunlight their fleece glistens like silver. Also, they are very intelligent animals.

The goat on the cover of the magazine is a young nanny, and from the appearance of her fleece these goats have fared well in the wild, despite the drouth.

Who knows but that if these animals are given the opportunity they may become one of our protected game animals? They will survive where cattle cannot. Surely these creatures of the high and rocky fastnesses are entitled to their freedom. They've battled storm and drouth and predator—and even man's misconceived idea of sport. I say, "Long may they range!"

MRS. T. J. WILLIAMS

Relic of the Jesuit Days? . . .

Willcox, Arizona

Desert:

Re-reading your issue of March, 1947, I believe John D. Mitchell's story "Bells of Old Guevevi" has furnished a clue to the identity of a strange artifact found by my friend Bonnie Wiprud in 1932.

Bonnie is an amateur collector of Indian artifacts, and the bowl shown in the picture I am enclosing, was found on the desert south of Tucson near the Tumacacori mission.



This bowl is 4¼ inches high, and has a base 4½ inches in diameter. It weighs 10 pounds. The thickness of the metal is uneven. The roughness on the bottom was caused by an assayer who at first thought it was pure gold. More careful examination proved it to be an alloy of gold, silver and copper. It is hand-turned with no markings except five little dots that may have symbolic significance.

Bonnie took the bowl to the Arizona state university museum, also to several collectors, in an effort to have it identified. None recognized the metal, nor did they have any similar objects.

John Mitchell's story told of the heavy black silver-copper ore the Jesuits used in 1691 to make articles for the church altars. After having supplied the needs of the mission altars they turned their attention to the fashioning of cups, plates and bowls for household use, using the same heavy metal.

The bowl shows no signs of having been used. It has the appearance of copper—copper that has been dulled by time, and yet lacking the reddish cast that modern copper articles acquire when tarnished.

We believe this bowl may well have been left by the Jesuits when they were recalled by King Charles of Spain in 1767. It certainly is not of modern origin.

GRACE B. SMITH

Mystery of Keyhole Canyon . . .

Boulder City, Nevada

Desert:

One lovely day in February, 1949, a member of our Clark county gem collectors' group suggested that we take a trip to Keyhole canyon to see the petroglyphs and look for garnets he thought were there.

The hills here are of red rock, and at one place an overhanging block of stone had fallen down, leaving a cavity in the pile of talus at the base. Out of curiosity I crawled under the pile and began scratching around in the sand with my pick.

My first discovery was the feet and legs shown in the left corner of the accompanying picture. At first I thought it might be a piece of obsidian, but when I had cleaned the sand off and saw what I had I let out a yell. The rest of the gang came running—and in all my rockhounding I have never seen sand fly so fast.

It was difficult work in the little 7x15 foot cave, and none of us could stand up, but as piece after piece was unearthed the excitement grew. And here is a description of what we found—the artifacts shown in the photograph:

The white face is carved on very porous pumice. The two pottery jugs are a tan clay covered with a black glaze. The decorations were made separately and fitted on after the jug was shaped. These decorations are most interesting as they consist of eagle heads, tiny dolls with mummy sort of wrappings, and frogs ready to hop.

The large idol is carved from basalt—whatever the hands were holding is missing. It is about 22 inches tall and heavy as lead. The pot-belly figure at left is a pitcher—handle missing. Right below it is a face with elaborate head dress, and I think it is a part of the statue belonging to the knees and feet—but I never could find the stomach.

The two round plaques are the silliest of all, as they seem to have been made by squirting a silica clay through a cake decorator. The clay glistens. The black around the edges is obsidian as are the eyes. But most amazing of all, they were made on metal discs, parts of which resemble buck-shot welded together. The center piece is definitely an Aztec calendar, as I bought one of the exact size in Mexico City last fall, which was made of travertine.

Not shown in the picture is a water jug about 30 inches tall that I dug up out of the roots of an old mesquite bush. The water jug and basalt idol were not under the rocks. The water jug has a human head (life size) that protrudes in its entirety from the jar. Part of a headdress is on it, and the



These are the artifacts described in Paul Mercer's letter. When and why they were buried in Keyhole canyon in southern Nevada remains a mystery.

mouth and nose have holes for water to run from, leaving the impression it was part of a fountain.

I never hope to make another find as exciting as this one. There is more mystery attached to these things due to the fact they appear both Aztec and Mayan. And how did they ever get under the rocks at Keyhole canyon? Did the Spanish come up the Colorado river bringing with them the Aztecs as slaves, and the slaves carried these things as part of their worship? Are these things genuine—or are they fakes placed there near the petroglyphs for someone to find just for the fun of it? They have been there a long time, because the sand was packed inside the jars so tightly we had a time getting it out. The nose on the face of the water jug shows that at some time a fire had been built over it and the nose was burned. All objects were buried in this protected spot beneath sand two to three feet deep. Keyhole canyon is not a place many people see. It is way off the highway with practically no road to it.

We have never had these things appraised by anyone who would know whether they are genuine or not. In fact we don't care. If they were Woolworth's specials it was fun to find them. I made a trip to Mexico especially to see the pieces in the National museum, and found ours are very similar. At the pyramids is sold a lot of junk made for tourist trade, but the clay and glaze cannot compare. Our pieces are handmade as we can place our fingers in spots the makers used to hold and

mold the pieces. What do you think of them?

PAUL MERCER

Dear Paul: We submitted your photograph and letter to M. R. Harrington, curator at Southwest museum. His comment was as follows: "All appear to be fakes except the stone statue to the right, which may well be genuine. The other articles look to be tourist goods made in Mexico, not recently, but in the 1890's. Many of such had a tin base. In fact I have seen statuettes of that period made in the same technique as the two disks shown in the photograph, and modelled on old rectangular tin oyster cans. I am not sure that all the fakes are of the same early vintage, but they look to be in the picture. It certainly seems strange that such things should be 'planted' in that remote spot."—R.H.

. . .

The Spelling Is Optional . . .

El Centro, California

Desert:

In the May issue of Desert Magazine you use the word "sherd" in referring to broken pieces of pottery. I find it spelled "shard" in my books.

O. M. CHEESEMAN

Webster's Unabridged, 1949, gives three forms for the word—shard, sheard and sherd, but indicates a preference for shard. However, Southwest Museum and many other authorities prefer sherd. Either spelling is correct.—R. H.

DESERT CLOSE-UPS

Addison N. Clark who has written about the possibilities of placer mining in the desert bajadas for this issue of Desert Magazine is a consulting engineer and geologist of Oakland, California. His work has given him an intimate acquaintance with both the mining properties and the geology of the western country, and out of this experience he contributes regularly to mining papers. For the last 14 years he has written a column for the Mining Journal and the Mining World with which it merged in 1946. And just to prove that a mining man doesn't necessarily have a one-track mind, he occasionally produces very readable poetry.

...

Residents of the Imperial and Coachella valleys in Southern California will be amused and amazed to learn through this issue of Desert Magazine that serious consideration was given in the 1870's to a proposal that this entire area be converted into a great inland sea, by diversion of the waters of the Colorado river.

David Hellyer came across this strange proposal while delving through the files of newspapers of that period.

Hellyer is professor of journalism at San Diego State college, but finds time to do a great deal of free lance writing outside of his classroom schedule. His feature stories have appeared in Saturday Evening Post, Coronet, The Woman, American Home, National Geographic and many smaller publications.

His hobby is fishing, and he especially enjoys goggle fishing at La Jolla, California. He and Mrs. Hellyer and their three children live in "wonderful seclusion on a citrus ranch in Rancho Santa Fe, surrounded by quiet, coyotes and eucalyptus trees from Australia."

...

Al Haworth, who became editorial associate on the staff of Desert Magazine April 1, makes no claim to being an old-timer on the desert, and yet his journalistic career dates back to the days before air coolers were an essential part of the equipment in every desert home and office.

Al was born and raised in Cuba where his parents were Quaker missionaries. By the time he was ready for high school his father had been assigned to a pastorate in United States, and during the ensuing years he at-

tended three high schools and four colleges, finally receiving his bachelor of arts degree from Willamette University at Salem, Oregon.

