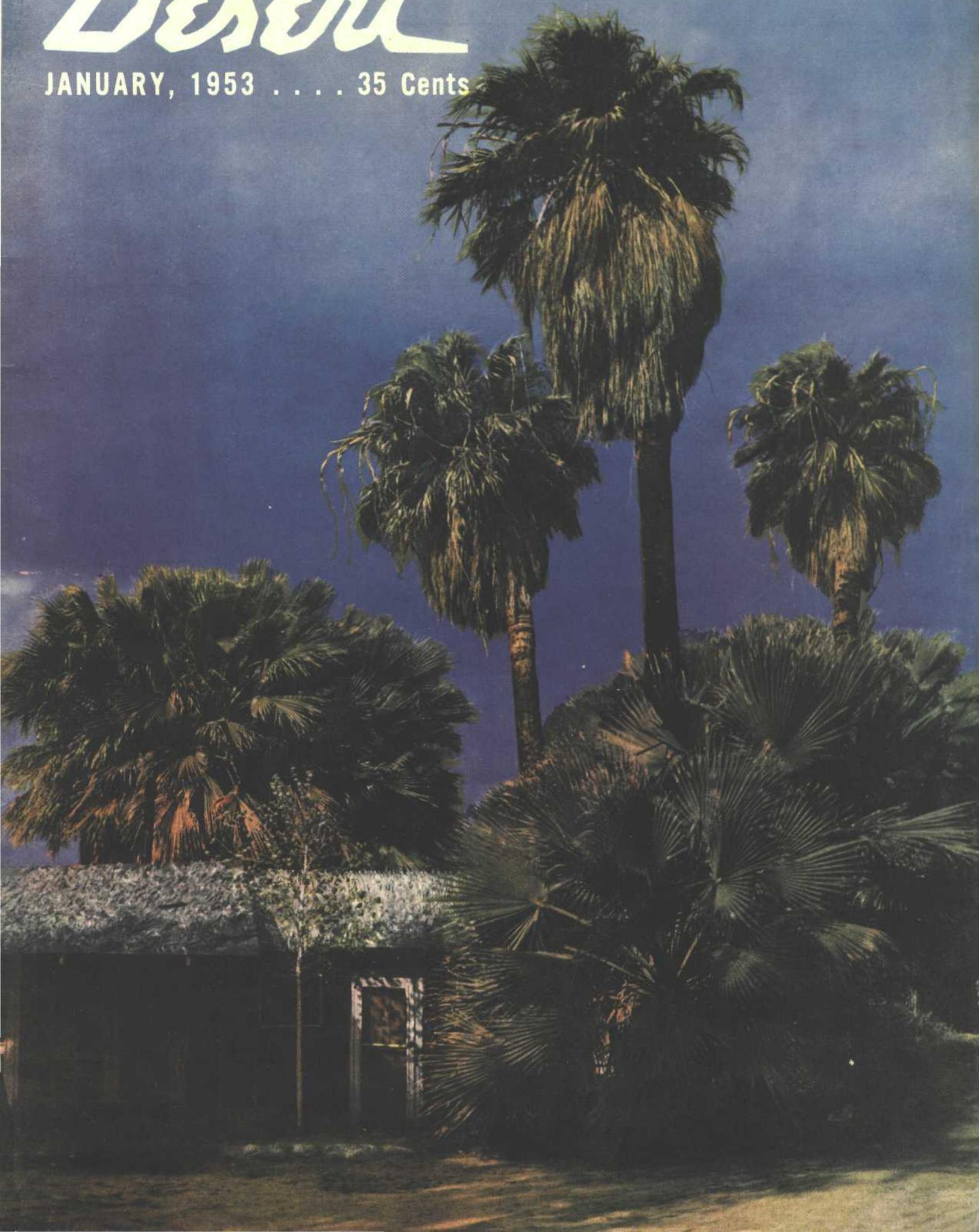


Desert

JANUARY, 1953 35 Cents





"You gave me a wild burro!" Seldom Seen Slim (left) protests to Chairman Harry Oliver. After making his protest, Slim withdrew from the Burro contest.



Buck helps his master win the Burro-Flapjack contest by eating the flapjack which Leslie D. Spell has just cooked. Spell, the Twentynine Palms entry, was the sweepstakes winner in the contest held in November as part of the Death Valley 49er festivities in Death Valley National Monument.

The Burros Ate the Flapjacks

70 LESLIE D. SPELL of Twentynine Palms, California, went the honor of winning the first annual Burro-Flapjack Sweepstakes held in Death Valley in November as part of the 1952 encampment of the Death Valley 49ers.

The Twentynine Palms prospector had tough competition. Runner-up was Hugh Cooper of Apple Valley, California, and there were 10 other contestants from all over the Southwest. The event was staged near Stove Pipe Wells, on two successive days.

At the starting gun, the contestants, each with a carefully packed burro, left the starter's line and pulled and pushed or somehow wrangled his pack animal along the 50-yard course. At the finish line each prospector unpacked his burro, spread his bed on the ground, built a fire, cooked a flapjack and fed it to his burro.

The burros accepted the whole shenanigans philosophically, and consumed all the flapjacks offered to them with obvious relish.

Last September the idea of a Burro Beauty contest was suggested to the directors of the 49ers. They named Harry Oliver chairman, and Harry developed the flapjack angle which he felt would produce a more interesting event than a mere beauty contest. With the help of Paul Hubbard and other committeemen Oliver scoured the Southwest for single blanket prospectors, and came up with a surprisingly large entry list on the day of the sweepstakes. Scoring was done on a point system, which included points for the prospector's beard, the manner in which he packed his animal, the way he tied his diamond hitch, the way he made his bed and built his fire, the quality of his flapjacks—and the final 10 points to be awarded if the burro ate the hotcakes. They all did.

In addition to the winners, the following prospectors were entered: Bill Higdon of Knott's Berry Farm, Charley Bishop of Atolia, Monk Miljan of Red Mountain, "Buffalo Bull" Maxwell of Johannesburg, Ed Kirkland of Randsburg, Walt Thatcher of Inyokern, On-the-Rocks Mac of Barstow, Red Ray of Lone Pine, Arnold Fryck of Las Vegas and Seldom Seen Slim of Panamint.

Like many other modern day prospectors, Seldom Seen Slim in recent years has been doing his prospecting in a jeep. However, the committee got a burro for him and induced him to enter the sweepstakes. But Slim drew a "wild" burro. And besides, he was a little out of practice. Things went so badly for him the first day, he withdrew from the race.

While the burro events were being held at Stovepipe Wells, an art exhibit was in progress at Furnace Creek Inn, and Twentynine Palms took high honors in this event also, John Hilton being voted the artist with the best picture in the show. Michael Malloy, also of Twentynine Palms, was second place winner, and Paul Leathers was third.

According to the Park Service rangers, more than 5000 motorists were present at the Encampment.

John D. Henderson, Los Angeles County Librarian presided at an Author's breakfast held at Furnace Creek golf course, and John Hilton was master of ceremonies at an Artist's breakfast at the same place.

Sunrise services were held in Desolation Canyon. A gem and mineral exhibit was arranged by Jim Nossor and George Seals, a firearms exhibit presented by Robert K. Ellithorpe, and a Kodachrome exhibit by Floyd D. Evans.

Campfire programs were held each evening, and square dances were held at Furnace Creek ranch.

DESERT CALENDAR

- Jan. 1—Turtle Dance at Taos Pueblo, New Mexico.
- Jan. 1-4—Desert Peaks Section, Sierra Club, to climb in Providence and Calico Mountains, California.
- Jan. 1-31—Annual Winter Art Exhibition, Harwood and La Fonda galleries Taos, New Mexico.
- Jan. 1-31 — Series of paintings in Southwest Museum, Los Angeles, to show head-dresses of American Indians, including ancient Mayas. Work of Mrs. Henry R. Wagner.
- Jan. 3-4—Sierra Club of California to camp in Box Canyon and hike to Hidden Springs and Grotton Canyon.
- Jan. 4—Don's Trek to Pima Indian reservation, Phoenix.
- Jan. 6 — Installation of all Pueblo governors, accompanied by ceremonial dances, New Mexico.
- Jan. 6-10 — Fifth annual Arizona National Livestock Show, Phoenix.
- Jan. 8-10—New Mexico Motor Carriers Assn. convention at Albuquerque.
- Jan. 10-11—Sierra Club 100 Peakers to camp in Joshua Tree National Monument and climb Mt. Inspiration, El. 5575, in Little San Bernardino Mountains.
- Jan. 10-11—Ski Carnival, Sponsored by chamber of commerce, Flagstaff, Arizona.
- Jan. 11—Desert Sun Ranchers' Rodeo at Rancho de los Caballeros, Wickenburg, Arizona.
- Jan. 11—Don's Club trek to Apache Trail, Phoenix.
- Jan. 11-18—Arizona Country Club Invitational gold cup tournament, Phoenix.
- Jan. 12-14 — National convention, American Dehydrators' Assn. Jockake and Paradise Inns, Phoenix.
- Jan. 15-18—5th annual Building and Home Show, Phoenix.
- Jan. 18—Bandolleros of Yuma, Arizona, to visit Palm Canyon in Kofa Mountains.
- Jan. 20-22 — American Society of Range Management convention at Albuquerque.
- Jan. 23—Buffalo Dance at San Ildefonso, New Mexico.
- Jan. 24-25—Sierra Club to camp near entrance to Pushawalla Canyon and explore Pushawalla oasis.
- Jan. 24-25—Desert Peaks section of Sierra Club to camp at Cottonwood Spring in Joshua Tree National Monument and make 2-day Knapsack trip.
- Jan. 25—St. Paul's Day dances, Taos Pueblo, New Mexico.
- Jan. 25—Desert Sun Ranchers' Rodeo at Slash Bar K Ranch, Wickenburg, Arizona.
- Jan. 25 — Little Stampede, Western Saddle Club, Squaw Peak arena, Phoenix.
- Jan. 26 — Annual buffalo hunt in Houserock Valley, Arizona.



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Lee Hand inspecting mine run of turquoise stored in barrels at the Blue Gem mine. Reese River Valley in the background.

Turquoise Miner in Nevada...

Like the yellow gleam of gold nuggets in the wet riffles of a sluice box, there is a fascination to turquoise which quickly lays hold on the miner who digs for it or the lapidary who cuts it. Thirty-five years ago, Lee Hand fell under the blue stone's spell, and today he operates one of the most successful turquoise mines in Nevada, the Blue Gem near the ghost town of Copper Basin. Nell Murbarger introduces to Desert readers one of today's leading turquoise experts and tells the history of a once-booming gold region now producing some of the finest blue gems in the world.

By NELL MURBARGER
Photographs by the Author
Map by Norton Allen

MY FIRST meeting with Lee Hand took place several years ago when a friend and I were exploring the southern end of the Battle Mountain range in Lander County, Nevada. We had been doing some

prospecting and relic hunting, but chiefly we were on the trail of three old ghost towns—Copper Basin, Galena and Bannock—which we knew lay somewhere in the vicinity.

Copper Basin was the first of the

trio that we located. Finding it, we automatically made the acquaintance of Lee Hand, the "Turquoise King of Nevada."

White-haired and slightly built, with drawing room manners and old school courtesies, Lee seemed as out of place in the dusty desert ghost town as did his dazzling collection of gem turquoise. As soon as we mentioned our interest in rocks and minerals, he brought forth tray after tray of the gems, all beautifully cut and polished and representing every possible shade of blue.

There, in turquoise, was the misty hue of desert dawn, the deep cerulean of October skies, the blues of robins' eggs and wild pigeons' wings and camp-

fire smoke in dry washes, the cool liquid blue-green of quiet sea water, rich blues laced by golden-brown spiderwebs of matrix. It was a breathtaking display.

Roaming over the desert in the years that followed this first meeting, I heard Lee Hand's name often—in the Indian hogans and trading posts of New Mexico, the mining camps of Arizona and the swank gem shops of California. I found that he was known throughout the Southwest as a man of integrity and was recognized as one of the world's leading authorities on gem turquoise.

Came the summer of 1952, and again I was prowling the Battle Mountain range. Almost instinctively my old car turned onto the Copper Basin road, and once more I found myself heading for Lee Hand's ghost town home.

The road climbed the long sage-grown slope from the Reese River Valley, then swung toward the brown hills as scattered dumps of abandoned copper mines came into view. Prolonged exposure to wind and weather had resulted in surface oxidation of these old tailing piles so that each one gleamed like a shining blue jewel on the gray cloak of the desert. Nosing through a jagged ravine whose culvert had been carried away by storms of the previous winter, I turned onto the single dusty street of Copper Basin. Heat and drouth and assaulting winds had left the old buildings a trifle more battered and weary than I had remembered. Not a soul was in sight.

As Lee's mining interests are widely distributed throughout Nevada, and this was the time of year for working assessments, I was somewhat doubtful if I would find him at home. But no sooner had I set foot on the ore-strewn front porch of his cabin than Lee appeared in the doorway and was greeting me warmly, pumping my hand, asking where I had been keeping myself and what had brought me back to the Basin after so long a time.

I told him I was trailing a story for *Desert Magazine*—the story of a peculiar chap who had spent half a lifetime in the pursuit of Nevada turquoise.

"Meaning me, I suppose?" he grinned. "I'm afraid there's not much to tell—but first, come and meet my partner, Alvin Layton."

Alvin was a man about 40 years younger than Lee, but every bit as pleasant and friendly as his senior associate. Married and the father of two young sons, he drives to Copper Basin daily from his home at Battle Mountain. He has been with Lee for six years, developing and operating the Blue Gem Mine.

"I can see how a man might be

interested in turquoise in these days when there's a strong demand for the material," I said to Lee, "but what puzzles me is how you happened to go into turquoise mining back in that hell-for-leather era when everyone else in Nevada was looking for gold?"

Lee laughed. "It wasn't through any choice of mine!" he declared. "Getting into turquoise was the last thing I ever expected to do. Like 'most everyone else in the state, I had done my share of prospecting and finally had settled down to operating a general store at the old camp of Millers, between Tonopah and Blair Junction.

"Grubstaking by merchants or anyone with a little ready cash was a common practice at that time, and one day one of my friends told me that he knew where he could get a good turquoise property if I would lend him enough to swing the deal. I

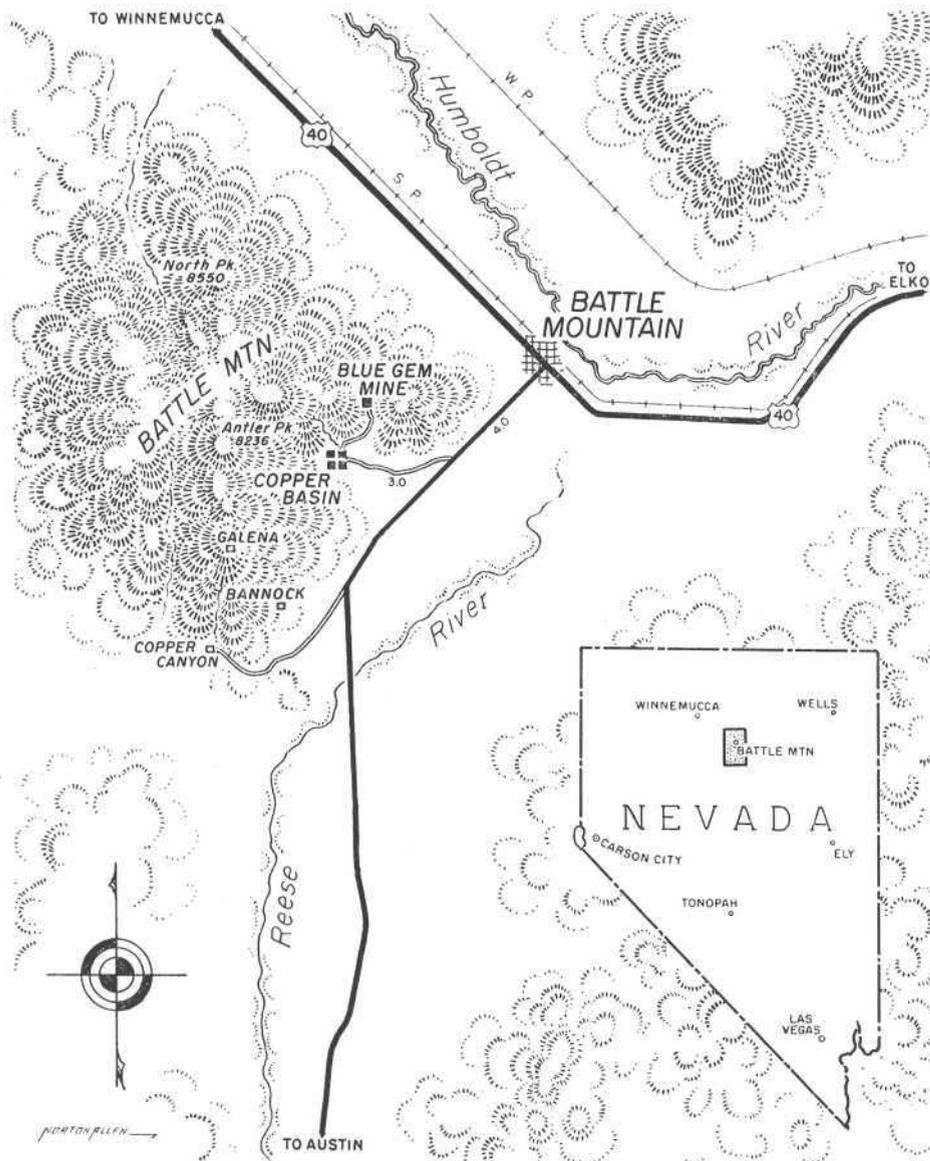
didn't care anything about turquoise, but I couldn't very well refuse a favor to a friend, so I let him have what money he needed.

