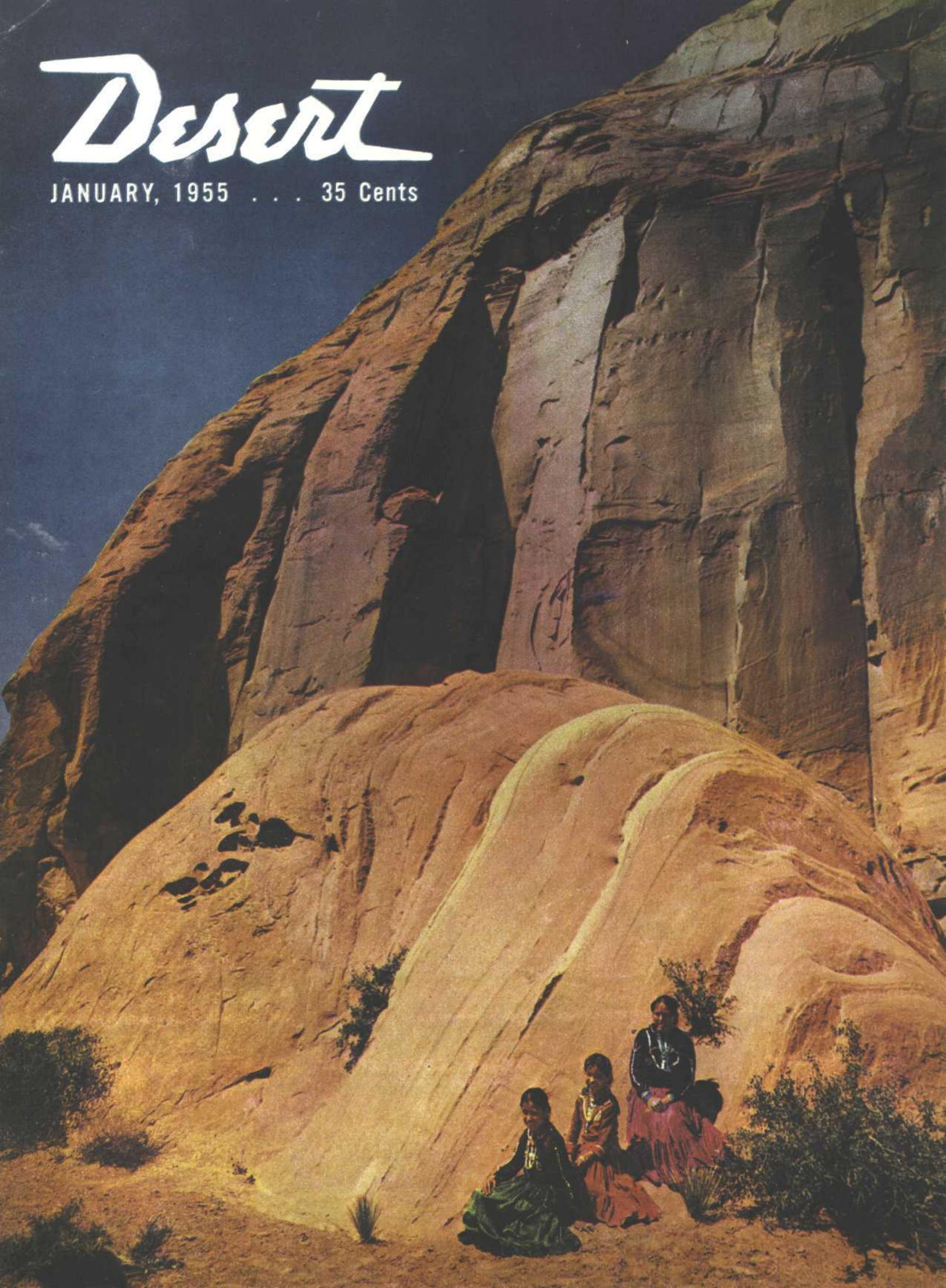


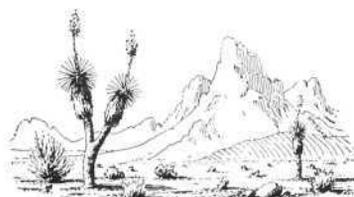
Desert

JANUARY, 1955 . . . 35 Cents



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DESERT CALENDAR

- Jan. 1—Comanche Dancers at Plaza of old Mission of St. Francis, Ranchos de Taos; also Ceremonial Dance at Taos Pueblo, Taos, N.M.
- Jan. 1—Southwestern Sun Carnival Parade and Sun Bowl Game, El Paso, Texas.
- Jan. 1—Salad Bowl Football Game and Parade, Phoenix, Arizona.
- Jan. 1-2—Sierra Club's Desert Peaks Hike and Camping Trip to Corn Springs, Chuckawalla Mountains, California.
- Jan. 6—Buffalo Dance, El Dia de Los Tres Reyes, at Taos Pueblo, Taos, New Mexico.
- Jan. 1-31—Skiing at Aqua Piedra Recreational Area, Carson National Forest, New Mexico.
- Jan. 3-8—Arizona 7th Annual National Livestock Show, Phoenix, Arizona.
- Jan. 8-9—Sierra Club's Camping Trip to Phantom Canyon and Enchanted Valley, California.
- Jan. 9—Don's Club Trip to Shrine of St. Joseph, Yarnell and Black Canyon, from Phoenix, Arizona.
- Jan. 15—Deadline for entries, tenth annual International Nature Photography Exhibition, Nature Camera Club of Chicago. Entry forms available from Blanch Kolarik, 5801 W. 63rd St., Chicago 38, Ill.
- Jan. 22-23 — Sierra Club's Desert Peaks Hike, up Manly Peak; meeting at Ballarat, Panamint Valley, California.
- Jan. 23 — Lectures: (1) Arts and Crafts of Southwestern Indians (2) Navajo Sandpainters (3) S.W. Indian Ceremonials, at Southwest Museum, Los Angeles, California.
- Jan. 23—Don's Club Trip to Silverbell Mine, from Phoenix, Arizona.
- Jan. 28-30—Gold Rush Days, Wickensburg, Arizona.
- Jan. 30 — Don's Club Trip to St. John's Mission from Phoenix, Ariz.
- Jan. 30—Lecture: Arizona Adventure, by Avalon Daggett, at Southwest Museum, Los Angeles, California.



Volume 18

JANUARY, 1955

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Address Correspondence to Desert Magazine, Palm Desert, California



It's back and shovel for many a "lonewolf" or small operator who, working on limited capital is trying to cash in on the uranium bonanza.

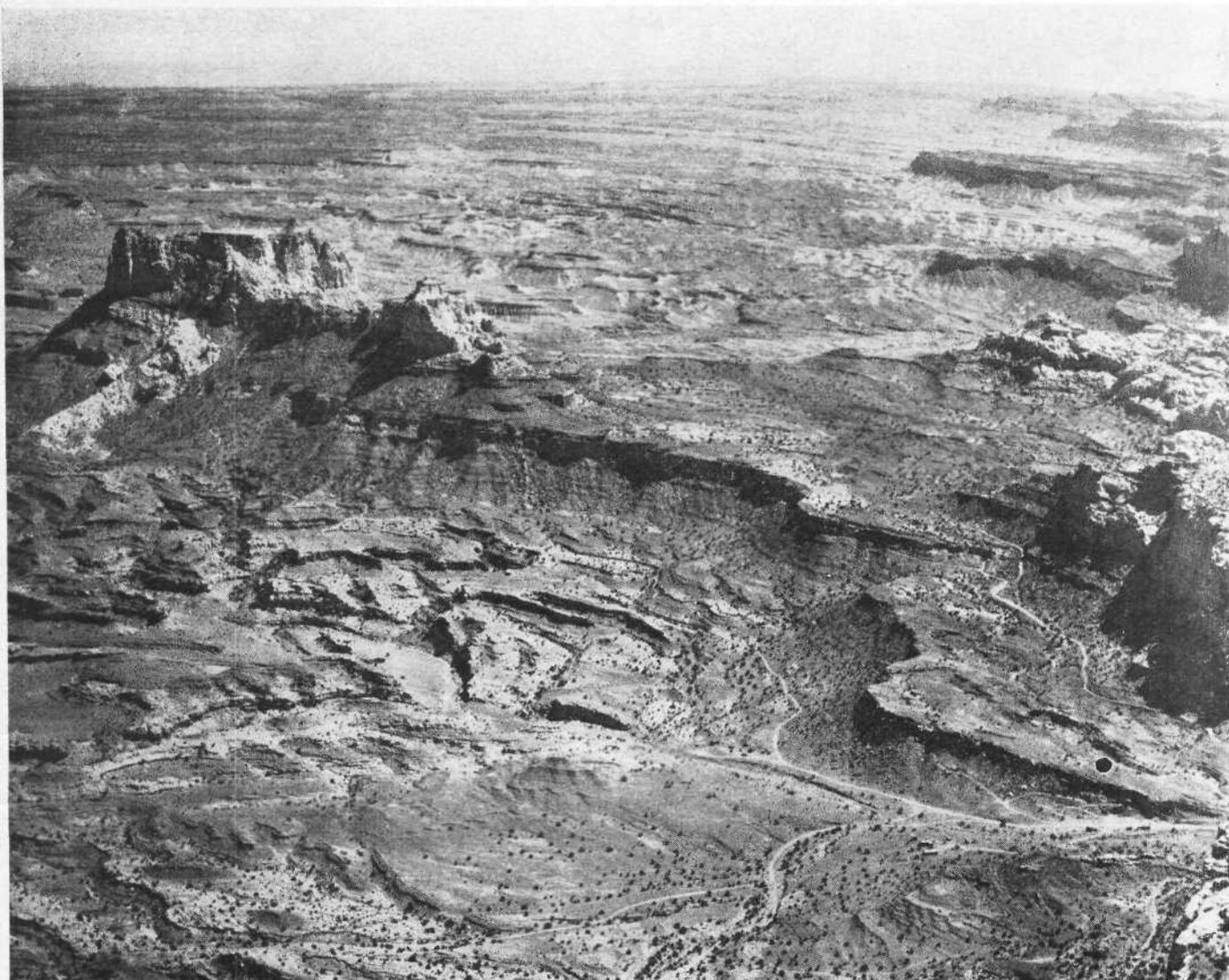
They're Finding Paydirt On the Colorado Plateau

By MURIEL LEDERER
Photographs by C. Hal Rumel
Map by Norton Allen

Spurred by the Atomic Energy Commission's promise of a bonus and a guaranteed market, a new mining boom is in progress on the great plateau which extends across the Utah-Colorado state line. Some important strikes have been made — and thousands of prospectors with Geiger counters are in the field listening to the little gadget which indicates the presence of radioactive ore.

THE VAST wastelands of the Far West are alive again with the tread of prospectors searching for a precious ore—uranium. Unlike their predecessors, the '49ers in search of gold and silver, these modern day prospectors need not gamble everything to succeed. As little as \$50 in cash and good sturdy legs can make a man hopeful of winning a fortune in the West's latest mining boom.

Take the case of the prospector we'll call Pete Perkins. He owned a store in Minnesota. An amateur rockhound, he spent his weekends hunting specimens in the surrounding countryside. Tales of the uranium boom on the Colorado Plateau reached Pete and he began to dream about wealth that might be found beyond the Rockies. One day he sold his store, closed up his house and moved his family to



*Temple Mountain, Southeastern Utah—typical uranium producing desert area.
Note drilling camp in lower right hand side of the picture.*

the center of the rush—Grand Junction, Colorado, where mineral samples are as common as dirt.

Pete loitered about for a few days talking to people and gathering information about uranium. He was told that an amateur has a better chance making a strike than a trained prospector because, as an amateur, he has not set ideas of what uranium formations look like. The folks in Grand Junction called uranium the "peoples mineral" as well over half of all the known deposits were found by amateur prospectors.

Prospectors, miners, speculators and investors were flocking to Grand Junction—and all talking about uranium ores. Pete met people from all walks of life who had turned hopefully to prospecting. Many were hard-working folks staking their meager savings on a strike. They lived in tents, digging and sorting their ore by hand, lugging it out by wheelbarrow because most of the mines are small and more profitable when handworked.

Many of the prospectors like Pete were former rockhounds. He sensed a new type of prospector—1954 style—a treasure hunter, grizzled and tough and just as determined as the men of 100 years ago. These modern men however, ride in station wagons and jeeps and carry geiger counters. There were men who assured Pete that serious prospecting isn't easy and can be expensive. Often the highgrade deposits are not commercially profitable to mine because though of rich grade, the pockets are too small.

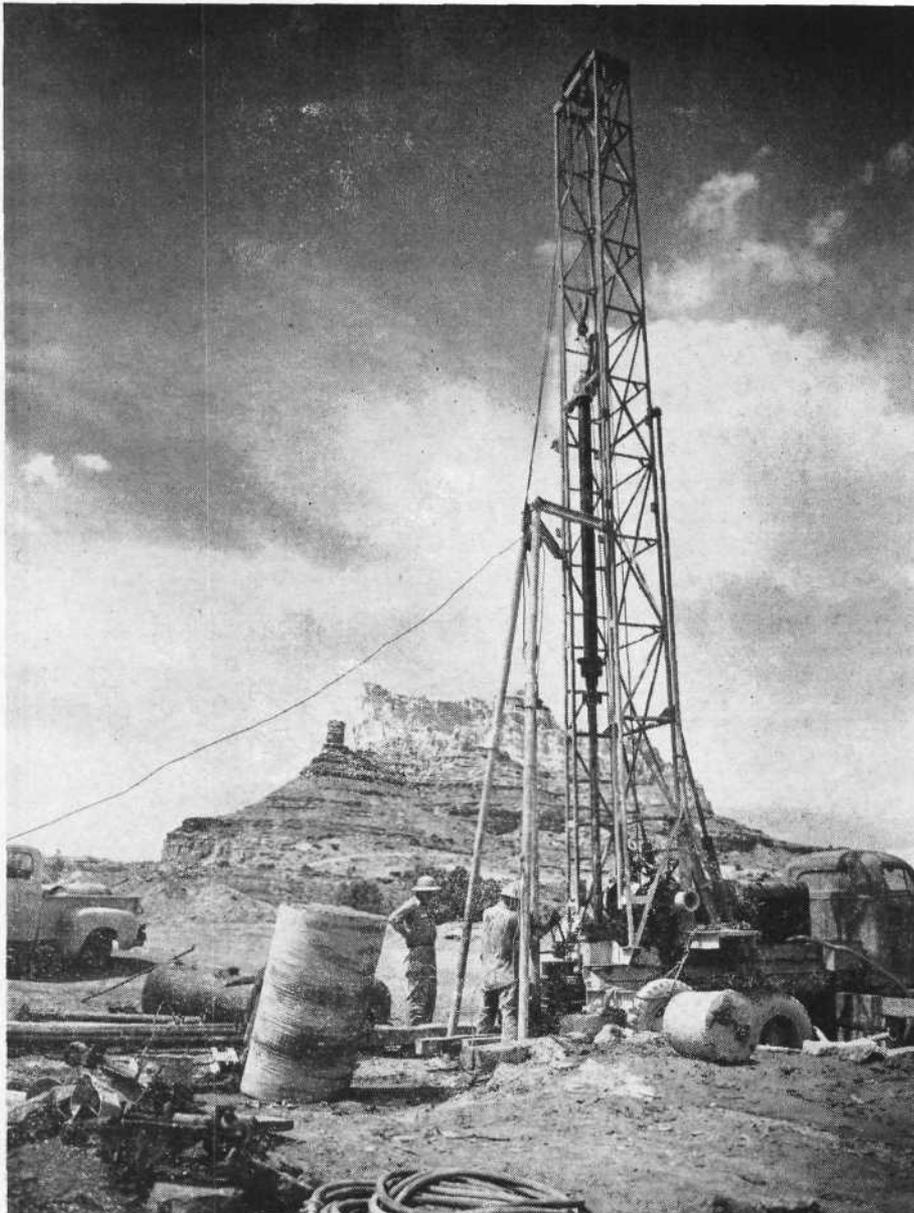
One man in several hundred locates a strike. Those who know, say you shouldn't throw up everything at home and set out with a geiger counter and pick just because it sounds easy. It isn't! There is much hard work between the first step into the wastelands and the first payoff in dollars.

In spite of all the words of warning, Pete wasn't discouraged. He headed for Atomic Energy Commission Operation Office in Grand Junction. There he was given information on mining

and exploration techniques and maps of likely ore-bearing areas. He sent for a pocket handbook called *Prospecting for Uranium* and got a copy of *The Uranium and Fluorescent Minerals* for additional information.

The experts Pete spoke to around town all gave him the same three bits of advice for success. First, know what uranium minerals look like. Second, look in the most likely places for them. Third, be on the lookout for guiding clues. However, everyone added that uranium is where you find it and may turn up where you least expect it.

Pete decided to learn as much as he could about the wonder mineral before starting out. He read that before 1939 uranium was an almost useless by-product of radium. That's no longer true. Radium is now a by-product in the production of uranium. There are four main types of deposits where one might find uranium: vein deposits, deposits in sedimentary rocks, placer and pegmatite deposits. The best known



Drilling rig with three-foot cores in foreground composed in this case of layers of sandstone rock. This rig drills down into the ore-body to provide shaft for mining operations.

sources of uranium in the U. S. are located in Colorado and Utah.

Of the ten dozen mineral species which yield uranium, carnotite is the most important. The element U-235 (uranium) never occurs in its pure form in nature. It is always combined with other substances to form a mineral.

An article in *Science Digest* said that the basis for the big boom in uranium production actually was laid about 150 million years ago. Geologists figure that the flat-topped mesas which rise sharply from the tableland were once the bottom of a gigantic inland sea; fossilized bones of dinosaurs have been found buried in the rock formations. When the seas receded they left uranium-bearing sands, chiefly carnotite. In addition, uranium

in which the geologists call primary minerals bubbled up in stream deep within the earth. Pitchblende is one of those primary minerals.

Carnotite in bright-hued deposits is a secondary uranium mineral formed by weathering and chemical change from original deposits of primary uranium minerals, dissolved by ground water and scattered afar. Much richer are deposits of primary uranium minerals like Canada's and Africa's black pitchblende. Some have been found in this country, but no appreciable deposits so far.

There are three important names to remember in thinking of uranium minerals in North America; pitchblende is the richest and is found mostly in Canada and occasionally in Colorado silver mines; uraninite is next richest and

is what Charlie Steen found at the Big Indian Lode claim; and finally carnotite, which is almost everywhere in the U. S. and especially in the Colorado Plateau.

The abundance of uranium doesn't indicate its availability. Uranium isn't found in rich bodies. A low-grade ore yields 10 grams per ton of granite. If that 10 grams is utilized efficiently, the power resulting would equal more than 40 tons of coal.

Generally uranium minerals are found as small isolated pockets or veins. One exception is the unusual concentration of rich (15-20%) oxide found in petrified wood on the Plateau. A mineralized tree is considered a real find because in some instances the geological processes have replaced the original vegetable matter with uranium bearing ores.

The four greatest uranium fields in the world are the Belgian Congo, Colorado Plateau, Czechoslovakia, and the Great Bear Lake area in Canada's Northwest Territories. Over two-thirds of the known deposits are in North America and Africa, though it is possible strikes could be made almost anywhere.

In the past few years many isolated deposits of carnotite have been found in Colorado and Utah. They vary in size and extent and are generally referred to as pockets. They are usually worked by small independent operators, often alone. When the ore is extracted, it is sent by truck to one of the ore treatment plants in the area. These plants are operated by private corporations and they pay for the ore on a basis of uranium and vanadium content as established by the AEC. Prospecting on an independent basis is encouraged by the AEC.

The Colorado Plateau area ranges about 100 miles westward into Utah and 30 miles eastward into Colorado from the state line. Nowhere is it more than 50 miles wide. It is a desert area fanning out from the point where Colorado, Utah, Arizona and New Mexico come together.

Since 1948 the Plateau has become the second largest ore-producing area in the world (topped only by Belgian Congo). Tonnage has been doubled every 18 months as a result of the encouragement given by the AEC. Most ore deposits are widely scattered through the sandstone in small pockets of a few hundred tons. There are a few exceptions — mines which may yield 100,000 tons or more of carnotite. One such mine may yield the owner a gross of \$3,000,000 or more.

The uncertainty is in the fact that uranium ore isn't everywhere on the plateau. A section of land next to a

major strike may be utterly barren, and often is.