He took a year of post-graduate work in the school of journalism at the University of Southern California, and then came to Calexico for his first newspaper job on the staff of the daily Chronicle, then edited by Randall Henderson.

First as reporter and later as city editor he remained four years on the Chronicle, and then left to set up a public relations and advertising department for the Imperial Irrigation district.

In 1941 he and Tazewell H. Lamb, another former Chronicle associate, bought the newspaper from Henderson who in the meantime had launched Desert Magazine. Haworth remained

as editor and publisher of the border newspaper 6½ years, then moved to El Centro, California, to become editor-publisher of the Imperial Valley Weekly and manager of El Centro Printing company.

For years Haworth has been recognized as one of the most promising young journalists of the desert country, and he brings to the Desert Magazine staff not only a thorough training in desert journalism, but a fine record for integrity and public service, having served as president of the Calexico Rotary club.

Dorothy, the other half of the Haworth team, has been closely associated with her husband in his newspaper enterprises. They have a 13-year-old son, and expect soon to acquire a permanent home in the Palm Desert community.

Desert Wants Cover Pictures...

... Prize Contest Announcement

June is the month of Desert Magazine's annual cover contest. This year, the staff hopes to obtain many of the photographs which will be used on the magazine during the ensuing 12 months. To make the contest worthwhile for photographers, a cash prize of \$15.00 is offered to the winner, and \$10.00 for second place. For acceptable cover pictures which do not receive prizes, \$5.00 each will be paid.

Entries in the cover contest should be approximately 9x12 inches—vertical shots. Photographers should keep in mind that the pictures should be so composed that the masthead to be printed across the top will not block out any important feature of the photograph. Any desert subject is acceptable including scenics, wildlife, rock formations, flowers, etc.

HERE ARE THE RULES

- 1—Prints must be black and white verticals, about 9x12 or larger, printed on glossy paper.
- 2—All prints must be in the Desert Magazine office by June 20, 1949.
- 3—Each photograph should be labeled as to subject, time and place.
- 4—PRINTS WILL BE RETURNED ONLY WHEN RETURN POSTAGE IS ENCLOSED.
- 5—Contest is open to both amateur and professional photographers. Desert Magazine requires first publication rights only of pictures accepted.
- 6—Time and place of picture are immaterial except that they must be from the desert Southwest.
- 7—Desert Magazine's editorial staff will serve as judges, and awards will be made immediately after the contest.

ADDRESS ALL ENTRIES TO PHOTO EDITOR, DESERT MAGAZINE

THE *Desert* MAGAZINE
Palm Desert, California

HERE AND THERE . . . on the Desert

ARIZONA

Desert Protects Its Own . . .

Twenty-nine years ago Felix Buba left the Cholla placers near Quartzsite on what he thought would be a short trip to the American river placers in California. Before he left his camp in the Chollas, he buried his tools, acids, blasting powder, caps, fuse, other articles—and two bottles of placer gold. Recently Felix returned for the first time since 1920, "just out of curiosity" went to the Chollas to see if anyone had disturbed his cache. No one had, he found everything intact, including the two bottles of gold.—*Yuma Daily Sun*.

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May Get More Funds . . .

Total recommended in the interior department's appropriations bill, approved by the house appropriations committee, for the Bureau of Indian Affairs, is \$32,127,971, an increase of \$7,817,657 over the last appropriation.

Besides a special Navajo-Hopi fund of \$8,000,000, the bill includes \$12,200,000 for education of Indians; \$7,731,000 for health work; \$500,000 for welfare work; \$1,000,000 for management of forest and range resources; \$2,400,000 for a revolving loan fund; \$3,575,851 for construction of irrigation systems; \$4,206,600 for construction and repair of buildings and utilities; \$2,750,000 for roads.

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Old West Crime Problem . . .

Irked by frequent loss of cattle from their herds, the Mojave Livestock association has decided to take steps to see that cattle rustlers are punished to the full extent of the law. The association has voted to offer a \$500 reward for information leading to the arrest and conviction of anyone caught stealing cattle belonging to association members.—*Mohave County Miner*.

DESERT HOMESITES

Fine water, excellent drainage, surfaced streets, electricity, natural gas, telephones, new school under construction—an ideal location where you can enjoy all today's conveniences in the clean atmosphere of a well-planned desert community.

Lots range from \$950. Write for information.

PALM DESERT CORPORATION
Palm Desert, California

It's "Navaho", Not "Navajo" . . .

If a plea of the tribal council's advisory committee is heeded, the Navajo Indians will hereafter be called "Navahos." Supt. James M. Stewart of the "Navaho" Indian agency has relayed that request. "Members of the committee said they were sick of the Navajos being called 'Joes,' and they want to be called 'Navahos,'" Stewart explained. "Further, they want it spelled like an American would spell it, not the way the Spaniards spelled it."—*Coconino Sun*.

. . .

Irrigated Land for Hopis . . .

Approximately 75,000 acres of land will be open to re-settlement by Indian families from other reservations when the land subjugation and irrigation program at the Colorado River Indian reservation in Parker valley is completed, according to long-range plans of the Bureau of Indian Affairs. Already 36 Hopi Indian families have been relocated there and more Hopis are expected to be moved there before year's end. This is in the southern division. In the northern region there will be 25,000 acres reserved for present tribes which live on the reservation. Total acreage of the reservation is 242,711, of which 20,621 acres are in California, remainder in Arizona.—*Yuma Daily Sun*.

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CALIFORNIA

Historic Spots May Be Marked . . .

Working through the California Centennials commission, the Coachella Valley Pioneers society is seeking to have plaques placed at historical spots throughout Coachella valley commemorating the days before man had partially broken the desert's hold on this now cultivated area. On the list of historical spots to be marked are Dos Palmas stage station and spring, Indians Wells, Shavers Well, first commercial date grove, first date palm, site of the old salt works on banks of the Salton sea, Whitewater ranch and the Bradshaw stage route.—*Coachella Desert Barnacle*.

• • •

Kept Alive by Barrel Cactus . . .

Lost more than three days on the desert in the Wingate Pass country near Trona, California, Joseph J. Marcure, 38, said he was kept alive by water of barrel cacti. He was rescued following a search by men in planes, jeeps, on horses and on foot. With Vance D. Danford, 35, Marcure was stranded when the fan of the car they were driving broke loose and punched a hole in the radiator. Danford walked for a day and a half to reach Trona, but Marcure became ill and could not continue. When Danford returned with help, Marcure had wandered from the appointed place and it was two days before he was located.—*Trona, California, Argonaut*.

• • •

Anti-Tram Move Killed . . .

Killed in committee by the California State Assembly committee on governmental efficiency and economy, a bill to abolish the Mount San Jacinto Winter Park Authority has failed to accomplish its purpose. The measure would have repealed an act passed in 1945 authorizing a tramway from Chino canyon near Palm Springs, to top of Mount San Jacinto. Supporters of the bill to kill the tramway act said construction of the tramway will destroy one of the few remaining primitive areas in the state. When built, the tramway will take passengers from floor of the desert to 8000-foot mountain greenery in a matter of minutes. The area it will reach is now virtually inaccessible.—*Banning Record*.

• • •

Apple Valley Gets Postoffice . . .

In true pony express fashion, 10 riders on fast horses carried the mail from Victorville to Apple Valley, California, to inaugurate in colorful style the first Apple Valley postoffice. Racing along Joshua-lined highway 18, the riders made the 7½ miles in 22 minutes, handing first bag of mail to Postmaster Emaline "Dutchy" Korba.

Veteran Peace Officer Dies . . .

A colorful character of the California desert area and the first white child born in Little Morongo — Ben de Crevecoeur — died March 21 at a rest home in Banning. After a pioneer boyhood, de Crevecoeur ran a freight line from Banning to the Old Dale mining district east of Twentynine Palms, later became a noted peace officer, was a Riverside county deputy sheriff for many years. Twentynine Palm residents of earlier days recall that Ben led the posse which tracked down Willie Boy, renegade Indian, in the hills of Morongo valley. Willie Boy had murdered his sweetheart's father on the Gilman ranch near Banning, kidnapped the girl, later murdered her while trying to make his escape in the desert mountains. De Crevecoeur's parents homesteaded in Little Morongo, where Ben was born. — *The Desert Trail, Thousand Palms.*

Gathering Joshua Tree Data . . .