"Well, you know how those things go. When 1918 rolled around, I found myself in the turquoise business!"

Like the yellow gleam of gold nuggets in the wet riffles of a sluice box, there is to turquoise a haunting fascination which quickly lays hold on every man who mines the stone as well as everyone who cuts it or deals in it. In an amazingly short while, Lee Hand had acquired this "feeling" for turquoise. His first chance-acquired mine led to ownership of others. At various times during the last 35 years he has owned and operated some of the most outstanding turquoise mines in Nevada, a significant statement in view of the fact that Nevada is recognized today as the greatest producer of turquoise

Lee Hand (left), "The Turquoise King," and his partner, Alvin Layton, at a surface outcrop of their Blue Gem turquoise mine near the ghost town of Copper Basin, Nevada.





in the United States and one of the leading producers in the world.

Lee and Alvin at present hold turquoise rights on approximately 100 claims in the vicinity of Copper Basin. Of these, the only one they have developed to any extent is the Blue Gem, situated on the Pedro lode mining claim, owned by Copper Canyon Mining Corporation and operated by the partners under a verbal lease.

"The Blue Gem is sort of like Topsy," laughed Lee. "It 'jest growed." The original tunnel, which I started seven years ago, expanded into three tunnels. We eventually worked these tunnels into an underground glory hole—and we've continued to enlarge this glory hole until it has become one of the deepest turquoise mines in Nevada!"

Later that afternoon the three of us piled into Alvin's pick-up and headed for the Blue Gem, perched like an eagle's eyrie on the high bare shoulder of the mountain, a couple of miles to

the north. In its steep and twisting ascent the narrow road passed close to the dumps of several old copper mines—all rich producers in their day—and eventually reached its conclusion on a rocky shelf barely wide enough to permit turning the truck.

Spreading away to the south and east lay the wide, sage-gray valley of the Reese River, and beyond it the high bordering ranges where streaks of snow were still visible in the shaded ravines. Spilling down the steep mountainside directly above us was the multicolored dump of the Blue Gem.

We walked along the mountainside shelf toward a corrugated tin building at the far end. Lee explained that the rough turquoise was brought from the mine to this shed for hand sorting. Two complete outfits for cutting and polishing are housed in the building, and as fast as the highgrade turquoise is sorted from the general lot it is slabbed, cut and made ready for market.

During the time the partners have been working the Blue Gem they have cut and sold only the best of the high-grade. At the same time they accumulated a backlog of 65 barrels filled with so-called "mine run," this comprising the residue after removal of the best quality material.

Practically all the work of mining and sorting is done by the partners, who likewise handle a major portion of the sawing and polishing.

"We would hire more help if good turquoise men weren't so hard to find," said Lee, who pointed out that even persons thoroughly experienced in other types of lapidary work may have little knowledge of handling turquoise.

"One important item is the matter of wastage. If color and texture of the material is good, there's almost no such thing as a seam of turquoise too thin for use. Take a piece like this, for example—" He indicated a grayish rock threaded by a vivid blue line little wider than a heavy pencil mark. "A cutter inexperienced in working turquoise would likely toss such a piece in the discard, believing that the seam was too narrow to use. A man who knew his business, however, would slab the piece parallel to the seam and cut it so the matrix would form the base of the completed gem stone, with the turquoise covering it as a thin capping."

This is a common practice in the turquoise trade, said Lee, and does not affect the value of the gem. After the set is mounted, only its turquoise face is visible and the hidden rock backing serves to strengthen the stone.

After a turquoise seamlet has yielded all the large to medium stones possible, waste corners are converted into "snake-eyes"—tiny round cabochons about as large in diameter as a match head. Indian silversmiths use thousands of these snake-eyes annually, particularly for setting in children's bracelets and in combination with larger stones.

Leaving the cutting shed, we climbed a steep footpath to the lower opening of the mine. Here we entered a chilly tunnel, wind-ventilated, and electrically lighted by means of a small gasoline-operated power generator. As we followed the smooth rock bore into the mountain, my hosts paused frequently to direct my attention along the beam of their miners' lamps to vivid blue seams and tiny blue pockets tucked away in the tunnel's walls and ceiling.

Instead of constituting well-defined veins, as I had expected, the gem material was spotted through the rock in seemingly haphazard fashion. Lee ex-



Copper Basin was a booming mining camp in the days following discovery of the rich Virginia vein in Copper Canyon. Now a ghost, it is the home of Lee Hand, turquoise miner who operates the Blue Gem mine nearby.

plained that turquoise is generally believed to be formed by surface waters percolating through rocks favorable for its deposition, but that, in some cases, it is known to have been formed by ascending waters.

"While shale is believed to be the most favorable formation for turquoise, it is found in many other formations as well," said Lee. "Any rocks rich in aluminum silicate and carrying traces of copper for a coloring agent may contain turquoise, provided the country is arid or semi-arid," he explained, adding that this affinity for desert regions is one of the peculiarities of turquoise. Although it is known to every continent, it occurs in comparatively few places and practically all of these marked by extreme drouth. Likely the chief reason it has never been found in appreciable amounts in well-watered regions is because too

much water destroys it as fast as it is formed.

When Lee had mentioned earlier that the Blue Gem was one of the deepest turquoise mines in Nevada, I had not anticipated that we would enter it at the bottom and work our way to the top; but upon reaching the inner end of the tunnel, we started climbing abruptly.

With my companions carrying my flash equipment and tripod and now and then lending a hand with the camera, we made our way through the mine, scrambling over jagged, loosely-heaped rubble and man-sized "step-ups" and searching out obscure footholds in sharply-tilted corridors.

While the lights we carried were inadequate to illuminate the place completely, I could see that some of the rooms of this underground gloryhole were of immense size, with the mine's

untimbered ceiling lying high above. That such a terrific volume of rock had been removed by only two men in the course of seven years was almost past believing.

After we had climbed for a great distance through the steeply-inclined passageway, we began seeing shafts of daylight stabbing through the inky blackness, and soon afterward we scrambled over the final rise and stepped into the out-of-doors. Following a brief inspection of the dump, we made our way back down the mountainside to the sorting shed and on to Copper Basin.

As evening was close at hand, my hosts arranged for me to occupy one of the old cabins which had been seeing service as a community laundry room. With my sleeping bag unrolled on the bedsprings and the top of the

laundry stove converted into a combination dressing table and typewriter desk, I was beginning to draft plans for preparing supper when a hail sounded at the door.

It was Wally and Martha Lee, whom I had met on the occasion of my pre-

vious visit to Copper Basin. They had come to invite me to dinner at their place, and, as a special honor, had raided their small garden of the year's first harvesting of crisp green lettuce and radishes.

Wally and Martha are old-time resi-

dents of Nevada—particularly Wally, who was born at Virginia City during the heyday of the Comstock Kings. Moving to Lander county as a child, he has spent the major portion of his life in the vicinity of Battle Mountain and Copper Basin. As we ate, he told of the boom days which had followed discovery of the rich Virginia vein in Copper Canyon, five miles southwest of Copper Basin.

The attention of white men was first attracted to Copper Basin during those days when the Humboldt River route was being ground to dust by the wheels and hoofs of West-bound emigrant trains. After heavy travel had depleted the grass along the river, it became necessary for later-comers to go farther back in the hills in search of forage for their cattle.

In the summer of 1857 one such grass-seeking party swung away from the main emigrant route and made camp at a spring near the present site of Copper Basin. It proved to be their last earthly stop. Before morning a band of Indian raiders swept down from the hills; every member of the emigrant party was massacred, cattle and valuables stolen and wagons burned.

Ordered to the scene, a detachment of cavalry engaged in a pitched battle with the Indians, and Historians Thompson and West later painted a graphic but possibly exaggerated picture of a hillside "covered with dead and dying."

Soon after the massacre and retaliatory action, a few adobe huts appeared on the scene, and the town of Copper Basin was born.

After promising Wally and Martha that I would be on deck for breakfast at six o'clock the next morning, I returned to Lee Hand's cabin to talk more turquoise.

During the evening's discussion, Lee mentioned that the gem occurs in more than 200 recognized shades of blue and green. When I asked which of these shades the connoisseur of turquoise considers best, he replied without hesitancy that it was the Royal Blue. "It's the brightest of all shades—the most vivid and intense," he explained. "Some mines, even good mines, may never produce a single carat of it. Other mines may yield only a few ounces in thousands of pounds of normally highgrade material. But wherever it is found—in whichever mine from Nevada to the Sinai Peninsula—Royal Blue turquoise is always identical, and there is no finer in the world.

"Aside from this," he continued, "the color of turquoise is largely a

Desert Quiz

Here is another list of those Quiz questions to which many of *Desert Magazine's* readers turn every month to test their knowledge of the Great American Desert—its history, geography, wildlife, Indians, etc. If you take this test regularly you'll find that your score constantly improves. Twelve to 14 is a fair score, 15 to 17 is excellent, 18 or over is exceptional. The answers are on page 35.

- 1—Joshua Tree National Monument is located in—Arizona . . . California . . . New Mexico . . . Nevada . . .
- 2—According to legend, those who drink the waters of the Hassayampa River—Will have eternal youth . . . Never thereafter tell a lie . . . Never thereafter tell the truth . . . Will never drown . . .
- 3—Obsidian is a form of—Volcanic rock . . . Sedimentary rock . . . Metamorphic rock . . . Conglomerate . . .
- 4—The Enchanted Mesa in New Mexico is believed to have once been occupied by the—Zuni Indians . . . Acoma Indians . . . Hopi Indians . . . Navajo Indians . . .
- 5—If you stopped at Peach Springs, Arizona, Indians seen loitering in the vicinity most likely would be—Pimas . . . Mojaves . . . Hualapais . . . Apaches . . .
- 6—The Gila monster normally is—All black . . . Black with orange markings . . . Sand color . . . Yellow with brown markings . . .
- 7—Mescal pits were used by ancient Indians for—Storing grain . . . Burying the dead . . . Taking sweat baths . . . Cooking food . . .
- 8—The Bennett-Arcane party was identified with—The gold rush to California in '49 . . . The Mountain Meadows massacre . . . The westward trek of the Mormons . . . First exploration of the Colorado River . . .
- 9—"Glory Hole" is a term used by—Cowboys on the range . . . Geologists in the study of volcanic craters . . . Speleologists in the exploration of caves . . . Miners in discussing certain open pit types of operation . . .
- 10—Prehistoric Indian cliff dwellings still found in the canyons of the Southwest generally are made of—Stones and mud . . . Adobe . . . Logs . . . Stones without mud or mortar of any kind . . .
- 11—*El Camino* is a Spanish term commonly used in the Southwest meaning—The mission . . . The mountain . . . The road or highway . . . The two-wheeled cart . . .
- 12—Only one of the following ghost mining camps is in California—Calico . . . Rhyolite . . . Aurora . . . Silver Reef . . .
- 13—The blossom of the chuperosa or wild hummingbird flower is—White . . . Yellow . . . Red . . . Lavender . . .
- 14—Montezuma Castle National Monument is in—New Mexico . . . Arizona . . . Utah . . . Nevada . . .
- 15—George Wharton James was an—Author . . . Stage driver . . . Mining engineer . . . Painter of desert landscapes . . .
- 16—Albuquerque, New Mexico, is on U. S. Highway 66 . . . 80 . . . 95 . . . 22 . . .
- 17—The once productive Vulture gold mine is located near the town of—Miami, Arizona . . . Goldfield, Nevada . . . Wickenburg, Arizona . . . Beatty, Nevada . . .
- 18—Weaver's Needle is the name of a pinnacle in the—Henry Mountains of Utah . . . Panamint Mountains of California . . . Wasatch Mountains of Utah . . . Superstition Mountains of Arizona . . .
- 19—Canyon de Chelly is on the reservation of the—Navajo Indians . . . Yuma Indians . . . Zuni Indians . . . Havasupai Indians . . .
- 20—The tallest native tree of the American desert is—Mesquite . . . Ironwood . . . Joshua tree . . . Washingtonia Palm . . .

matter of personal taste. Some buyers, particularly Southwesterners, prefer that each stone show a bit of the matrix. Others like the medium blue shades; and while it isn't considered the most desirable, there are folks who prefer the green shades. Dealers sometimes tell purchasers 'the best turquoise is the one you like best!' And I guess that's about right."

As his most interesting experience in 35 years of mining and marketing turquoise, Lee named the occasion in 1946 when his Copper Basin cabin was honored by the week-long visit of Akbar Ouskouian, "Turquoise King of Persia."

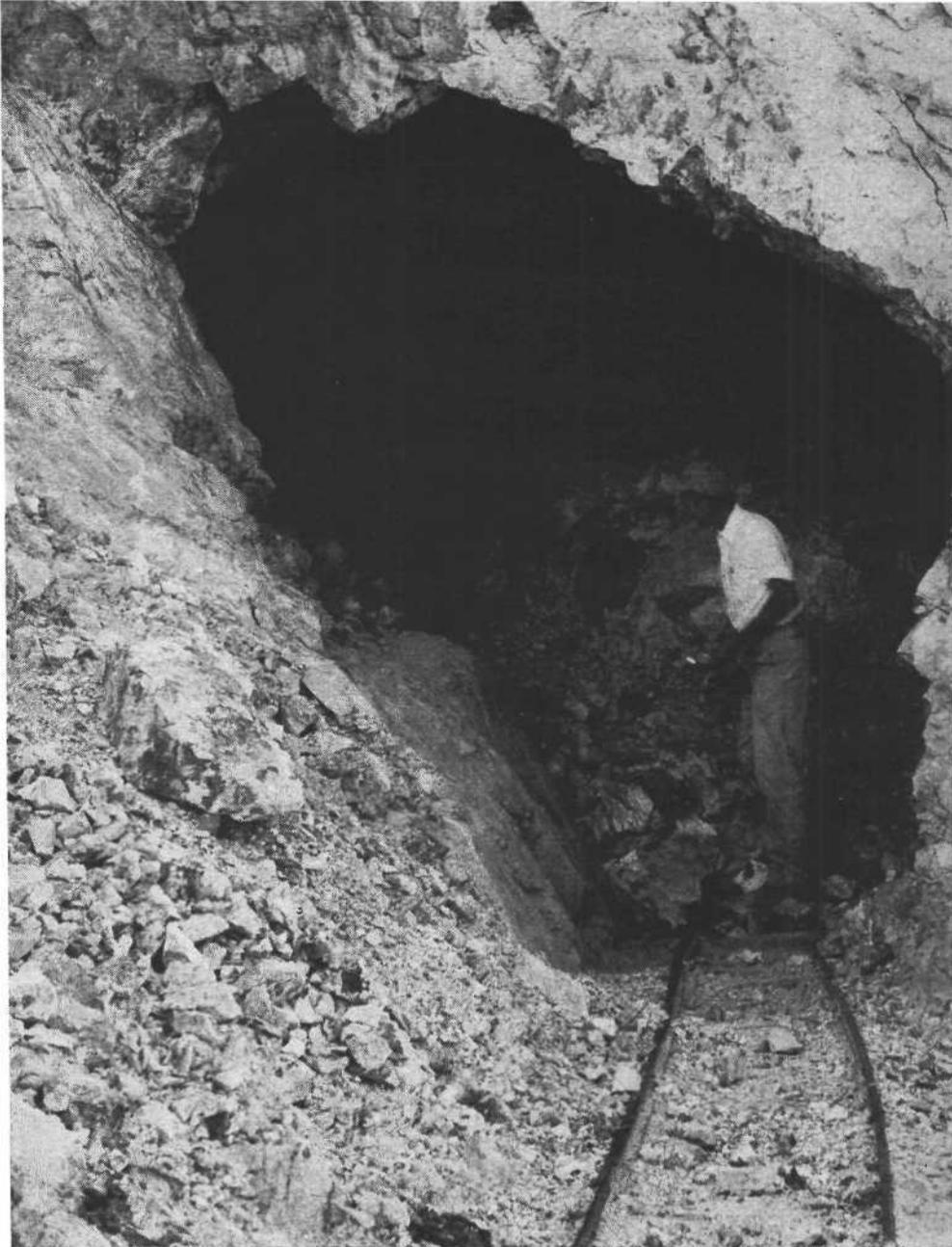
In Persia—or Iran, as we know it now—all mineral rights are vested in the government and leased to individuals as concessions, said Lee. "Mr. Ouskouian, on this basis, owned and operated all the turquoise mines in Persia, which is considered the turquoise capital of the world. Turquoise mining and cutting has been one of the leading occupations there since before the birth of Christ; and until the close of World War II, the machinery employed in the work was identical with that in use more than 2000 years before!