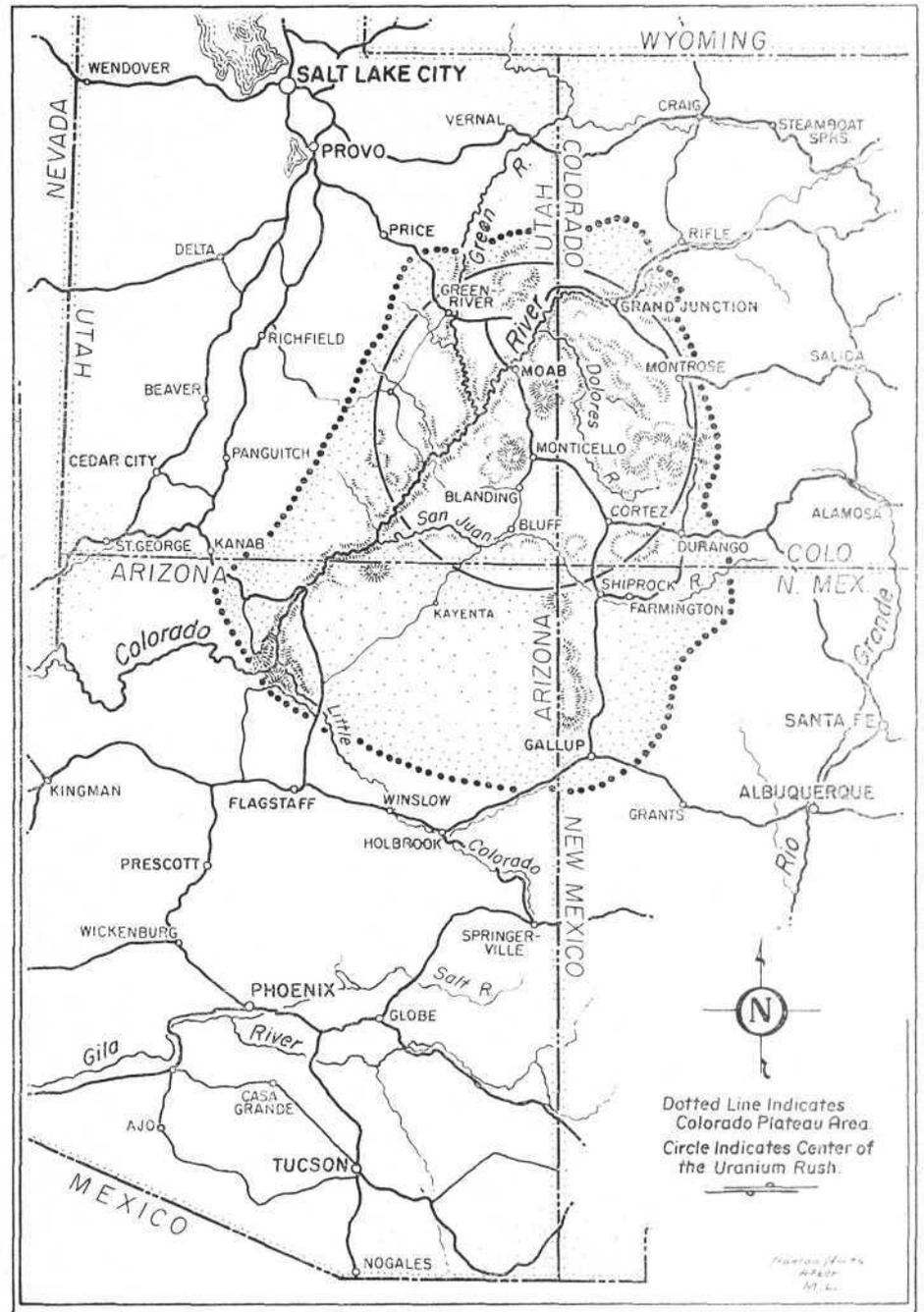
The Plateau has few roads and they are narrow, tortuous and unpaved. It's a trackless waste and gives little solace to the determined prospector hacking away at its rocks. Much of the Plateau is in the public domain; that is, owned by the Federal Government, but open for prospecting by anyone who wants to search for minerals. A valid claim based upon the presence of uranium minerals can be staked.

The AEC suggests that the most successful prospecting for uranium is carried on in areas where (1) uranium has been found before, (2) the geologic conditions are similar to those where uranium has been found before, or (3) other metals have been found (especially lead, zinc, cobalt, copper, silver, nickel, bismuth, and vanadium.)

When Pete had read all about the geological aspect of uranium prospecting, he was ready to find out what equipment he needed to do the best job. He had gone to a mineral dealer in Grand Junction who sold him samples of uranium minerals to study. A visit to a museum taught him about other species. He talked with men who had gone to mobile schools set up by several Western states. The schools toured the uranium territory giving lectures and demonstrations on how to work a geiger counter and how to recognize uranium ores. He learned that if uranium minerals have outcropped, they are easily spotted because of their bright green, yellow or black color. If they haven't outcropped, you must study the geological conditions carefully.

When he felt he had picked up enough information, Pete was ready to buy prospecting equipment. He had several alternatives. He automatically eliminated rim flying-airborne prospecting. This is the most modern way to find uranium. You travel in a low-flying plane close to the canyon walls and register radioactivity on an instrument attached to the back of the pilot's seat. This method was started by the AEC who use it to draw maps indicating likely areas for prospectors. These maps are posted in the AEC offices for the public to examine on the 15th of each month.

Pete decided to start with just a geiger counter, eliminating an ultraviolet lamp or photographic methods of exploration. He discovered there are many types of counters available to prospectors. A field type is battery operated and in an inexpensive model may even run on flashlight batteries. They cost from \$25 to \$300, depending upon the accessories. A field unit



may weigh less than five pounds including the battery.

A geiger counter registers radioactivity by a series of clicks made as the radiation passes through the counter tube. The rate of these clicks depends upon the intensity of activity of the radiation. The geiger counter will not detect low grade uranium deposits deep in the ground with no outcrop near the surface. Core drilling is necessary to make such detection. But rich ore, even though located deep beneath the ground will react on the counter.

A geiger counter can be taken into the field and used for routine tests of suspect areas. However, it is most effective if kept in a given spot and samples of the material brought in and tested in a locality where the background count has been made previ-

ously. The AEC has warned that a most important thing to remember in using a geiger counter is to allow for the background count. This is the count which the geiger counter always registers no matter where it is because of cosmic rays and random gamma radiation. The background count must always be subtracted first before a reading is of any significance. Prospectors are cautioned not to cover ground too rapidly in general reconnaissance because the counter can by-pass narrow veins. If you find the radioactivity of a given rock four times the background count, a sample should be taken.

After finally purchasing his equipment, Pete was almost ready to head for the hills. He had one more thing to check—the state and Federal laws governing uranium claims. He learned

that the AEC controls all uranium discoveries—for a good reason. The political struggles of the world have created a race for atomic supremacy. The result is that every major nation has nationalized its fissionable metals (uranium and thorium) industry and shrouded production and related activities in secrecy.

All laws (federal, state and local) and regulations which apply to metallic ores generally also apply to uranium ores. They are also subject to the provisions of the Atomic Energy Act, which applies mostly to the sale or transfer of the ores once they are mined. The government encourages rather than restricts independent prospecting, mining, processing and sales of uranium. No government license is required to prospect for or mine uranium on public or private lands. But there are exceptions to this rule—Indian reservations, National parks, etc.

The Atomic Energy Act gives the government the right to enter and remove uranium ores from public lands. The AEC must pay the locator for damages or injury caused, but not for the ore removed. This protects the government if a claimholder refuses to work a deposit.

The rush for uranium started early in 1953 and today it is estimated between four and five thousand people are prospecting for the silvery-white metal in 120,000 square miles of the Colorado Plateau. No one knows just what the commercial potential of the metal is, but the rush is on because of government subsidy. The AEC has guaranteed a future market by agreeing to three things: (1) pay a minimum price of \$3 per ton of ore plus generous allowances and premiums until 1962, (2) pay an initial-production bonus until 1957, (3) buy at least 1000 tons of ore per year from every miner until 1962. Thus the government has insured stable operation for the industry for at least eight more years.

If the assay of your sample shows you may have found pay uranium and you request it, the AEC will send a field representative to examine your property. If a rich vein has been struck in a spot where no roads exist, the government will build a road to the mine to help get out the ore. In addition to these aids, a bonus of \$10,000 is given for the discovery of a new deposit and the production of the first 20 short tons of uranium ores or mechanical concentrate assaying 20 per cent or more uranium oxide.

Pete set out on the trail determined to make a strike. He drove his jeep as far as possible into the rugged country

he had chosen, then got out and walked through miles of wilderness. As luck would have it, he hit a spot where the counter "went crazy." After testing the surrounding area and recording the counter results, he staked his claim. He paced out an area 600x1500 feet and piled small stone cairns at the four corners of the claim. He hurried back to the nearest county courthouse and recorded his claim. He was told that a person may file as many as 100 such claims with a rental fee of \$10 each to the Federal Government. The prospector leases the land from the AEC and must spend at least \$100 a year developing his area.

Pete sent a 10 pound sample of his ore with complete information on his claim location and its character to the U.S. AEC, P.O. Box 30, Ansonia Station, New York 23, New York., Attention: Division of Raw Materials. They would tell him the value of his ore and what to do next. Pete could sell his ore to Uncle Sam or he could get a license to sell it to any AEC licensed private company or person.

When last seen, Pete was deciding how to cash in on his find. The most common way for the ordinary prospector to do it is by an outright sale of a promising claim to a private company. He should get \$5000 or more for such a claim. If Pete should decide to work the mine himself, he might get another man as a helper and

eke out a small fortune on a shoe-string investment — an air compressor and drill, picks and shovels, a one-ton car or just a wheelbarrow. Should the vein show exceptional promise Pete could form a corporation and issue so called "penny stocks" to raise the money needed to explore and develop his claim.

Once a strike is made, there are many alternatives open to the prospector for developing his claim. Some day we'll hear more of Pete and his mine. Perhaps his story will be another of those fabulous ones about the amateur rockhounds who became millionaire prospectors of the Uranium Age!

WHERE TO GET FURTHER INFORMATION ON URANIUM PROSPECTING

Prospecting for Uranium, U.S. Atomic Energy Commission and U.S. Geological Survey, Superintendent of Documents, Washington 25, D.C., 1951, 55 cents.

Dake, H. C. *The Uranium and Fluorescent Minerals*, The Mineralogist Publishing Company, Portland, Oregon, 1953, \$2.00.

Nininger, Robert D. *Minerals for Atomic Energy*, D. Van Nostrand Co., Inc., 1954, New York, \$7.50.

AEC Operations Office, Grand Junction, Colorado.

Uranium Ore Producers Association (champions the cause of small operators).

U.S. Atomic Energy Commission, Washington, D.C., (all sorts of information available).

THE *Desert* MAGAZINE CLOSE-UPS

Lelande Quick, editor of *Lapidary Journal* and author of *Desert's* Amateur Gem Cutter page since August, 1942, has moved his publishing operation to Del Mar, California. Lelande will continue to write his page for *Desert Magazine* and will maintain a residence in Palm Desert.

It is his plan to construct fine new publishing offices to provide for continued expansion of his popular Journal. In the meantime he is carrying on his editorial and business operations in premises purchased for immediate use. He moved in December.

Del Mar is only a little over two hours' drive from Palm Desert and Lelande expects to return to his desert home for recreation whenever time is available. His desire to have a publishing plant of his own and commute between desert and seashore as the seasons change is the fulfillment of a dream that is shared by many desert dwellers.

Edith M. Hockey, this month's Life on the Desert author was born in Cardiff, Wales, attending a private school not far from the famous Banbury Cross. She came to America in 1920 as a war bride of World War I and has one daughter who lives outside of Pittsburgh, Pennsylvania, and has two grandchildren.

Her husband, Chet, is employed at the Main Post Office in Tucson, where they are now living. Their hobbies are prospecting trips and mineralogy. Edith is particularly enthusiastic over fluorescent rocks and crystals and they both read everything they can get hold of on lost mines and buried treasure. Some day they hope to try for Pegleg's gold.

Bea Marsh, author of the humorous story "The Mule I'll Never Forget" in this issue of *Desert Magazine* didn't have to learn to love the desert for she was born on the desert on a ranch in New Mexico, the closest town being Tucumcari. That was 46 years ago.

She went to school at West Texas College in Canyon, Texas and for a graduation present was given a trip to California in 1929 and has lived there ever since. She resides in Lomita, California.

The Mule I'll Never Forget



By BEA MARSH

RIDE A MULE, if you want to see that geological marvel, the Grand Canyon, at best advantage. I rode a mule from the south rim of the Grand Canyon down to the rushing Colorado River. As the years slip away from me, I may forget the beautiful colors, the weird-shaped cones, and the awful hugeness of the canyon, but the mule I rode—Never, in a million years.

My first introduction to George, my mule, was while my husband and I were making arrangements for our trip. There were 10 people in our tourist group. The head wrangler introduced us to our guide, a lanky individual whose name was Tex. Tex told us something about the history and training of these mules that take the thousands of irresponsible tourists down the canyon trails each year. They are trained from six months to two years, depending on the IQ of the individual mule. They work in pack trains carrying supplies from the rim to Phantom Ranch at the bottom of the canyon. When they become trustworthy enough, they become guide mules. Which means that guides take over and ride and train them further. Since 1907 mules have carried passengers down the Canyon without one fatal accident. Each mule has his private stall with his name written on it. Tex showed us the mules that were to take us down the trail. His mouth crinkled in a one-sided smile as he told us we could choose our own mule. He was right in thinking we didn't know one mule from another.

My husband wanted to let the guide choose our mules, but I wanted to pick my own—just to show Tex I could. Then I saw George. Now George is a dignified sedate name for mule or human. And George, the long-eared critter I chose for my mount looked as gentle as a well-fed kitten. When I was a child, I had a pony and I had ridden a horse occasionally during the years, but never had I been on a mule.

When I climbed up on George's back (seemed like I was 10 feet in the air) and looked down from the 7000 foot rim to the narrow twisting trail, I was ready to admit I was scared stiff, and walk down.

Now we were on the trail. While everyone was gazing up and down and exclaiming about the gorgeous colors and odd-shaped spires, I was worrying about switch-backs and George. That

mule, it seemed to me, had changed since I had so laborously climbed upon his back. I began to wonder just why I had thought he looked so gentle. He kept watching me over his shoulder and once he came so close to an out-jutting rock that my leg scraped against it. But when he hung his head over a 3000-foot drop, my heart jumped into my throat.

"This Blankety Blank is trying to kill me," I said to my husband. "Anyway I'm changing his name. He's not a George; he has a split personality. As of now, his name is 'Schizo'—he has schizophrenia."

I'm like most women, I talk a lot and no one listens. My husband finally became aware that I was still muttering and offered to change mounts with me. But S.O.G. (stubborn old girl—that's me) gritted her teeth and muttered, "I'll ride him if it kills me." I was reasonably sure it would too. In fact I was so sure that I was already feeling sorry for Tex for breaking his all-time record—"no fatalities."

A little later Tex called for a rest, and George—alias Schizo—took him literally at his word. He stopped dead in his tracks while I kept going. If Tex (how did he know?) hadn't been there to catch me, I would have broken my nose. I don't think they, Tex or my husband, ever realized how really afraid I was.

My husband kept yelling, "Look up there! See that rock! Isn't that beautiful! Look at the colors!"

I shut him up with, "If there is scenery here, just leave me out of it. There is only one place in the world and that is a mule's back. I'm on it and would like to stay there—so don't talk to me."

The trail kept going down, getting steeper all the time. I was busy enough, with Schizo scraping the skin off my legs and trying to dump me over the rim. He had a couple more tricks too—one was trotting very fast when we came to a steep place so that I nearly bounced off his back. Once while we were resting, I was standing in front of him—was afraid to get behind him—he butted me like a billy-goat. Everyone thought he was just playful; I thought he was trying to get even with all tourists. Finally we were at the bottom. I quite shaking long enough to say, "hmm, that wasn't so bad."

We had arranged to stay a few days in the bottom of the canyon at Phantom Ranch. This part of the trip was perfect. I put the thought of the return

trip out of my mind and enjoyed the sight-seeing and exploring. What a different world! That scenery made up for the trip down. Frankly, unless one is a master of all the beautiful words, I don't think it fair to try to describe the canyon. For one thing, it is next to impossible to describe. If you've been there, you know what I mean. If you haven't, Ah! ride a mule! You will have had the experience of seeing grandeur that is almost supernatural. All I can say is, it's wild, dramatic, and so awful big."

I didn't even dream of Schizo our last night. The next morning, it wasn't so bad heading up the trail for the top. For one thing, Schizo couldn't travel so fast and then maybe I had gotten on to all his cute tricks. It took us a long time to reach the top. We went very slowly. Tex says a mule may be ruined if he is forced to travel too fast on the up-trail.

We were all glad when we came out on top, though everyone complained about being stiff and sore. I wasn't any dirtier than the others, but I had more skinned places. When Tex finally dragged me off that old mule, I knew why cowboys walk with their legs bowed! We were anxious to get away to a hot bath and a big meal. It was hard to break away. On a trip like that, away from city noise and tension, you make friends quickly. Many of my truest friends are people I met in some far-away place.

Tex came over and shook hands with us. When he came to me, his smile crinkled as he asked me, "don't you want to say 'goodbye' to your friend George, pardon me, Schizo I mean?"

Well why not? I was safe on solid ground; I could afford to be magnanimous for I knew one fact—no one ever in the wide world would get me on a mule again.

I walked up to Schizo; he looked so tired, listless and forlorn; poor old George, what a boring life, up and down year after year. (Some mules live to be 25 to 35 years old.) I raised my hand to stroke his dusty forehead. Wham! he whizzed by me, missed my head by inches. My eyes, nose and mouth were filled with dirt. So while the others waved "goodbye" to Tex and turned for a last glance at beautiful Grand Canyon, I dug sand out of my eyes and nose—a parting gift from George, alias Schizo, the mule I'll never forget!



Looking southeast along Camino del Diablo from above the watering place of Tinajas Altas. The Cabeza Prieta Range is in the background and Cabeza Prieta Mountain, focal point of many Lost Jabonero hunts, is the peak (center) with the triangular black cap.

Waybill to the Lost Jabonero

Many have searched the southern Arizona mountains for the Lost Jabonero gold—and some have lost their lives in the quest. But the legend persists, and it is possible that somewhere in the jagged peaks north of the Sonora border one may yet re-discover the place where rich gold ore is scattered on the hillside.

By HAROLD O. WEIGHT
Photographs by the author
Map by Norton Allen

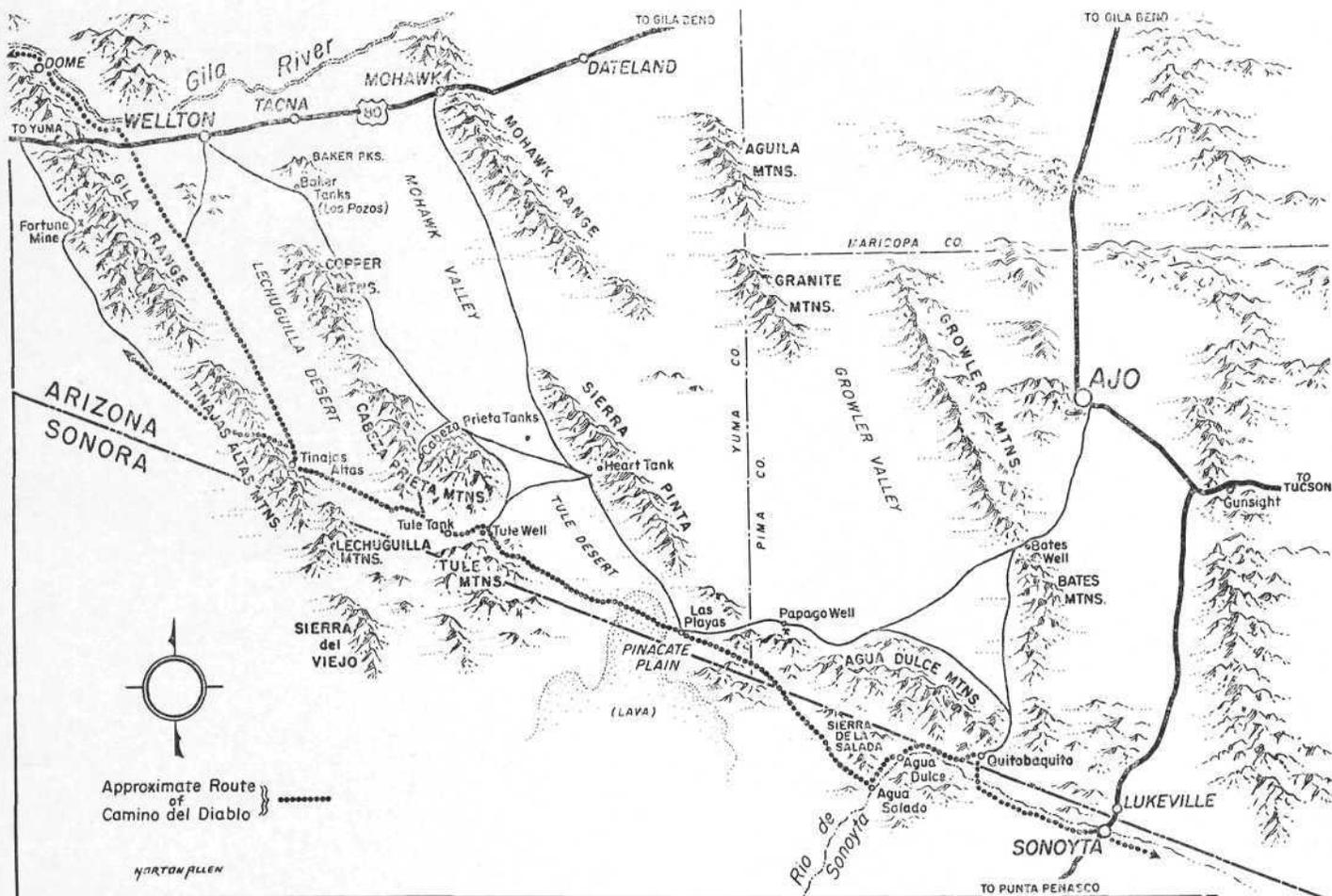


Seventy-five year old Jose Alvarado of Yuma—grandson of Governor Juan Bautista Alvarado of Alta California. He searched for the Lost Jabonero Gold more than 40 years ago.

AS THE long shadows of a late afternoon sun swept across the harsh landscape of northwestern Sonora, more than a century ago, three mounted Mexicans leading pack-mules reached Agua Salada and camped for the night. From the mesa beyond the riverbed watering place one of them pointed northwest, where the sandy thread of El Camino del Diablo wound through the most deadly desert in the world, and spoke eagerly.

"See those pinto mountains up there? That's where I found the gold! Scattered down the hillside! We will start early, go there and load the mules with ore, and be back here by evening."

Excitement mounted as the three stared through the growing darkness at the jagged peaks where fortune waited. To one the promise of the morrow was almost beyond belief. The others were prospectors and miners, just back from Gold Rush California and accustomed to the thought of sudden wealth—but he was a tradesman. He was *el jabonero*—the soapmaker—of Sonoita. When the two prospectors first came to the little village with their wonderful ore, he had been the one



with the money they needed for equipment and supplies. Now he was their partner — and tomorrow they would reach the golden ledge!