To explore the little known areas of Joshua Tree National Monument and gather botanical data, a trip to the southeastern part of the National Monument was made recently by Dr. and Mrs. Phillip A. Munz, Mr. and Mrs. W. Egbert Schenck and Supt. Frank Givens. Dr. Munz is director of the Santa Ana Botanical gardens. Data gathered will be used in the future interpretive program of the Monument and in scientific studies in educational institutions. — *The Desert Trail, Thousand Palms.*

Iron Foundry in Desert . . .

A veteran manufacturer of cast iron products and a mining engineer have joined hands to develop an iron industry for the production of pipe close to the entrance to Afton canyon, about 45 miles northeast of Barstow, California. From ore to finished pipe and fittings, the entire operation is to be conducted in the middle of the Mojave desert. A virtually unlimited supply of ore is available from seven ore claims located between three and five miles from the smelting furnaces erected on the desert, according to Frank Fawver, owner. M. H. Vaughan, mining engineer with extensive holdings which include the famous Oro Grande gold mine, is manager of both the mines and the mill. — *Barstow Printer-Review.*

Stove Pipe Wells hotel in Death Valley will be kept open all summer

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this year, according to George Palmer Putnam. It was opened last summer as an experiment, and accommodated a surprising number of summer motorists traveling that way. The high temperature during the summer was 119 degrees.

Indians May Get Land . . .

Investigations that may result in 37 Indians being given full ownership of half a million dollars in Coachella valley lands lying within the irrigation district, have been started by the U.S. interior department. Harry Gilmore, district agent for the Office of Indian Affairs, said the decision to make the investigations was reached at a conference with William E. Warne, assistant secretary of interior. Warne recently visited California and the Southwest. The department of the interior now holds the lands in trust for the Indians. The 37 parcels range from 40 to 60 acres each. Most of the land is not now irrigated, but some is planted to grapes and dates, is worth in the neighborhood of \$1000 an acre. — *Coachella Desert Barnacle.*

NEW MEXICO

National Monument Proposed . . .

Establishment of a national monument at Manuelito just west of Gallup is being advocated by the New Mexico state tourist bureau. The drive from Albuquerque to Gallup, along highway 66, is one of the most attractive in the state, according to Joseph E. Bursey, director of the tourist bureau,

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with its rock formations, Indian pueblos and Red Buttes to be seen from the highway. "But there is no turn-off, no short detour which gets the people back into the country," Bursey said. He advocates a loop road from Manuelito into the Valley of the Great Ruins, to provide access to sites of many ruins in the area and circle back to highway 66 in front of the red cliffs at Lupton.—*Gallup Independent*.

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More Money for Navajo-Hopi . . .

Nearly \$3,000,000 more than was allowed last year has been recommended by the house appropriations committee for the Navajo-Hopi Indian service. Total recommended appropriation, \$8,000,000. At the same time the committee wrote into the interior department money bill a prohibition effective July 1 against use of any Navajo-Hopi welfare funds for payment of social security benefits. Funds approved for the Navajo-Hopi service include \$5,000,000 for industrial, agricultural, educational, health, welfare and employment services, \$3,000,000 for construction work.—*Gallup Independent*.

. . .

Kit Carson Memorial . . .

The New Mexico state legislature has allocated \$10,000 and designated the Kit Carson cemetery as a state memorial park.—*Taos El Crepusculo*.

Bombing Range Opposed . . .

The proposed purchase of land by the government for a bombing range is to be strongly opposed by New Mexico ranchers involved, it was voted unanimously at a special meeting in advance of the 35th annual convention of the New Mexico Cattle Growers association. Big reason for the opposition is that in many instances prices paid to dispossessed ranchers are said to be too low. Much of the land involved is public domain, owned by the government and leased to ranchers under the Taylor Grazing act. Government appraisers are allowed to offer only a small amount for improvements placed on the public domain, and a small amount for the grazing privileges the rancher would lose.—*Alamogordo News*.

. . .

Indians Want Citizenship . . .

An Indian plan for his destiny as an American citizen instead of a government ward has come out of the Southwest Indian conference recently concluded at Phoenix, Arizona. Commenting on the long-range program, Robert L. Bennett, conference chairman, said: "This is not the end of the trail, but the dawning of a new day in which the Indian people will be just plain Americans—free citizens with the blessings of life, liberty and the pursuit of happiness." The plan calls for the government first to bring the Indian up to comparable standards of the white man, then to return to tribal corporations full control of the Indian's land and resources. States in which reservations are located would participate in

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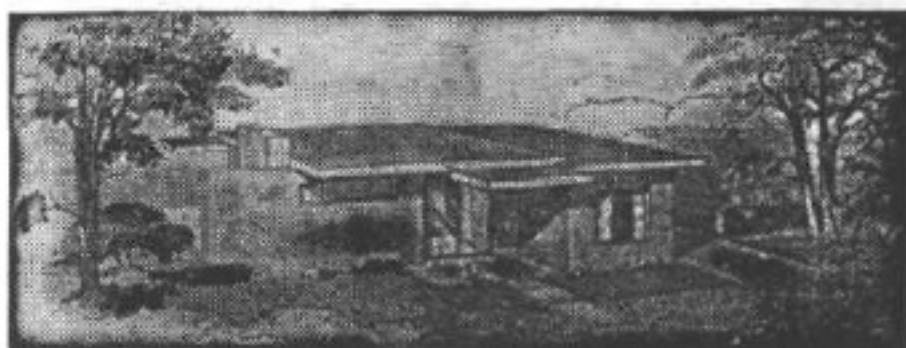
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Palm Desert, California

planning and execution of the transition "because the Indian people want to become part of the state citizenry—not as problems but as self-sustaining members."

Costs of such a program, it is believed, could be recovered in offsets against tribal claims pending against the government. This is most controversial feature of the plan.—*Gallup Independent*.

• • •

They Died for Gold . . .

Search for a legendary treasure within a one-month period recently cost the lives of two men in the rugged San Andres mountains of New Mexico. The search centers on the Dona Ana-Socorro county line about 40 miles northeast of Hatch. Mrs. Ova E. Noss of Hot Springs is directing the search. Mrs. Noss' former husband, M. E. (Doc) Noss, found the treasure cave, she claims. His story was that he found gold bars "stacked like cordwood." He was shot to death March 5 at Hatch. Accused is Charley Ryan of Alice, Texas, who worked with Noss. The other casualty was Curtis Noble, Jr., of Edgewood. He was killed in a plane crash March 4 while trying to deliver notes to the treasure hunters in a remote El Humbrillo canyon. A companion was seriously hurt.

Fact and legend are inextricably mingled in the story. Mrs. Noss says her former husband found the treasure cave by accident while on a deer hunt in 1937. One of the bars brought out by Noss "showed yellow under the black when we cut it with a knife," she said. Mrs. Noss was not very clear on what happened to the bar afterwards.

Nothing is known of what happened to other bars, alleged jewels and diamonds that Noss is supposed to have brought out of the cave before the shaft to it was sealed by a dynamite blast in an attempt to widen the entrance.

Jim Hirst of the U. S. secret service in Albuquerque has a bar he got from Noss' belongings after the shooting. Hirst says it "definitely is not gold."—*Gallup Independent*.



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NEVADA

Stock Brands to be Listed . . .

History and description of livestock brands, an ever-fascinating topic, is to be the subject of a book contemplated by Velma S. Truett, researcher now in Ely delving into musty files of the county recorder's office. Formerly of Elko and now business manager for the firm of Gehrett-Truett-Hall, book publishers of Los Angeles, Miss Truett said the book will be the first of its kind for the cattle industry. It will contain each cattle and horse brand of which records can be found. These records go back to 1873 in county files, prior to that cattlemen announced their brands through publication in newspapers. The book will deal only with Nevada.—*Ely Record*.