"Shortly after the end of the war, Mr. Ouskouian decided it was about time he brought his methods up to date. He accordingly visited the United States, and someone suggested to him that I might be able to give him some help.

"We got along fine!" said Lee. "We mined, cut and polished turquoise every day, and talked turquoise every night for a solid week. He was very agreeable and good company. There was one thing he said that pleased me in particular. Tiffany's and other big Eastern buyers have always contended that Persian turquoise is superior to turquoise from the New World. Mr. Ouskouian declared that this was nothing but a notion; that our No. 1 turquoise from Nevada is as excellent in quality as any he had ever seen, anywhere in the world."

Upon his return home, Ouskouian took with him a great deal of up-to-date mining equipment and several American technicians who were to be paid \$1000-per-month salaries to modernize his cutting plants and step up production in line with what he had learned from Lee Hand and from other American turquoise experts.

Turquoise history was made and mining traditions of 2000 years were tossed into the discard that week when the two Turquoise Kings met—from East and West, across the globe—to talk shop in an old miner's cabin at a lonely little ghost town half lost in the brown hills of central Nevada.



Inside the Blue Gem mine.

Gradual Liquidation of Indian Bureau is Forecast of Myer

It may require several years, but eventually the U. S. Indian Bureau will go out of business. This policy was re-stated by Dillon S. Myer, U. S. Commissioner of Indian Affairs during a recent visit to the New Mexico pueblos.

The policy of liquidating the reservations already has been in progress in California and Oregon for some time, under Public Law 728 passed by the 81st congress. Myer estimated that California and Oregon Indians might be removed entirely from the jurisdiction of his Bureau within the next five years. In New Mexico and elsewhere it would take longer, and he was unwilling to make any forecast as to dates.

That the Indians themselves are not unanimously in favor of the policy of liquidating the reservations was indicated in recent months when some of the tribesmen in California at a statewide conference expressed opposition to the program.

However, the desert Indians in Southern California generally have favored the plan. Recently the Augustine, Cabazon and Torres-Martinez bands of Cahuilla Indians in Coachella Valley held elections designed to abolish the federal trusteeship of their lands. The allotment of valuable lands in and adjacent to Palm Springs to the Agua Caliente band now is in progress.



LET ME HOLD THE SUNSET

By MARGUERITE STANLEY
San Bernardino, California

Let me hold the sunset
In my outstretched hands,
While the colors linger
Soft upon the sands.

Layers of brilliant petals
Of flamboyant rose,
Lupine and the poppy
Piled in separate pose.

Forming all the colors
Of sunset's array;
Giving of their fragrance
At the close of day.

Let me hold the sunset—
Never let it go,
Until my life evolves
To an afterglow.

TRUTH

By MARGARET HORMELL
North Palm Springs, California

Today I sketched a mountain scene
In water-color mauve and green;
Some yellow, too—some red—some blue—
My picture honors every hue.

In lavish tints my hand ran wild,
My artist's senses soared!—beguiled,
For, calmer now, I can but see
My picture holds no spark of me.

Its warmth of color leaves me cold,
Each copied object I behold
Reminds me of the me I am,
An empty, midget-minded sham.

No copied feat in life, or art,
Embodies truth, and soul, and heart,
And from this day my aim shall be
For truth, and courage to be me.

Desert Lure

By RUTH STROBEL
San Fernando, California

The road slips through a drab and dusty
land,
Where sword-plants tall and giant cacti
stand,
Like silent soldiers, in a stately row,
With pointed spears that make a threat'ning
show.

And here gnarled Joshua trees unfold,
Grotesque and panoramic, while in gold,
Marine and crimson dyed, the skies
Are seen between high peaks, as daylight
dies.

Soft twilight falls within the heart of night,
And, oh, the peacefulness of dream delight!
Caressing rests the starlight on my face,
And vivid desert blossoms scent the place.

Beneath the stars the air is crystal clear;
Weird, plaintive voices of the night I hear!
The unseen serenaders shrill their lay
That sings "Farewell" to travelers on their
way.

And thus the eerie desert casts its spell;
Lured by its mystery, my soul grows glad
and well:
My once sad heart finds peace and quiet
rest
While sunset's afterglow is fading in the
west.

DESERT

By PAUL WILHELM
Thousand Palms, California
The cleanest offering we can hand
Unblushing to our God
This timeless land of sky and sand
Subservient to His rod.

Photograph by Jim Hervey

THE DESERT TRAIL

By BRUCE CRANSTON
Los Angeles, California

I love to ride the desert trail that leads up
toward the sky,
Amid the purple sagebrush, the yucca white
and high;
The cactus, ocotillo and the grasses which
grow free.
And rest, when I am weary, 'neath the dear
old Joshua tree.

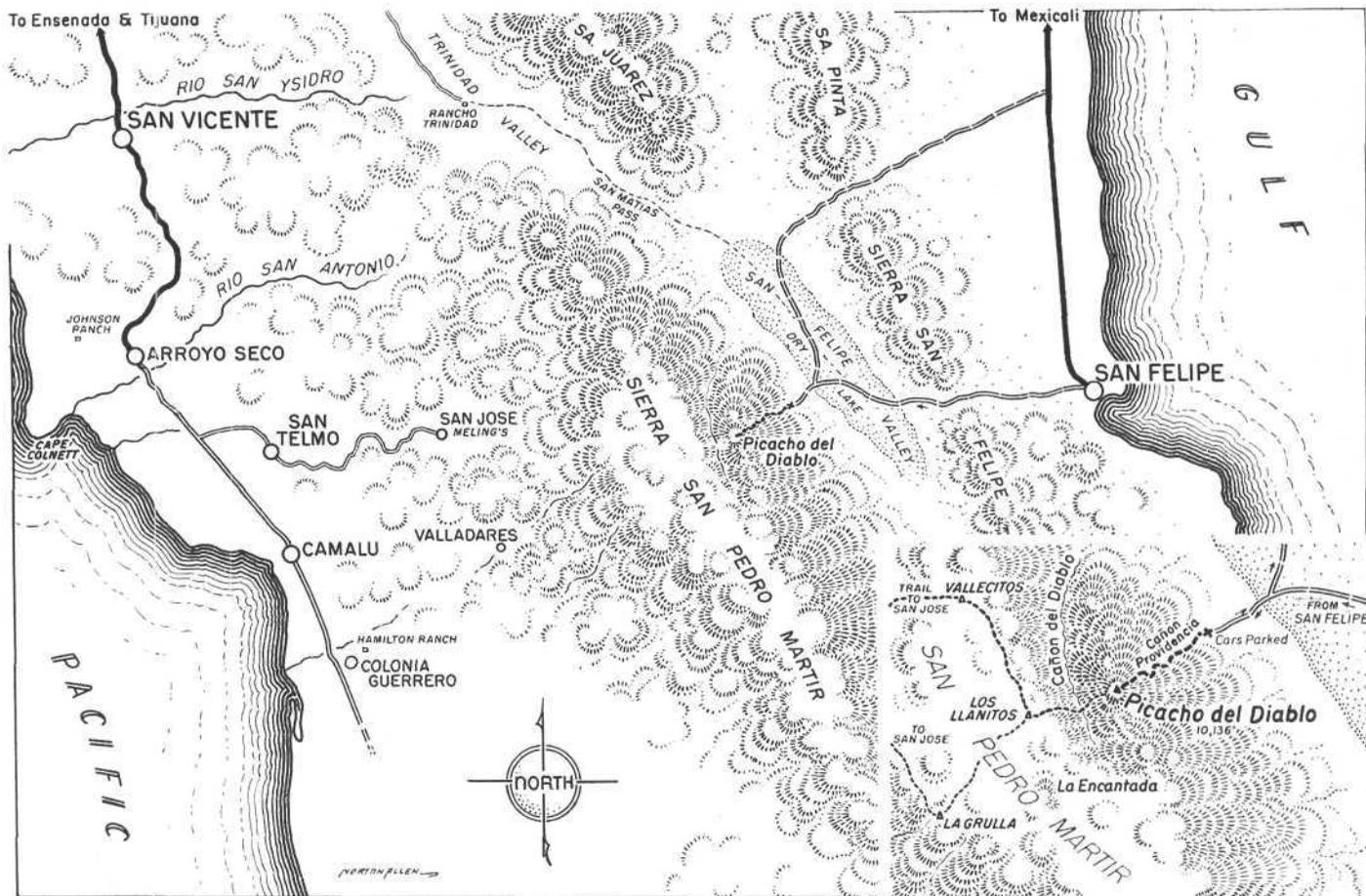
The desert trail which I love well winds up
a mountain far,
And on its crest, when sunset falls, I see
the evening star.
Deep purple shadows dance and play, as
o'er the desert face
A tinge of heavenly beauty smiles, transcendent
in its grace.

I love to ride the desert trail, for then I am
carefree,
And as we cross the miles of sand there's
just my bronc and me.
We watch the moonbeams glistening as
shadows 'round us lie,
And we jog along serenely 'neath a brilliant
starlit sky.

Onward!

By TANYA SOUTH

Then carry your banner with courage,
With staunchest resolve for Truth,
With purpose and goal for storage.
And whether the way seems smooth,
Or hard and rugged for faring,
Go fearless forward, uncaring.



Norton Allen's map shows the two routes by which the climbing expeditions reached the base of the San Pedro Martir mountains from the Mexicali-San Felipe road.

We Climbed El Diablo From the Desert Side . . .

The Mexicans call it "The Devil's Peak" and perhaps there is good reason why they have given such a forbidding name to the highest mountain on the Lower California peninsula. Anyway, here is the story of an ascent of the peak from the desert side, and a description of some of the obstacles that had to be overcome by the mountaineers who reached the top.

By RANDALL HENDERSON
Map by Norton Allen

7 WICE I tried to climb El Picacho del Diablo—and failed. Then on the third attempt I reached the summit. My companion on the final ascent was Norman Clyde, well known mountaineer of the High Sierra.

It is only 15 miles from the floor of San Felipe Valley to the summit of El Diablo, elevation 10,136 feet, highest peak on the Lower California peninsula. But the terrain is so rugged it required three days of grueling work to make the ascent.

El Picacho del Diablo is in the San Pedro Martir Range 125 miles south

of the California border. It has been climbed several times by parties approaching from the Pacific coast. But there was no record of anyone having scaled the mountain from the floor of the San Felipe Valley on the desert side.

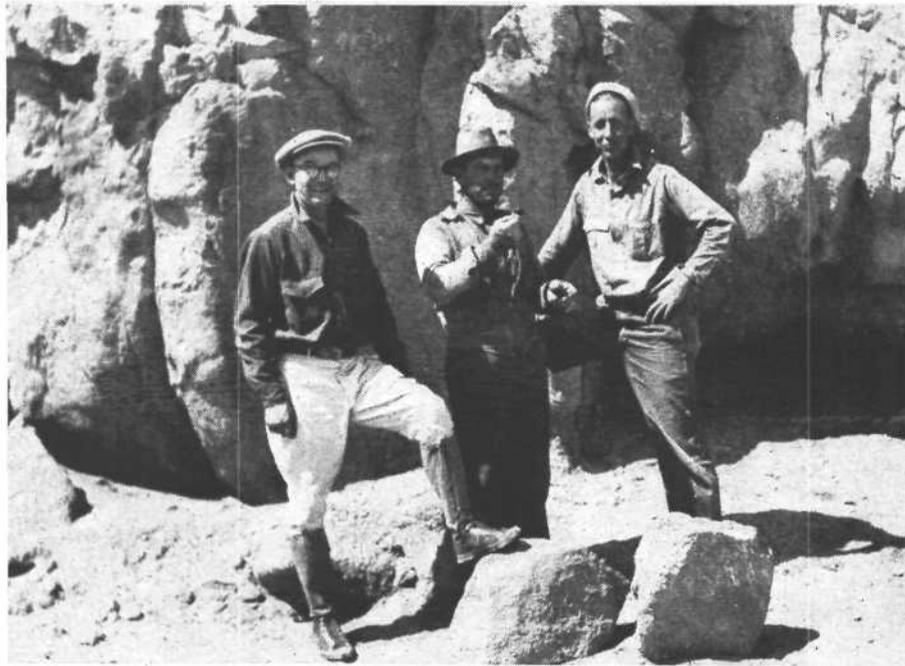
Malcolm Huey suggested that we attempt to make the desert ascent. That was in the early 1930s when Malcolm and I were on a fishing trip to the little Mexican village of San Felipe on the gulf coast 140 miles south of Mexicali.

We could see the great white gran-

ite range of the San Pedro Martir mountains 25 miles inland, with the cap of El Diablo rising a little above the level of the long ridge. It looked like an easy climb, after we reached the base of the range. The major difficulty appeared to be the 25 miles of sand and rocks between San Felipe and the base of the mountain. No passable road crossed this terrain.

In 1934 we organized our climbing party. Early one March morning in that year our two cars crossed through the Calexico-Mexicali port of entry with San Felipe as our immediate goal. Harry Horton, El Centro attorney who had done considerable exploring on the Baja California peninsula, was driving his desert jalopy, with W. J. McClelland, Imperial county clerk, as his companion. I was riding with Huey in his Ford pickup. Both cars had big tires for sand travel.

Today gulf-bound fishermen roll



along the paved road to San Felipe at 60 and 70 miles an hour. But in 1934 the road was a rutty 15-miles-an-hour trail when it was passable. After heavy rains the great salt plain at the head of the gulf became a bottomless quagmire of mud and there were intervals of several days when no motor vehicle could cross it.

We had been told that at San Felipe we could find an old Indian who knew a passable route from the coast to the base of the San Pedro Martirs. It was said there had once been a road for freight wagons connecting the upper gulf with Ensenada on the west coast.

We found our guide, and he was quite willing to go with us. His name was Juan, and he had spent most of his life in that region. Yes, he knew about the old road, but there wasn't much of it left. He would take us to it, and show us the best route to the base of the San Pedro Martirs.

We camped that night on the outskirts of San Felipe, then a settlement of less than 200 people, and next morning with Juan showing the way, we turned inland toward the range which was our goal.

Juan was right. There wasn't much of a road, but we followed the route where it had been, and it led through a pass in the low coastal range of hills, across the floor of San Felipe Valley's dry lakebed, and thence up the bajada to the base of the San Pedros.

Juan was a fine companion as well as a competent guide. At night, when the rest of us were enjoying the luxury of sleeping bags with air mattresses, Juan lay on the sand with no pillow and only a bit of canvas over him. It was all he wanted. He told us that many years ago there were large herds of antelope in this area. On hot days, he said, the animals would sometimes wade out into the surf below San Felipe bay. The antelope, Juan explained, have a great curiosity, and the Indians took advantage of this weakness to snare them for food.