Agua Salada, where the alkaline underground flow of the Sonoita touched the surface, has watered explorer, adventurer, priest and prospector since Spain first came to Pimeria Alta. Jesuit Padre Kino stopped there 250 years ago. After him came the Franciscan Garces on his missionary wanderings, and Captain De Anza blazing a trail to Alta California, and the soldier Pedro Fages marching to quell a Yuma uprising. Thousands of Sonorans in the California Gold Rush paused here.

From this watering place, less than ten miles south of the present international boundary and about 25 miles westerly from Sonoita, the old Caborca-Yuma trail angled abruptly northwest around the shoulder of Sierra de la Salada. Here was the real beginning of the dread Devil's Highway. From here to the Gila River stretched a hundred burning miles where the only water supplies were the doubtful resources of *charcos* scooped in clay basins, *pozitos* dug in sand washes, and the *tinajas* nature had eroded in granite mountains.

There were other grim dangers on

the trail. That night, a party of desert Indians fell upon the sleeping Mexicans at Agua Salada. The prospectors were killed, and El Jabonero left for dead. Long afterward, members of the Arenenos—Sand Papagos—admitted the massacre. They may well have been responsible. The Mexicans had passed the Areneno *rancheria* at Quitobaquito a few hours before, and the mules, horses and supplies must have tempted the desert tribesmen.

Sometime before dawn, El Jabonero regained consciousness. Though so severely wounded about the head that part of his sight was gone and he later became entirely blind, he reached Sonoita with his tragic story. There also he told about the wonderful golden ledge. The story soon spread throughout the Southwest. Everywhere the ledge became known as the Lost Jabonero Mine although El Jabonero almost certainly never saw it, and was never able to guide anyone to it.

Lost mine legends more than other folk tales suffer alteration and enrichment through decades and generations of retelling. Was the Lost Jabonero found in 1830 or in the 1850s? Were its finders coming from California or just prospecting? Did they work their discovery, returning several times to it, or did only one of them ever see it,

and that briefly? Did El Jabonero reach the ledge before the Indians attacked, or did he only see the golden hills from afar? *Quien sabe?* The tellers of tales disagree.

My closest approach to the original so far is through the memory of Jose Alvarado of Yuma. Don Jose—grandson of that Juan Bautista Alvarado who was governor of Alta California between 1836 and 1842 — searched twice for the Jabonero gold, more than 40 years ago. His companion and guide was an old man whose father knew El Jabonero, heard the story from his lips, and had moved to Yuma to search for the lost ledge.

"The two partners who found that mine were returning from California to Sonora four or five years after the California Gold Rush," Don Jose told me. "From Tinajas Altas they went to Tule Tank. From Tule Tank they took the old trail to Sonoita. They followed it until late at night and made a dry camp. They hobbled their horses so they could graze but not get too far away.

"The partners were up before dawn. 'Go get the horses,' one told the other, 'while I make coffee. We will try to reach Salada before noon, for water.' That was Agua Salada on the Sonoita



Looking across Las Playas to the Sierra Pinta. The Camino del Diablo crosses the light area, center, and here an old road, which may be the key to the Lost Jabonero, forks to the right from it. Meaning of the rock symbol, foreground, which dates into the last century and possibly back to Spanish times, has never been determined.

below Agua Dulce. I know the place. "The man found one horse, but the other had gotten loose from its hobble. The prospector rode back to camp on the horse he had found.

"My horse got loose," he told his compadre. "After breakfast we'll load

my saddle and blanket and everything on yours, and you go on to Salada. I must go back and track my horse. I'll find him and catch you."

"He followed the tracks which were fresh and easy to see in the early light. Just when the sun was up he saw his

horse on the side of a little hill, standing there asleep. After he caught him he rode to the top of a big hill there to try to see his partner on the trail. Coming back down this hill he saw ore scattered on the slope. Some of it was shining in the morning sun. He got off and picked up a piece.

"That rock, he said, was pretty near all gold. It was full of gold. It was more gold than rock.

"He wrapped three or four pieces of ore in his handkerchief, mounted his horse and hit for the trail. He caught up with his partner just before Agua Salada and showed him the rock. By golly, they were both nearly crazy about it. But they didn't have much water or food. They went on and at Sonoita they smelted that rock. Two-thirds gold, they claim. El Jabonero was there, and he made a contract with them. They got horses and pack mules and set out that day for a load of ore from that ledge. At Agua Salada the Papagos came. They call it the Jabonero Mine because he was the only one left alive. But he never saw it. He never knew where it was—just what the man who found it told him."

I agree with Jose Alvarado. If El Jabonero had reached the golden ledge, his directions to find it would have been more definite. But other stories place the soapmaker and the two prospectors at the base of the three peaks where the ledge was located when they were attacked. The principal account supporting this belief is a letter supposed to have been written by C. O. Bustamente.

Bustamente asserts the strike was made in 1830 by two Sonoran prospectors who picked up in a few hours all the native gold they could carry and returned to their homes in Hermosillo and Alamos. One died, but about 1836 the other returned to the ledge taking El Jabonero and another man along. The ledge was located on the central peak of a group of three—called the *Tinajera* by the prospector — which stood alone on open ground. *Tinajera* means "waterpot-holder." But the *tinajas* — waterpots — of the Spanish Southwest are natural water tanks weathered into rock, usually granite, and the *Tinajera* of the golden ledge probably also holds pothole watering places.

It was at the foot of these peaks, according to Senor Bustamente, that Wild Papagos killed all but the soapmaker. About 1849, by the same account, El Jabonero emigrated to Los Angeles, California, and there spent the rest of a long life.

Bustamente as a boy knew El Jabonero in Los Angeles. On September

27, 1878, the old soapmaker, then completely blind, dictated to him one of the strangest wills ever written. It was a waybill to the Lost Jabonero Gold. When it had been taken down in shorthand, "so it could not be read by anyone," El Jabonero gave it to young Bustamente's father.

A copy of that remarkable document—the authenticity of which has never been established—was given to me some years ago by Arizonan Benjamin Byrd, who had attempted to trace it out. With grammar intact and only certain spellings corrected it follows:

"First Call: Leave Quitobaquito following the old road leading to Tinajas Altas (High Tanks).

"Second Call: Thence to the end (punta) of Pinto Mountains.

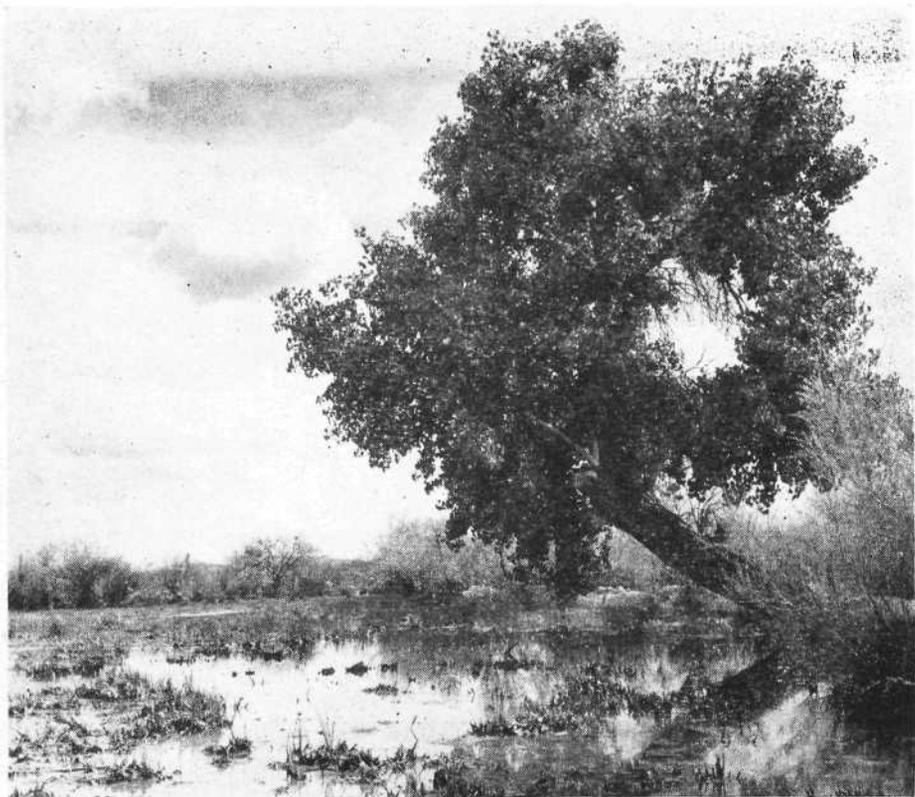
"Third Call: From Pinto Mountains go to Cabeza Prieta Mountain.

"Fourth Call: At Cabeza Prieta there is a well of water.

"Fifth Call: After leaving Quitobaquito following this imaginary line pass or cross an arroyo (gulch) at a place where the road forks out for the first time, one leading to Tinajas Altas and the other to Mohawk or the Gila River.

"Sixth Call: By standing at the forks of the road to the right three peaks standing alone are seen and in direction to said peaks the middle one is the mine on the opposite side of it.

"Seventh Call: From the said forks in the direction said peaks down in the arroyo (gulch) there is a big flat



The oasis of Quitobaquito on the Sonora-Arizona border. Quitobaquito is the initial point in El Jabonero's directions for finding the golden ledge.

rock in the form of a table with crow bars pointing to the peaks of the said mine.

"Eighth Call: We were killed at the foot of said peaks of said mine. The little peaks cannot be seen from no

other place but only from the fork of the old road leading from Quitobaquito to Tinajas Altas. On the other side of the middle peak there is water and there is where the gold is.

"Ninth Call: You must have great care in locating the fork of the roads because that is the only point from where the peaks can be seen and cannot be seen from no other place.

"Tenth Call: In order for you to make sure, find from the old folks at Sonoita which is the old road leading from Quitobaquito to Tinajas Altas. It must be blotted out after so many years.

"Eleventh Call: And all I ask is that if you find the mine you help my daughter. This is my last will and testament, wherefore I witnesseth with my signature.

"EL JABONERO"

El Jabonero died about eight years after he made his will when 84 years old, and his daughter followed him about 1901. The elder Bustamente made no effort to use the waybill, and he passed on in 1907. His son, urged by a man who financed the trip and went with him, used the old soapmaker's directions on one fruitless search for the gold in 1912. And since then El Jabonero's will has been the hope and despair of a multitude of lost mine seekers.

To one familiar with Camino del Diablo and the Sonora-Arizona frontier, El Jabonero's directions evidence

Camino del Diablo, looking from the southeast toward Tule and Cabeza Prieta Mountains, the area where the long search for the Jabonero ledge has centered.



a personal knowledge of the country. But somewhere in the waybill or in the way we attempt to apply its guides there must be a grievous error. Perhaps the old soapmaker's memories were confused. More likely the boy, putting names and geography with which he was totally unfamiliar into shorthand and transcribing them many years afterward, made mistakes. Quite possibly place names—and especially the range called the Pinto Mountains—may have changed since El Jabonero's time.

The first three points can be followed out. One can by small jeep or on horseback go almost directly from Quitobaquito to the point of the Sierra Pinta and then to Cabeza Prieta—Blackhead—Mountain. But this is not the route of the old Tinajas Altas road which is specified. It led from Quitobaquito to Agua Salada to Las Playas, across the edge of the Pinacate plain, through the Tule Desert to Tule Well and Tule Tank, then around the shoulder of the Cabeza Prieta Mountains and across the Lechuguilla Desert to Tinajas Altas.

There is no well of water (Call Four) at Cabeza Prieta Mountain, but the famous natural tanks of Cabeza Prieta are close to the peak. And the only permanent dug well on the whole Camino—Tule Well—is only a few miles south of Cabeza Prieta Mountain. Tule was a landmark long before El Jabonero wrote his will, having been dug in the early '60s by a Mexican who lived there with his family and sold water to prospectors heading for the Colorado River placers. So many died in this rush that the Camino became almost deserted and the water merchant abandoned his enterprise.

But if El Jabonero meant Tule Well, why didn't he mention the Mexican's adobe there, a landmark which remains identifiable to the present? If Cabeza Prieta Mountain hides the golden ledge, why did he so stress the first forking from the Tinajas Altas road?

That fork is the key in the Jabonero's waybill. Only at that fork can the peaks be seen. There is little question as to the first and earliest fork of importance along the Camino above Agua Salada. It branched from the main trail at the clay and mesquite thicket sink called Las Playas in which, after rains, there were numbers of mud holes which might be called wells of water. The fork was located close to the present international boundary, and the branch road went north by Cabeza Prieta Tanks and the east side of those mountains to the Gila River. According to Lt. Nathaniel Michler of the first boundary survey party, who wrote about it in 1855, it was known as the Cabeza Prieta Trail.

Jose Alvarado searched for the Jabonero when Mexican revolutionists were active not far from Quitobaquito.

"I went twice with the old man," he remembers. "Once we got as far as the line north of Agua Salada. I climbed on the border monument there and looked straight west. I saw those pinto mountains from there, and I was sure they were north of the line, in the United States. But the old man was afraid we might cross into Mexico and the revolutionists would get him. He wouldn't go there."

Jose Alvarado is convinced that if the revolution had not been on, he and the old man would have found the gold. But it seems there always is something which blocks rediscovery of the Lost Jabonero. Besides the confusing directions which are the only guide to it, the ledge's most potent—

and dangerous—guardian is the deadly desert which surrounds it. Hundreds have died along the Camino del Diablo—and some of them have been searching for the Lost Jabonero. Writing about the boundary re-survey in 1893, Capt. D. D. Gaillard said: "The desert still claims its victims and not a month passes but some inexperienced prospector yields up his life in the search for the fabled mines of the desert—sirens which have lured scores of victims to their deaths."

He was speaking of the Camino, and deaths along it did not end with the '90s. Much of its deserts can still be traversed only by horse or on foot. Many of its trails are passable only to four-wheel drives. In the fall, winter and early spring it is a beautiful country, reasonably safe for those who are prepared for any emergency. In the summer it is deadly.

TRUE OR FALSE

Here's more brain exercise for the quiz fans. To get a high score in this test it is necessary

to know something about the botany, mineralogy, geography and lore of the desert country. If you want to increase your knowledge of these subjects you'll find this is an excellent lesson. Twelve to 15 is a fair score, 16 to 18 is good, 18 or over is excellent. The answers are on page 28.

- 1—The stinger of a scorpion is in the end of its tail. True..... False.....
- 2—Rattlesnakes will not cross a rope of woven horsehair. True..... False.....
- 3—The Salt River Valley of Arizona is served by water from Elephant Butte dam. True..... False.....
- 4—In locating a mining claim it is necessary to place a location notice at all four corners. True..... False.....
- 5—First known white explorer to see the Colorado River was Melchior Diaz. True..... False.....
- 6—The Chuckawalla lizard is a venomous reptile. True..... False.....
- 7—U.S. Highway 66 crosses the Colorado River at Topoc. True..... False.....
- 8—The Indians at Taos, New Mexico, live in wigwams. True..... False.....
- 9—The Santa Fe Trail was blazed by Coronado and his Spanish explorers. True..... False.....
- 10—Natural Bridges National Monument is in Utah. True..... False.....
- 11—The San Francisco peaks of Arizona may be seen from Tucson. True..... False.....
- 12—Furnace Creek Inn is located in Death Valley. True..... False.....
- 13—Herbert Bolton's *Rim of Christendom* is the story of the missionary work of Father Kino. True..... False.....
- 14—Coniferous trees grow on the rim of Grand Canyon. True..... False.....
- 15—The blossoms of the Smoke Tree are yellow. True..... False.....
- 16—Asbestos grows on certain species of desert trees. True..... False.....
- 17—Wild Rose Canyon is in the Panamint Mountains of California. True..... False.....
- 18—The Imperial Valley of California is irrigated with water from the Colorado River. True..... False.....
- 19—The Black Rock Desert is in Nevada. True..... False.....
- 20—Coyotes are vegetarians. True..... False.....



To the collector everything is possible. A blown up and hand tinted photograph is a handsome adornment to any wall. A few deft touches of a paint brush converts a conastoga axle hub into a holder for fire place implements and an old railroad lantern into a patio light. The lapidarist turns rocks into such things as jasper book ends, jade pins and turquoise earrings. Cut bottles and crucibles make unusual vases. Old time Nevadans give nostalgic sighs over the pen and pencil holder which is a diagonal cut from the track of the old Virginia Truckee Railroad. A gilded spike from the same line is a paper weight, as is the piece of ore track from an abandoned mine. Necks of broken desert bottles become salt and pepper shakers.

Hobbies for Health

By JANE ATWATER

Photographs by Adrian Atwater

THE DESERT holds its own particular spell for the people of the southwest, and Nevadans are no exception. And the desert offers special hobbies that are possible only for the desert dwellers.

The subject came up at our home the other night while Adrian was painting names on bricks. Our new barbecue will be built entirely of bricks from

The desert country has its own special hobbies. There is almost no limit to the possibilities in a land where the skies are nearly always clear, and the by-ways lead to strange and interesting places where traffic is never a problem. Here are some suggestions for those who may wonder what Nevada dwellers do for recreation.

old ghost towns—one from each. Some of the towns are still alive and have dignified themselves with new names, but on our bricks, Yerrington will be known as "Pizen Switch," named for a particularly bad brand of whisky sold there when it was a rough little town

with its share of frontier characters.

Leetesville is the modern name for Rag Town where the pioneers encountered the Carson River after their hot and dreary trek across the Forty-Mile Desert. The women of the caravans did their accumulated laundry in the

Sam and Dottie Peters are intent upon their search for lost mines. They have so many trips planned ahead that it will be a matter of years before they are all accomplished.

river and hung the garments to dry on the sage brush of the surrounding desert: hence, the name, "Rag Town."

Rhyolite, Bullfrog, Candalaria and Jumbo, all thriving communities at one time and now in the process of being reclaimed by the desert, are a few of the interesting names to grace our backyard fireplace.

An old railroad lantern that we found at Mound House, a ghost town between Carson City and Virginia City, has been given a fresh coat of paint and wired for electricity to light our patio and the barbecue area, will bask in the glow of an old bonnet lantern from Searchlight that has been given the same treatment. A cuspidor from an old saloon in the days of the wild and wooly west, with a new coat of paint and half filled with sand, should serve to keep our patio floor free of smokers' debris. Inside the house, the hub of a wheel from an old Conastoga will hold the fire tongs, poker, shovel and brush in a corner by the fire place.

For years we had just been collecting junk but Gus Bundy changed all that for us. Gus, author and artist, and his wife Jean, near Highway 395 20 miles south of Reno, own a small guest ranch that has become the temporary home of many notables of the world of art. They are also junk collectors but everything that they bring



home must be functional as well as add beauty to the home they built themselves.

The Bundy home rests on a hillside with the Sierra Nevada Mountains coming to an abrupt halt to tower over the back of their ranch, with Slide Mountain, about which Mark Twain wrote, being almost in their back yard. Slopes of sage brush and greasewood lead the eye downward for about a mile to the treeless shores of Washoe Lake. Gus and Jean do all in their power to instill the true feeling of Nevada in their guests. They are taken on rock hunts and taught to cut and polish their own stones. A huge library

and a studio where the visitors can putter to their heart's content are other attractions of the ranch.

An old bellows from the Virginia and Truckee Railroad shops in Virginia City has been separated with braces and mounted on ball bearing casters to make one of the most unusual coffee tables in the state. The wood from the old flume that carried water from Stony Lake to the Ophir Mills in the beautiful Washoe Valley during the past century, has been converted into a planter box the length of the picture window. Odd bits of drift wood and wood bleached and twisted by desert sun and winds offer themselves to Gus' talent for sculpturing. His knowledge of ceramics and lapidary aid him in converting the discards of yesterday into things of beauty. However, Gus insists that this is not a hobby but a matter of expediency.

Otis Wright, Highway Division Engineer of the Las Vegas area has an entirely different type of desert hobby. He collects and photographs desert wild flowers. He and his wife Ellen take Sunday trips into the deserts and have come home with over 150 different types of flowers native to the southern end of the state. One of each kind is pressed between blotters with clamps pressing them between square pieces of wood. When the plants are dry they are put in a book made especially for



Otis Wright of Las Vegas tracks down every desert wild flower he hears of. A long time resident of Las Vegas, he is thoroughly acquainted with the surrounding deserts.



Gus Bundy has assembled a small part of his reclaimed desert treasure on the table he made from an old bellows. He has a happy combination of talents to call upon in the decoration of his home.

Al and Nell Laird have a rock room that is the envy of many a rockhound in Carson City. They have a supply of rocks that would take a life time to cut, but they are always on the lookout for more.

that purpose, with the Latin and common name added. When coaxed, (he is so enthusiastic about his hobby that he is afraid of boring people with it) he will show his colored slides of beautiful cactus blossoms and delicate wildflowers that people seldom see as they speed by along the highways. His whole department has become interested in his hobby and it is not unusual for a right-of-way agent, construction worker or maintenance man to come to his office to announce that the Purple Sage is in bloom up by Mountain Springs, or that the Apache Plume has buds on it.

Last time we were in Las Vegas Otis graciously invited us to see his desert. It is not the desert that the tourist speeds through in his effort to get to someplace cool. Otis' desert is the beautiful Red Rock area, where a winding dirt road leads through groves of Joshua Trees and Yucca, desert willows and Palo Verde trees. Between them grow wild flowers in profusion, and my enthusiasm and blood pressure raced ahead of me over big rocks and through the sandy hills to see still another kind of desert bloom. The Red Rock Canyon is a green desert bounded on the west by the spectacular Red Rock Mountains which are stripped bare of all soil, exposing the colorful and rocky soul of the range to those who are lucky enough to venture off the beaten path.

Otis became interested in his hobby when he became curious one day about a species of cactus. He looked it up in Edmund C. Jaeger's book, *Desert Wild Flowers* and became so fascinated with the contents that it has become the bible of his hobby. His only problem now is that he has found some species that Jaeger doesn't list.