. . .

New Desert Gypsum Plant . . .

A new plant with capacity equal to the company's plant at Plaster City, California, on the Colorado desert west of El Centro, is to be built by U. S. Gypsum company at Gerlach, Nevada, on the Western Pacific 110 miles north of Reno. The new mill is located close to large high-grade gypsum deposits in the mountains only five miles away. An aerial tramway

will carry the gypsum from crushing plant in the quarry to processing plant at the mill. The extensive building program, including housing for personnel, is expected to be completed, the plant in operation by year's end.—*Winemucca Humboldt Star*.

. . .

Archer Kills Huge Lion . . .

Two arrows from a bow in the hands of Walter Kennison killed a huge 200-pound mountain lion near Pioche, Eagle valley, recently. After the big cat had been treed by Bud Hines' famous lion dogs, Kennison and Sheriff Fogliani were summoned from Pioche to do two kinds of shooting—motion picture and bow and arrow.

Kennison sank two arrows in the animal's body, angry strokes of a lightning paw immediately broke off both shafts before the cat jumped out of the tree to make a final dash to safety. He was treed again by the dogs, made it to top of the tree where he posed against the skyline briefly before toppling to the ground. Before the lion was shot by Kennison, Sheriff Fogliani climbed a nearby tree and got some fine movie shots of the snarling cat and the bow and arrow kill.—*Pioche Record*.

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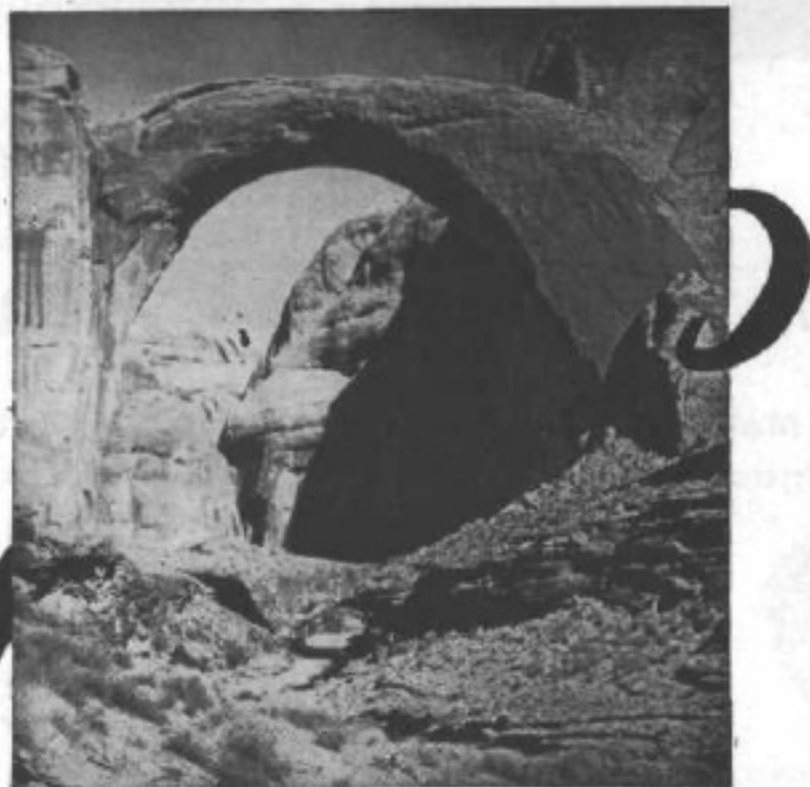
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Too Many Deer, Reported . . .

Deer in the Morey district, north-eastern Nye county, have increased to such numbers that there is grave danger of the browse being entirely depleted if over-grazing is not halted, according to Nils Nilson and Tony Sutich, state fish and game commission biologists. It is believed many of the deer are migratory, use this section for winter range. Over-grazing of browse was observed over a large area. Sagebrush, rabbitbrush, juniper, bitterbrush and even pinon show evidence of heavy over-grazing. —*Tonopah Times-Bonanza*.

UTAH

Mastodon Pictograph Found Safe . . .

The famed pictograph of a mastodon, located on the canyon cliffs down the Colorado river four miles from Moab, is not ruined after all. Following several weeks of nation-wide publicity which bemoaned the destruction of the artifact in a rockslide, it was discovered that the mastodon picture is intact just as it has been for unknown centuries.

Erroneous report that the pictograph had been obliterated was made in good faith by Harry Reed, Moab, and Ralph A. Badger, Salt Lake City, when they hiked down the river to photograph the drawing. Arriving at what they believed to be the location, they found the face of the cliff had been shattered by what they thought was a dynamite explosion. County and federal officials visited the site and after careful investigation expressed the opinion that the cliff had fallen from natural causes.

Everything was settled until Ace Turner piloted two officers to scene of the rockslide. He had visited the pictograph as a boy, doubted that the cliff where the slide occurred was correct location. To satisfy his own curiosity, he made another trip down the river, searched along the cliffs for some distance.

He found the mastodon undisturbed, about a quarter of a mile upstream from the rockslide. —*Moab Times-Independent*.

River Veteran Plans Trip . . .

This summer when he will be 80 years old, Bert Loper, who has spent 56 years on the Colorado river, plans another trip down the river. For this trip he plans to build a new boat, his old one having made three trips down the Yampa, trips through Split Mountain, Whirlpool and Desolation canyons, three trips through Cataract canyon and a journey all the way from the Continental divide to Lake Mead. He has material for his boat, is starting construction. —*Moab Times-Independent*.

Navajo School Assured . . .

Transfer of the Brigham City Bushnell hospital—a 15-million-dollar war-time project—to the Bureau of Indian Affairs for use as a school is authorized in a bill signed by President Harry S. Truman. The Indian bureau plans to convert the big hospital into a school for Navajo children and a center for training and housing adult Indians for off-reservation employment. The new project is about one day's automobile drive from the Navajo Indian reservation, part of which lies in southeastern Utah. —*Moab Times-Independent*.

Funds for Utah Museum . . .

The state legislature has voted \$30,000 for operation and development of the Utah Field House of Natural History, the money to cover the next biennium, and the appropriation has been signed by Gov. J. Bracken Lee. The funds will permit the Field House to continue its major program, according to G. E. Untermann, director, although several special projects will have to be abandoned for lack of money. —*Vernal Express*.

A 10,000-volume library valued at \$50,000 and a collection of rocks and minerals have been presented to Brigham Young university at Provo, Utah, by Dr. A. C. Boyle, formerly assistant custodian of Dinosaur National Monument. —*Vernal Express*.

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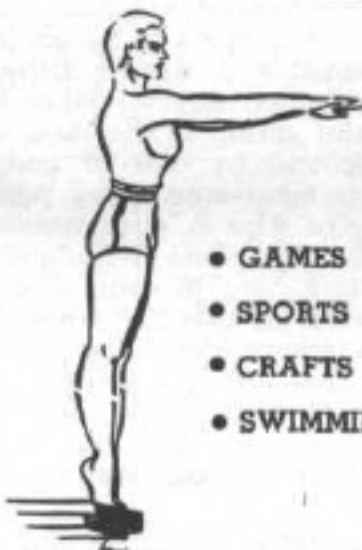
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AMATEUR GEM CUTTER

By LELANDE QUICK, Editor of The Lapidary Journal

We have just witnessed the conclusion and breaking up of another gem and mineral show—one of the most pleasant and interesting exhibits we have ever attended. The crowds gather for days; new friends are made and old friendships fostered; one is thrilled by new stones and refreshed at the sight of the old ones; educated by new ideas. Then comes the announcement to "tear down." In two hours the hall is empty and the minerals and gems have been carried away by the friends who have gone. These moments have always made us glum. We feel much as we do when we take down the Christmas tree.

The particular convention we refer to was that of the Texas State Mineral society held at San Antonio. This society is an important factor in the growth of the lapidary movement in America and we think you would be glad to hear something about it. It is different from the other societies. This society should not be confused with the Texas Mineral society, an older society located at Dallas. Nor should it be confused with the recently organized gem and mineral societies at Houston and San Antonio.