As we approached the mountain it

Above—Members of 1934 expedition to the San Pedro Martir mountains. Left to right, W. J. McClelland, Juan the guide, Harry Horton, Malcolm Huey.

Center—Climbers on the second attempt to scale El Diablo, left to right, Randall Henderson, Malcolm Huey, Wilson McKenney.

Lower — Norman Clyde (left) and Randall Henderson, in Providencia Canyon in 1937. Clyde carried a 60-pound pack and ice axe. They reached the top in three days.

appeared the most direct route to the summit would be up a canyon marked on our map as Providencia. A luxurious garden of desert vegetation—Palo Verde, ironwood, catsclaw and cactus—grew on the bajada, but we were able to drive our cars through this shrubbery and close to the mouth of the canyon. We camped there that night. The next morning, with two days' provisions in our backpacks, Malcolm and I started up Providencia creek toward the summit.

Harry Horton and "Mac" McClelland had other plans. They wanted to search for the legendary lost mission of Santa Ysabel. Near this mission, according to the story told in Fierro Blanco's book, *The Journey of the Flame*, the Jesuit fathers, before their expulsion from New Spain by royal decree in 1767, had for many years been storing gold and jewels taken from their various missions in a cave at the base of a 7000-foot cliff on the desert side of the San Pedro Martir mountains. The padres, according to this legend, learned in advance that they were to be expelled, and before their departure caused a great landslide to cover the mouth of the cavern where the treasure was hidden.

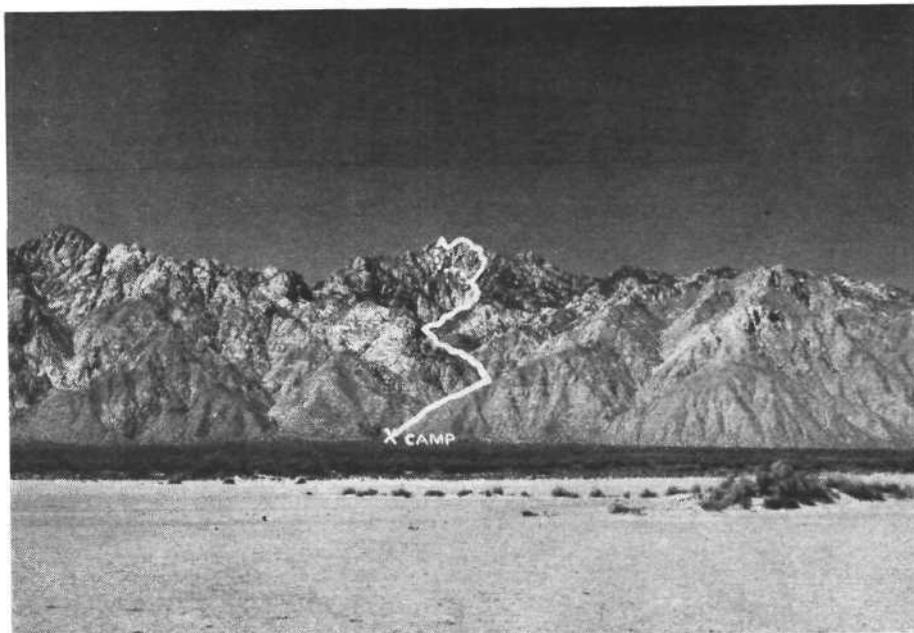
The location of the mission Santa Ysabel is no less a mystery than is that of the cliff where the gold and jewels were buried. During their two days in San Felipe Valley, Harry and Mac explored as far as they could take their jalopy both north and south along the edge of the dry lake bed, but failed to find any clue to the location of the lost mission.

In the meantime, Malcolm and I were meeting with unexpected obstacles along the creek which tumbled down the precipitous east face of the San Pedro Martir massif. Light rain started falling early in the afternoon and since we had to make our way through thickets of willow and mesquite we were soon drenched. Frequently we came to vertical rock pitches which presented almost im-

Above—Route up Providencia Canyon to the top of El Diablo. Dotted line is the return route following the final ascent of the peak.

Center—The author's Model A on the great salt flat at the head of the Gulf of California in 1937. A paved road now skirts the edge of this salt plain.

Below—San Felipe fishing village on the Gulf of California about 1937. Since paved road was completed two years ago, town has grown rapidly.

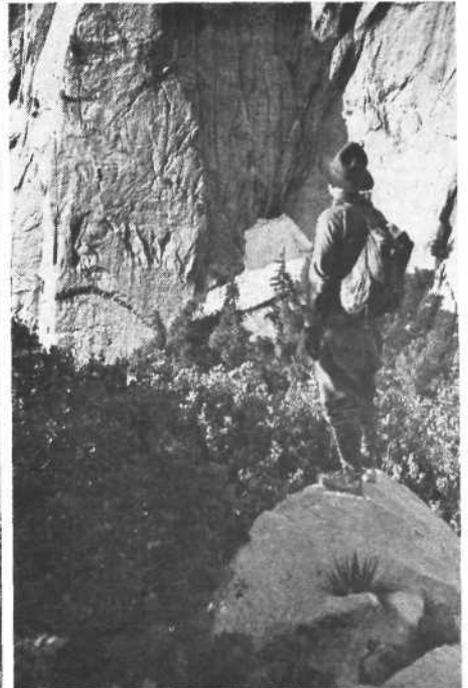




One of the many pools in Providencia Canyon. Members of the expedition called this one the King's Bathtub. Malcolm Huey in silhouette.



Norman Clyde of the High Sierra, standing on the top of El Picacho del Diablo April 5, 1937. He has climbed the peak from both east and west.



When the climbing parties faced a barrier such as this there was only one alternative — to find a way out of the canyon and make a long detour.

passable barriers. Sometimes these had to be detoured. Some of them could be climbed with the aid of our rope, but it was slippery going. Several times we had to wade waist-deep in pools before we could reach the waterfalls which had formed them, and then use shoulder-stands to gain the top.

Toward sundown it turned cold, and Malcolm and I separated, searching the slopes on both sides of the canyon for a cave where we could find shelter for the night. It was dusk when he shouted across the canyon that he had found a shallow cave that would serve our purpose. A dead tree growing just outside the cavern provided the wood which enabled us to dry out our clothes and keep warm that night.

Rain fell during much of the night, and the next morning the slopes of the range above were white with snow. We started up the canyon soon after sunup and within two hours had reached the snow line.

We realized now that we had underestimated the time necessary to climb Picacho del Diablo. From the 1500-foot elevation where our base camp was located at the mouth of Providencia Canyon we had spent an entire first day reaching the 3800-foot level—and it was certain we would not gain the top on the second day. We were wearing tennis shoes, and it became evident this was the wrong kind of footgear for climbing over snow-covered rocks. Rubber on wet rocks is treacherous footing. Our feet were

cold and our soggy shoes began to disintegrate.

At ten o'clock we agreed that El Diablo was beyond our range for this trip, and turned back, reaching camp before nightfall.

That was failure number one.

Just a year later, on March 21, 1935, I crossed the Calexico border on a second attempt to reach the summit of El Diablo. Malcolm Huey was driving his pickup again, and this time I had my Model A Ford with big tires. Our companions were Wilson McKenney and Paul Cook, both of Calexico.

On this trip we blazed a new trail from the Mexicali-San Felipe road inland to the base of the San Pedro Martirs. Malcolm had flown over the area in a plane during the year which had elapsed since our first assault on El Picacho, and had decided it would be possible to take our cars through a pass between the north end of the San Felipe hills and the southern end of the Pinta range. There was no road, but we had two good sand cars—and we found it a feasible route. We flushed a small herd of antelope as we crossed this desert where no wheeled vehicle had ever before been seen.

Due to a knee injury Paul Cook was unable to accompany us on the climb. The first night out, Malcolm, Wilson and I camped not far from the cave where Malcolm and I had spent the night a year before. This year we had a cloudless sky and perfect climbing weather.

We spent much of the second day detouring out of the canyon to get around a series of waterfalls which could not be scaled by direct assault. That night we camped at an elevation just under 7000 feet.

The third day we might have reached the top—and it was my fault we failed to do so. In mid-morning I separated from Wilson and Malcolm to explore a ledge which seemed to hold the possibilities of a short-cut to the summit. It offered such easy going at first that I continued my ascent in high hopes—and then after an hour of good progress my path was blocked by a field of soft snow. For awhile I floundered in the snow, making little headway, and then realized this route would never get me to the summit this day.

In the meantime Wilson and Malcolm had climbed a long talus slope which brought them to the top ridge of the San Pedro Martirs nearly a mile north of its highest peak. They worked along the ridge toward the south and eventually reached a secondary peak—250 feet below their goal. But a 600-foot chasm separated them from the highest point. It was near sundown, and as bedding and extra food had been left at the previous night's camp, they left a record of their climb to this point and returned to camp shortly after I arrived there. We had less than a day's provisions left, and had commitments which prevented our spending a fourth day on the ascent, and the

next morning we headed down the canyon with El Diablo still unconquered.

We had 100 feet of rope, and as we left camp on the return trip that morning we resolved to head straight down the gorge, roping down over the waterfalls we had detoured around on the ascent. We thought this would save time.

It was a good idea—at first. We rappelled over two waterfalls and were making fast progress until we reached a dome of slick granite at the head of a series of falls, the depth of which obviously was beyond the span of our rope.

Despite our resolution, it was going to be necessary to detour out of the canyon. But it wasn't as easy as that. We had just roped over a 40-foot vertical ledge. We couldn't return over that route, and the sidewalls of the shelf on which we were standing appeared at first to be impossible of ascent. For a moment it appeared we were barred from progress in all directions.

I will always be grateful to Wilson McKenney for getting us out of that dilemma. Thanks to his lanky build and the mountain goat blood in his veins he did find a way up one of the sidewalls, and Huey and I followed on the rope. Mac did a fine mountaineering feat that morning. Late that night we reached our camp, and the following day returned to our California homes.

I began planning for a third attempt, but it was two years later, April, 1937, before the start was made. Through Sierra Club friends I learned that Norman Clyde, mountaineer of the High Sierra, was interested in making the ascent. He had climbed El Diablo from the west side in 1932, and he wanted to add the desert ascent to his experience.

Malcolm Huey and Wilson McKenney were unable to go in 1937, so Norman and I loaded our gear in my Ford jalopy and headed south, reaching the mouth of Providencia Canyon just before noon April 3.

We made up our packs and started up along the creek immediately. The detail of the lower canyon was now quite familiar to me. I knew the best routes over and around the various rock obstacles that blocked this precipitous creekbed, and Norman and I passed the first night's campsite of the previous expeditions at 4:45 in the afternoon and gained another 500 feet in elevation before making camp at six o'clock on a little sandbar.

We encountered heavy brush the



This is the series of waterfalls which members of the parties were unable to scale, either ascending or descending. The pine trees in the upper part of picture are 40 feet in height, indicating the height of the falls. There are 10 natural tanks in this series—fed by 10 waterfalls.

next morning. It was especially difficult for Norman because he carried a 60-pound pack that was always getting caught on protruding rocks and

limbs. The size and weight of Norman's pack was due to the thoroughness with which he prepares for such an expedition. He even carried a shoe-

maker's hammer and awl for repairing his footgear.

Then we came to that long series of slick rock waterfalls which had nearly brought disaster on the last previous trip. Four hours were consumed in detouring these falls.

Detours on this precipitous terrain are hard work, but would not be hazardous were it not for the agave, or wild maguey. Agave is the worst enemy of the climber on the desert slope of the San Pedro Martirs. It is a wild species of the plant from which Mexicans derive their fermented drink, *pulque*, and their very potent distilled drink, *tequila*.

Every plant is a roseate of dagger-like blades with a needle-point at the end of each blade. The plant grows on these slopes wherever there is a bit of soil for its roots. And when it cannot find soil it grows in the cracks in the boulders. It is everywhere on this mountainside and a touch of the needle-point means a painful puncture. Every few minutes it would become necessary for the leader to stop and clear a path through or past the agave. This is done as the Mexicans do in harvesting the buds in their maguey fields, by seizing the blade just below its needle, and then turning it back and pushing the sharp point through the fleshy part of the stem below.

We saw very little evidence of wild game on the desert slope of the San Pedro Martirs, and I am convinced that the reason is agave. A head-on collision with a formidable roseate of these blades could readily bring death to man or beast.

Eventually we reached an elevation above the zone of the agave — and then we encountered manzanita. Manzanita grew so dense in one place that we crossed over from one ledge to another by walking on the tops of the shrubs.

There is a sprinkling of coniferous trees above 6000 feet on the desert side of the range, but no fine forests of pine such as are found on the west slope of the San Pedro Martirs. We saw some sturdy oak trees on the upper elevations.

Our camp Sunday night, April 4, was at the highest elevation where water was available, about 7800 feet. Actually, we climbed 300 feet higher, and when no water was found, returned to this level.

Monday we left camp at 6:45, carrying no packs except our lunch for the day, jackets and cameras. We expected to reach the top and return to this camp by nightfall.

We followed the route Wilson McKenney and Malcolm Huey had taken

in 1935, detouring to the right up an almost vertical cliff that blocked the way, then crossing through and over some dense thickets of manzanita, and finally ascending the long talus slope to the crest of the ridge a mile north of El Diablo peak.

We worked south along the ridge and an hour later came to the couloir which had turned back my companions of the 1935 expedition.

We were now at an elevation where we could look down to the Gulf of California on the east, and into the great gorge of Diablo Canyon on the west. Diablo is a tremendous gash in the range which starts on the desert side a few miles north of Providence Canyon, cuts through the high backbone of the San Pedro Martirs, and then circles south to flank the Martir ridge on the west side.

El Picacho del Diablo might be climbed from the desert approach by coming up Diablo Canyon, but I would estimate the one way distance at close to 25 miles, and the required time for a round trip, six to eight days of back-packing. I am sure Diablo has some gorgeous vistas for the photographer whose heart and legs are stout enough to pack his equipment up this great canyon.

The couloir which blocked our route to the high peak ahead is a shallow tributary of Canyon Diablo, and the most feasible route appeared to be to drop down about 700 feet on the Diablo side and then work our way up over some great inclined slabs of granite to the summit.

"We'll never reach that peak, and get back to camp by dark," Norman estimated.

He was right. The sun was just touching the Pacific ocean far off to the west as we reached the summit toward which we had been climbing for three days. This is the one point on the peninsula of Lower California where from the same stance one can see both the Pacific ocean and the Gulf of California.

We found a little cairn at the top. In it were records of an ascent made from the west June 16, 1932, by a Sierra Club party consisting of Bestor Robinson, Nathan C. Clarke, Norman Clyde, Walter Brem, Glen Dawson and Dick Jones. A second party consisting of Julia Mortimer, May Pridham, Fred Stitt and R. C. Kendall had registered there June 19, 1935. Also, there was a notation that Don McClain had made the ascent from the west in 1911.

We found no record of any previous climb from the desert side, although I have been told on good authority that such an ascent has been made, and

that at one time there was a record of it in the cairn.

Since our visit there, several other parties have climbed the summit from the west, members of the Sierra Club having reached the top during the last year.

It was growing dark, and we had neither food nor bedding, so Norman and I chose to rope off the summit and down the precipitous east side of the ridge as a short-cut back to our base camp. Three ropes took us down into a great bank of snow where we sank waist-deep. After a little floundering we got free and just after dark reached a trickle of water in a canyon where there was an abundant supply of wood. There we bivouacked for the night, taking turns stoking the fire until day-break.

Mexican maps list El Picacho del Diablo elevations at both 10,136 and 10,163. My altimeter, probably less accurate, registered just under 10,300.

On the return trip I worked around to a point where I could photograph the series of waterfalls which had forced long detours on this and previous trips. Countless ages of erosion had cut a series of natural tanks down across the slope of a huge granite dome, and each of the pools was fed from above by a waterfall. Standing on the ridge opposite, I counted 10 waterfalls in the series, although the accompanying picture was taken from an angle which does not show all of them.

The San Pedro Martirs are wild and rugged, and their upper reaches are inaccessible except to well-equipped climbers—but the beauty of this region is not surpassed anywhere in the high Sierras of either of the Californias.

In 1934 when our first climbing party reached the base of the San Pedro Martirs there were no tracks of motor vehicles anywhere in San Felipe Valley. Today a well-graded road connects San Felipe with the dry lake that bears its name, and on the desert adjoining the lakebed caterpillar tractors are leveling a great tract of land for cultivation.