Al and Nell Laird of Carson City are rockhounds and their hobby has led them to turning their guest room into a lapidary shop, complete with saws, grinders and polishers. Nell teaches Home Economics and General Science at the local high school and Al is a draftsman for the State Highway Department. They are both desert people. Al grew up in Eureka where his father worked in the mines, and Nell was raised in Tonopah. Al has been interested in rocks since he was six years old, although, at that age, if they didn't show lead, silver, gold or zinc, he thought they were no good. In barren desert lands there is no medium of beauty. One has to accept the grandeur of long sweeping shadows on the hills, or look for it in unusual places. Nell spent her childhood looking for pretty rocks, a pastime in which her mother encouraged her with stories of how the rocks were made and how they happened to be there. A black light makes their fluorescent specimens glow and a Geiger counter accompanies them on all field trips. "Thar's uranium in them thar hills."

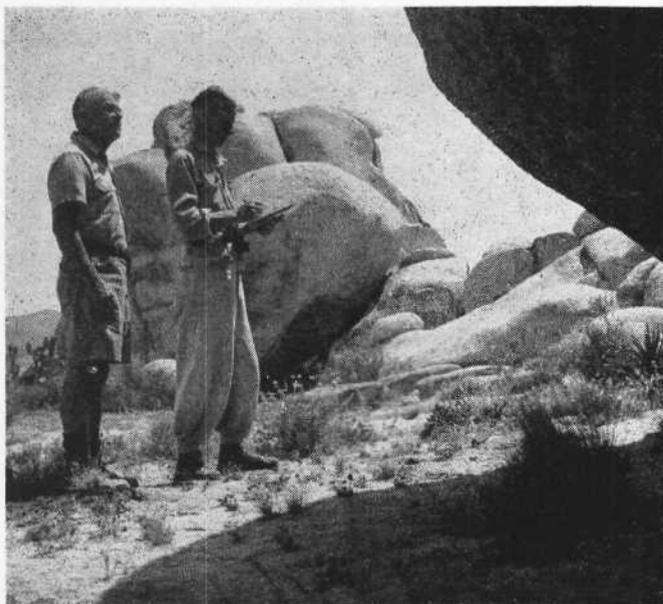
"If you are going to write," Nell asked, "Will you please say something about the gripes of the rockhound?" Herewith are listed her two pet peeves. The first is people who blast with dynamite to obtain specimens of rock. Nell had just found a large amount of blood stone shattered to bits by the explosive. Her second peeve is the amateur who smashes every rock to pieces with his prospector's pick. "Tell them to use the pick just to separate the piece of rock they want from where it is imbedded."

Sam and Dottie Peters who live

about five miles south of Reno spend their holidays looking for lost mines. Every new book that is published on the subject soon finds its way into their library, and maps fill the drawers of their desk. Sam is a salesman and is on the road for 10 days at a time, an occupation that introduces him to many old-timers who can tell him the stories of the mines lost in their areas. Dottie is the secretary of the Double Diamond Ranch and has brought her efficiency home to organize their camping equipment so thoroughly that their station wagon can be loaded and they can be on their way to search for another lost mine within 10 minutes. Sam has evolved two theories about these lost mines. One is that several of them could be the same mine, lost and found in turn by different prospectors. The second theory he is being very cagey about, but they are planning a trip to the Black Rock Desert soon, and if the lost Hardin mine is found, it will be Sam's new theory that finds it.

These are but a few of the hobbies of the desert dwellers. There are those who collect old lamps, and others who hunt for old patent medicine bottles that display such labels as "Dr. Hottstedt's Stomach Bitters." Some people collect ores from the various mines of the state. Others look for the fossils of animals that lived millions of years ago. There are huge limestone beds where trilobites, bivalves, gastropods and other creatures, turned to stone, are firmly imbedded. A mountain near Eastgate yields fossil leaves to the chisel of the person who has chosen this for his hobby.

True desert people are a healthy, happy lot and it could be their hobbies that keep them that way.



Edmund C. Jaeger (left) accompanied Professor Giuseppe Scortecci of Italy on a visit to Joshua Tree National Monument.

Life on Two Deserts . . .

Desert environment develops amazing similarities in wildlife—even though the deserts be separated by the Atlantic Ocean. Dr. Jaeger learned how true this is when he had the opportunity to compare notes with a visiting Italian scientist from the Sahara. Here are some of the things he learned.

By EDMUND C. JAEGER, D.Sc.
Curator of Plants, Riverside Municipal Museum

TWO YEARS ago America was honored by having as a visitor to its southwestern deserts the great authority on the fauna and flora of the Sahara Desert, Professor Giuseppe Scortecci of the University of Genoa in Italy.

It was my good fortune to spend a day with him as escort on a trip to the Joshua Tree National Monument. I found him to be a most rare and informing conversationalist and delightful companion, eager to observe every object of interest. He exhibited all the enthusiasm of an agile-minded youth while constantly using his notebook and camera to keep a record of his important observations.

I know little Italian and he often found it difficult to express himself well in English but each of us, by using a mixture of German, English,

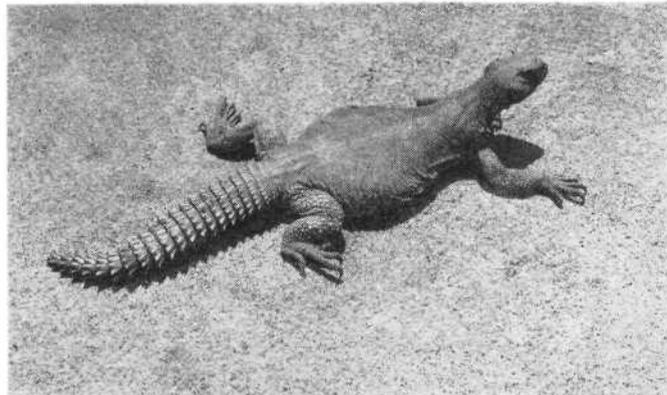
French, Latin and even occasionally Greek, was able to get over to one another our ideas. It was all most amusing and a constant test of our resourcefulness in finding new and appropriate words. Frequently Dr. Scortecci expressed his surprise at the way both animals and plants of the Sahara had, through the impress of environment, come to have similar form and behavior to the animals and plants of our American deserts.

I was able to show him a specimen of our largest iguanid lizard, the Chuckawalla (*Sauromalus obesus*). "It reminds me very much indeed" he said, "of our thorny tailed Saharan lizard, *Uromastix acanthinurus*. They have great similarity in appearance due to the short rounded head, much flattened, dark smoky-brown or almost black body, and lack of middorsal crest of

scales. Both rock inhabiting species are vegetarians and have many similar habits such as lashing the large, very muscular tail to defend themselves."

From his description I decided that the most noticeable difference between the two rather distantly related saurians is in the scalation of the tail. Whereas our Chuckawalla has small scales over its tail surface, the African lizard has a tail covering of rather large broad pointed ones, somewhat like, but much heavier than those we see on our rough-scaled lizard of the genus *Sceloporus*.

"The same evidence of amazing evolutionary convergence due to similar environment can be seen," he said, "when we compare the African horned viper (*Cerastes vipera*) and the American desert sidewinder (*Crotalus cerastes*)."



Their tails are different—otherwise the Thorny-Tailed Lizard of the Sahara (above) is a first cousin of the American Chuckawalla.

Although only distantly related, these venomous serpents have developed large horny scales above the eyes. It is these peculiar protuberances which have suggested the two appropriate names, horned viper and horned rattlesnake. The heads of the two have almost the same spade-shaped form, the necks are narrow and the comparatively short bodies have the sand-matching color so that when lying still they are very inconspicuous.

The peculiar, rolling, sidewise locomotion over the sand of the American sidewinder is the same as that of its African cousin. The horned viper differs in not having heat-detecting sensory pits between the eyes and nose, and in lacking rattles.

The American sidewinder does not bury itself in the sand but the horned viper cleverly works its way beneath the sand leaving only the nose, eyes, and horns protruding. The Arabs say that the viper wiggles its horns to attract the attention of curious birds and then the half buried reptile snaps up its victim. It is an interesting explanation but is based, I suspect, on a very erroneous observation.

Of the remarkable burying methods of the African *Cerastes*, Dr. Walter Mosauer has said: "While lying in the shape of a sinuous curve with closely drawn bends, the snake starts the digging at a point near the posterior end. The movement consists of a transverse shaking, which proceeds from the tail headwards, without change in the position of the main bends of the body. The very slight sidewise movement of each point is aided by the movement of the ribs, which are spread alternately on both sides. Thereby they form a sharp keel along the side that cuts like a shovel into the sand and throws it upon the dorsal surface of

the snake. Thus the animal disappears rapidly from the surface, the points covered by sand coming to rest while other portions nearer the head start moving. Finally, the head also is subjected to the transverse movement, covering it with sand."

Some months after Dr. Scortecci returned to Genoa he sent me his large and valuable, well-illustrated book, *Biologica Sahariana*. A perusal of the illustrations and Italian text made me highly conscious of further similarities in structural adaptations and behavior of the Saharan and American desert animals. They showed how much environment has influenced a parallel evolutionary trend. The Saharan gecko (*Stenodactylus sthenodactylus*) for instance, has the same large head, prominent eyes, narrow tail and significantly marked body of our American Banded Gecko (*Coleonyx variegatus*). Both are peculiar among lizards in being able to make audible sounds. The name gecko, by the way, is supposed to be an imitation of the sounds made by some of the Old World geckos.

The North African sand-dwelling scincid lizard (*Scincus officinalis*) has the habit of burying itself in the sand much as does our large Sand Lizard (*Uma notata*). *Uma* has specialized fringed scaly borders on the toes which aid it efficiently in digging, as well as preventing it from sinking while the animal is running on the sand surface. This adaptation is shared with several of the African lizards including the skink just mentioned.

Another instance of convergent evolution was revealed when I compared some of the insects. Saharan beetles of a number of genera have their form and body sculpturing duplicated in our tenebrionid beetles of the genus *Eleodes*, which we call "circus bugs" or

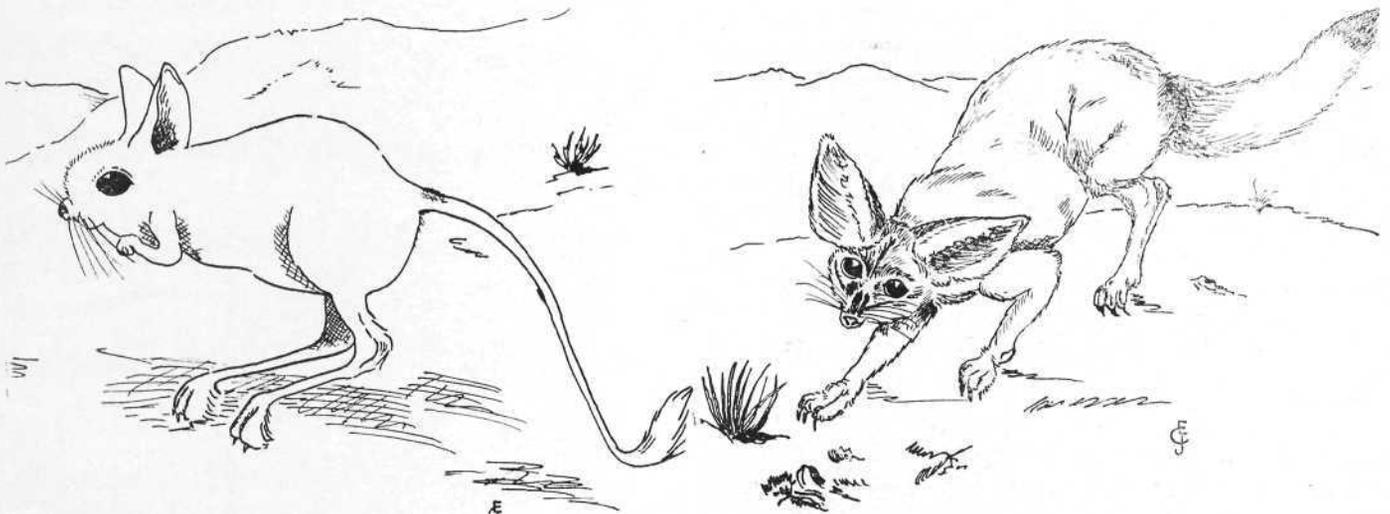
"stink beetles." Both have intensely black bodies and hard wing covers. All are flightless sand crawlers and leave quite similar tracks on the dunes.

When we come to consider the mammals, we find in both deserts, so widely separated, similar parallel adaptations. Compare, for instance, the Sahara's elegant, large-eyed Gerbilles (pronounced jer-bilz) and Jerboas and our handsome, sleek-furred, liquid-eyed kangaroo rats. In both rodent groups we find a number of sand dwelling species living in burrows with numerous exits. The Gerbilles and Jerboas like the kangaroo rats, have short forelimbs and greatly elongated strong hind-limbs, long tails ending in a brush of fine hairs and the same manner of progressing by long leaps, with the tail used as a balancing organ. The auditory bullae, a name given to very sizeable hollow, bony, bubble-like expansions on the skull behind the ear openings, are present in all these animals. These peculiar inflations are especially prominent in desert rodents and it is thought that they have been developed in animals requiring special acuity in hearing.

We have in our southwest American deserts the small, bright-eyed and gentle, long-eared kit fox with bushy, black-tipped tail. It is matched on the deserts of Africa by a very similar, but smaller animal, also a fox. It is called the fennec (*Canis zerda*) and has a body length, including the bushy black-tipped tail of but 21 inches. The ears of both foxes are of great basal breadth and are enormous in size, giving a similar remarkable appearance to these small-headed animals. Our kit fox has almost the same buff to fawn colored fur as the fennec. Both have black-tipped tails.

The Sahara's Jerboa differs little from the Kangaroo Rat of the American desert.

The Fennec of the Sahara is smaller, but has a close resemblance to the American Kit Fox.



The coloration of the two animals is in complete harmony with their color-bleached arid surroundings. An examination of the skulls of these two desert-adapted animals shows a comparatively great development of the audital bullae similar to that in the desert rodents just mentioned, all in accordance with their acute hearing. Both of these elegant night roving, swift moving foxes live in burrows during daylight hours.

The Saharan sand termite (*Psammotermes hybostoma*) constructs sand or earthen tubes around the plant stems whose bark and wood they often eat, almost identical with the sand or mud shelter of our widely distributed Arizona desert termite (*Amitermes arizonensis*). These insects are most active after summer rains and at such times many of the smaller ground-hugging desert shrubs, especially dead ones, appear, because of the termite's activities, like plants spattered thick with dry mud.

The deserts of many parts of the world have, much as it may surprise us, a quite extensive land-snail fauna and our American deserts are no exception. These much specialized mollusks inhabit dry rocky areas far removed from living waters or streams and waterholes and come out to feed at night during times when there are rains. In both Asiatic, African, and American deserts there are vast stretches too dry or sandy for mollusks of any kind but it is amazing how dry some places can be and still support a considerable population of land snails. Here we may mention as the home of snails the extraordinarily bleak hills and canyons of the Death Valley region and many seemingly lifeless mountains of arid Arizona.

Last week I visited the San Diego Zoo and there in the reptile house Charles E. Shaw showed me specimens of several of the Saharan reptiles I have mentioned, particularly the extraordinary Thorny-tailed *Uromastix* and the horned viper. The beautiful salmon-tan very venomous horned viper, several specimens of which the zoo has, are enclosed in glass cases but the harmless thorny-tailed lizards bask during the sunny hours on large rocks in the open reptile enclosures. The Zoo formerly had six of these remarkable lizards but museum visitors stoned a number of them to death, "and," said Mr. Shaw, "the lizard murderers weren't all teen-age youngsters either, some of them were 60-year-olds who evidently think it amusing and also their right to throw objects at anything that moves, no matter how valuable it is."

USC Geologist President of Death Valley '49ers in 1955

Dr. Thomas Clements, head of the department of geology at the University of Southern California, was elected president of the Death Valley '49ers at the annual meeting of the '49er directors in November. Mrs. George Palmer Putnam of Stove Pipe Well hotel is the new first vice president and John Anson Ford, Supervisor in Los Angeles County, second vice president. Arthur W. Walker was re-elected treasurer, and Joe Micciche, secretary.

More than 8000 visitors from all over the West were present at the sixth annual Encampment held in Death Valley this year, and tentative plans already are being made by the new officers for next year's reunion.

Highlights of the 4-day program were the Burro-Flapjack contest and the dedication of a monument erected in memory of Death Valley Scotty.

Winner of the Flapjack contest was "Badwater Bill" Arnold Frick of Reno and Virginia City, Nevada. With his burro, Gravel Gertie, he raced over the 50-yard course, built a fire, cooked a pancake and fed it to the burro in 4 minutes 17 seconds. Ralph Lyle of Beatty finished second.

Charlie Mitchell of Barstow was awarded first prize for the best burro pack and most authentic prospector's attire. All eight contestants, including Bea Kirk, woman entrant from Trona,

were showered with prizes at the end of the contest which was held at Stove Pipe Well Hotel.

State Senator Charles Brown of Shoshone paid a final tribute to the memory of Death Valley Scotty at the graveside overlooking Scotty's Castle when a bronze plaque modeled by Cyria Henderson was unveiled. The plaque bore the following quotation from Scotty's philosophy of life: "I got four things to live by: Don't say nothing that will hurt anybody. Don't give advice—nobody will take it, anyway. Don't complain. Don't explain."

Eleanor Jordan Houston, author of a recent biography of Walter Scott, was among the hundreds of spectators present at the hilltop ceremony. Artist-author John Hilton closed the dedication with "The Last Bonanza" one of his own songs, and one of Scotty's favorites.

The Encampment program included Artists', Photographers' and Authors' breakfasts on the Furnace Creek Ranch golf course, campfire programs each evening, art exhibit at Furnace Creek Ranch, firearms and gem and minerals exhibits, sunrise services, guided tours of Death Valley, square dancing and the showing of kodachrome slides.

The directors gave George Savage of San Bernardino a vote of thanks for the able manner in which he, as out-going president, managed the 1954 Encampment.

FIRE DANCE OF NAVAJOS IS SPECTACULAR EVENT

The most spectacular of all Navajo ceremonies held after the first frost of winter is the Mountain Chant or Fire Dance. It is held for the pleasure of the gods and expels evil spirits. The ritual includes feats of magic, weird chants, incantations of medicine men and is staged against the background of a ceremonial fire.

Indians from far and near journey to the ceremony with blankets, babies, coffee-pots and food, for the ritual lasts through the night and the night air is very cold. When darkness approaches and the fire seems to sweep to the sky, twelve "Turn-To-White" dancers rush to the fire shouting and twirling staves tipped with white eagle down. The dancers are covered with white clay and as they thrust the staves toward the flames and the feathers burn, the

Indians shout "Turn-To-White." When fresh feathers are placed on the staves, that is a signal for feats of magic, and is followed by an arrow-swallowing dance.

At five in the morning, fresh logs are heaped on the fire and a second program begins. Twelve fresh performers bearing cedar bark torches leap toward the flames. They are like howling demons, chasing each other and whipping the burning wands over their bodies. It is said as long as a dancer shouts his Fire Song, he will not be burned.

Hardy visitors may attend these ceremonies, but it is well to go prepared against the rigors of winter. Time for various celebrations is established by the medicine men as these are healing ceremonies and are taken seriously by all participants. — *Alamogordo News*

LETTERS

Mockingbird Sounds Alarm . . .

Douglas, Arizona

Desert:

One day we heard a loud and angry "chirp, chirp, chirp" and peering out the screen door we saw by the garage a grey and white female mockingbird who seemed to be in a frenzy of fear. She would jump backward, then hop forward flipping her wings and chirping incessantly. We had a feeling we had been summoned.

Joe said: "I bet a snake is causing all this," and went to the garage to get a long-handled shovel. When he cautiously moved a wide board which was resting along the garage, there was a rattler five feet long. Joe swung the shovel and killed the rattler but as customary with snakes, though dead they continue to twist and turn. We wanted the neighbor's children to see the snake so we laid it in the back yard and went inside.

We again heard the loud chirping and twice the mockingbird flew to the porch seeming to summon us. Soon her mate arrived and hovered near the writhing rattler. Finally, the male mockingbird pecked the snake, then they both would nip and fly back out of range. The two birds kept their vigil all night and early in the morning they were still on sentry duty. Joe thought the birds needed a rest so he buried the rattlesnake in the desert. As the birds flew away we said "A job well done little friends." To show our gratitude we always keep food and water for them.

ANNA L. MINICI

High Cost of Litterbugs . . .

Ogden, Utah

Desert:

In my classes of Geology of Utah and National Parks and Monuments I attempt to point out the value of elimination of roadside garbage.

It might interest you to know that about three years ago in talking to the ranger in Yellowstone Park, he said that for the season it had cost \$228 per day to pick up the litterbug's debris from the roadside of Yellowstone. This did not include the campgrounds or concession areas. Certainly we as American people need education and re-education in the maintenance of debris-free roadsides and clean camps. My own feeling is that this is a hold-over from the days when westbound pioneers crossing the desert had no thought of ever coming this way again.

WALTER R. BUSS

Rock Fall in Scenic Canyon . . .

Blanding, Utah

Desert:

On August 21 and September 21 we made successive trips through the Glen Canyon sector of the Colorado River, and between those dates there was a tremendous rock fall in the Hidden Passage tributary where river voyagers always stop for a scenic side-trip. An estimated 200 tons of rock fell from an overhang opposite the point where the trail enters the canyon. Many of the boulders rolled to the bottom and partially blocked the stream. This in no way obstructed the trail, but provided a causeway which makes it easy to cross the creek.

Referring to the picture, most of the rock shown, with the exception of the large one directly behind the figure, is newly fallen material. By examination of the bark on the crushed trees, I estimated the slide had occurred on September 7.

J. FRANK WRIGHT

• • •

Opposes Hunting at Joshua Tree . . .