It is a state-wide organization which meets but once a year and is sparked by an irrepressible spirit named J. J. Brown. Brown's job as state rehabilitation director takes him into every nook and anthill in the state several times a year and by dint of endless questioning he has uncovered every person in that great empire who is even remotely interested in rocks. He visits them and in periodic news letters, sent to every one on the list, he tells what they do and what they have. We do not know what those initials "J. J." stand for; he is just J. J. to everyone. But we think one of them should stand for Jumbo, for Brown is a big man and he has a memory better than any elephant we ever knew.

He has a wide reputation for seating 200 people at a banquet and then introducing them without ever making an error in any name or referring to any list. Everyone in the society feels he knows every other cutter and collector in the state and when Brown lets it be known that the society is going to have a meeting the folks fill up the vans with their local rocks and set out for the greatest rockfest in the country, hold a brief meeting and reelect the "Colonel" for another year.

The meetings are so good that several hundred people from other states bring their stuff too and they are generous enough to let the outlanders enter in competition. Four blue ribbons in the show just concluded went to Californians; two from the Long Beach Mineral and Gem society and two to members of the Los Angeles Lapidary society. Dealers come from all over the land for they know they will find many new materials the Texans have uncovered during the previous year. The situation is different from the Federation meetings in other parts of the country. The feeling is different and it is indefinable.

This is all good, for the Texans are hap-

pier in their collecting than they were several years ago when they wouldn't even tell one another where they got material. They will even tell the out-of-stater where it comes from now. Time was when a Californian visiting Texas and asking for information was told that "the best agate was to be found eight miles down the road after turning right at the big cactus and proceeding seven miles to the little tree," etc., etc. The Texan would then offer some fine plume agate for a dollar a pound and the Californian would argue that it was only fern agate and offer ten cents a pound for it. Then the horse trading would begin and the Californian would return to El Toro and brag about the wonderful collecting field he had found.

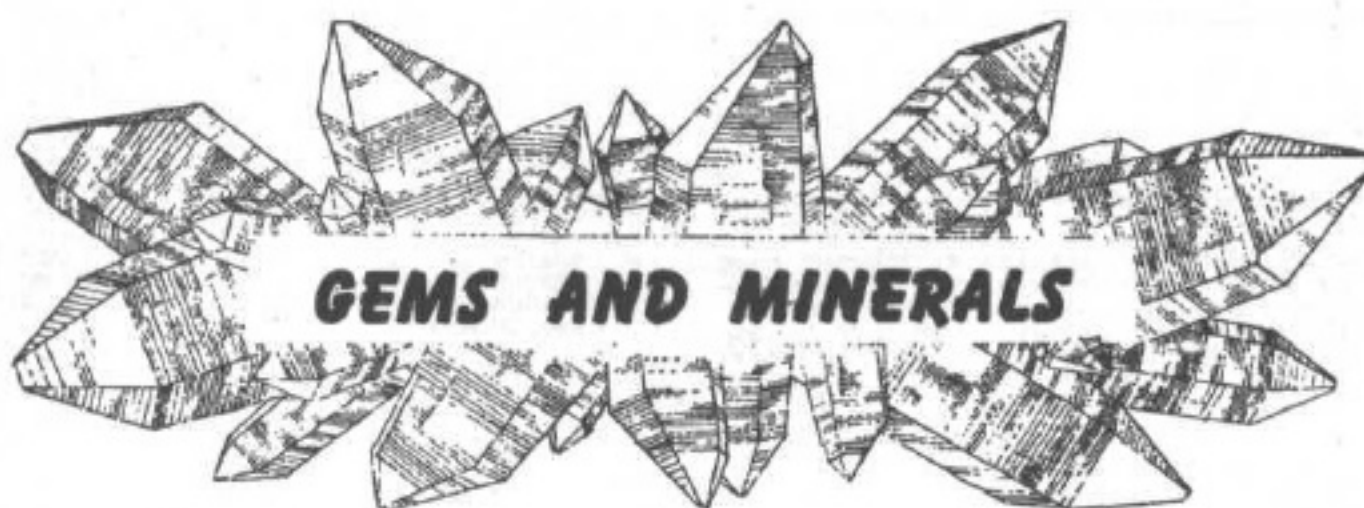
Now the ranchers welcome the tourist, show him where the material is, let him gather all he wants and charge a small sum per pound for it. This scheme has resulted in the uncovering of new fields and types, for the average rancher knows nothing about minerals, geology and gems and he is quite willing to let experienced people prospect his land for him.

The result of all this is that more good gem cutting material has been found and mined this past year than in any previous year anywhere.

The sagenite agate offered for sale at San Antonio was the best we have ever seen. Some of the very best from the Alpine area is being gathered by A. J. Burgard and the Woodward ranch abounds in the finest material. It resembles a bouquet of flowers for it has sprays in all colors in the same cabochon. When someone wanted a name for it we suggested "Texas bouquet agate." The name was readily adopted and we believe it accurately describes this very beautiful material. It will be highly popular for a few years, as the average collection already contains plenty of Oregon plume, Nipomo sagenite, Montana moss, etc. A new geode location has been discovered too in central Texas.

We noticed that the Texans cut most of their cabochons flat, as that enhances the plumes. The best polishing is done on a wood wheel covered with a layer of hard felt, with a layer of old carpet between. Cerium oxide is the polishing agent. Our informant said that a layer of sponge rubber under the felt made the polishing surface too soft and that such a polishing wheel made it difficult to get a mirror finish. The bouquet type of agate comes in a flat rock that resembles a petrified oyster. The nodule should be cut the long way so that three or four slabs, including the heels, are taken from each one. If they are sliced like bread the plumes are ruined. It is a good idea to "spot" the agate on both sides before sawing it to see how the plumes are.

We had the pleasure of being one of the two speakers at a breakfast meeting of the Texas State Mineral society and we never addressed a more appreciative audience. Our visit with these friendly folks will long be remembered.



GEMS AND MINERALS

ROCK SHOW, IMPERIAL VALLEY ATTRACTED 1400 VISITORS

Attendance during the two-day Rock show the Imperial Valley Gem and Mineral society and Imperial Lapidary Guild held April 16-17, El Centro, was 1400. California was represented by 39 cities, and visitors were registered from 17 states. Members exhibited in new show cases built by the club. Displays included crystals, cabochons, rough and polished material, silver work, geodes, Indian artifacts, concretions and rock oddities. L. G. Beale demonstrated the use of lapidary equipment, junior members assisting. A fluorescent exhibit attracted wide attention.

LAST MINUTE NOTES ON THE BIG MINERAL CONVENTION

With the addition of six new societies, the California Federation will be represented by 49 societies at its annual convention, making it 49 for '49. Hotel Sacramento has been chosen as convention headquarters for the dates June 24-25-26.

A conducted bus tour of Sacramento has been scheduled. Another feature will be a free swapping area in a prominent location. Plans have also been completed for a gold panning contest. Contestants must dress in garb appropriate to the occasion. Ultra Violet Products Inc. will exhibit its extensive fluorescent mineral collection, reputed to be spectacular.

EARTH SCIENCE CONTESTS HAVE BEEN ANNOUNCED

First of a series of contests sponsored by the American Federation of Mineralogical societies has been announced by President Richard M. Pearl. The purpose of the contests is to encourage further activity in the earth sciences.

The contest is open to boys and girls in the United States and Canada under twenty, who have not yet enrolled in a college or university. Original articles will be accepted on any subject connected with the earth sciences.

A \$25 Savings Bond and fine mineral specimen will be the first prize. Additional prizes will include specimens, equipment and books. Papers should be submitted before October 15 to Prof. Richard M. Pearl, Colorado College, Colorado Springs, Colo.

COLORFUL '49ER NIGHT THEME OF CLUB MEETING

Early day relics—scales with weights of gold pieces, miners pans from large to a small six-inch, horn spoon, gold nuggets valued from \$25 down to 50 cents—were on display at the April meeting of the Pacific Mineral society. Members enjoyed a colorful evening attired in garb appropriate to "49er Night." Speaker of the evening, Wm. R. Harriman, discussed "Geology of Mother Lode."