Probably in the years ahead this warm fertile valley that lies between the Gulf of California and the range of the San Pedro Martirs will become a highly productive area for winter-grown vegetables and fruits. It will become quite civilized. But the great granite-capped peak which towers overhead—a mountain so forbidding the Mexicans named it "The Peak of the Devil"—will remain a challenge to those who seek out the really tough places on which to try their climbing prowess. El Picacho del Diablo will never become too civilized.



Instead of the red ochre reported to have been used in Big Knee's Sign of the Red Horse, this old Navajo drawing of a Spaniard on his mount was painted with white clay. Such pictures are rarely found in the old Navajo country of Northwestern New Mexico.

Lost Pictograph on Mesa Cabresta

By RICHARD VAN VALKENBURGH

Map by Norton Allen

WHILE *Sóntsoji hathli*, the Star Singer, and I sat on a crumbled wall of ancient Pueblo Pintado in northwestern New Mexico and watched a rose-tinted fragment of a cloud race across the sky just ahead of Navajoland's gusty twilight the wrinkled old medicine man from Defiance Plateau softly murmured:

*Lichii, the Red Horse
Gallops over the Star-Jeweled Trail
Of Klehonahai, the Moon Bearer
Into the Land Beyond the Sunset.*

I suspected there was an interesting story concealed in the words spoken by the old medicine man, but experience had taught me patience. If the pat-

tern ran true to form Star Singer would tell me more about the Red Horse that night while we made camp with Jose Toledo, headman of the Navajo farming community of Torreon in the rolling hill country of the continental divide.

We found Jose at his hogan, and that night when we had finished our supper of braised mutton ribs, corn pudding and boiled coffee, we relaxed as we watched the dust-yellow pall of moonrise creep up from behind the jet blackness of the Jemez range. It was then that Star Singer chose to tell the story of *Lichii*, the Red Horse.

"When this story lived, the *Diné*, or Navajo People dwelt in the *Dinétxa*,

Somewhere up on the Mesa Cabresta in northern New Mexico is a sacred shrine of the Navajo Indians, marked with the pictograph of a red horse. The secret of its location died with Star Singer, an aged medicine man, in 1948. Richard Van Valkenburgh never was able to find this shrine, but he believes that sooner or later another person, perhaps a reader of *Desert Magazine*, will rediscover the ancient symbol.

or Old Navajo Country. Today the ruins of their hogans and watchtowers can be found on the rims of Rainy Mountain, along the Canyon Largo, around Stinking Lake and under *Ch'olih*, the sacred Fir Mountain.

"For food the People grew corn on the flats of the canyons, gathered yucca fruit and wild seeds and hunted deer and other game. Not having sheep, goats or horses, the tribe was weak. It was only through the wisdom of the *Natáni Gotso*, Big Knee, that our an-



Star Singer, also known as "Man of the Standing House People." This Navajo medicine man, a friend of the author, claimed that after making offerings on the sacred Wide Belt Mountain the Navajo gods guided his feet to the Sign of the Red Horse.

cestors stayed together and survived.

"Among Big Knee's people there was a man named Chee. He was called thus because his skin was reddish in color. When he came, people pulled down their hogan door-mats because he was a fool like *Nasjaa*, the Big Owl, and did not respect the taboos and customs of the tribe.

"Chee wandered from place to place. There were times when he would be gone a long time. People would say, 'Chee's no more'. Then he would come back with white shell, turquoise, and other things that he had stolen from the Pueblo people who dwelt on *Tó ba'ad*, the Female Water, which the Mexicans now call the Rio Grande.

"They tell that it was near 'four-old-

men's-lives-ago' when Chee returned from the Female Water with this news. Strangers with light skins, black beards, and iron shirts had come up from the south. From the kind of hat they wore Chee described them as *Bicha nezh*, or 'Long Hats'.

"Upon hearing this news Big Knee said to Chee, 'These Long Hats may be the children of *Náho'ilpi*, the gambler who was banished from this land by *Bekosidi*, the Universal God. Maybe they have come to make trouble. Return to the Female Water. Spy upon them. If they come this way, return to warn us with the speed of *Jadi*, the antelope.'

"For three full moons the People waited. Again they said, 'Chee's no more'. Then—just when the moon

began to take the shape of a silver bow, the guards in the watchtowers began to signal. The owl hoots told that something strange was coming from out of the mist that covered the mountain to the south.

"The warriors ran to get their bows while the women and children hurried to the watchtowers. The mist lifted and the 'thing' began to take form and color. Out walked Chee. Behind him was a reddish colored animal unlike anything that the People had ever seen before.

"Cautiously coming down from his tower Big Knee asked, 'Where did you get this thing? It has eyes, ears and teeth like an animal. What's that thing hanging down from the end of its back? Did you put it there? What's this animal good for—something to eat?'

"Chee answered, 'While the Long Hats slept under *Sisnateel*, the Wide Belt Mountain, I took this animal. That bunch at the end of his back is for knocking off flies. No, Grandfather, he is not to eat. While his flesh might taste good, he has better use than that. Look!'

"Then Chee jumped on the back of the animal and rode him around.

"When he got over his surprise Big Knee said, 'With that strong back this animal can carry great burdens. Those long legs can carry a man farther and faster than our best runners. He must have been sent by the gods to make a better life for the People.'

"Big Knee then went to a nearby ledge. Taking red ochre mixed with the juice of the cacti he started to paint a picture of the animal. When he finished he turned to the People and said, 'By this sign our descendants will know that it was here under the Mountain of Coiled Rope that The People got *Lichii*, the first burden bearer, the Red Horse.'

"Today we old Navajos honor the Red Horse. He changed the People from a weak tribe into a strong nation. We became so powerful that we made the Long Hats, who were later called the *Nakai*, or Mexicans, hide in their stone houses. That is why great memories come to sit beside us old Navajos when the Red Horse gallops across the sky."

Star Singer wrapped up in his blanket as his words faded out in the drowsy night. For a long time we lay and watched the flickering play of the silver-red glow cast on the canyon walls by our low campfire. When the silence was broken by the staccato yap of *ma'i*, the coyote, Jose spoke:

"There is a Mountain of Coiled Rope. My old uncle, *Hastin Tlogi*, told me of the place. The Mexicans call it La Mesa Cabresta, for it looks

like a coiled rope. It sets beside the canyon of the La Jara which runs some distance beyond *Ch'olih*, the sacred Fir Mountain, which the Mexicans call El Gobernador."

A half-smile deepened the wrinkles that crowfooted out from Star Singer's old eyes as he said, "When I saw the Red Horse in the sky I knew that it was a good omen. I knew that within this moon I would see the place where he first came to the Navajo. It is fitting that we travel to the Mountain of Coiled Rope."

The first pale shafts of early dawn lighted our way as we headed our pickup across the upper Torreon towards Eagle Spring and Penistaja. The whole world was alight with the crystal brightness of the Indian summer morning when we reached New Mexico Highway 44 some 15 miles west of Cuba.

At the Potrero which cuts across the southwestern corner of the Jicarilla Apache Indian Reservation, Jose called for a stop. While we looked to the south across a juniper covered slope that rose to a rectangular shaped mesa. Jose said, 'tis *Sisnateel*, the Wide Belt Mesa. This is where Chee got the Red Horse from the Long Hats."

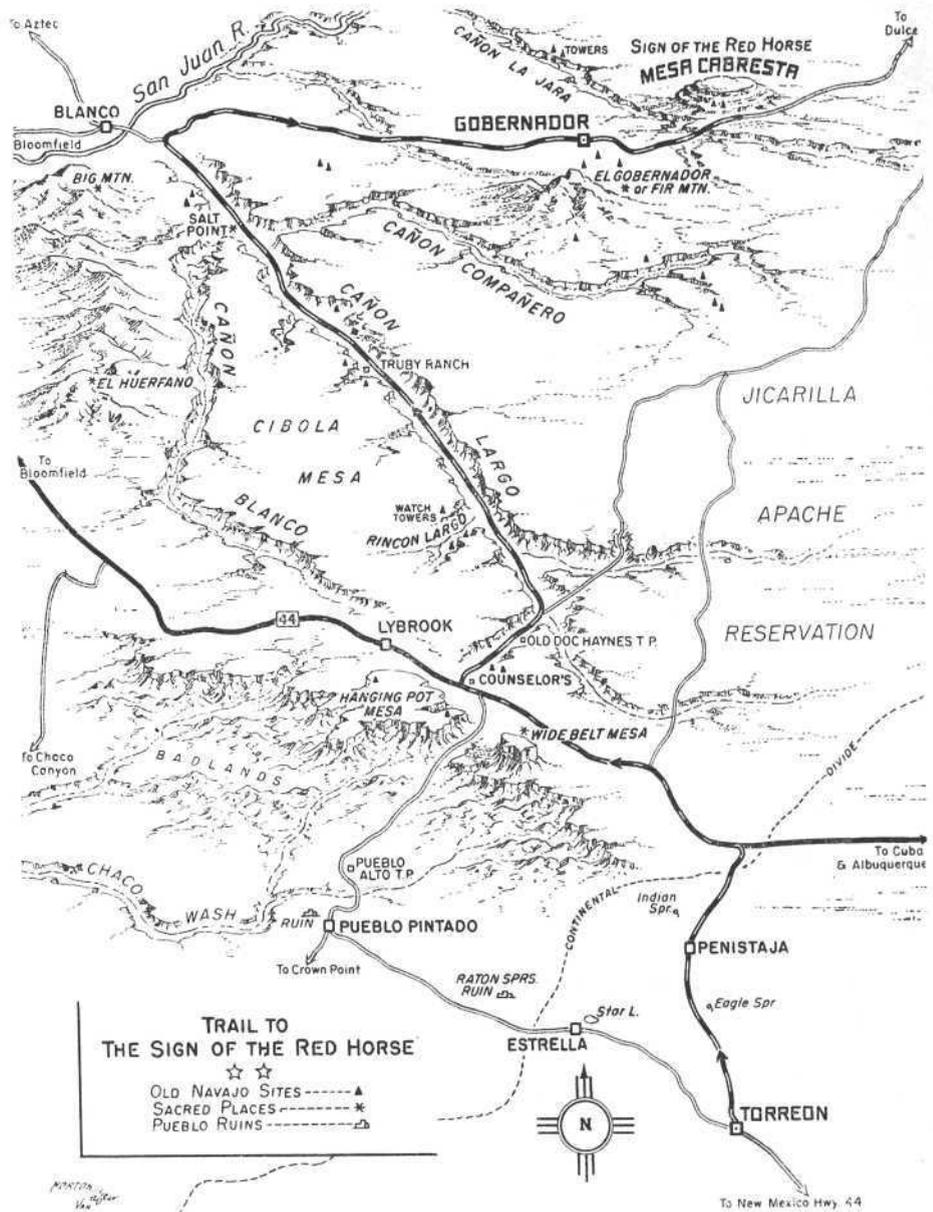
Jose and I did not tag along when Star Singer took his deerhide medicine bag and padded off through the junipers toward the mesa. Experience had taught us that a Navajo medicine man does not want company when he has something on his mind. Within an hour the old singer returned, but he made no explanations.

Traveling northwest we soon reached Lybrook Station, veered north and picked up the Haynes Canyon trail. After passing the ruins of the long abandoned trading post of Doc Haynes we soon reached the wide sand flat made by the juncture of the east and south forks of the Canyon Largo. Turning west we headed into the jaws of the main canyon.

Our first Navajo watchtowers were picked up on the points of the mesas that box in the Rincon Largo. Two hours of tough sand and high-center driving brought us to the lonely ranch of Henry Truby. After watering at Henry's well we took a short look at the watchtowers that perch on the rims above his place.

It was late afternoon when we swung out of the Canyon Largo just above its juncture with the San Juan River at the Spanish-American village of Blanco. We started to climb the graded road that hairpins upward to the pinyon covered grasslands that rise for 20 miles to the cattle community of Gobernador.

Night was falling when we reached



the small 'dobe store and whitewashed church that marked the center of Gobernador. After washing off the gypsum dust collected in the canyon we sat down to supper with Antonio Fernandez. A local vaquero, Tony has been my guide on earlier archeological prowls into the Campanero region to the south.

Tony verified Jose's location of the Mountain of Coiled Rope by stating that the Mesa Cabresta lay a few miles farther east. He further whetted our impatience to explore the mesa by adding that while working cattle and gathering pinyon nuts he had seen the ruins of "*muchos jacales de los Indios*."

Star Singer and Jose were up and chewing jerky and parched corn when Tony and I rolled out into the brisk pinyon-scented air of the Gobernador. After filling up on beans rolled in tortillas and washed down with steaming black chicory coffee, we headed down

the hill that dropped us into the canyon of the La Jara.

After swishing across the sandy bottom of the La Jara, Tony motioned for a stop. While we looked northward toward the terraces that coiled into lavender rags of clouds, Tony said, "t'is La Mesa Cabresta. Does she not look like a coiled riata?"

Ten minutes of easy climbing brought us to a wide break in the lower benches of the mesa. While we looked at the grass covered flat which was boxed in on three sides by low buff-colored walls, Tony said, "This is the place—*La Rinconada de los Indios*."

Our first prowl of the *Rinconada* turned up a number of shallow depressions and weathered trash heaps which indicated old hogan sites. As we widened our search we began to find the crumpled tripods of forked juniper logs characteristic of the old Navajo *alchindesa*, or "forked stick house."

After an hour's exploration I began



José Toledo, of the Navajo farming community of Torreon, New Mexico, gave Star Singer and Van Valkenburgh their first lead to the location of the "Mountain of Coiled Rope." In this picture, José is shown with his wife and typical Navajo family of the rolling hill country of the continental divide.

to realize that we were in the center of the largest old Navajo camp site I had ever visited. This was not a single hogan-group, but a series linked together to make a big community. Confident that I was on the site of Big Knee's centuries-old camp, I started to look for the sign of the Red Horse.

Warning of nightfall came with the long shadows that brought a sudden chill to the mesa. Gathering together my collection of pottery sherds, stone objects and other artifacts, I wasted no time in coming down off the mesa. When I reached the *Rinconada* Tony and Jose were there. But—Star Singer had disappeared!

Deciding to make camp in the *Rinconada* we built up a large fire. If Star Singer did not show up by morning we would start to hunt for him. Mentally nagged by visions of a broken leg or a sudden attack of sickness I tried to keep faith that my old friend was probably making medicine and was safe.

After a restless night I arose just before daybreak to put more wood on the fire. No one will know my relief when I saw that Star Singer had returned. With his medicine bag tucked between his knees he casually said as he looked at me across the fire,

"I have found the sign of the Red Horse!"

That morning Star Singer made no move toward offering to guide me to the location of the glyph. Somewhat provoked, I took Tony and Jose and spent the day combing the benches of the mesa in an effort to make my own discovery. But the gods turned their faces, and by night I had to admit that our search had been in vain.

Two days later Star Singer and I returned home to Fort Defiance, Arizona. When the old Navajo left for his hogan he still had given no explanation for his puzzling behavior on the Mesa Cabresta. A few weeks later he ambled into my office powdered with the first snow of winter. When we settled down to coffee he said:

"Four frosts have touched the sacred mountains and the evil beings are asleep. Now I will talk of certain things. When I left you and Jose at Wide Belt Mesa I went to talk with the gods. I laid down *ketans*, or prayersticks, for this is a sacred mountain, and where Chee got the Red Horse.

"While there, I made the gods a promise. If they would guide my feet to the sign of the Red Horse, I would give the location to no one—not even to Beni, my favorite son. For the

sign of the Red Horse is sacred, and its power would be lessened should it be seen by an alien, or by a Navajo who does not walk in the Holy Way.

"Window Rock has been talking about taking away the Navajo horses. To the Navajo, horses are more than just burden bearers. They are symbols of tribal power and prosperity. I knew talk as plentiful as the spring winds would have no influence on the white officials. Help was needed from beings with greater wisdom than that of man.

"That is why I went to the Mountain of Coiled Rope. After being guided to the sign of the Red Horse, I made the proper medicine. Then, with nothing between us but the turquoise of the sky, I spoke to my gods. I prayed that they would influence the Big-Chief-who-sits-in-the-White-House-in-Washington to take something else away from the Navajo, but not their horses."