Hermosa Beach, California

Desert:

I would like to add my opposition to the proposal to open Joshua Tree National Monument to mining and hunting as stated in the editorial in December's issue. I have only been a resident and pioneer for over half a century, but view with regret the transition of sunny California to a grimy industrialized state.

Years ago we hunted mountain sheep, deer and antelope for food only, in both the Little San Bernardino and Picacho Mountains when mining and prospecting. It was one of the necessities of life then as distances to stores were far and travel slow by foot or horseback, but even then we resented the hunting of these wild creatures for sport.

In the last five years I have lain in my blankets at sunrise at the Morongo end of the Joshua Tree Monument and seen mountain sheep and deer browsing quietly and the quail chicks being herded by their mother, all unafraid of my presence. Even the rattlesnakes do not disturb you. The only ones who may thrust themselves on you are the small lizards who crawl into the folds of the blanket for warmth. At our camp in the Picachos there was a Gila monster who took up residence in a monument and always showed up when he smelled bacon, for a strip of the rind.

Why disturb and kill these remaining denizens of God's country. There is little enough left in its virgin state in this age of commercialism.

ERNEST GRIFFITH



Rock Fall in Hidden Passage Canyon.

First Guide to Rainbow Bridge . . .

Victoria, Texas

Desert:

The Old Desert Quizmaster slipped on two of his answers in the Desert Quiz for October. No. 4 gives John Wetherill as the guide for the first party of white men to see Rainbow Bridge. *Desert Magazine* in May, 1940 gave the correct answer. It was Nasja-begay, a Paiute Indian. I heard this also from John Wetherill and Dr. Byron Cummings. No. 18 gives willow as the wood most commonly used in making Hopi Kachina dolls. Practically everyone writing on Hopi Kachinas from Alexander Stephen on February 4, 1893 (Vol. 1 page 215, *Hopi Journal of Alexander M. Stephen*) to Dr. F. J. Dockstader in 1954 (page 95, *The Kachina and the White Man*) says the usual material is cottonwood, usually the roots.

I have just returned from a 7000 mile trek following the old cattle-drive trails and the Santa Fe Trail through seven or eight states. I also saw the Snake Ceremonies of the Hopis for the 19th time, and I see no evidence of its dying out as forecasted by Mrs. Dama Langley. She was speaking of the ceremonies at Walpi, however, and I saw the dance at Shongopovi and Shipaulovi this year.

REV. VICTOR R. STONER

Thanks, Padre, for your corrections.—R.H.

Disagrees on Word Rodeo . . .

Arroyo Grande, California

Desert:

In *Desert's* November issue in an article entitled "He Rode with Buffalo Bill," Harry Knight made the statement that the word rodeo originated when a roundup came to Los Angeles about 1912 and the Mexican newsboys announcing the show couldn't say "roundup" so they said "rodeo" instead. He is mistaken for rodeo is an old Spanish word. The newsboys were saying the word in their own language. In my Spanish dictionary the word roundup is *rodeo de granada*.

JOHN BARDIN



Once A Tree

By DARRELL A. TOTTEN
Las Vegas, Nevada

'Twas just an old pine log, and yet it seemed
to say:
"Oh, do not judge me, man, by what you
see today!
Now, as I lie here, still, and rot throughout
the years,
I cannot feel the snow that falls, then dis-
appears,
Nor can my branches reach out to the sky
above,
And feel the sun's warm rays you feel, and
seem to love.
As you now live, I too, once lived upon
this earth.
And tried my best to make my life a thing
of worth.
I pushed my strong roots deep into the
fertile soil.
As you push drills into the earth, in search
of oil.

"Like you, I watched my young grow, just
as I had grown,
And learned that none of them knew more
than I had known.
I gave my share of food to those who, each
year, found
My well-filled cones, which I dropped freely
on the ground.
I gladly gave my shade to all who cared to
rest
Within that area which I called home, and
blessed
Because it was the only home I ever knew.
We trees were never free to roam at will,
like you.
I lived the life I loved, then left it all behind.
Like you, I took, and gave of what there
was to find."

SANCTUARY

By CONSTANCE WALKER
Los Angeles, California
The colonnades of saguaro
Are framing an open door
Where desert blossoms mosaic
A sanctuary floor.

The peace of a blue-arched sermon
Is found in a hallowed hour
With beauty, like benediction,
From every tiny flower.

DESERT NIGHT

By ENOLA CHAMBERLIN
Los Alamitos, California

A neophyte
In robes of worship furled,
I kneel to watch this desert night
Pour out its cup of beauty on the world.

The yucca trees
In their wide-flung tableau,
Lift arms to touch the pleiades.
The greasewoods make a velvet domino

Of soil and sand.
The sky, a star bouquet,
Rests lightly on the hill top's hand
Where shadows blend in soft-edged disarray.

The cool winds bring
The mingled scent of bloom.
A mocker's notes in measure swing
To weave a web of song on quiet's loom.

And I, though yet,
The desert's devotee,
Must rise, must seek a roof, forget
A little while this soul-sharp pageantry.

SONG FOR A CITY GIRL

By DIANA DER HOVANESSIAN
Cedar City, Utah

The mountains will not hem you in
While there are wings
To take your dreams to tilted thrones
Of long forgotten kings.

The desert will not parch you
While there's a secret cup
Of ruby cactus blossoms
To hold the soft dew up.

NAVAJO MOTHER

By MARIE CURRY
Lukachukai, Arizona
Night sits quietly weaving
By the hogan's open door,
Children watch her shadow darken
Across the fire-lit floor.

They can twine their fingers
In her shining, star-strewn hair;
Night's a gentle Indian mother,
Sleepy children are her care.

SAND DANCER

By GLORIA RAYE MARSDEN
Long Beach, California
Like an effervescent dancer
Race the winds on desert land,
Impishly destroying last night's
Terraced ridges on the sand;
Heaping castles, scooping valleys
Like a small delighted child
On an afternoon of freedom
From the limited and mild.
On she dances through the sunlight
Tossing high her sand bouquet;
Pivoting in wild expression
For the words she cannot say.

DESERT NOCTURNE

By EDITH Y. INGLE
Medford, Oregon

Over the desert the stars hang low,
The lanterned moon, with slumbrous glow
And flame of orange, then of red,
Creeps high above where the night winds
blow
And the little towns lie tucked in bed.

The little towns in slumber tight
Are hushed by the lullaby of the night,
While softly the rustle of desert grass,
Jewel'd here and there by the faint star-light,
Harks to the night-winds as they pass.

Sleep on, sleep on, little desert town,
Huddled close to the earth so warm and
brown,
Sleep on to the lullabies of the wind,
Nor hear the train that comes thundering
down
And hurtling by, leaves you far behind.

OPPRESSION

By MRS. GRACE B. WILSON
Kirtland, New Mexico

There is no shadow in the turquoise sky,
No hint of shade across the desert land.
The white hot fires of summertime are
fanned

By hotter winds that scorch as they pass by.
Far, far above on silent wings there fly
The buzzards on patrol, as if they scanned
To find a vulnerable spot, and planned
A raid their hungry craws to satisfy.

But earth has given no betraying sign
Of carrion, neither living things to show
There might be hope of food hereafter. Heat
Is still the king. Above the alkaline
Encrusted beds of dry arroyos blow
The winds to make the mastery complete.

DESERT DESIGN

By GLORIA RAYE MARSDEN
Long Beach, California

See thorn and flower side by side
So silently assuming
Their given pose and habitant
And each its way of blooming.

Here sand and sagebrush set the scene
In casual designing,
Then bow to give Simplicity
Her fling at mass refining.

Notes in the Traveler's Diary

By ELSIE MCKINNON STRACHAN
Santa Ana, California

Twilight has blended
Shadow and color
With a feathery brush,
Tinted the skyways
Purple and amber;
Dusted the desert with hush.

Darkness has bedded
Greasewood and sage in
Mist-woven quilts of night;
But white yucca blossoms,
Pure and radiant,
Stand guard in the moon's early light.

Abundant Life

By TANYA SOUTH

Our "steep and narrow Path" still lies
Deeply within. And enterprise
Can soonest help us up the Way.
Our every thought by night or day,
Our every instinct effort bent,
Should be on Good alone intent.
Thus can we climb up from our strife,
Into a more abundant life.

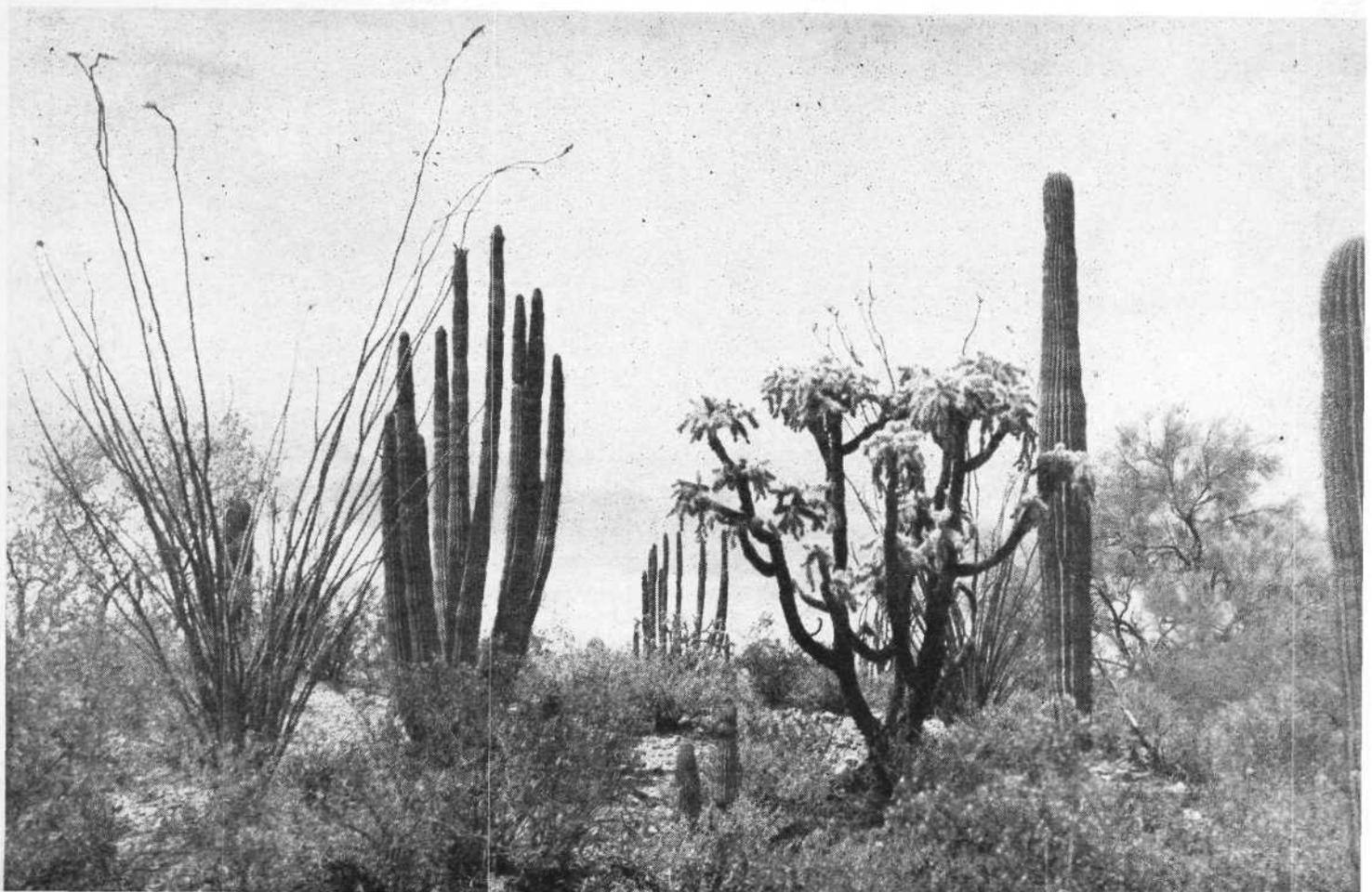
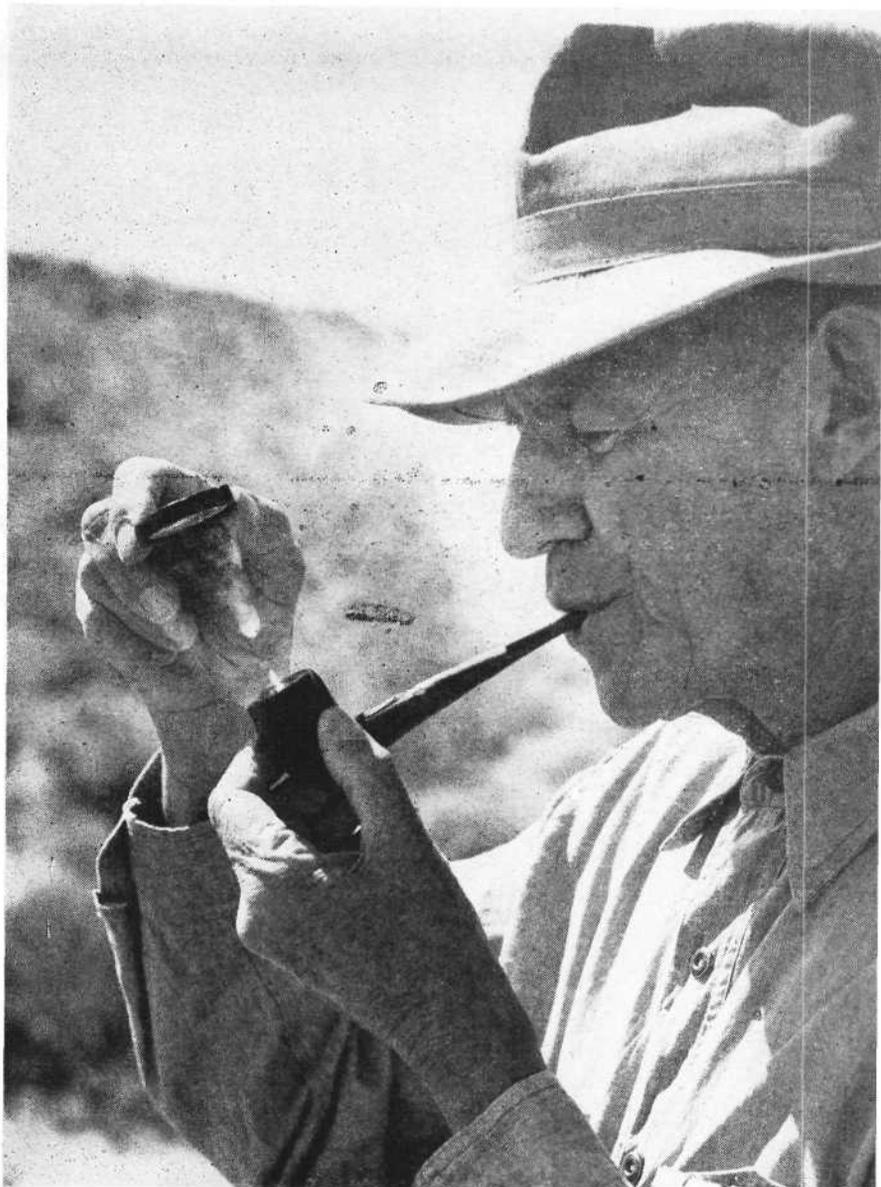
PICTURES OF THE MONTH

"The Matchless Desert"

Harry Vroman, whose home is a roving trailer, was awarded first place in Desert's Picture-of-the-Month contest in November. Photo of a prospector lighting his pipe with a lens was taken with a Press Camera, Eastman 4x5 Press film, 1/50 second at f. 16. Print on Kodabromide in Dektol.

"Desert Forest"

Taken in Organ Pipe Cactus National Monument in Arizona, this photo by Weldon Heald of Portal, Arizona, was awarded second prize in the November contest. Picture includes four species of cactus—Saguaro, Organ Pipe, Tree Cholla and Senita in addition to Palo Verde tree and Ocotillo with numerous small shrubs in the foreground. Taken at f. 11 at 1/100 second with Kodak Super XX film and Wratten A filter.



LIFE ON THE DESERT

By EDITH M. HOCKEY

Here is a revealing story of what may happen when strangers meet on a lonely road in a remote sector of the desert.

IN 1930 my husband and I were prowling the California desert to the north of what was then known as the Santa Fe's Parker cut-off in search of mineral or anything interesting. We were truly greenhorns at the mineral and rock collecting game, but of one thing we made very sure, whenever we started anywhere on the desert we had sufficient water, food and gas and water for the car.

We had come down from the Death Valley country and had decided to travel on to Tucson. Thus we were enjoying the hot September sunshine and singing, "Oh, we ain't got a barrel of money, maybe we're ragged and funny," not knowing we would soon meet those who were poorer and more ragged than we.

Many people were out of work in those depression days. This, and my ill health, were the reasons why we were in the far West. We were in no hurry and would stop frequently and look over any area that looked mineralized or just stop to admire interesting and pretty rocks.

The Parker trail in those days was a couple of tracks through the sand, down dry washes, up over a rocky rise, then along low hills and down another dip. Our Oakland roadster was humming along and as we drove around an abrupt, rocky curve my husband suddenly exclaimed, "What in the world!" and skidded to a screeching stop in the loose sand. An old Chevrolet coach was stalled in the middle of the road and we had stopped just in time to avoid an accident.

A shabby man stepped out of the car and asked Chet if he would tow him to the base of a mountain a few miles away, where there was a watchman at an old abandoned mine who would give him water while he fixed his car.

It was quite a job for our little car to tow the larger one and we were making little headway when the tow-rope broke, leaving us in the middle of the road miles from anywhere with the stalled car and no possible way of helping them.

But the Parker trail was not a lonely place on that day. A Studebaker with an eastern state license-plate roared to a sudden stop. Sand filled the air and so did a lot of heated words. But after a brief consultation between the three men it was decided the Studebaker would tow the old Chevrolet to the abandoned mine.

When the Chevrolet arrived at a point near the mine the man, his wife and twelve year old son, assured us they would be all right and so the easterners left to head for the Colorado River to cross into Arizona before night fall. We followed them. But we were too late! It was a little after six o'clock and the ferry was closed for the night. There wasn't anyone on either side of the river to take us across.

The Colorado River was running full to the topmost bank and the waves were rough. It almost made us seasick to watch them, but rougher still were the mosquitoes. There were swarms of them, buzzing around in a black cloud. They were as large as houseflies. Standing on the bank, we were soon covered with mosquito bites.

Chet yelled, "Let's get out of here, quick!"

"Yes, but where?" asked the Studebaker man whose wife and two little girls joined the outcry against the mosquitoes.

"We can't stay here for the night, let's go back on the desert a few miles and camp," my husband said.

"But I must get to Vicksburg tonight, and find a place to stay," replied Mr. Studebaker.

"How are you going to get across the river?" asked Chet.

The easterner saw he was trapped, so we turned back a few miles and prepared to make camp on a ridge where there was neither sight nor sound of mosquitoes. As we drove along, Chet and I discussed our fellow traveler. He had the arrogance that often goes with wealth, and we wondered if he would be a congenial camp companion.

It did not take long to set up camp and get supper started in our gasoline stove. It was soon evident that Mr. Studebaker and his family was ill prepared for such an adventure. They had no food, no bedding or cots, other than a couple of pillows. Worst of all, for anyone traveling on the desert—no water!

We invited them to eat supper with us as a few extra potatoes and cans of vegetables and fruit were easily pre-

pared, along with extra coffee. The man half heartedly refused at first but then he saw the foolishness of going without food so we all ate heartily. Night was closing in fast and the children were crying and fretful so the mother made beds in the car for them with blankets I loaned her.

We did not erect our tent in deference to our fellow campers and simply put our cots up and settled down for the night. But no one slept much that night. First one child then the other would say: "Daddy I want a drink of water," until it seemed like an hourly chant. Each time one of the children called for a drink, their father would rouse Chet and ask him politely for some of our water. I felt like asking him why he had attempted the Parker trail without water, especially when a huge sign at the northwest end of the trail read: "Do Not Attempt This Trail Without Sufficient Water and Gas."

Morning finally came and we headed for the river again and ferried across to Arizona. Our traveling companions invited us to breakfast at a cafe then said goodbye and speeded out of our lives.

We remained in Phoenix a few days then went on to Tucson, but jobs were impossible to find so we headed back the way we came as Chet had been given a tentative offer of work with the Borax Company in Death Valley. We started along the Parker cut-off again and there in the middle of the desert, in trouble again, was the Chevrolet. This time the man waved his arms like a windmill to stop us and said, "Bud do you know anything about ignition?" Then he recognized us and grinned happily.

While the men worked on the car I walked over to his wife, who to my amazement was sitting on a blanket in the hot sun, dressed in a black chiffon dress covered with sequins which glistened like little stars in the sunlight. It was amusing, but so pitiful, especially when her hands, face and neck were so dirty from the sand. It must have been the one thin dress she owned. The boy had split a barrel cactus so they could get water to drink and he was chewing the pulp because he was so hungry and thirsty. They explained they had been unable to find the abandoned mine owner. They didn't seem downcast or unhappy. But the star performer and picture of contentment was their little canary whose cage was on the blanket next to the woman. The



little yellow bird was singing praises to the wonderful sunshine and warmth which surrounded him.

It was noon and I started to prepare some food and while we enjoyed the meal there was no talk of these people being down and out. Instead the man repeatedly said if Chet would help him get the car going he was sure he could find work for the three of them around the Salt River Valley cottonfields.

While the little bird filled the air with music, the men worked on the car and with Chet's mechanical knowledge they had it working in a few hours. The man was so overjoyed and grateful and thanked Chet over and over again.

His wife and I cleaned the dishes and talked, but not once did she say a word of complaint or grumble at fate and circumstances; instead she was confident that she and the boy would work with her husband, even picking cotton.

It was time to go our separate ways so with a few cans of food plus a dollar for gas we gave them, we said goodbye to those pleasant people who though down and out would not give up hope.