The Junior Rockhounds of Prescott convened April 22. Tommy Ryan gave a talk on the fossils of Death Valley. Two new members were admitted to the club, Paul Burkhardt and Wilson Dusho. The Rockhounds have received a letter from the Junior Gem and Mineral club of St. Paul, Minnesota, asking for minerals from the Prescott vicinity. The club is preparing a package hoping to start an exchange.

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AMONG THE ROCK HUNTERS

Object of the Dona Ana County Rockhound club's April trek was Bridal Chamber Silver mine. Failing to locate it they wound up in the manganese mining area where manganese ores and specimens of pyrolusite were collected. One member exclaimed over a pinkish crystalline material he found, "ruby silver I hope!" The material turned out to be common pink calcite. His remark, "It's an awful let-down to find out that anything is calcite."

April meeting of the Searles Lake Gem and Mineral society was held at the Trona Club ballroom. Featured speaker of the evening, Marcia Winn Rittenhouse, author of *Desert Bonanza*, talked on "The Early History of Randsburg." For the third year Searles Lake Gem and Mineral society sponsored the San Bernardino County Mineral exhibit at the National Orange show held March 21 at San Bernardino. Eddie Redenbach was in charge of arrangements and display.

New officers were elected at the San Jacinto-Hemet Rockhounds' April meeting as follows: U. G. Tallent, president; Sally Ramsey, vice president; Ethel Harwell, secretary-treasurer — re-elected; T. V. Harwell, field trip chairman; V. F. Clark and Edna Nichols, directors; L. F. Harvey, representative to Federation. An installation pot-luck dinner was augmented with colored slides of field trips of the past year.

Mr. and Mrs. F. B. McShan, Needles, California, are moving their gem shop from the west city limits to a new building erected on Highway 66.

Accepting the invitation of Ernest R. Dickie, general manager of Bagdad Copper corporation, Yavapai Gem and Mineral society members trekked to Bagdad for their April outing.

April meeting program of the Long Beach Mineralogical society was a projection of agate slides prepared by Wm. Pitts of the Golden Gate museum. A March field trip to Cady mountains yielded calcite crystals, and another outing was planned for April 30—location undecided. A May field trip in search of fire opal in the Lead Pipe springs area was scheduled, and June was left open for the Sacramento convention. Plans were made for regular meeting exhibits by members.

Raymond M. Addison, recognized nationally and internationally as a cameo carver, lectured on "Cameo Carving, and Jewelry Making" at the March meeting of the Sacramento Mineral society. March activities included a field trip to Grizzly Peak, Berkeley hills, for blue agate nodules; and a visit to the University of California mineral collection in Bacon Hall, as the guests of Dr. Adolph Pabst, associate professor of mineralogy.

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GEM, MINERAL SHOW PLANNED FOR DE ANZA CELEBRATION

Riverside County Chamber of Mines plans to stage a Gem and Mineral show during the De Anza Days celebration, June 16-19, at Riverside, California. According to present arrangements the show will be held in the basement of the municipal auditorium. Amateur collectors will be granted free space, dealers will be charged according to floor space needed. Contact Mrs. Retta E. Ewers, 3961 Third St., Riverside, California.

De Anza Days are celebrated each year in memory of Juan Bautista De Anza, the first explorer reputed to have crossed the Riverside valley.

"Resources of California" sound and color film was presented by A. W. Doig at the April meeting of the Sequoia Mineral society. A trek to Parkfield for jasper was planned for April 24.

Dr. George H. Otto was guest speaker at the March meeting of the Chicago Rocks and Mineral society. Otto lectured on "Life History of the Rarer Elements," and traced the disintegration and deposition of rocks. Miss Selma Jenner and Miss Gertrude Hannon exhibited separate displays of minerals, geodes and fossils from their own private collections.

Junior Rockhounds of Prescott, Arizona, accompanied by ten adults, enjoyed a field trip to Hell's Canyon March 26. The group returned with specimens of agate, opal and fossils.

Donations at the March meeting of the El Paso Rockhounds made possible the purchase of a mimeograph machine for the Society's monthly publication "The Voice." Another event of the evening was Mrs. Miller's account of a treasure hunt in the Soledad canyon. April field trip was to the Texas Fluor Spar mines and another trek was scheduled—to Boyd ranch east of McNary, Texas, to look for Indian pictographs, pottery shards and fossils.

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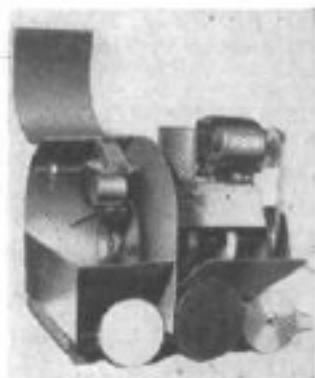
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GEM VILLAGE ROCK SHOW SCHEDULED FOR JULY

The Gem Village Rock Club, Bayfield,
Colorado, has announced that the Gem
Village Rock show will be held July 4—one
day packed with everything interesting for
the hobbyist. Display space will be free for
either exhibiting or selling. After the show
an auction will be held and refreshments
served.

Fourth annual banquet and election of
officers of the Minnesota Mineral club was
held at the Curtis hotel March 12. Color
films of the Grand Teton national park and
Jackson Hole country with comments by
Dr. Clayton G. Rudd were highlights of the
evening's entertainment. Elected as club offi-
cers were: Arthur Anderson, president; Mrs.
Wm. Cooper, vice president; Mrs. Lydia
Heumann, secretary; Percy A. Brown, treas-
urer; Wm. Bingham, program director; Mil-
ton Fehling, tour director; Paul Sandell,
publicity director.

Judge Blanchard, president; Mable
O'Neill, vice president; Mrs. F. Purdy, sec-
retary-treasurer; and Harold Godby, field
scout, are the new officers of the Kern
County Mineral society. Election was held
at a pot-luck supper in March. The society's
March field trip was to Boron where speci-
mens of palm fiber were found.

The Tucson Gem and Mineral society is
now affiliated with the Arizona State mu-
seum in Tucson.

In a parcel of 100 zircons imported from
Australia by Geo. W. Chambers, Encinitas,
California, came an enormous crystal be-
lieved to be the largest and most perfect
zircon crystal known. The crystal weighs
3 lbs. 8 3/4 ozs. Three of its faces measure
2 1/4 inches while another is 3 1/4 inches. The
crystal is not of gem quality.

Utah is considering the possible formation
of all the mineral societies in the state into
a federation such as exists in other states.

Newly elected officers of the Pomona
Valley Mineral club at the April meeting
are: F. H. Smith, president; Pauline Saylor,
vice president; Alice Cohoon, secretary;
W. B. Cohoon, treasurer; J. A. Kryder, di-
rector. The evening's entertainment was fur-
nished by Nancy Taylor, who showed col-
ored slides of western national parks, and
Mrs. Emma Kryder, who related a field trip
to Topaz mountain. Mrs. Kryder brought
topaz specimens.

J. D. Churchill brought a small laboratory
with him to the April meeting of the Texas
Mineral society, and demonstrated the test-
ing of minerals. Tests were run on cinnabar,
iron, manganese, calcite, copper. Blow-pipe
and test-tube experiments were made.

Over 1400 persons attended the Monterey
Bay Mineral society show held in February.
Special emphasis was placed on Monterey
county jade, rhodonite and fossils. Other
exhibits of mineral specimens including
fluorescents attracted wide attention. "Thun-
der", the sculpture of Wyoming jade by
Donal Hord of San Diego, was on display.

The tenth anniversary of the Mineralogi-
cal Society of Utah was celebrated with a
dinner and program April 1. Old time square
dancing rounded out the evening's enter-
tainment.