Star Singer's secret was buried with him when he died in 1948—one of the few that he ever kept from me. Today, somewhere on a lonely bench on the Mountain of Coiled Rope the sign of the Red Horse awaits discovery by the one who will be the first white man to see Big Knee's historic recording of the first horse known to the Navajo.

THE *Desert* MAGAZINE
CLOSE-UPS

Desert Magazine rarely crosses over Southwest desert boundaries for story material. But, in the case of Edith Rutenic McLeod's "Where Indians Dug for Ipos," which appears in this issue, the editors felt the interest great enough to warrant taking readers north to the arid lands of Southeastern Oregon.

Mrs. McLeod is a resident of Klamath Falls, Oregon, and she has long been interested in the cultures of the early Klamath and Modoc Indians who formerly occupied the Klamath Lakes region. Her home is a small museum of artifacts.

She presently is enjoying a year's vacation from her profession, piano teaching, and hopes to spend most of her leisure time doing research in archeology and ethnology, particularly of the local Indian tribes.

Hard Rock Shorty, who has been telling his tall tales to *Desert Magazine* readers since the first year of *Desert's* publication in 1937, was created by Lon Garrison who at that time

was a park ranger in Yosemite Valley.

Lon had served a hitch of duty in Death Valley National Monument before going to Yosemite, and had acquired a stock of yarns from the mining men he met there. Garrison wrote the Hard Rock stories for three years and then was transferred to a Park Service assignment in Pennsylvania.

During the intervening years Hard Rock fiction has been contributed by a number of writers. This month Lon Garrison is back on the job again, and readers will find his by-line on Shorty's latest tale.

Desert Magazine staff had hopes that Lon would become a regular contributor again, but just about the time he sent this bit of fiction to the editors, he received word from Washington that he had been promoted from his job as assistant superintendent at Grand Canyon National Park to the superintendency of the Great Bend National Park in Texas. The duties of the new post, which Garrison assumed November 17, will keep him very busy in the months ahead, and whether or not he will have time for Hard Rock Shorty is a question. But whether he does or not, the editors of *Desert* congratulate him on his promotion to one of the most important park assignments in the United States.

Hard Rock Shorty of Death Valley



By LON GARRISON

Hard Rock Shorty groaned as he eased himself into his busted cane-bottom chair on the Inferno store porch.

"Been workin'," he sighed. "Ain't used to it. Didn't get the job done, neither. But I will. I been workin' with Doc Doolittle over to the Dusty River Experiment station in his lavertory for the last week. I never seen so many gadgets an' vile smellin' chemicals in my life.

"There's a fortune in it though—we got 'er all done but one little step we can't figger out an' we decided to take a little rest an' then start over.

"Yuh know, we're workin' on this water problem. There's lots o' places here in the desert where just a little water'd really help a lot, like in minin' camps, huntin' camps, out prospectin', an' sech like. But there ain't no water nowhere near, an' tryin' to pack enough water in canteens or barrels or cans is too durn expensive mostly, if it ain't downright impossible on account of they is so far from the end of the road.

"So me an' Doc decided that we'd try a new approach. The fellers that manufacture food has got it down pat—they dry fried eggs, an' spuds, an' meat, an' fruit, an' even have dried onions, though I never seen why anybody bothered with that one. So Doc an' me says — why not dried water?

Startin' from that end it was easy. We got it all figgered out in just a few days. Dehydrate the water, package it up, an' about ten gallons make a nice one pound package. We even put a couple hunderd of the packages on a mule an' lugged 'em up on Telescope Peak.

Then's when we found out the one bug in the whole process an' we're workin' now on how to lick that. We still got to figger out what we're gonna mix it with at the other end."

January Photo Contest Announcement...

Clear crisp days of the winter season on the desert are a constant invitation to the photographer who likes to roam the highways in search of picture subjects. The possibilities are almost unlimited: shadow patterns in mountains and dunes, prospectors at work, wildlife (if you have a telephoto lens), Indians, unusual botanical or mineralogical specimens, sunsets and sunrises—these are just a few of the subjects which are acceptable in *Desert Magazine's* Picture-of-the-Month contest. Any subject which is essentially of the desert may be entered.

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

PALM DESERT, CALIFORNIA



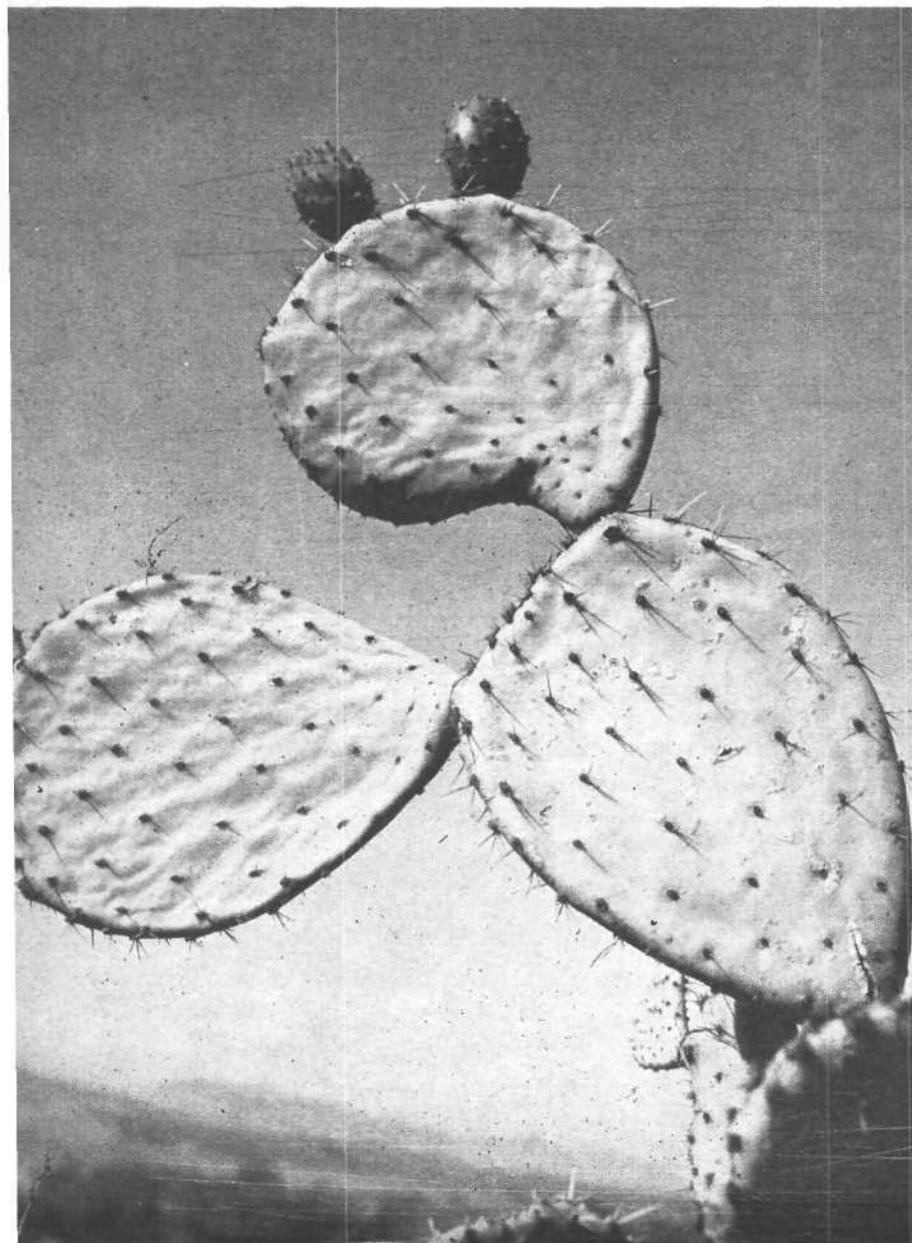
Pictures of the Month

Dust to Dust

First place winner of Desert's November Picture-of-the-Month contest was Susie Rielly of North Hollywood. Photograph was taken at the mouth of Diamond Creek near the Colorado River, and the tracks near the skull are those of a lizard. Taken with a Leica camera, 1/100 second at f.9.5.

Prickly Pear

Second place winner in the November Picture-of-the-Month contest was Paul E. Black of Los Angeles. This photograph of a Prickly Pear cactus in bud was taken with a Rolleiflex on tripod, 1/50 second at f.11 with Plus X film.





Growing in adobe soil among the junipers this field of ipos was photographed in Modoc County, California by Helen Helfrich.

Where Indians Dug for Ipos

By EDITH RUTENIC McLEOD

MY HUSBAND and I were out on the great volcanic desert which extends across southeastern Oregon and northeastern California looking for traces of the old emigrant route to Oregon—the Applegate Trail—when quite unexpectedly we came upon a 1000-acre tract of blooming ipos.

In the region in which it grows, the ipo, or yampah as it was sometimes called, was an important source of food for western Indians. The field we discovered in Modoc County, California, probably had been known to the Modoc Indians. But since the Indians were confined to a reservation 75 years ago the tubers have bloomed and multiplied unmolested.

There are two species of this interesting plant which the Indians sought for food. One is the Western false caraway, *Carum gairdneri*, Gray, known to the Indians of northern Oregon and Washington as *yampah* or *year-pah*. The other is Oregon false

Among the Indians of the Southwest the staple item of food in prehistoric times was the mesquite bean. Farther north one of the main sources of nourishment through summer and winter was a tuber which the tribesmen called ipo, yampah, and various other names. Since the Indians no longer depend on the native plants for food, the ipo, or false caraway thrives and multiplies unmolested in the arid region of northeastern California and southeastern Oregon.

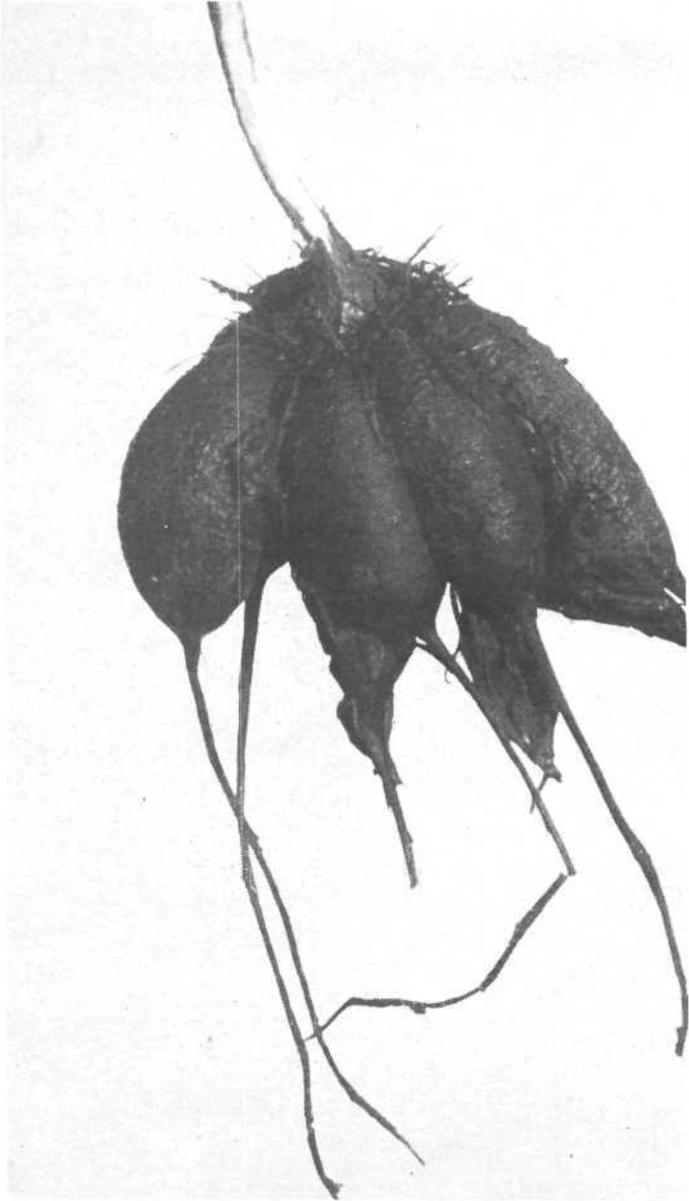
caraway, *Carum oreganum*, Wats., used mainly by the Klamath, Modoc and Shasta Indians and known to them as *ipo*, *ipa* or *apo*, and called squaw root by the early white settlers who came to this region.

The ipo habitat in eastern Oregon and northeastern California is typically desert — an arid upland of volcanic rock and adobe soil with scattered junipers, sagebrush, bitter-brush and

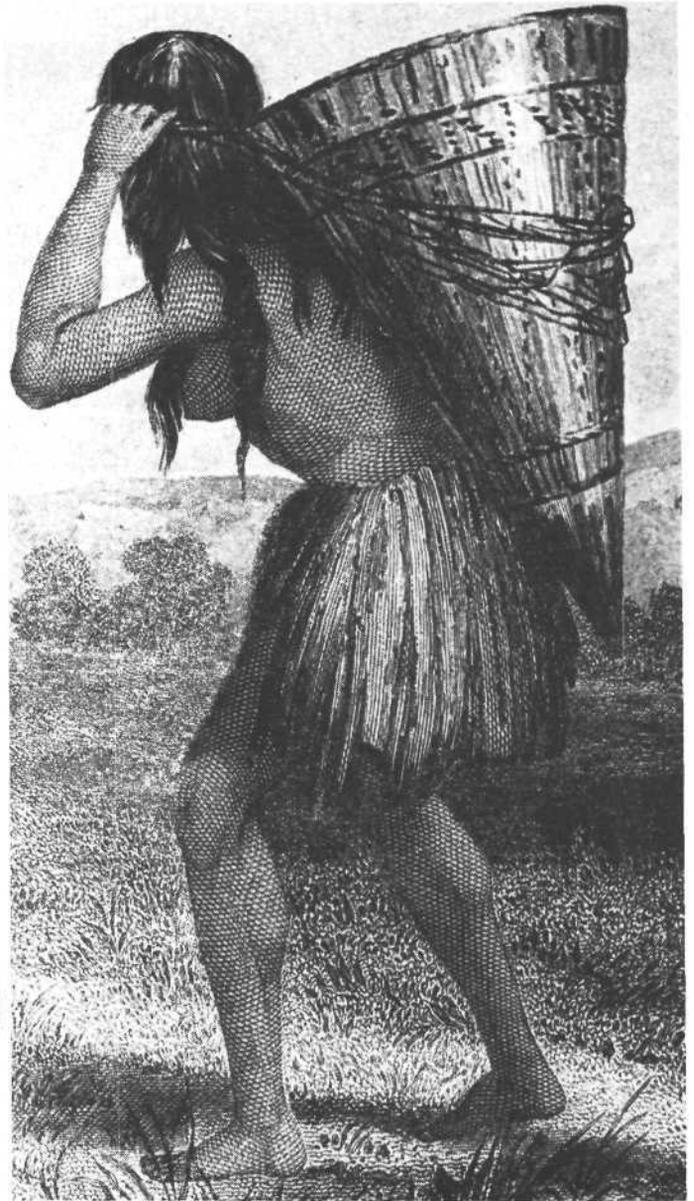
rabbit-brush. In such terrain the big fields of lacy white ipo blossoms stand out in sharp contrast, their carrot-like blooms on sparsely-leaved, forked stems bravely withstanding the hot July sun and dry surface soil.

The ipo root is about an inch or less in length and varies from the thickness of a pencil to a finger. The northern species is larger. The tuber is hard, white and farinaceous, growing in clusters of from two to five at the base of the plant. Two to three tubers seems to be the general rule. A member of the parsley family, they are often confused with wild carrot, Queen Anne's lace.

Lewis and Clark who traveled down the Columbia River in 1805 say of the plant in their journal, "Sacajawea gathered a quantity of roots of a species of fennel which we found very agreeable food, the flavor of this root is not unlike anis seed . . . they are called by the Shoshones *year-pah*. These roots are very palatable either fresh, roasted, boiled or dried and are generally between the size of a quill



Slightly enlarged picture of a cluster of ipo tubers. Actually they are about an inch long and the thickness of your little finger. Photo by Ken McLeod.



This type of carrying basket was used by Indians in some parts of California. Drawing by Capt. S. Eastman in Schoolcraft's Indian Tribes.

and a man's finger, and about the length of the latter . . . The rind is white and thin, the body or consistence of the root is white, mealy, easily reduced by pounding to a substance resembling flour, which thickens with boiling water like flour, and is agreeably flavored."