New and Improved Products for Desert Living

"Canned Ice" Available for Motorists and Campers

One of the most efficient "canned ice" products now on the market is Frigee Freeze, perfected by Earl Scheib and available at most of the markets. By placing the compact one-quart can, no larger than a milk carton, in the freezing compartment of a refrigerator overnight, the can becomes zero-cold and when transferred to lunch box it is equivalent to a 15-pound cake of ice, and retains its coolness for 24 hours. The same cans may be used over and over again merely by refreezing the can each time it is to be used. It is recommended for campers, fishermen, hunters and motorists who wish to keep cool drinks in the car when traveling the desert in summertime.

New Air Conditioning Unit Specifically for Trailers

A unit developed especially for mobile homes has been announced by Carrier Corp. It fits entirely inside and requires no openings in the walls or roof. Corner installation allows it to double as an end table alongside the couch. Besides refrigerated cooling, other benefits are elimination of need for open windows, which permit entry of dust and noise.

Portable Ice Chest Provides 72-Hour Refrigeration

The new Kampkold (\$8.95) permits combination wet and dry storage, or maximum wet storage, of beverages and perishables. Thick fiber glass insulation; convenient suitcase-handle.

New Refrigerated Automobile Air Conditioner

Frigikar Corp., Dallas, announces the first such unit to sell for about \$300, plus installation. Adequate refrigerated air is delivered to assure maintenance of the 70-degree comfort zone, in 100-degree-plus weather, without detracting from engine efficiency or increasing battery strain. Underdash installation or transfer from one car to another is stated to be easy and economical.

Letters to Desert Magazine requesting more detailed information about any of the above products will be forwarded to the proper addresses.

Calling All Photographers . . .

No fog! No smog! The sun comes over the mountains to the east, and is seldom obscured by clouds—or, if there are clouds they generally are of the type that add to the composition of the picture. These are the reasons why the desert is the ideal place for photographers. The subjects are unlimited—so long as they are essentially of the desert. Desert Magazine each month reproduces some of the best of the photos submitted in a Picture-of-the-Month contest. All photographers are invited to send in their entries.

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

HERE ARE THE RULES

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

Address All Entries to Photo Editor

The Desert Magazine

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The Last Rug of Mother MacCree . .

By JOE KERLEY

MY WIFE and I called her Mother MacCree. We didn't know her real name. Navajos consider their names a very intimate part of themselves, and they keep them secret from all but a very few close relatives. Because they fear a witch or evil person or an enemy could work harm on their livestock or property by magical incantations over their names, Navajos go through life under aliases—nicknames like Many Horses, Red Burro, Gray Hat or Blue Shirt.

Mother MacCree was a wee wisp of a gray-haired grandmother. Her fingers were gnarled and toil-worn, her face wrinkled and furrowed. Her frail bent body and weathered features reflected the hardships of a lifetime struggle against wind and sand, blizzard and drouth, heat and cold on the vast desert reaches of the Navajo reservation.

Her husband had died long ago; her children were scattered. She lived with her 10-year-old grandson in a one-room, cedar-post mud-covered hogan. She cooked frugal meals on an open fire built in the center of the hogan floor, below a smoke hole in the ceiling. She slept on the floor, with only a sheepskin beneath her.

It was surprising how nimble and spry she was, considering her poverty and age. She had perhaps a dozen sheep and a few goats which were herded by the boy.

Her sheep and goats were important to her. From the goats she got milk for herself and grandson; from the sheep she got wool to make the rugs which she traded with me for groceries and a piece of calico or shirt and pants for the boy. Once in a while she would kill an old ewe, and she and her grandson feasted on mutton. Chances are that friends would drop in and help them eat it. Mother MacCree didn't mind. They liked visitors, and sharing the meat meant they could visit their neighbors when they had mutton. It was a friendly custom.

Mother MacCree brought many small rugs to me. They were not woven very well, but somebody always seemed to buy them, and I managed to break even. If a trader breaks even on his poor rugs and makes a profit on his good ones, he can stay in business.

For years Mother MacCree and I were the best of friends. And then I

made a mistake, a simple slip of the tongue, and our friendship was strained.

It was during the depression. Both Mother MacCree and I were hard put to make a living. All she had to give me for her groceries was a rug or a goatskin now and then. My wareroom was full of wool, rugs, goatskins and sheep pelts. I couldn't sell them, and without sales I couldn't restock my store with groceries. Two jumps ahead of the receiver, I was worried.

Like this old Navajo grandmother, Mother MacCree's eyes were weak and her hands gnarled and slow. Her rugs were poorly woven and hard for the trader to sell. But she needed the income to live. Photo by Lewis M. Jones.

It was a very poor rug, impossible for the trader to sell in those depression days. But Mother MacCree was old and frail, and her hogan cupboard was bare.

I was wondering what to do when Mother MacCree brought in a little rug. I spread it on the counter and looked it over. It was a very poor job. It would be hard to sell in boom times; in a depression it was an absolute liability.

Thinking of my own financial condition and not considering Mother MacCree's age and her and her grandson's empty stomachs, I said:

"Mother, you didn't bring me a very good rug this time."



Here and There on the Desert...

As soon as they were said, I wished I could recall the words. Little Mother MacCree—she was hardly as high as my counter — gave me a withering scornful look, and her half-blind eyes blazed with contempt.

"Shame on you, you stingy trader, shame on you! I've come a long way on my burro to sell you this rug, and now you say it is no good. Shame on you!"

She put her hands on the counter. I can still see their gnarled old fingers, grotesquely twisted, like coral branches or fossil twigs.

"I am an old woman," she continued. "Look at those hands; look at these eyes. How can I weave rugs like I used to? Shame on you! You have a store full of everything, but there is nothing in my hogan for me and the boy. Shame on you! Now I am tired after riding so far on my burro. Give me some flour, coffee, lard and sugar. And some candy."

Well, I gave her all she asked for, and I was careful not to forget the candy. All Navajos, young and old, have a very sweet tooth. She put her things in a sack and went out and fell asleep under a cedar tree while her burro browsed.

That was more than 20 years ago. I still have the little rug I bought from Mother MacCree that day. It was the last rug she finished weaving. She died a few weeks later, and I was asked to bury her.

When I went to her hogan I found her lying on the north side of the poor dwelling, wrapped in her Pendleton shawl. Evidently she had passed away quietly in her sleep. There was a partly woven rug on her loom. No one was around. Navajos have an inordinate dread of death, and they flee in terror when it occurs. They are afraid of dead bodies, fearing the evil spirits which they believe dwell within them. That is why I was asked to bury Mother MacCree.

I dug the grave by her side in the hogan. It was a simple funeral. There was no coffin, no flowers, no relatives, no mourners of any kind; no music, no sermon; no weeping or sorrowing.

According to Navajo custom, I buried her as I had found her, wrapped in her shawl, her head facing east. I put her loom and the partly woven rug in the grave with her, closed the door and knocked a hole in the north side of the hogan as a warning to all Navajos that it was an evil spirit house.

Now Mother MacCree belongs to the ages. No Navajo would ever visit her grave.

ARIZONA

Survey Is Surprising . . .

PHOENIX—In a survey of more than 26,000 Indians, the University of Arizona's bureau of ethnic research has learned that despite unhygienic living conditions Indians are less likely to suffer from "constitutional diseases" such as cancer, the allergies, metabolic and endocrine disorders than non-Indians. Indians seem to have near-immunity to some diseases that are killers among non-Indians. The secret of their ability to resist serious diseases despite substandard living conditions could aid all man-kind—once it is discovered.—*Phoenix Gazette*

Who Will Get "The Island"? . . .

YUMA—The meandering Colorado River has produced a problem: what to do with "The Island," a 3000 acre piece of land lying between the old river channel and the present river course. A public hearing was to be held to consider the views of interested local persons. The Colorado River Boundary Commission engineers have already recommended that the old channel become the permanent boundary, which would place "The Island" in Arizona where it would become a part of Yuma County. The final decision is up to the Boundary Commission and then it must be approved by Arizona and California legislatures and then by Congress before it is adopted.—*Morning Sun*

Experimenting with Rubber Roads . . .

PHOENIX—Arizona jet plane bases have contributed to a research program which may lead to rubber highways across the nation. Rubber mixed with tar has proved successful at jet air bases in Arizona and New Mexico. The mixture was found to be resistant to jet fuel spilled along runways and taxi strips. Experimental patches of road surfacing containing rubber have been laid on selected portions of highways all over the country. Those who favor rubber roads believe they will prove to be longer lasting, skid-proof and more resilient to heavy traffic.—*Phoenix Gazette*

New Superintendent at Monument . . .

WUPATKI NATIONAL MONUMENT—Forrest M. Benson, Jr., who has been chief park ranger at Hot Springs National Park in Arkansas since early 1952, has been appointed superintendent of Wupatki National Monument in Arizona. He succeeds the late James W. Brewer, Jr.—*Phoenix Gazette*

Protection May End . . .

ORGAN PIPE CACTUS NATIONAL MONUMENT—On the Cabeza Prieta Game Range and adjacent to Organ Pipe Cactus National Monument, the Sonora pronghorn antelope, smallest of all North American antelopes, is given complete protection. These animals require large areas of arid land for survival and have that at the present time, but a move is underway which would drive these animals off the land and out of the state for all time by giving the air force jurisdiction over the refuge for air-to-air gunnery practice. Present federal policy appears to favor this needless move.—*Phoenix Gazette*

Plan's Are Clues to Uranium . . .

PHOENIX—Western gold mining history contains many accounts of odd ways in which gold was located. One of the most interesting ways was the use of prospectors of certain plants as indicators of gold-bearing locations. History appears to be repeating itself in the current uranium prospecting boom. Plants are again being studied by botanical-minded uranium prospectors. Two plants common in the mesa and canyon country of northeastern Arizona, Princess Plume and Loco-weed contain "selective mechanisms" that enable them to select and draw from the soil certain minerals rejecting others. One of the preferred elements is selenium, which is a clue for prospectors because it is found in association with radioactive minerals such as carnotite.—*Phoenix Gazette*

New Bridge for California-Arizona . . .

YUMA—The California Department of Public Works announced that Arizona and California will share equally in the cost of a bridge which will span the Colorado River on U.S. Highway 80 connecting Winterhaven, Imperial County, and Yuma, Arizona. A total cost of \$1,600,000 will be shared. The new bridge, to be located about half a mile downstream from the present crossing, will be 837 feet long of riveted steel plate girder construction.—*The Morning Sun*

SAN CARLOS — The Arizona Inter-Tribal Council has endorsed Thomas H. Dodge, superintendent of the San Carlos Apache Indian Reservation, for the appointment of area director for the Indian Service in Phoenix. The position is vacant due to the death of Ralph M. Gelvin.—*Phoenix Gazette*

THE DESERT TRADING POST

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CLOSING OUT: Yes, someone with a little capital can buy a fine going business very reasonably. Customers in nearly every State. Meanwhile will sell retail at discount. Great opportunity for someone who likes Indian merchandising business. Daniels Indian Trading Post, 16299 Foothill (Highway 66), Fontana, Calif.

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MISCELLANEOUS

URANIUM CLAIMS with merit, wanted for development. Will give liberal override. Can furnish bank reference. Give detailed description of property in first letter. Rex R. Moore, 2904 Liberty Bank Bldg., Oklahoma City, Oklahoma.

STEREO 3D SLIDES—Gorgeous Colorado mountain and Utah desert scenes. Realist size original Kodachromes. Sample selection four of my best stereo slides \$2.00. List free. Will C. Minor, Fruita, Colo.

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PAN GOLD: \$1 for 75 panning areas in 25 California Counties. Geological formations, elevations, pertinent notes. Panning pans \$2.75, \$2.25. Leather nugget and dust poke \$1. Fred Mark, Box 456, Ojai, California.

MOST UNUSUAL Desert sea-view tracts and homes soon to be offered overlooking beautiful Salton Sea. For advance information (without obligation, of course) write Pon & Co., Box 546-DM, Azusa, California.

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TRUE OR FALSE ANSWERS

Questions are on page 14

- 1—True.
- 2—False. It has been proven many times that this old saying is mere fiction.
- 3—False. Salt River Valley is served with water from Roosevelt Dam reservoir.
- 4—False. The location notice describing the claim is required only in one corner cairn.
- 5—False. Hernando de Alarcon was first.
- 6—False. The Chuckawalla is quite harmless.
- 7—True.
- 8—False. The Taos Indians are pueblo dwellers.
- 9—False. Coronado blazed the route from Mexico to what is now New Mexico.
- 10—True.
- 11—False. San Francisco peaks are in northern Arizona.
- 12—True. 13—True. 14—True.
- 15—False. The blossoms are indigo.
- 16—False. Asbestos is mined from the ground.
- 17—True. 18—True. 19—True.
- 20—False. Coyotes are very fond of meat.

Act to Stop Spread of Beetle . . .

YUMA—The Colorado agriculture department has imposed a total embargo on a long list of farm, meat and fish products from California, Arizona and New Mexico. This action was necessary to stop the spread of a dread insect, the Khapra beetle, a menace to stored grain. The Khapra is a native of India and has been discovered recently in parts of these three states. Entomologists report it resists total extermination and can live three years without food.—*The Morning Sun*

CALIFORNIA

Group Opposes Tramway . . .

PALM SPRINGS—Permanent preservation of the San Jacinto Mountains wilderness areas was outlined as the major objective of the Citizens' group meeting in Idyllwild recently. The proposed tramway from Palm Springs to Mt. San Jacinto was described as a threat to primitive areas, not only because of commercialization but because any reduction in the size of the present primitive area would mean its doom. The opinion was expressed that Idyllwild would become the service entrance to the tramway, that a road to carry supplies might be routed through the mountains by way of Idyllwild with the result that it would become "only another village" with no back-country assets. A land exchange with the U.S. Forest service removed the last tramway barrier.—*Hemet News*

Recruit Burros for Rescue Duty . . .

SEARLES VALLEY—Members of the San Bernardino Sheriff's office had an unusual task recently in Searles Valley when they scouted the entire area to secure burros for rescue duty. They hoped to obtain at least 15 to answer the request of the Air-Sea Rescue Service of the U.S. Air Force. The burros have proved themselves to be superior to the horse, being adaptable to extremes in weather, rough terrain and foraging for food and water. The burro will be in his element when used to break trails into inaccessible country, carrying medical supplies, food, blankets and rescue equipment and leading men to the aid of unfortunates in downed airplanes. — *Los Angeles Times*

Hesperia Starts Land Sale . . .

HESPERIA — Land sales in Hesperia, the gateway to Victor and Apple Valley, have reached the \$1,000,000 mark in only a three day period. Purchasers include many well-known realtors who will develop the land according to the master plan devised by M. Penn Phillips Enterprises. — *Victor Press*

Jacumba to Be Evacuation Center . . .

JACUMBA—Business men of Jacumba were told recently that in the event of a bombing in the San Diego area, 5000 persons would be evacuated to that area. R. H. Rodgers, chief warden of the San Diego Civil Defense and Disaster Service told the group that Jacumba is the logical point of refuge, and pointed out that only the training and teamwork of defense unit personnel could assure the success of such an undertaking.—*Jacumba and Mountain Empire News*

May Date the Origin of Man . . .

LOS ANGELES—At the American Geological Society's convention in the Statler, Dr. J. Laurence Kulp of Columbia's Lamont Geological Observatory and his co-worker, Dr. Wallace Broecker told the assembled geologists of a Carbon-14 measuring rod, a radioactive measuring device, that can determine definitely how long man has been on the earth. This means that whereas geologists formerly could tell the age of plant or animal remains as far back as 6000 years, they can now go back 50,000 years and determine the exact time within 30 or 40 years. —*Herald and Express*

New Developments in Land Grab . . .

SALINE VALLEY—Inyo Associates learned of new developments in the proposed land grab by the Navy of Saline Valley acreage for an aerial gunnery range at a recent meeting. It was reported that Sam A. Kendig, valuation engineer for the 11th Naval District, toured the Valley checking roads, photographing mines and other installations and preparing data needed for the Navy to take over the area. Indications are that the properties would be leased for a five-year period but would remain on the county tax rolls. Wright Huntley of Huntley Industrial Minerals told the group his firm had a payroll from \$2000 to \$3000 monthly involved in its Saline Valley operations and that they had discovered uranium deposits in the area now under controversy. Many other business men told how the land grab would reduce the country's economy. The Associates voted to ask Congress not to vote any additional funds for leasing Saline Valley lands or furthering the land grab in any way.—*Inyo Independent*

Urge Road Name Change . . .

HEMET — The Coachella Valley-to-Ocean Highway Association is urging that the Cahuilla road, the 20 mile section of Mountain road between Aguanga and Palms-to-Pines highway, be changed to the official name of Anza-Cahuilla.—*The Hemet News*

NEVADA

Fossil Bones To Be Aged . . .

FALLON—A problem was solved recently by University of California paleontologist Charles Camp who since July has been digging the fossilized bones from the ichthyosaur graveyard. The bones unearthed from limestone and shale did not have the appearance of age. The bones would assume natural color after a long exposure to air and moisture but this would be a process of several years. To speed up this process so that the fossils could be displayed, Dr. Camp tried an experiment with sandblast equipment owned by Nye County and it worked. It will be a long job but thanks to the University of California extending his sabbatical leave through next summer, Dr. Camp expects to complete the work himself. He will remain at work this year until heavy snows cover the area. — *News Bulletin*



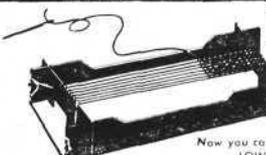
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Rare Collection To Be Sold . . .

TONOPAH—The valuable mineral collection of the late C. C. Boak may be sold. Mr. Boak made no provisions for its disposal upon his death and the rare collection has reverted to his heirs. Although the display has been appraised at \$25,000 to \$35,000 the heirs have agreed to accept \$7500. The Nevada museum has named a committee to devise ways and means of purchasing the collection at the figure agreed upon by the heirs, however, townsfolk of Tonopah would like to have the collection stay where it is.—*Tonopah Times Bonanza*

Protests Pillaging of Sites . . .

FALLON — Nevada State Park Commission Chairman Thomas W. Miller has written Governor Charles H. Russell concerning the pillaging and sabotaging of Nevada's historical and archeological sites. The feasibility of delegating to the Nevada State Police the responsibility of apprehending people who are vandalizing and carrying specimens out of the state which is violation of the state law was suggested. Park Chairman Miller wrote "On a recent trip to Leadville, I confirmed the fact that the large petrified tree area was being systematically pillaged. A similar situation would have occurred at the Ichthyosaur deposit near Ione had not the caretaker financed by private funds frightened the vandals away . . ."—*Humboldt Star*

NEW MEXICO

Mud Volcanoes Appear . . .

BOULDER CITY — With Lake Mead at new low levels, mud volcanoes, from the size of a hat to 50 feet across, are appearing on the delta below Pierce Ferry. The cratered mud hills percolate steady flows of gas, silt and water. It is believed they are caused by the disintegration of buried trees in the silt. They are about two miles out on the silt-formed delta from the end of the Pierce Ferry road. —*Las Vegas Review-Journal*

Indians Can Handle Liquor . . .

WASHINGTON — The American Indian is proving he can handle fire-water as well as anyone. So says William Bengé, chief of the Indian Affairs Bureau's Law and Order Branch. When asked whether Indian crimes had increased as a result of the 1953 law authorizing the sale of liquor to the wards of the federal government he said, "The incidence of crime on reservations which can be attributed to intemperate use of intoxicants is no greater today than before the law was passed 14 months ago."—*New Mexican*

Exiled with Geronimo . . .

MESCALERO—Burial and funeral services for 98-year-old Apache Edwin Yohanozha were held in Mescalero recently. His death marked the passing of one of the few remaining Indians who had lived in exile with the warrior Geronimo at Ft. Sill, Oklahoma. —*Alamogordo News*

Pageantry at Zuni-Land . . .

GALLUP—Following the first big frost in Zuni-Land, a thrilling pageantry occurs when the coming of the Shalakos, giant messengers of the gods, is heralded by weeks of preparation. Women labor over out-door ovens, roasting huge quantities of bread and meat. Shrines are visited and prayer plumes are planted in newly finished dwellings and surrounding pathways are strewn with sacred meal. The ceremonies actually celebrate the start of the Christmas season. Visitors come from far and near to trade, feast and dance. The ceremony usually lasts for 24 hours. —*Alamogordo News*

Promotion for Ted Hall . . .

GALLUP—Ted B. Hall has been appointed assistant area director of the U.S. Bureau of Indian Affairs at Gallup. In his new post Hall will be in charge of education, health, welfare, relocation and law and order on the Navajo Reservation in Arizona and New Mexico.—*Phoenix Gazette*

UTAH

Museum Receives Artifacts . . .

KANAB—The Museum of Southern Utah has received several new collections from Museum visitors this summer. Among the many artifacts were 30 pieces of ancient Hohokam pottery from Southern Arizona, a large rabbit fur robe used by the Hopis in their Kachina dances (this type of robe has 75 skins), clay heads from the Temple of the Sun at Monte Alban, a Hopi sifter basket from Sichomovi pueblo, and a large flaked stone war club. —*Southern Utah News*

Ideas to Keep Utah Clean . . .

SALT LAKE CITY — The Lions Club of Utah has announced a project to help keep Utah's highways free of trash. They plan to erect billboards at main highway entrances to Utah asking motorists to help keep the state clean by not discarding litter from cars. It is also proposed that trash bags be handed out to motorists by service stations, asking that paper, pop bottles, beer cans, etc., be put in the bag and disposed of at the next service station. —*Salt Lake Tribune*

Wells Are Ordered Closed . . .

ST. GEORGE—State Engineer Joseph M. Tracy has ordered the closing of wells diverting water from underground sources from November to April 1, 1955. All persons owning or controlling any artesian or pump well or wells in the state are required to close by plug, cap, valve or other mechanical device or by repairs all wells except those providing water for beneficial use. Beneficial use during the above period does not include irrigation. The closing season of underground water has been ordered in the interest of conserving the underground water supply and to provide a maximum quantity for next year's use. —*Washington County News*

Publicity Campaign Started . . .