Mineral transparencies, as illustrated by
Harry Hazlitt at the March meeting of the
Mineralogical Society of Arizona, proved
to be something more than a new experience
in color on a screen or a new slant to the
lapidary art. The study of minerals and
rocks in thin sections under the microscope
has been practiced for years. The use of
thicker slices for direct projection is more
recent, and indicates possibilities for the
study of intricate structures especially in the
microcrystalline varieties of the quartz fam-
ily minerals. Pinnacle Peak rose quartz local-
ity was the objective of the April field trip.

Members of the Yakima Rock and Min-
eral club were entertained by Mrs. Claire
Hillyer at the March meeting. Mrs. Hillyer
presented a travelog in color. Proposal of
bi-monthly field trips was voted on, and a
three day trek into south central Oregon
scheduled for July 4.

The South Bay Lapidary society, serving
the communities of Manhattan Beach, Her-
mosa Beach, Redondo Beach, El Segundo,
Hawthorne, Torrance, and Lomita, Califor-
nia, has started its second year. Newly elect-
ed officers are: Gary Britt, president; Mrs.
Jane Hagar, vice president; Mrs. Alice Be-
mis, secretary; Bob Fredericks, treasurer.
Meetings are held the first Tuesday of each
month at Clark Stadium, Hermosa Beach.
A cordial invitation to attend is extended to
anyone interested in lapidary work.

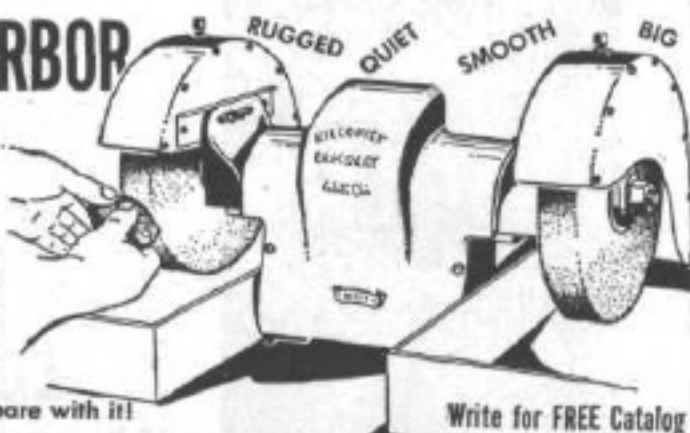
Santa Monica Gemological society elect-
ed the following officers at the April meet-
ing: C. E. Hamilton, president; Vern Ca-
dieux, first vice president; Prof. W. R. B.
Osterholt, second vice president; Edward L.
Oatman, treasurer; Mrs. Doris Baur, cor-
responding secretary; Mrs. Estelle Tesh,
recording secretary. Annual dinner and in-
stallation of officers was scheduled for May
at the Santa Monica Windemere hotel.

At the April meeting of the Mineralogical
Society of Southern California Charles L.
Heald showed a series of kodachrome slides
of national parks and monuments of the
Southwest. While a traveling photographer
for the United Geophysical company, Heald
acquired the knack of glamorizing natural
subjects. He has established a business of
supplying slides of geological subjects to
schools, museums and other educational in-
stitutions. A field trip to Lead Pipe springs
area to collect geodes and fire opal was
planned for May.

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OPERATION OF GEIGER COUNTER DEMONSTRATED . . .

Fred Burr demonstrated the operation of the Geiger counter at the April meeting of the Mineralogical Society of Arizona. Field trip of the month was to Pinnacle peak where rose quartz was collected. A joint field trip with the Tucson Gem and Mineral society was arranged for May 1, area to be visited—Mineral hill in Pinal county. Annual Jamboree was scheduled for May 29 at South Mt. Park, and will be the final meeting for this season.

The Yachats Gem and Mineral club of Oregon planned to display several cases of beach material at the Newport Crab festival May 6-7-8. A March field trip yielded several black agates and blue cloud agates.

"History of San Francisco's water supply" was the subject of Dr. Green's talk at the April meeting of Northern California Mineral society. A trip to San Jose local mineral exhibit replaced the monthly field trip.

Regular meeting of the Junior Rockhounds of Prescott was held April 1. Johnny Yount was winner of the pebble puppies quiz. Committees were appointed to select club pins and a club emblem.

Vic Gunderson of the Los Angeles Lapidary society explained the art of faceting at the March meeting of the Hollywood Lapidary society. A faceting demonstration was performed by Dick Mitchell. Plans were made for a Dutch auction to be held in April. Two-day field trip to the Ludlow area March 26-7 was enhanced by perfect weather, nice specimens plume agate obtained.

William Turnbull of Chicago Natural History museum described the work of the paleontologist at the April meeting of Chicago Rocks and Mineral society. His discussion included prospecting for fossils, their removal and ultimate use in the museum. Another feature of the evening was two exhibits—a cabochon display by G. C. Anderson, and S. Norvell's display of iron ores.

"Fossils", topic of the March meeting of the Georgia Mineral society by A. C. Munyan, was illustrated by projection slides and specimens. Another attraction of the evening was F. E. Gleason's offer to check specimens for radioactivity with his newly purchased Geiger-Mueller counter. The society was recipient of a collection of Maine minerals donated by students of the geology department of the University of Maine, and a proposal was made by the council at the April meeting to establish a mineral museum displaying minerals from all sections of the country.

At the March meeting of the East Bay Mineral society, Dr. David Houston gave members facts concerning coloring in minerals. Miss Joan Morris displayed a variety of crystal specimens, minerals, petrified wood and fossils. At the March 17 meeting guest speaker Kenneth C. Peer spoke on "Spectrographic Analysis of Minerals," and L. J. Hostetter exhibited jewelry, minerals, mineral sets, polished slabs and equipment. March 6 was the occasion of a field trip to Coyote point in search of jasper, and another trek was scheduled for April 10 to Ano Nuevo island to look for fossils, beach stones, banded flint and shells. This area is an old Indian burial ground. It is also believed there is buried treasure in the sand dunes.

SIXTH ANNUAL DISPLAY BY SAN FERNANDO GEM CLUB

San Fernando Valley Mineral & Gem society members are busy making final plans for their 6th annual show, to be held June 11—from 1 p.m. to 10 p.m. and June 12—10 a.m. to 9 p.m., at North Hollywood Recreation center, corner Tujunga Ave. and Chandler Blvd., North Hollywood, California. Displays will consist of minerals, gems, jewelry, fossils, fluorescents, and demonstration of lapidary art. Admission free.

April 1 meeting of the Mineralogical Society of Arizona was Junior night. Maryana Weber discussed "My Minerals" and explained her own system of cataloging material, and Carrie McLeod followed with a talk on metal magnesium. Bill McLeod spoke on copper.

Gem Collectors club, Seattle, Washington, met at the home of Mrs. Alice Reed April 12. Magazine articles on handicraft in copper and aluminum were discussed. "History of Filigree Jewelry" was outlined by Mrs. Roberson who displayed a filigree bracelet. A hot platter plaque made of petrified wood trimmed with copper, and two miniature prospector's picks, one of jade, and one of agate were among other articles exhibited.

Dr. Edward Henderson of the National museum, gave an illustrated lecture on meteorites at the April meeting of the Mineralogical Society of the District of Columbia. Tony Rapp and Major Taylor were scheduled to entertain the society at the May meeting with their observations of Japan and Mexico.

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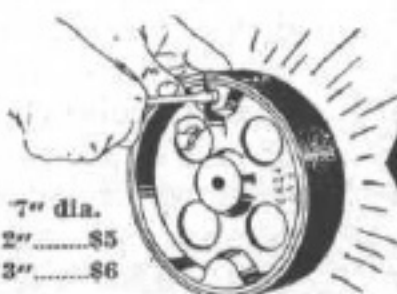
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14"	32.30	24.95	21.85
16"	36.40	27.85	24.75
20"	66.30	44.20	33.95
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By RANDALL HENDERSON

ON THE DESERT I have never been able to tell the difference between flowers and weeds. The dictionary doesn't help. Webster defines a weed as any plant that is "useless or troublesome."

According to that definition, it would appear that most of the cacti species should be regarded as weeds. But no person who has seen the beavertail cactus or the hedgehog in blossom would ever give it so ignoble a term as weed.