Colonel Fremont also mentions them, "At this place (Columbia River region) I first became acquainted with the *yampah* which I found our Snake women digging in the low timbered bottom of the creek. Among the Indians of the Rocky Mountains, and more particularly among the Shoshones or Snake Indians, in whose territory it is very abundant, this is considered the best among the roots used for food, which they take pleasure in offering to strangers." And again later, "For sup-

per we had *yampah*, the most agreeably flavored of the roots."

We can attest that digging ipos all day, as did the Indian women, must have been an arduous task, for even with the convenience of a modern spade instead of a "digging stick" we were ready to give up at the end of an hour with one pint of ipos.

It was a different matter with the Indians of our region, for with them the ability to gather enough food during the summer to last them through the long season of winter snows meant the difference between life and death by starvation.

As soon as the snows melted, the Indian tribes left their winter homes, migrating to the various parts of the country for the particular crop each region offered, fish, camas, wokus,

ipos, wild plums, huckleberries and other berries, seeds, and so on.

While digging our ipos, we visualized the women starting out early in the morning, in the month of June, big carrying baskets strapped on their backs, and carrying digging sticks. The carrying or root basket for ipos was made of woven tule, with willow withes around the mouth for strength and sometimes supporting the sides. Straps of elkhide were fastened across the breast and around the basket to hold it in place on the back.

The digging stick was merely a pointed stick of mountain mahogany, the point hardened by fire and shaped by rubbing on a stone. The squaw shoved the pointed end into the ground by the ipo plant, flipped out the cluster of small tubers and threw them over

her left shoulder into the root basket. Some they ate raw or boiled or baked, and the rest were dried for winter use. When needed, the dried tubers were pounded to a meal in a stone mortar with a stone pestle, and made into mush or cakes.

The Klamaths had a superstition: "If you let your shadow fall on the hill, not you ipos will find; but if you not let your shadow fall, much you ipos will find." We discovered that it was more fact than superstition for we found that in digging in our own shadows it was difficult to distinguish the

adobe-covered ball of tubers from the other clods.

The ipo has a thin, brown outer rind which the Klamaths and Modocs removed by shaking them in a coarse, flat basketry shaker with small, sharp stones. George Miller, an old-timer of Klamath Falls, recalls that the Indians had a trough at their village site on Link River (now Klamath Falls) into which they dumped the day's harvest of ipos each night, partially filled the trough with water, and tromped off the rinds with their bare feet.

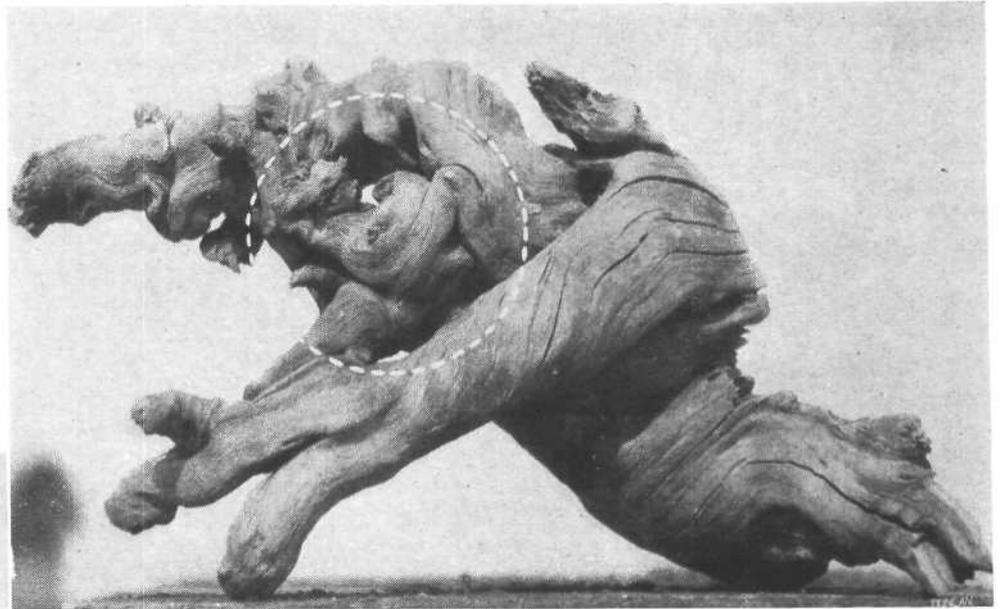
Kashma, kash, kesh or kas, as well

as ipo, was the Klamath name for the tuber, the first names probably derived from the Shasta Indians, according to Albert Samuel Gatschet who made a 10-year study of the Indians in the '80s. In "Wild Flowers of the Pacific Coast," Haskins suggests that the Indian name ipo may possibly be a corruption of the Spanish word *apio*, celery.

When newly dug they taste to me like a combination of raw potato and young carrot; others say a little like celery, potato or carrot; when cooked they taste somewhat like roasted chestnuts.

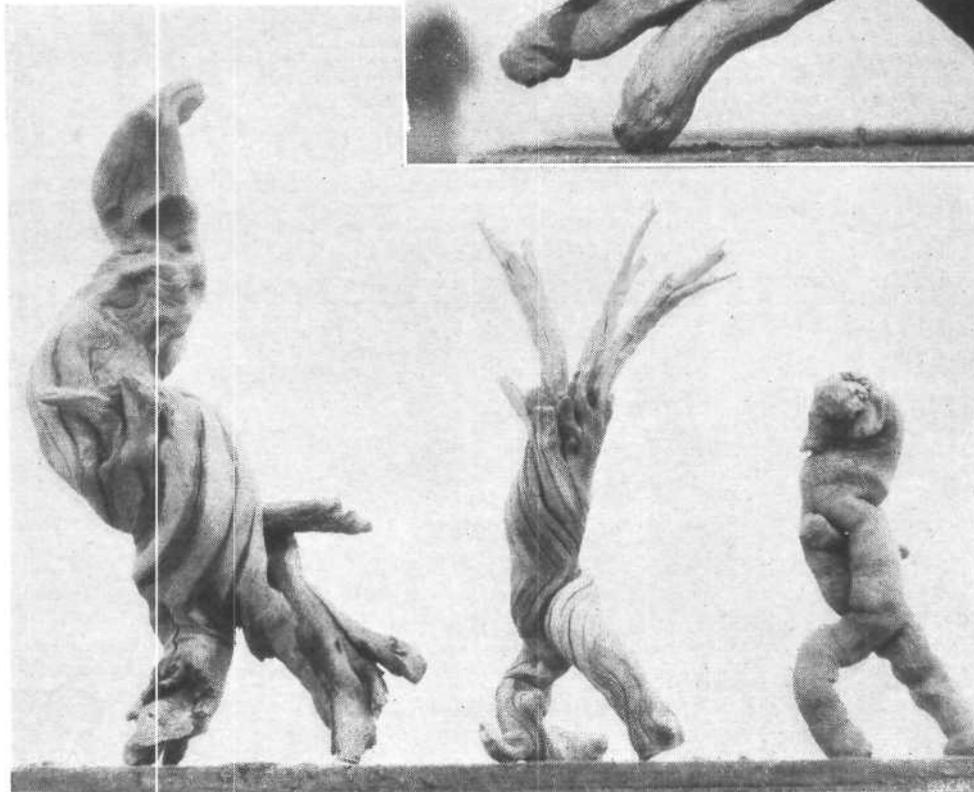
Death Valley Caricatures . . .

A good imagination is all that is needed to see humor as well as beauty in some of Nature's wind-and-weather-blown handiwork. Lloyd E. Duncan of Los Angeles, California, gathered these roots and dried limbs in Death Valley. Titled and photographed, they make an interesting gallery of natural caricatures.



Sleeping Peon . . .

For his afternoon siesta, the little wooden Mexican above (see circle) curled up in the crotch of a gnarled tree root. Even the camera's flash failed to disturb his slumber.



The Root Brothers

Three odd but erect root men, dug from their sandy tombs, shake the Death Valley dust out of their wooden wrinkles and, shoulders back, forward march.

Mines and Mining

Henderson, Nevada . . .

Early in November, the Federal General Services Administration announced official transfer of the giant magnesium plant at Henderson to the ownership of Basic Magnesium, Inc. The federal government built the plant early in World War II at a cost of \$116,000,000 and operated it as Magnesium, Inc. Acting for the state, the Nevada Colorado River Commission bought it in 1948 for \$1 down, and before recent negotiations had paid nearly \$3,000,000 of the \$24,000,000 purchase price. Basic has agreed to pay the balance of the purchase price by 1968. The plant is spread over nearly 8500 acres and provides factory, storage and sales space for about 50 private firms.—*Pioche Record*.

Albuquerque, New Mexico . . .

Dewey Dismuke of the U. S. Indian Service office here reports that about 25 tons of uranium ore are being mined daily from Laguna tribal lands. Anaconda Copper Corporation, which leases the lands, hopes to increase production to more than 60 tons a day.—*Farmington Daily Times*.

Battle Mountain, Nevada . . .

Declining lead markets are held responsible for shutdown of the Copper Canyon mine where approximately 70 men were laid off recently. Company officials pointed out that recent heavy imports of lead from foreign countries have driven the price down below local production costs, while costs of freight, smelting and supplies have risen. The mine is being kept pumped out and in stand-by condition so that work can be resumed with minimum delay if and when metal prices justify reopening.—*Territorial Enterprise*.

Lovelock, Nevada . . .

Trojan Mining and Milling Company's new 100-ton mill at Toy, five miles west of Lovelock, soon will be operating. The mill is being built on the foundations of the former Hall mill. A heavy crusher is being installed with a ball mill and rolls. Four gravity concentration tables and a Denver jig will be used at the start, with more to be added if needed. The company plans to handle 50 tons of its own ore from a deposit in the nearby Ragged Top mountains and 50 tons of custom business daily.—*Battle Mountain Scout*.

Austin, Nevada . . .

Sunnyside Milling Company has processed the first 108 tons of ore from its Birch Creek Tungsten mine and plans to continue operations as long as weather permits. The property, leased from Crouch and McGinness, lies two miles south of the Frontier Tavern and about four miles north of the T-Bone mine. The company now is stripping an area 150 by 400 feet and putting in three benches for open pit mining.—*Reese River Reveille*.

Randsburg, California . . .

"Proper sampling for an assay is just as important as the assay itself," Martin C. Engel, assayer at Cantil, California, warned prospectors in the Randsburg area, where many new deposits of scheelite-tungsten ore are being profitably developed. The tungsten boom has brought a number of amateurs to the area, and Engel is afraid faulty sampling methods will contort their assay reports.—*Randsburg Time-Herald*.

Globe, Arizona . . .

The United States government has signed contracts with the Arizona Asbestos Producers Association for \$80,000 worth of raw asbestos from Arizona mines. According to an association spokesman, the contracts will be filled by five of the larger mines in Gila County. The Defense Materials Procurement Agency in Washington, which represented the government in the contracts, will stockpile the asbestos at a Dominion Mine warehouse until a processing mill can be built.—*Yuma Daily Sun*.

Ely, Nevada . . .

Development of Kennecott Copper's Deep Ruth project near Ely is progressing steadily. Sinking of the main Ruth vertical shaft to the 1700-foot level has been going forward several months and the old 755-foot Kellinske incline has been enlarged and is being deepened 1500 feet. This shaft will be connected to the Deep Ruth by drifts and will serve as a ventilator and safety factor. Located approximately 900 feet below the great ore bodies mined in the Ruth pit, the Deep Ruth deposit contains an estimated 22,500,000 tons of commercial grade copper ore. Mining will be conducted from three levels connected with more than eight miles of haulage ways.—*Mining Record*.

Goldpoint, Nevada . . .

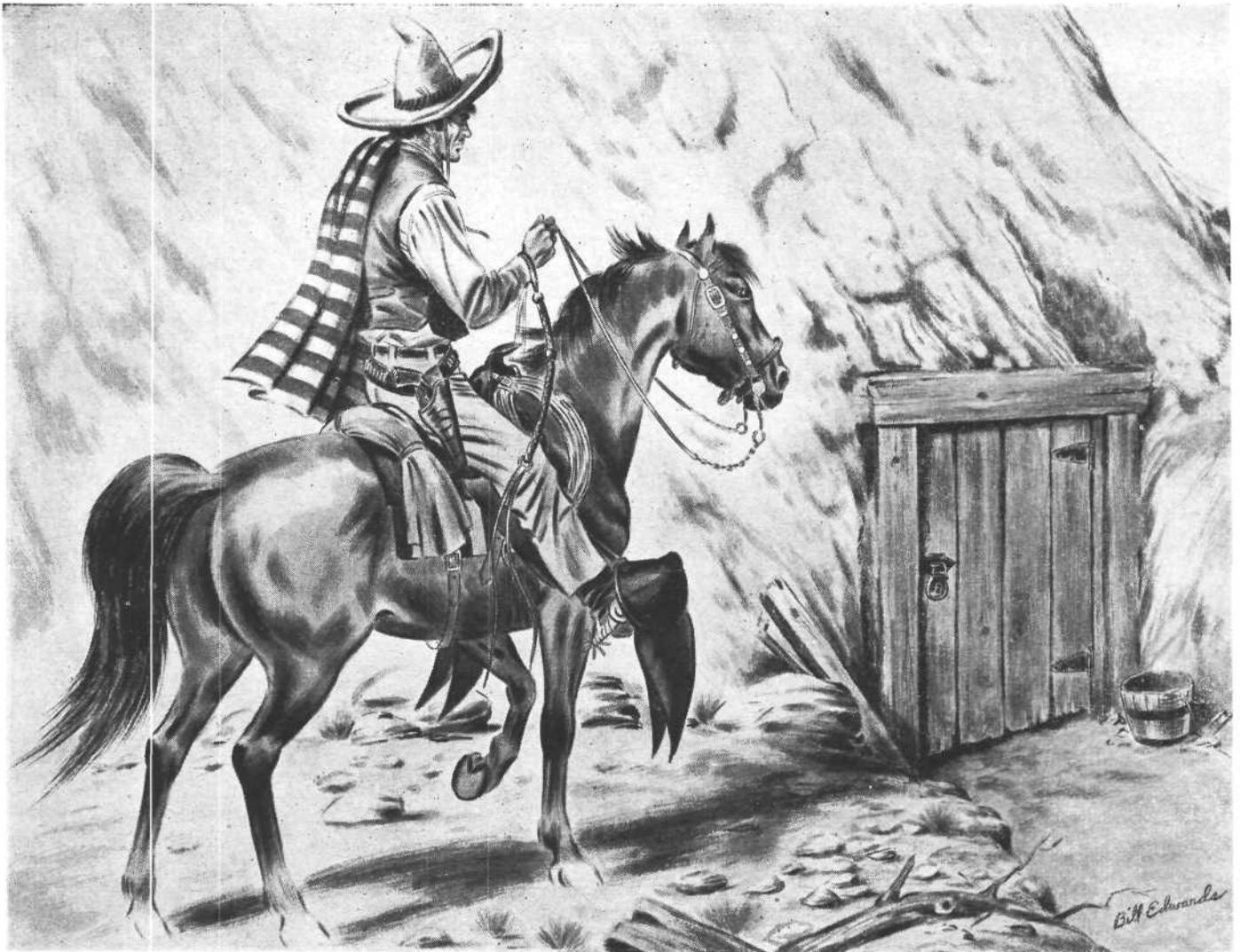
Exploring the same ground in the Goldpoint district where they mined gold-silver ore as young men, Harry Wiley and Jack Whitaker began looking for tungsten in 1938. The long search was rewarded late in 1951 when Wiley traced some rich float to its source. The months since have been spent getting the multiple vein structure in place. The Good Kate and Amelia groups now comprise 21 claims and two millsites. Nineteen veins have been brought in with an average strike of 3000 feet and an average width of 16 feet. Whitaker describes the ore as a sugary quartz composed of calcium, aluminum, silicon, sodium tungstate with W03 running well above one percent and contaminations materials well below .08 percent. The partners' firm, known as the Nevada Mining Company, is negotiating for the purchase of the State Line mill from Charles L. Richards of Reno.—*Tonopah Times-Bonanza*.

Beowawe, Nevada . . .