VERNAL — Educational and publicity funds of the Upper Colorado River Commission were increased from \$25,000 to \$40,000 and a definite program of expenditure was outlined by the commissioners. At the suggestion of George D. Clyde, Utah's representative on the Commission, \$10,000 from the fund will be used to produce a color film on the project; \$5000 will be spent on a newspaper publicity campaign; \$12,000 for temporary office facilities in Washington, D.C.; and \$2500 for two brochures. The remaining money will probably be used to employ a public relations expert in Washington during the hearings. —*Vernal Express*

Booklet on Sagebrush . . .

OGDEN—Director Reed W. Bailey of the Intermountain Forest and Range Experiment Station tells of a new booklet designed to advise farmers and ranchers how to increase the grazing capacity of rangeland by eradicating the sagebrush and growing grass. It points out methods to control sagebrush through spraying with herbicides, plowing, harrowing, planned burning, beating and other ways. A free copy of the booklet *Farmer's Bulletin No. 2072* may be obtained from the Director, Intermountain Forest and Range Experiment Station, U. S. Forest Service, Ogden, Utah.—*Ely Record*

Too Many Porcupines . . .

KANAB—That little timber renegade, the porcupine, who causes so much damage to future timber supplies is again increasing in dangerous numbers. The Forest Service is asking hunters in all forested areas to "shoot them on sight." Even though they are a natural part of forest habitat, an overpopulation can destroy recreational and scenic values by stripping the bark from young trees. —*Southern Utah News*

MINES and MINING

Grand Junction, Colorado . . .

The Geological Survey plans to release logs of core-drill holes on public land opened recently for mineral entry. The logs show the type of rock penetrated and assay data on the mineralized parts of the core. An index map showing locations of holes is provided for each group of logs. The first group released pertains to holes drilled on Blue Mesa, Mesa County, Colorado. Additional information will be released from time to time as the data becomes available. Copies of the logs and map are available for public inspection at the offices of the Geological Survey, Grand Junction, Colorado. Copies are not available for distribution. — *Pioche Record*

Casa Grande, Arizona . . .

One of the biggest ore bodies discovered since the New Cornelia Mine at Ajo was reported 43 miles southwest of Casa Grande. Development is being made by the Pinal Copper and Uranium Corporation which incorporated in Arizona with \$30 million. According to Edward Hopkins, president, the copper ore body consists of 54 claims formerly held by individuals and contains an estimated 1.8 million tons of copper. Operations will be open pit mining since much of the copper is close to the surface. The copper ore body showed an average content of 2.60 percent. Many companies operate in bodies showing less than 1 percent.—*Phoenix Gazette*

Park City, Utah . . .

An important high-grade lead-silver discovery has been made by the United Park City Mines Company along the Crescent Fissure on the 2100 foot level in the Daly-West section of the firm's Park District property. The ore is above mill grade, meaning it does not have to be concentrated, and initial assays show it to be above 20 percent lead and 50 ounces of silver per ton.—*Salt Lake Tribune*

Montrose, Colorado . . .

More than 1000 prospectors filed claims on approximately 18,450 acres of public lands and 2280 acres of patented lands which had been withdrawn from public use for possible Atomic Energy Commission development, but have recently been restored by the Department of Interior. Some of the miners waited in line all night for Montrose County Clerk Ira C. Foster to open the recording office.—*Phoenix Gazette*

Churchill County, Nevada . . .

Fifty years of Churchill County mining history comes to an end with the Summit King Mine placed on the auction block. The history of the Summit King, formerly known as the Dan Tucker, goes back to 1905. C. W. Kinney and his brother prospecting in the Sand Springs were the first to find gold there. The mine is on the summit above Sand Springs and Sand Mountain 30 miles east of Fallon. Included in the mill and mine machinery were pumps, compressors, conveyers, pipe, buildings, crushers, diesel power plants, a complete assay plant and \$9000 of tools and spare parts. — *Fallon Standard*

Kingman, Arizona . . .

The Hualapai Tribal Council has recommended that the bid of \$310,000 for 200,000 acres of reservation land for uranium prospecting rights be accepted. The award will be made by the Bureau of Indian Affairs in Washington. The action of the Tribal Council was a recommendation only. Bids were submitted by three mining companies, but A. T. Locke Associates of Escondido, California, received the approval of the Tribal Council. When approved the holder must commence actual prospecting within 30 days. — *The Mining Record*

Moab, Utah . . .

Diamond core drillings by three companies have opened another multi-million dollar uranium ore area in the Big Indian District 32 miles south of Moab in San Juan County. Discoveries have been listed by Utah and Idaho Uranium Company, Couer d'Alene, Homestake Mining Company and Robert Daniel in association with Moab. On the properties ore valued by geologists at \$15,000,000 reportedly has been blocked out. The discovery is at 700 feet in the Shinerump conglomerate formation.—*Dove Creek Press*

Verde Valley, Arizona . . .

Two groups of ore-bearing claims on Mingus Mountain have been leased to a Utah mining corporation and Verde Valley is preparing for a uranium rush. The claims are the first to be leased commercially in the area although interest in uranium has grown rapidly. Mingus Mountain is the hub of activity and deer hunters have found the mountain covered with new claims.—*The Verde Independent*

Albuquerque, New Mexico . . .

The Sapphire American Petroleum Company of New York has offered the highest bid ever made for a prospecting permit on pueblo lands in New Mexico. The bonus offer is \$101,110 for a permit to prospect for uranium on Acoma Pueblo tribal lands for one year. Exploration will be on 160,500 acres of Acoma land, south of U.S. 66 bounded on the east by Laguna Pueblo land, now the scene of large scale uranium mining by Anaconda Copper Co. Beside the bonus, a good faith offering would give 1600 Acomas more than \$60 each upon issuance of a permit. The firm also agrees to employ Indians whenever possible during the operation.—*The Grants Beacon*

Grand Junction, Colorado . . .

Recent government ruling has greatly widened the field for uranium prospecting and location of claims on U. S. lands formerly out of bounds for mining claims. The Department of the Interior has declared carnotite ores and uranium to be metal minerals. For 36 years the department has considered carnotite and uranium non-metallic. The Pickett Act which set aside certain lands as federal reserves for petroleum, oil shale, water power rights, irrigation and other public purposes allowed filing of claims for metalliferous minerals but prohibited filing claims for non-metalliferous minerals.—*The Mining Record*

Randsburg, California . . .

"Discovery of water on the desert in great quantities after a 75 year search is about to add another industry to production in Southern California. The nation will soon be looking to the southland as a major source of tungsten. This is of utmost importance now that America's major source of tungsten in the Orient has been cut off by Communists." This was the prediction of Philip M. King, Sr., president of the Lila King Mining Co. when a water strike was made by the Old Nassau Exploration Company drilling for the Lila King mine in Kern county. Insufficient water in this arid district for the past 75 years has left the area's great potentials almost untapped. — *The Mining Record*

Coconino County, Arizona . . .

Northern Arizona's uranium boom is apparently centering in Coconino County. Since July 1 a total of 3248 claims have been filed with the Coconino County Recorder. Most of the claims are located in the Marble Canyon and Vermillion Cliffs areas near Highway 89, not far from the northern border of the county and state.—*Cocconino Sun*

AMATEUR GEM CUTTER

By LELANDE QUICK, Editor of The Lapidary Journal

It was recently our privilege to edit the section on gems and gem materials of a highly exhaustive report being prepared by the Bureau of Mines of the United States Department of the Interior. This report on metals, minerals and gems will soon be published as a bulletin entitled *Mineral Facts and Problems*. It is a study of the domestic economy relating to minerals and is being issued as a guide to research and the improvement of our national mineral position. The gem section was written by Robert D. Thomson and he has done a

very thorough job indeed. When the report is available for distribution we shall announce it on this page. Do not write to Washington for a copy at this time for it may be many months before the bulletin is actually printed.

Mr. Thomson rightly states that the United States has never been important in world gemstone production and that gemstone output in the entire country was valued at less than a half million dollars last year. He says "the greatest factor in this production is the thousands of amateur collectors engaged in gemstone collecting as a hobby. Enthusiasm for gem collecting has grown into a tremendous hobby and commercial activity. It is in the national interest to encourage the activities of collectors and lapidaries; their efforts may disclose new sources of strategic minerals and their technical skills and facilities may serve as a nucleus for emergency expansion of jewel bearing production and related manufacturing industries."

It is interesting to note that in this government report the imports of diamonds last year amounted to \$107,600,000 while the imports of the so-called "semi-precious" stones amounted to \$130,182,050. This latter figure was an increase of 44 percent over the previous year and it is believed that the collecting of gems by collectors accounted for most of the increase. One very interesting section of the report will include a list of every reported gemstone location in every state of the United States.

Now and then we receive for our personal collection some very fine contributions. Among these we recently received a small turtle carved from Petoskey stone, an ideal material for turtles because of the marking in the stone of the petrified coral. The thing that pleased us however was to see the wonderful polish on the turtle, for

Petoskey stone has long been a lapidary problem. When we first started polishing rocks one of the old time lapidaries said that when we learned to polish a Petoskey stone we would be an accomplished gem cutter for he had never been able to polish one.

That was a challenge and we began to polish a specimen. Nothing came of it. When we announced on this page, about ten years ago, that we were experimenting with cerium oxide as a polishing agent (it was new then and no one had been using it for lapidary work) we tried it on our lone Petoskey stone. While we did not achieve a mirror-like finish we did get a result that was better than any we had seen.

Our turtle was sent to us by E. H. Smith of Hicksville, Ohio. He makes them for the trade and we asked him how he achieved such a good polish. He advised that he derived his method from an old timer and did not feel free to reveal it. A few days later Floyd Irwin of Gould City, Michigan, sent us a polished Petoskey stone about the size of a silver dollar and the polish was so good that you could see the reflection of your face in it as you gazed at it. For the first time a Petoskey stone really looked pretty to us. Irwin proved to be the old timer who told Smith how to polish the stones and he wrote and told us his method of polishing, with the comment that "it might make some of the ones mad who wish to keep it a secret but it will make many more happy."

Mr. Irwin uses a coarse grinder for fast work; a 70 or 80 grit wheel. Then he rough sands on an 80 grit sander and finishes on a 220 sander. He claims that wet or dry sanding gives the same results. "The secret is in the buffing" says Irwin. He uses a three-quarter inch plywood disk covered with a one inch thick piece of foam rubber over which is stretched a piece of 10 ounce canvas. Irwin claims this is the only type buff that he has ever found that will do the work. He makes a saturated solution of oxalic acid. Saturated means that you take a bottle of water and pour in the powdered acid until no more will dissolve. He puts this in a sprinkler type bottle and soaks his buff with the solution. After the buff is really wet he applies a thin paste of tin oxide with a brush and starts to polish, gradually using increasing pressure. When the stone begins to pull he applies more oxalic acid but not much more tin oxide. He claims you have to practice this method for some time before you get proficient with it because Petoskey stones vary in their structure and some of the eyes will never polish at all. There are many kinds of coral in Michigan but the stones that polish best are of Colony Coral.

The importance of Mr. Irwin's volunteered information is not so much its value in polishing Petoskey stones but it suggests a method of polishing other materials that may be hard to polish. We intend to use it next time we get in our shop on rhodochrosite and variscite, two materials which have always kept us unhappy. We believe that the type of buff has the most to do with the success of the method for the idea of using a little oxalic acid in all polishing agents is not new. It has long been used by Melvin Kathan of Portland, Oregon, one of the top lapidaries of the Northwest and author of *Working with Agate*. However oxalic acid finds its greatest field of usefulness in the polishing of soft materials. It is the only agent used in polishing most of the commercial onyx novelties such as pen stands, etc., and it is the agent that was used in producing the beautiful onyx dishes of the late O. C. Barnes.

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GEMS and MINERALS

AMONG THE ROCK HUNTERS

The Mineralogical Society of Arizona has started an informal way to learn about minerals. The winner of the door prize will give a five minute talk at the next monthly meeting on the specimen he won. In the event that the first prize is won by a visitor then the second prize winner will give the talk. Winners are asked not to be too technical and to spend at least 30 minutes reading up on the subject.

The Santa Fe Gem & Mineral Club of New Mexico planned to have as guest speaker Francis H. Harlow of Los Alamos with "Cretaceous and Pennsylvanian Fossils in New Mexico" as his subject, at the November meeting. Mr. Harlow also planned to lead the November field trip to Nambe Falls for fossils on November 28. Nambe Falls is located on an Indian Reservation. A fee of 50 cents per car is charged.

The Gem Cutters' Guild of Baltimore, Maryland, won third prize for its display of lapidary work submitted at the convention of the Eastern Federation of Lapidary and Mineralogical Societies held in Miami, Florida, October 12-16. Mr. James W. Anderson, founder and president emeritus of the Guild, won first prize for the best individual display of polished slabs and another first prize for his display of lapidary work mounted in silver and other metals. Mr. Anderson's silver table service with handles and decorations of polished stones is nationally known.

The first indoor meeting of the fall season of the Minnesota Mineral Club was scheduled November 12 at the Y.M.C.A. Midway auditorium. The annual "biggest, best and most unusual" rock contest was to have been held with prize money and ribbons for winners in five classes. A movie "This Is Minnesota" was scheduled and Mrs. D. A. Thomas was to have given a talk on the custom making of silver jewelry.

The Contra Costa Mineral & Gem Society of California at its November 12 meeting planned to have members bring the most interesting specimen in their collection and give a short talk on the collection and history of the find. A movie from Shell Oil Company on "Prospecting for Petroleum" was also to have been shown.

New officers for the coming year of the Ukiah Stone & Gem Club of California were elected at the November 4 meeting. They are: Carl Jensen, president; Leslie Williams, vice-president; Ethel Jensen, Secretary; Peter McCarty, treasurer; Ruth LeRoy, corresponding secretary and Susan Haines, Federation Director for the club.

At the 12th District Fair, the club held its Second Annual Show and won a gold trophy cup for the best hobby display.

Ruth Parker of the Ventura Mineral and Gem Society was to have been the speaker at the November meeting of the Santa Barbara Mineral & Gem Society. Her talk was to have been on her summer vacation entitled "Running the Rapids of the Green River" and illustrated with kodachromes.

The Montebello Mineral and Lapidary Society of Montebello, California, reports the first show ever held by the society was a success. There were 689 registered guests and many other societies attended including the Santa Monica Gemological, Mojave Mineralogical, Compton Gem and Mineral, Delvers, San Gabriel, Long Beach, Mineral and Gem, Southwest Mineralogists, Gem Cutters Guild, Pasadena, Southeast, West Coast, Whittier Gem and Mineral, Verdugo Hills, Arrowhead Mineralogical, Los Angeles Mineralogical, San Pedro Lapidary, Stockton, Lockheed Rockcrafters and Fresno Gem and Mineral.

Members of the Coachella Valley Mineral Society enjoyed the first field trip of the season by visiting the old Indian campsite where tribes gathered for council meetings when the Salton Sea area was a fresh water lake. Trips were made by jeep to the Rainbow Rock collecting area for book-end cutting material and at night rock hunting with a black light produced many interesting fluorescent specimens.

Mineral and ore display samples taken from Twentynine Palms area received 8 blue ribbons, 4 second place ribbons, 2 third place ribbons and a special ribbon award at the Death Valley '49ers Encampment held at Furnace Creek and Stovepipe Wells, November 11-14. The exhibit was entered by Les Spell and consisted of gold, silver, lead, copper, commercial clay rhyolite building rock and many other specimens.

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HUNTING AMETHYST IN MINNESOTA

Rock Rustler's News, monthly bulletin of the Minnesota Mineral Club printed this interesting article on Amethyst.

"Older books on gems and minerals lists Minnesota as a prime or single source of amethyst. Modern hunters will disagree with this statement. There is amethyst in Minnesota—a lot of it but you have to look for it.

"Amethyst is nothing more than quartz with a distinctive purple color. It may be pale and known as "mild" amethyst. This at one time was the most desirable shade. Much of Minnesota's material is a deep shade, some so dark it can not be used. Like the material from Mexico and Brazil only a small portion is of faceting quality and an equally small portion is of sufficiently fine crystalline structure to make interesting cabinet specimens.

"You may find this gemstone anywhere as the glaciers passed over its source and scattered fragments of it all over the State.

"The famous North Shore amethyst is north of Grand Marais. It is hard to find. The freight office at the town of Grand Marais showed a consignment of seven barrels of this material which has been found on the Gun Flint Trail, but the finder has not given the location.

"For two years I have been looking for a known deposit in large crystals around Hinkley, Minnesota. It is a lost mine one reads about. The owner has nice specimens but doesn't remember exactly where he found it except that it was along the Kettle River. These crystals are mild in color as are the small waterworn fragments of amethyst found in the gravel beds along the Kettle River near Carlton, Minnesota.

"Mild amethyst has been found on the Mesabi Range but here again the material is out of place. Crystals are large as a fist and sharply defined or they are longer and distorted from irregular growth. Both kinds have been moved from where nature made them and mixed with a cretaceous conglomerate of forming iron. To say that amethyst does not exist in Minnesota is not true. The problem is to prove it."

The *Mineralog*, monthly news letter of the San Francisco Gem & Mineral Society quotes the *San Francisco Chronicle* of October 1, 1954. The Director of the Museum of Paleontology at the University of California credits mineral societies with "some of the most significant discoveries of fossils," and apologizes for the careless use by a U. S. Paleontologist of the term "Dreadful Rockhounds."

New officers of the San Antonio Rock and Lapidary Society for 1955 are: Raymond Rock, president; John Gibson, vice president; Ann Woodward, secretary; and Eva Pirie, treasurer. Directors are, R. C. Farquar, Jesse Burt and Oren Striegler.

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The Delvers Gem & Mineral Society of Bellflower, California, planned a field trip to Beatty, Nevada, to look for petrified wood November 25-28. Dale Clifford in the *Delvings* reported that the area has not been stripped but that members were to prepare for digging.

One of the highlights of the year for the Chicago Rocks & Minerals Society was scheduled November 20 at Green Briar Field House, when hundreds of dollars worth of specimens and cutting materials were to be offered to members and guests at an auction.

A float depicting the proposed Ichthyosaur Park was planned to be exhibited by

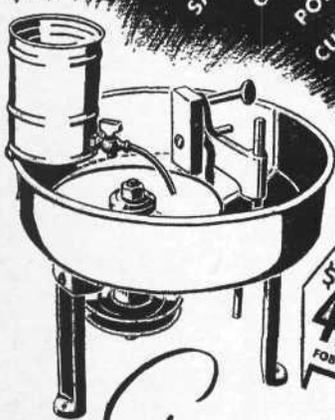
the Lahontan Gem and Mineral Club in the Nevada Day parade October 30 in Carson City.

The monthly field trip of the Mojave Mineralogical Society was to Boron, October 16 and 17. Members searched the hills north of Boron for petrified palm wood.

Mr. and Mrs. Gene Schenet and son Edward of San Clemente, California, traveled in their bus museum, which they christened "Rockhound Special." In their traveling museum all types of mineral specimens are displayed along with geiger counters and Mineralights.

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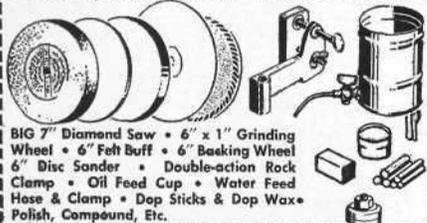
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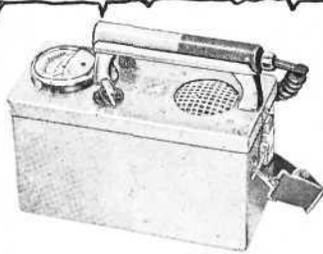
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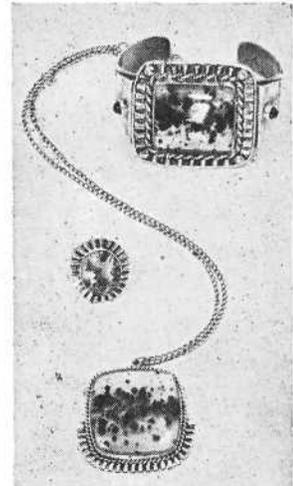
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At the October meeting of the East Bay Mineral Society of Oakland, California, members were visited by Dr. Stenbuck, president of the New York Mineralogical Society and Mr. Mitchell, vice-president. Dr. Stenbuck displayed specimens he has collected and gave a talk on the background of the New York Mineralogical Society, which is the oldest in the United States being organized in 1880. Melvin C. Stinson, Jr., mining geologist was scheduled to speak on Uranium at the November meeting.

Mrs. Nathalie Mahoney, a member of the East Bay Mineral Society and past president of the California Federation of Mineral Societies, was scheduled to speak to the Long Beach Mineral and Gem Society, November 10 on Jade. She was to have discussed methods of cutting and polishing jade. The field trip to Boron Dry Lakes was planned for November 27 and 28 for petrified wood, jaspagate, pastelite, petrified bone and palm fiber.

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Afton Canyon can be reached by way of Barstow via Tehachapi and Bakersfield then through Yermo toward Baker. When you are about 35 miles from Barstow you will come to Midway station. After Midway you go a few miles to Barbara's Station, turn sharp to the right and almost double back on the road you are traveling and take the dirt road leading south toward the railroad tracks and Afton Station. When you get to the tracks turn left down through the brush to the bridge. Under the bridge is sandy and this is a good place to camp. Water and wood is absolutely a necessity. If you have a pickup, you can go up the gulch toward the divide or along the river. If you have a jeep you can keep going up the sand wash for a long way and wind up at Ludlow which is on the road from Yermo to Needles.

I have always considered dendrite jaspagate as typical material from the Afton Canyon. It has a main color of white to lavender with black dendrites. I found a chunk in 1950 of about 100 pounds and I have sawed and polished about 10 by 18 inches, with three patterns entirely different and it is the hardest and most beautiful gemstone imaginable.