And if you will carry a pocket microscope as I did on a recent trip through Joshua tree national monument, you will be reluctant to call any of the desert plants weeds. It really wasn't necessary to carry a microscope to find beauty in the Monument on this early May trip. The ground was carpeted so thickly with tiny mimulus and gilia and eriophyllum it was almost impossible to walk without trampling them. And indigo bush and the golden desert senna and scores of other more conspicuous shrubs were blazing with color.

But I carried the microscope because I have learned that there is a great world of beauty on the desert never seen by the naked eye. There are numerous little plants with blossoms so drab and inconspicuous they are never given a second glance. You and I normally would call them "weeds" of the desert.

But one of those little pocket magnifying lenses such as every prospector and rockhound carries in his kit, reveals forms and colors of fantastic brilliance. It almost appears as if Nature had tried to compensate in splendor what these pigmy blossoms lack in size.

When you have the opportunity, just focus your lens on the tiny blossom of the lowly burroweed, and you'll know what I mean.

• • •

Much has been written about the plight of the desert Indians, especially the Navajo. But not all the news from the reservation is bad. I learned of a more cheerful aspect of the Indian problem recently in talking with Alida Bowler, Indian Service placement officer in California.

Miss Bowler represents a special division organized by the Window Rock agency to find off-reservation jobs for the Navajos and Hopis. She and her associates have gotten rather surprising results. Last year nearly 12,000 Indians were given off-reservation employment in the Southwestern states. About 7,000 of them were hired by the Santa Fe, Union Pacific and Denver & Rio Grande railroads for

work as section hands. The other 5,000 were distributed in a wide range of occupations—the beet fields, citrus groves, army posts, grain fields, and as domestic workers.

"The Navajo are careful conscientious workers," Miss Bowler reports. "They are rather slow in occupations new to them, and when they do piece work as in picking oranges, their wages are not high, but they learn readily and are especially eager to acquire mechanical skills."

On the Navajo reservation there are approximately 11,000 men and 2,000 women available for seasonal or permanent jobs in the Southwest. Many of them cannot speak English, but when they are employed in groups there generally is at least one among them who can serve as interpreter.

The Indian Service works in cooperation with the state employment agencies, and Miss Bowler's desk is in the California State Employment office in Los Angeles. When an order comes in for Indian workers they are recruited on the reservation by young Indians with school training.

The progress being made by the employment division is heartening. Sending bundles to Indians is commendable charity—but employers who will provide jobs for these workers from the reservation are making a much more important contribution to the problem of over-crowded Indian lands.

Miss Bowler is going about her job with missionary zeal—and it is a very important job.

• • •

I hope the water-witches will give me a little recess. Since the subject was opened for discussion in the Letters page three months ago I have read so many opinions about this mysterious art of locating underground water with a green forked stick I am in a daze.

And the more I read the less I know about it.

I wish some of the scientific men, now that they have solved the problem of atomic power, would turn their attention to the unsolved mysteries of the human body. As far as I am concerned, most of the so-called water dowzers are honest men, and when they tell me some unseen force nearly twists that green stick out of their hands I believe them. But all this mail has convinced me of one thing—that those humans who are endowed with whatever it takes to make the stick go through strange gyrations do not know any more about the reasons than I do. To me it remains a complete mystery.



STORY OF NEW MEXICO TOLD IN BLACK-ROBED JUSTICE

Black-Robed Justice written by Professor Arie Poldervaart, now with the University of New Mexico College of Law, fills a significant role in preserving the record of New Mexico territorial history. Author Poldervaart had the opportunity to make this study while law librarian of the Supreme Court in Santa Fe for ten years.

This story of New Mexico judicial history centers around the lives and activities of the 17 chief justices from the American occupation in 1846 to Statehood in 1912 when officers meting out sentence needed a "rugged constitution, steady nerves and a mind receptive to crude language and the rough customs of the frontier." Rough in language, ready always with a rugged pair of fists, the judges of the territorial supreme courts, even when coming direct from the East, proved, in most cases, equal to the situation.

Thirty-five-year-old Judge Joab Houghton, with no legal training and little experience, clothed his sentences in vigorous western garb. He was the first territorial chief judge. As was the custom in those days, judges, in keeping with the tradition, imbibed heavily of the contents of the bottle. Upon hearing complaints on Judge Kirby Benedict's frequent binges, Lincoln, then president of the United States, retorted: "He knows more law drunk than all the others on the New Mexico fence when sober. I shall not disturb him."

One of the most interesting and novel cases which ever went through the courts of New Mexico during that period, is the well-known controversy which arose between the two Indian pueblos of Laguna and Acoma over the ownership of an oil painting of San Jose.

Many of the state's greatest legal controversies are discussed in the light of social and economic conditions of the time. Enlivened with anecdotes, the book is delightful reading as well as authentic history.

University of New Mexico Press, Albuquerque, New Mexico. 1948. 222 pps., index, biblio. \$3.50.

WESTERN WONDERLAND GUIDE FOR YEAR 'ROUND VACATIONS

People who travel like to know where to go; where to stay; where to play; where to eat. And to those who plan a vacation trek to the western wonderland—*Doorway to Good Living* by James Lewis is a handy little book to have along.

Lewis has arranged the information in alphabetical order—by state, then by cities and towns. The states include Arizona, California, Nevada, Oregon, Utah and Washington. Information is necessarily brief. But *Doorway to Good Living* presents in picture and story as complete a coverage as space will allow. Lewis based his selection of dining and lodging establishments on three factors—cleanliness, courtesy, cuisine.

Lewis Publicity Service, Box 1060, Beverly Hills, Calif. First printing 1946, copy-right '47-'48. 334 pps. \$2.00.

RIVER WATER DIVERTED TO EQUALIZE NATURE'S SUPPLY

California's water supply is limited. It is a thirsty land! And because nature was more generous in some sections than in others the Central Valley Project came into being.

California is divided roughly into two parts. South of the Tehachapi range of mountains lies southern California which has grave water problems. North of the Tehachapi lie the great interior valleys of the Sacramento and San Joaquin rivers. The rivers meet in the Delta region near Stockton and continue to the sea through the Golden Gate. Simply stated, the Central Valley Project is a north-to-south water exchange in these valleys. Water of the San Joaquin is diverted to the dry acres of the southern valley, and Sacramento river water shifted to the central San Joaquin valley to replace the water diverted south.

The project is the product of many years of careful water planning and study, and as far as construction goes, is past the halfway mark. It is a public project under Federal construction.

Robert De Roos tells the story in *The Thirsty Land*. He discusses the issues and policies and problems. One of the major issues concerns the question of state or federal control.

The Thirsty Land is an enlightening account of a subject of tremendous importance. While attention is focused on the Central Valley Project and the valleys connected with it, an awareness of California's

fight for growth and prosperity and the struggle to find ways to use every drop of available water permeates throughout.

Stanford University Press, Stanford, California. 1948, 265 pps., photographs, index. \$4.00.

NEW PLACE NAMES BOOK PUBLISHED BY UNIVERSITY

Probably there are more than 150,000 place names in California, not including street names in the towns and cities. It would require several volumes and a tremendous work of research and compilation to assemble them all in book form.

Although Erwin G. Gudde's *California Place Names*, recently published by the University of California Press, lacks much of being the final and complete answer, it represents the most exhaustive effort yet made in that direction.

The author is quite frank: "This book is not a gazetteer. It does not contain all the names in the state, nor does it give the latitude and longitude, or the statistics of the places . . . the most interesting and important names have been selected for individual treatment, and most of the frequently recurring names have been treated in a summary way."

Desert people who would learn more about the naming of the local canyons and mountains and waterholes in their immediate areas, will be disappointed in this volume. Nevertheless, the book contains 431 pages of accurate and informative data on the more important place names in a state where the Indian, the Mexican and the gold-hunter all have had an important part in the determination of geographical names.

The book was prepared by Professor Gudde with the aid of an advisory committee appointed by President Sproul of the university. The University Press deserves credit for an exceptionally fine printing achievement.

University of California Press, 1949, 431 pps. Pronunciation guide. \$10.00.

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

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