Summary of an article by George Smith in the Fresno Gem & Mineral Society's monthly bulletin *Chips*.

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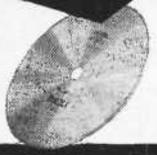
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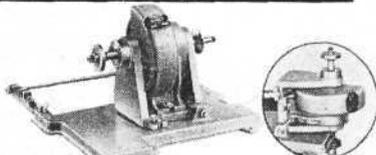
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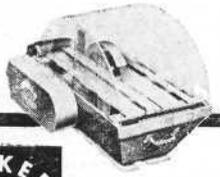
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Dr. George Green, a member of the San Francisco Gem & Mineral Society was to be guest speaker at the November meeting of the Gem and Mineral Society of San Mateo County, California. The Guadalupe Mine for a picnic and to collect travertine, cinnabar and jasper was the field trip planned November 21. Member Jean Andrus has a good idea for collecting agate. To solve the "stoop and pick" problem or prevent wet feet when agate hunting on the beaches, she uses a slotted kitchen spoon fastened to the end of a broomstick, bent to form a scoop. It is effective and does double duty as a stout walking stick upside down.

The San Jose Lapidary Society's spring gem exhibition will be held at the Women's Physical Education Building, on the campus of the San Jose State College, east San Carlos at 7th street, April 23 and 25 from 10 a.m. to 9 p.m.

The San Fernando Valley Mineral & Gem Society planned a trip to the Darwin mine November 20 and 21 to collect pyrite and smithsonite, with D. Parsons as field trip chairman.

The Rawlins Rockhounds Mineral and Gem Club of Rawlins, Wyoming will be hosts to the Rocky Mountain Federation of Mineral and Gem Societies and to the Wyoming State Mineral and Gem Society June 16-19, 1955. The show will be non-competitive and no fee will be charged for non-commercial exhibits. The Rawlins Rockhounds are also planning field trips to the jade fields and to the Diamond Hoax area.

Members of the San Francisco Gem & Mineral Society traveled to Coulterville, California, to pan for gold. Gold nuggets were rare—but members enjoyed the scenery and the fun. There was a caravan of 14 cars. Although members did not bring home a lot of gold—they brought back wild grapes for jelly.

A new rockhound club has been inaugurated in Tehachapi, California. As yet the organization does not have a name. Mrs. Gordon P. Maloche is president; John Squires, vice-president; Sgt. Plummer, secretary and Mrs. Wonnacott, treasurer. Chester Gilbertson, an experienced geologist is field man. The organization will meet the first Wednesday of the month at the Veteran's Hall and plan field trips the second Sunday of each month. At the first meeting 24 members attended.

The San Diego Mineral and Gem Society planned to invite other San Diego mineral societies to hear Dr. Frederick H. Pough, author of *Field Guide to Rocks and Minerals* speak. His talk was to be on gems and minerals illustrated with colored slides.

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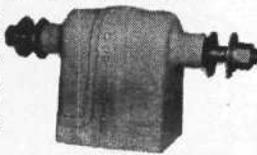
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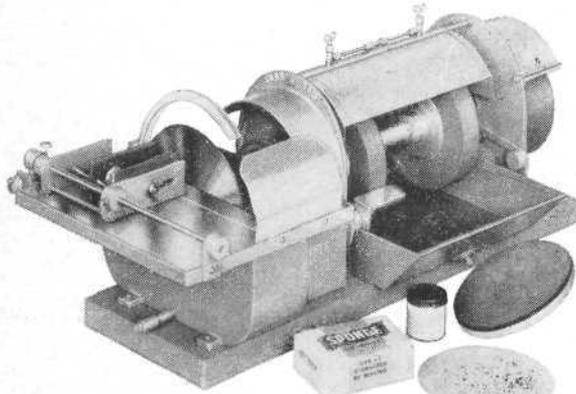
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Colored slides of micro-mounts from the collection of Arthur L. Flagg were shown to members of the Mineralogical Society of Arizona at the October meeting. The photographs were taken by Floyd Getsinger with a special camera built for that purpose. The first field trip of the season was taken October 24 to Big Bug Creek in Central Arizona where two old mines were visited. Calcite with dark spots as yet not identified were part of the finds. About 80 attended. The field trip was supervised by Joe Harris.

The 14th anniversary of the Tacoma Agate Club of Washington was to be celebrated November 4 with a turkey dinner. Prizes for competitive displays of rocks collected since the last birthday dinner were to be presented. John Haberlin of Seattle was scheduled to speak on gold and show his gold collection.

Forty members of the Clark County Gem Collectors Club of Nevada attended the October field trip to Bullhead City, Arizona, near Davis Dam and found fire agate and geodes. The club recently exhibited 12 cases of gold nuggets, polished rocks and colored glass. A blue ribbon was presented for this display at the Las Vegas Community Fair. A field trip was scheduled November 29 to the Johnny Mine, 85 miles northwest of Las Vegas. The regular November business meeting and pot luck dinner was to have been held at the Johnny Mine location.

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"There is a lost diamond mine in Nevada within 20 miles of what is now the city of Las Vegas near the Colorado River. It has been lost since 1872. This story deals with a successful miner and probably is the reason that the mine is lost today. The ores of gold and silver were his trade. He knew his trade well, too well to be worried about identifying a pocketful of unfamiliar shiny rocks.

"In 1872 a prospector named Lawrence, arrived at the old Stewart ranch, now the site of the city of Las Vegas on a prospecting mission. Heading toward a point on the Colorado River where it would be about 25 miles from the ranch, he came upon some blue clay of an odd color in the formation of volcanic rock. As nearly as he could judge, much later, he was about 25 miles from the ranch. Later he washed a small pocketful of rocks from the mud and went on with his search for silver, a trip which resulted in a successful mining venture.

"After carrying the pocketful of rocks for some time, the thought occurred to him to ask a jeweler if the rocks were worth anything. They were. All of them were diamonds, one-half to three and one-half carats in weight. Not in need of money and certain that he could find all the diamonds he wanted, the successful miner, Mr. Lawrence, gave all the diamonds to his friends. But he never found the blue mud seam again.

"Perhaps the blue outcrop has been covered by Mother Nature again with shifting sands—the old trails covered up and new ones made. Even the landscape could be altered. Such is the too familiar ending of many a dream of wealth in the uncharted desert country. Yet the shifting sands can uncover as well as cover."

From the *American Prospectors Journal*, monthly bulletin of the American Prospector's Club.

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The San Diego Lapidary Society made a field trip to the Himalaya Mine Dump led by Ed Soukup. Some of the members were lucky and found tourmaline, but the pieces were small. It is almost impossible to walk around and pick the tourmaline from the ground anymore, reports Frances Creson in *Shop Notes and News*. It is necessary to dig and screen for good tourmaline. The next field trip planned was to have been to the Cal Rock Ranch, November 20 and 21.

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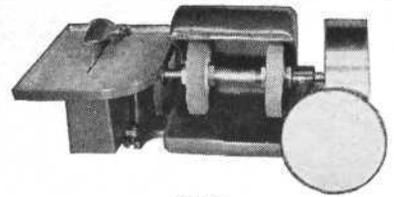
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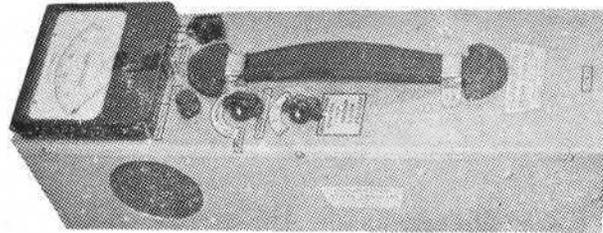


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Gerald Backus was scheduled to be field trip chairman on the planned field trip of the Compton Gem & Mineral Club of Compton, California, to the Lavic District of the Cady Mountains November 20-21. Good grade agate and plume jasper has been reported to be found there located about 35 miles east of Barstow. The *Rockhounds Call* monthly bulletin of the Club reports one of the favorite locations for field trips, Boron Dry Lake is now closed to rockhounds. The owner has posted "no trespassing and no digging" signs.

The Hollywood Lapidary and Mineral Society planned to have as its guest speaker November 11, Margaret Harris who was to show her collection of slides on both mineral and lapidary. The next field trip planned is to Wingate Pass.

Dr. Thomas Clements, Chairman of the Geology Department at the University of Southern California and past president of the Los Angeles Mineralogical Society, was scheduled to speak at the November meeting of the Mineralogical Society of Southern California in Pasadena. His talk was to be on "Geology of Death Valley" with colored slides for illustration.

Walter Kohn, member of the Glendale Lapidary Society has arranged a display in the Treasure Room of the Doheny Library at the University of Southern California. His display consists of California jade, polished petrified wood, agates and moonstone jewelry. He collected these semi-precious stones in California and polished them himself. A silver head of George Washington copied from a sapphire carving is also on display.

SCIENTIST EXPLAINS MYSTERY OF THE OPAL

The *Evansville Lapidary Society News Letter* published this clipping from the *Courier-Journal*, of Louisville, Ky.

"Sir Chandrasekhara Venkata Raman, Nobel Prize winner in physics has discovered the secrets which have made the opal the most mysterious and one of the most coveted of precious stones throughout the ages. The director of the Indian Institute of Sciences at Bangalore has found the scientific clue to the splendor and the mystery of opal iridescence.

"Until recently, it was thought that the opal refracted light and gave off its multi-colored brilliance for the same reason that a soap bubble shines with all the colors of the rainbow.

"Instead the Indian scientist has found internal crystalline formation creates the quality of opalescence. Dr. Raman and his associates have found that the two important ingredients of precious opals are forms of silica known as high-cristobalite and tridymite. And their stratification accounts for the colors described by the Roman scholar Pliny as possessing 'the living fire of the ruby, the glorious purple of the amethyst, the green sea of the emerald, all glittering together in an incredible mixture of light.'

"The new discovery makes it easy for scientists to understand and jewelers to judge the qualities of any particular stone. And yet the opal retains its mystery for all but the few who really understand physics. Even the scientists cannot explain why, through the ages, the opal has brought good luck to all who were born in the month of October and bad luck to the rest."

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BOOKS of the SOUTHWEST

WHEN JOURNALISTS CAME TO THE COMSTOCK LODGE

The first newspaper ever to be printed in the howling wilderness of Nevada made its appearance in December, 1858 at Mormon Station. It was a six-column, one sheet paper, printed by hand press, and on its mast-head was the name *Territorial Enterprise*.

Lucius Beebe, publisher of the *Territorial Enterprise*, who along with Charles Clegg, editor, restored the legendary paper in 1952, in *Comstock Commotion—The Story of the Territorial Enterprise*, tells with a flourish the story of the Enterprise when it followed the bonanza of the Comstock Lode to Virginia City. The writers of that era are vividly and amusingly described. Joe Goodman, J. Ross Brown, Dan De Quille and Rollin Daggett were the journalists of the day along with a celebrated staff member of the Enterprise — Mark Twain. In those days the very first requirement of a good reporter was to be able to use a revolver—in self defense.

Lucius Beebe is an expert in narrating the history of Virginia City and the fabulous characters of that day. The book is interestingly illustrated with drawings and photos of early day printing. The Enterprise, as it was in the old days, is still the least formally conducted newspaper in the land.

Published by Stanford University Press, Stanford, California. Cloth bound \$3.50, paperbound \$2.00, 129 pages.

TRAGIC STORY OF THE UTES IN COLORADO

The saying of the Utes is — "The Land is the body; the People are the spirit. When the Land and the People are cut apart, this is death."

In *The Last War Trail*, Robert Emmitt tells the gripping, true-story of the Utes, around the time Colorado became a state in 1876, when their land was "the splendid and forbidding wilderness of peaks which they called the Shining Mountains." He follows with a wealth of informative detail about the Ute War of 1879 and the evidence given at the hearings in Washington following the incident.

Emmitt has first hand information from the then-young warriors, among them Saponise Cuch, and has spent a great deal of time searching the Congressional records.

The Indians before 1876 bothered

little with the white man; agents came and went but Agent Nathan Meeker had his own ideas for civilizing the Utes. From then, through the fateful battle, with Major Thornburgh a dominant figure, and the Meeker Massacre, the story moves to the decision of removal of the Utes from their reservation, by the Committee on Indian Affairs of the House of Representatives in 1880. Included is the equally dominant figure of Chief Douglas (Quinkent) whose dream of visiting Washington and talking in behalf of his people vanished when he was put into prison, later to be released.

Told in narrative manner, *The Last War Trail* provides excellent reading both for the student of Indian affairs and anyone interested in a moving true-story laid against the magnificent country of Colorado.

This is the 40th volume in the Civilization of the American Indian Series. University of Oklahoma Press. Drawings by Bettina Steinke. Bibliography, bibliographical essay. 333 pages. \$4.50.

DESCRIBES NORTH AMERICAN AMPHIBIANS AND REPTILES

An authoritative Nature book for both the lay reader and the scientist is *Amphibians and Reptiles of Western North America*, latest of the McGraw-Hill Field Series. It is an easy to read volume for the identification of salamanders, turtles, lizards and snakes.

Each species is illustrated by line drawings, range and distribution, including maps covering Western North America from the Mexican boundary to Saskatchewan and Mackenzie in Canada, to New Mexico, Colorado, Wyoming and Montana.

In identifying, the key to families is first used, then the key to differences in qualitative characters, then to accompanying illustrations. Characterizations are given of the larger taxonomic groups with an estimate of the number of species in each genus.

There is also a section on methods of collecting in the field and preserving specimens at home, with clear-cut instructions on the apparatus needed. Photos of tracks help with identification of certain species.

Robert Stebbins has done splendid work throughout western America to obtain factual data for this book. An associate professor of zoology at the Museum of Vertebrate Zoology at the

(Book Reviews continued on page 43)

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By RANDALL HENDERSON

9 THINK THAT even Solomon with all his wisdom would be baffled by some of the problems this atomic age has produced. For instance, I am thinking of a controversy now going on in Arizona over the improvement of Highway 60-70-89 in the western part of the state.

The U. S. Bureau of Public Roads wants to build a super-highway west from Phoenix to Quartzsite—cutting 20 miles off the present distance, and according to estimates, saving motorists nearly a million dollars a year.

But the new route would leave Glendale, Wickenburg, Aguila, Salome and several smaller communities far to the north—off the main highway. Naturally, merchants and motel owners with millions invested in tourist accommodations along the present route are opposed to the new road. They want the money spent on a 4-lane highway along the present route.

Since the state pays 21 percent of the cost of the super-highways, the property owners in Wickenburg and the other towns point out that they would be taxed to build a road that would take business away from them.

The federal government pays 79 percent of the cost, and most of the money comes from gas and automotive taxes. Since the super-highways are to serve the nation rather than the local community, the act specifies that they be built along the most direct feasible route. Federal road engineers say they cannot spend the money on the present U.S. 60 highway because it is not the most direct route.

And there the matter stands. There's justice on both sides. I do not know the answer. This high-speed civilization is getting too complicated for my simple mind.

* * *

I am glad to note that my old friend Harry Oliver, editor of the *Desert Rat Scrapbook*, has joined the crusade against the litterbugs. Harry had some signs printed bearing this legend: "SHAME! Look what you did! . . . (Beauty was here until YOU came!)"

Harry drives down the road and when he sees a pile of bottles and cans someone has dumped beside the highway, he puts up one of the little signboards. Of course it is unlikely the lout who dumped them there will ever see the sign. But the signs attract attention—and if enough people become indignant over the trash deposited along the roadsides, something will be done about it.

Recently I wrote to the California State Motor Patrol to ask how many tickets had been issued during the past year to violators of the law which makes it a misdemeanor to toss debris along the roadside. The reply was that the state office had no record of this type of violation. Evidently the state officers do not attach much importance

to the law. Perhaps it would help if we could get more cooperation from that source.

* * *

I do not know Charles Hutchings of Altadena, California. But I am against him. He's the fellow who proposed that the Los Angeles metropolitan district solve its smog problem by cutting a huge notch in the Sierras and blowing the poison atmosphere through to the desert. I could say a lot about that, but it isn't necessary — the idea is too screwball for anyone to take seriously.

* * *

Recently I was present at a meeting of the newly organized Desert Protective Council—composed almost entirely of desert dwellers who would like to have some of the scenic canyons and waterholes preserved against the encroachment of private commercial enterprise. They feel there should be natural outdoor sanctuaries for human beings, as well as for birds and other forms of wildlife—where all the members of the big American family would have free access to lands which belong to all of them.

One of the members of the council expressed a viewpoint which I am sure will be shared by many *Desert* readers. He was discussing the efforts being made by certain mining interests to have the Joshua Tree National Monument opened to private mining.

"There is considerable difference of opinion as to whether or not there are any ores in the Monument worth mining," he said. "That really is not a vital matter. There is no pressing need that all the minerals in this hemisphere be extracted from the ground in this generation. Ores are not perishable. Perhaps our great grandchildren of a future generation would be grateful if there remained some of this natural resource for their generation to work on. There are cattlemen and lumbermen and mining men who would take over the entire public domain if they could. And if that ever happened you and I couldn't even take our families out on a picnic or camping trip without trespassing on some one's private property.

"As the matter stands now, Joshua Tree Monument belongs to all of us, and nearly a quarter of a million Americans visited the park last year. If there is a rich gold deposit somewhere under the surface in the Monument, it is just as safe there as in the underground vaults at Fort Knox. And it still belongs to all of us. If there were strategic minerals within the Monument, and the government had a critical need for them, Uncle Sam has the authority to go in and take them out.

"In the meantime let's keep the Monument as it is—a place where there are good access roads open to all, with picnic tables, and rocks for the kids to climb on, and a wealth of flora that is protected by our employees, the rangers."

BOOKS

(Continued from page 41)

University of California at Berkeley, he is also curator of herpetology.

Published by McGraw-Hill Book Co. 528 pages. Over 300 line drawings and maps. \$8.50.

NEW GUIDE FOR ARIZONA TRAVELERS

In 1864 J. Ross Browne wrote: "Arizona was perhaps the only part of the world under the protecting aegis of a civilized government in which every man administered justice to suit himself, and where all assumed the right to gratify the basest passions of their nature without restraint. It was literally a paradise of devils."

But Arizona has come a long way during the 90 years since Browne wrote those words. A state of towering mountains, rugged chasms, rushing streams, arid desert and verdant valleys, its people have built great irrigation systems, beautiful homes, stately marts of commerce and most inviting guest accommodations.

It was for the purpose of publicizing the wondrous Arizona of today that the Southern Arizona Bank and Trust Company of Tucson has issued an 80-page pictorial booklet, *The Other Side of the Mountain*, for distribution to all who are interested. Prepared by the Cabat-Gill Advertising Agency, with Su Plummer as editor, the book presents in picture and text the state's natural and historical landmarks, with maps for the guidance of travelers. It is a guide book of outstanding merit for those who would become better acquainted with Arizona, past and present.

While they are available, copies may be obtained without cost by writing to Southern Arizona Bank & Trust Company, Tucson.

DECISIVE DEFEAT ENDS CRABB'S SONORA VENTURE

"... An official appeared with a written paper... Mr. Cortelyou, who read Spanish, translated it aloud to us. It was that we were all to be shot at sunrise."

This was the verdict which brought to an inglorious end the tragic filibustering expedition organized by Henry

Alexander Crabb to seize the territory of Sonora, Mexico, nearly 100 years ago. Of the 90 men in the expedition only a 16-year-old boy escaped to tell the story.

The Mexicans were not unjustified in their bold defense of Sonora, Robert H. Forbes tells in *Crabb's Filibustering Expedition into Sonora, 1857*.

Crabb was a Tennessean by birth, lawyer by training and visionary adventurer by nature. He came to San Francisco in 1849, became successful in California politics and married into the Aienza family which was prominent in Sonora and California.

He lost an election for U. S. Senator and, at loose ends, entered Sonora politics, which, more often than not, were resolved by military actions.

Crabb made a deal with venal General Ygnacio Pesqueria, one of the contenders for the governorship of Sonora, agreeing to help Pesqueria win governorship in return for mining rights and extensive tracts of land along the northern border where they were to offer protection against the Apaches.

But Pesqueria had driven out his enemy and rival before Crabb arrived with his "army" and turned against ill-fated Crabb at Caborca, Sonora. Besides these difficulties 1000 men supposed to sail from San Francisco to Port Lobos and meet him near Altar, Sonora, did not show up, in fact were not even enlisted.

Complete and uncolored the book is an important chapter in Southwestern history immediately following the Gadsden purchase.

Limited edition published by Arizona Silhouettes. 60 pages. Map, profuse illustrations and bibliography. \$5, cloth; \$10, leather.

CUSTER'S LAST STAND IS AGAIN IN REVIEW

The often-argued Battle of the Little Big Horn in 1876, when General Custer and every member of five companies of the Seventh Cavalry were killed, resulted in the Court of Inquiry authorized by the President in 1879 which convened in Chicago. The record of

the proceedings of the inquiry is considered by competent historians to contain the most important authentic data concerning the battle. *The Reno Court of Inquiry* is just that: vital testimony of participants in the Battle of the Little Big Horn.

This abstract of the official record of proceedings, edited by Colonel Wm. A. Graham, provides for the student of the battle first hand testimony from the only people who, except for the Indians, knew the facts. Never before published is Captain Benteen's own battle map, drawn in the field, as back-end paper and the Maguire map, as front-end paper and the USGS Contour map of 1891. A very complete Analytic Table of Contents is of great convenience for the reader.

Published by the Stackpole Co., 303 pages. Besides Benteen's map, the Maguire map, and the USGS Contour map, four smaller maps are included in the book. \$5.00.

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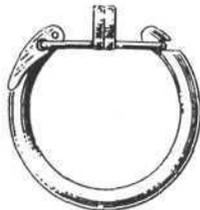
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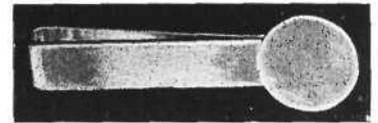
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