London Extension Mining Company is carrying on extensive gold mining and milling operations at its open pit property in the Tenabo district, about seven miles south of the old town of Tenabo, 30 miles south of Beowawe. The site was obtained by the company several years ago and has been worked steadily ever since. The ore is of a comparatively low grade, but quantity production methods are employed in handling and the operation has proved profitable. Mining is done by power shovels and hauled by truck to the rim and the mill which is on the site. The pit is now almost half a mile long by 200 yards wide and over 70 feet deep.—*Pioche Record*.

Tonopah, Nevada . . .

An old Nye County mine that set an enviable record as a gold producer in the early 1900s is presently undergoing a revival as a source of antimony. The property, located on the outskirts of Manhattan, was recently sold by the White Caps Mining Company to Mark Young of Tonopah and A. C. Conlee and associates of Portland, Oregon. Assays indicate large tonnages of both high grade and milling grade ore. Work currently is underway at the 300-foot level where, according to Conlee, a 20-foot wide vein is being opened. The new owners are converting the old Manhattan Mill to the treatment of antimony and plan a daily capacity of 100 tons.—*Tonopah Times-Bonanza*.



"His horse was standing on an old mine dump, and off to one side was the entrance to a tunnel with a heavy oak door . . . fastened with a padlock."

Lost Treasure of Carreta Canyon

Stories persist that before their expulsion from the New World by royal decree in 1767, the Jesuit fathers had acquired large stores of gold and silver, and that in their hurried departure the padres concealed their wealth for the day when they would return. Since that day never came, the buried treasure of the padres, according to legend, still awaits the coming of a modern-day treasure hunter who may be fortunate enough to find it.

By JOHN D. MITCHELL

Illustration by Bill Edwards

A PIECE OF silver ore assaying thousands of ounces per ton recently discovered in an old adobe house that stands on the main street in the old pueblo of Arivaca, in southern Arizona, may be the clue that eventually will lead to the

discovery of a long lost, fabulously rich silver mine, and a great treasure said to be stored away in the tunnel.

According to stories told by some of the descendants of the Spanish conquistadores who still reside in and around *el Pueblo de Arivaca*, the mine

is located somewhere along the old carreta road that ran from the ancient Tumacacori mission on the west bank of the Santa Cruz river below Tubac to Sonoita, south of the present mining town of Ajo, Arizona.

Don Manuel Gonzales who arrived in Arivaca in the early 'eighties, before the wild Apaches had been rounded up by the joint action of the American and Mexican governments and placed on reservations, vouches for the authenticity of the story.

It was siesta-time in the old pueblo and all along Arivaca creek and I found Don Manuel asleep in the noon-day sun. Far across the Altar valley to the northwest a fleecy cloud hung like a bridal veil from the lofty summit of Baboquivari peak, the highest in Southern Arizona.

Don Manuel bade me be seated and after the proffer of the inevitable *cafecita*, this fine old Mexican gentleman, in accordance with a custom that lingers among polite Spanish-Americans, gave me his house and garden and all that he possessed. Don Man-

uel lit a cigaret, offered one to me, and sat looking at the lighted match, seemingly lost in deep thought.

Finally when the rings of smoke started drifting up over the cool veranda on which we sat, he came to with a start and asked me if I had ever heard the story of the old carreta and the lost silver mine at the upper end of Carreta Canyon. I assured him that while I had read many of the old records and accounts of the numerous mines worked by the Jesuits from the Tumacacori mission, I had not heard the one referred to at first hand.

"Well," said Don Manuel, "Shortly after my arrival in the Arivaca country, three Mexican vaqueros started out to round up cattle that grazed on the western foothills of the Tumacacori and Tascosa Mountains. The boys established their camp and left their chuck wagon on the plains near the mouth of Jalisco Canyon only a few miles east of *el Pueblo de Arivaca*.

"After arranging their camp the three vaqueros started off in different directions to gather the cattle and drive them to the corral where they were to be branded. The vaquero who rode south soon found himself near the head of a long rocky canyon on the western slopes of the rugged Tascosa Range and not far from the pass that leads to the deep canyons that gash the south side of this range.

"As he stood there surveying the surrounding country that spread out below him he discovered his horse was standing on an old mine dump and that off to one side was the entrance to a tunnel that had a heavy oaken door with a hand-made hasp and staple on which was fastened a large padlock such as was used by the Spaniards and old time Mexicans. From a large pile of ore that lay on the dump in front of the tunnel the vaquero selected a few pieces to take with him and rode on after the racing cattle that were heading down the canyon to the valley below. A short distance below the tunnel on one side of the canyon stood the remains of an old carreta such as was used by the padres around the missions during the Spanish occupation.

"That night as they sat around the campfire at the chuck wagon eating their evening meal, the vaquero displayed his samples of ore and told the others that he had discovered an old tunnel with a wooden door fastened with a large padlock. When the other boys started to ridicule him about his lost mine, he said no more about it, but when the roundup was over he took the pieces of silver ore home with him and left them in the old adobe house where one of them was found

and is now in the possession of a man living in Casa Grande, Arizona.

"The vaquero drifted away to another part of the country. Nothing more was heard of the old tunnel until a few years later when a party of Spaniards arrived in the district from San Francisco, with an old Spanish document describing a long lost and fabulously rich silver mine in which was stored a part of the Tumacacori treasure that had been hidden by a Jesuit priest from the Tumacacori mission.

"One of the guide posts to the mine," continued Don Manuel, "was an old carreta that had been abandoned near the tunnel. At that time no one in Arivaca had ever heard of the old ox cart, and as the only man who knew anything about the old tunnel had disappeared, the Spaniards returned empty handed to San Francisco."

In the spring of 1886 soldiers chasing Apaches who had raided the Peck ranch in Peck's Canyon killing the owner and his wife and leaving their baby boy Al alive in the cabin, passed by the old carreta high up near the head of a long canyon which since has been named "Carreta Canyon." At that time the soldiers had never heard the story of the long lost silver mine and treasure and were too busy chasing Apache renegades to do any prospecting.

Calestro, an Opatá Indian who was born and raised near the Tumacacori mission, once repeated to the writer the story told to him by his father and grandfather. They said that when the Pima tribes revolted against their Spanish oppressors and started the great uprising in 1750, the padre in charge of the mines and mission decided to conceal the entrance to the mines, bury their treasure and flee to the coast.

According to Calestro's story the padre chose a few of the loyal neophytes to help him load all the altar fixtures, many bars of gold and silver bullion, a small copper box containing the maps of the eight mines and church records, into a carreta which was drawn by two oxen.

At dawn the padre left the mission. An Indian on foot prodded the slow oxen over the old road that leads out across the rocky foothills and around the north end of the Tumacacori mountains past the Isabella mine where the road may still be seen cut in the solid rock on the hillside just west of the Isabella shaft and ruins of an old rock house. From the Isabella mine they skirted the foothills below the San Pedro mine and wound their way through the mesquite into the foothills of the rugged Tascosa moun-

tains where they were met by a pack train from the Altar mission in Sonora. The padre in charge of the pack train informed them that the Indians at Altar had revolted and killed a number of Spaniards and that conditions were very bad there.

While the two padres were holding a conference, word reached them by Indian runners that the revolt was widespread and that three padres had been killed at Sonoyta and their bodies thrown in an underground room with the treasure, and the walls of the mission pulled down. In view of the serious situation that was developing, it was decided to bury the cartload from Tumacacori and the eight pack mule loads of treasure from the Altar mission in the tunnel at the nearby silver mine until such time as they could return in safety for it.

After concealing their treasure and abandoning their carreta and six of the mules the padres made their way to the coast and the ships that were to carry them away. In 1767 King Charles III issued the edict that expelled the Jesuit Order from Spain and all its possessions and they were never able to return for their treasures.

All we know of lost mines and buried treasures today is gleaned from meagre church records and from stories like those told by Don Manuel Gonzalez, Don Jesus Rodriguez, and Don Teofilio Ortiz with whom Don Manuel spends many happy hours arguing over the events of bygone days.

The wild pagan tribes of the northern hills have long since disappeared. Their war cries, the soft tread of their moccasined feet, the creaking noise of the ox carts and the voices of the padres and the sweet-toned bells, calling the lowly neophytes to early morning prayer are heard no more. But as in the days of old, the twang of a guitar may still be heard coming through the open door of the Gitana dance hall and bar where the dark eyed Senoritas still come to dance and flirt with the vaqueros and gambucinos.

Then too, so they say, the contents of the old carreta from Tumacacori and the eight jack loads of treasure from the Altar mission are still stored away in the old tunnel up there in the hills near the head of Carreta Canyon guarded by the skeleton of the old Opatá who prodded the slow oxen over the rocky road across the foothills to the mouth of the tunnel. The copper box has a screw in one corner. Remove the screw, pull out the iron bar and open the box. There will be found all the maps of the eight mines that belonged to Tumacacori and the great treasure stored away in them.

Letters

How Fish Spring Got Its Name . . . Willits, California

Desert:

There is an item in one of your 1952 issues dealing with a unique species of minnows, described as desert pupfish, living in a Nevada desert pool.

This brings to my mind the minnow-like fish that formerly were found in Fish Spring at the northwest end of Salton Sea. I first saw Fish Spring in 1900, and I always regarded it as an artesian well, the same as Fig Tree John had not far away. The old Indian John got his name from the fact that he had planted a few fig trees around his spring.

During the first four winters in the 20th century, John Collins and I would swim in the 5-foot pool at Fish Spring on trips when we were hunting for the lost Pegleg mine. The water was a little alkaline, but drinkable.

At one time there were many of these artesian springs north of Salton Sea, but as more and more water was pumped from the ground for irrigation, they dried up.

H. E. W. WILSON

That Geography Editor '#\$(@!?! . . . Albuquerque, New Mexico

Desert:

I read your Desert Quiz in the November issue. If you have moved our Sangre de Cristo mountains to California you had better get them back here before Clyde Tingley finds it out or you'll think that hell has broken loose in your part of the desert.

W. D. WILSON

Apologies to you and Clyde Tingley. Desert's geography editor merely got his wires crossed. California is quite willing that New Mexico and Colorado should keep their lovely Sangre de Cristo Range.
—R.H.

Where Another Old-timer Died . . . Colton, California

Desert:

Another little-known grave which might have been included in your May, 1952 "In Memory" feature is that of Mat Riley. It is located in Joshua Tree National Monument north of Cottonwood Springs, about .3 mile north of the junction of the monument road with the Cottonwood branch, on the road to Twentynine Palms. The grave is 40 yards or so east of this road under a large juniper bush.

The headboard, old and weathered, carries the legend: "Mat Riley, died July 4, 1906." He had tried to walk from Twentynine Palms to Cottonwood Springs in the heat of the summer with only a quart bottle of whiskey or, as some old-timers aver, a quart whiskey bottle filled with water. At any rate, it wasn't enough and he died, a victim of thirst, within sight of the cottonwood trees which were his destination.

MRS. J. E. MCKINNEY

They Love 'em Too . . .

Death Valley, California

Desert:

Recently the California Fish and Game commission sent out a press release not only approving burro hunting as a sport but giving instructions as to the type of arms, ammunition and other pertinent details.

Unfortunately, the impression has been given by some of the writers who commented on this news that it originated in National Park Service headquarters in Death Valley. In order to clarify its position in the matter of hunting burros, the Park Service in Death Valley recently sent out a news release which I believe, in fairness to all concerned, should be published in *Desert Magazine*. The Park Service stated:

"Any report of shooting burros within a radius of 50 miles of Death Valley National Monument unfortunately is always attributed, either directly or indirectly, to the National Park Service. It will surprise most persons to learn that the only areas in the country where the burro is protected are under the jurisdiction of the Park Service — Death Valley and Joshua Tree National Monuments in California.

"Prior to Death Valley coming under Park Service administration, hundreds of burros were taken out annually for food for fox farms. Rangers immediately stopped this drain on the burro population and, since their arrival, no burro hunting season has been permitted. Hunters have been warned or ejected from the area.

"Stopping wholesale killing had a quick effect. In fact, the burro population increased so rapidly that measures soon were necessary to prevent extinction of mountain sheep. The burros were monopolizing ranges and waterholes, driving the bighorns away and removing their natural food and water supplies.

"Burro control was approved by the principal conservation and humane societies and authorized by the Director of National Parks. Only rangers were permitted to destroy the animals,

the sole purpose of such action being to prevent them from monopolizing sheep ranges and springs — certainly not to eliminate the burro population as has so frequently been charged.

"Nature helped thin the burro ranks. During the severe winter of 1949, followed by prolonged drouth conditions, many of the animals died of starvation and freezing.

"Burros are beginning to learn that if they remain below the general low level of the sheep range they are not disturbed. For the past two or three years, necessary elimination has been reduced to a very few animals annually. Most of these forced action by tearing up trees and shrubbery, fouling lawns and disturbing the peace by braying and cavorting around homes at night.

"Every winter there is a congregation of more than a hundred animals in the natural meadows in the Panamint Valley below Indian Ranch. Many are shot, roped, or otherwise captured each winter in this area and trucked out. The area is miles outside the boundary of Death Valley National Monument, but the blame for this promiscuous hunting is usually placed on the National Park Service."

T. R. GOODWIN
Superintendent
Death Valley Nat. Mon.

Origin of the Shalako . . .

Dartmouth College Museum
Hanover, New Hampshire

Desert:

A recent letter in *Desert Magazine* prompts this mild observation. Mrs. W. W. Turner pointed out that the Shalako dance is a Zuni, not a Hopi ceremonial.

She's quite right that the better-known Shalako is a Zuni ceremony, and most dramatic, too. However, she may be unaware that the Hopi likewise have Shalako (actually three varieties). The first, Zuni Shalako (*Sio Shalako*) is rarely performed, and pretty well equates the Zuni ritual; the second is the Hopi Shalako proper, which is a Kachina; the last has the small Shalako figurines which perform in the Horned Water Serpent (*Palulukon*) ceremonial. These latter are marionette figures. The first impersonation, *Sio Shalako*, differs from the Hopi Shalako primarily by its size: It is a huge figure, some 12 feet or more tall, while the second is less impressive, usually only 7 or 8 feet in height.

However, the particular ceremony to which she refers was, I understand from Second Mesa correspondents, actually Shalako. But I had thought it was earlier in the year than August. At any rate, it was of extreme interest

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in that the most recent performance
of Shalako, to my knowledge, was
back about 1935 or 1936.

As for the origin, there is little
doubt that in all three Hopi forms it
goes back to the Zuni ritual. There
have been some Hopi revisions, of
course, but it is largely Zuni—especi-
ally *Sio Shalako*, which is 99 44/100
percent pure. As you well know, there
is a tremendous amount of inter-tribal
exchange in matters of ritual and cere-
mony. I hope this may be of interest.

FREDERICK J. DOCKSTADER

Rockhounds' Paradise . . .

Salem, Oregon

Desert:

As you point out in "Just Between
You and Me" in September's *Desert
Magazine*, we haven't much terrain up
here in Oregon which can qualify as
desert. But we do have beautiful scen-
ery and much to tempt the rockhound
and geologist.

Dr. Ralph Chaney of the University
of California calls this country a ge-
ologist's mecca. He says that every
time he comes here he wonders why
he ever goes anywhere else. We have
much to show students of geology,
mineralogy and paleobotany, and much
to offer collectors of crystal formations,
gems and mineral specimens.

Our field work continues winter and
summer—whenever rocks are blasted
by a construction job, we are there
with our rock hammers and specimen
bags. The quantity and variety of the
material we find is beyond description.

ELEANOR GORDON

Home for Two Burros . . .

El Centro, California

Desert:

Just received the November issue
and note your comments regarding the
burros.

You may be assured that we would
gladly give good homes to two burros,
providing the fish and game commis-
sion agrees.

MARION AND AL NOYES

Spelling of Navajo . . .

Window Rock, Arizona

Desert:

In your October issue I noticed on
page 42 you say the Navajo Tribal
Council wants the name spelled "Nav-
aho." This may be true, but I am
inclined to doubt it. Enclosed is a
sample of the currently-in-use letter-
head of the tribe in which the name is
spelled "Navajo." You will note that
the name appears in three places on
the letterhead and in each instance the
"j" is used. Since I am in the Indian
service I would prefer that my name
not be used.

A READER

The California Landscape . . .

Bakersfield, California

Desert:

I was deeply impressed by Weldon
F. Heald's letter in your October issue
regarding "Beercan Highway."

On a recent trip to San Luis Obispo
it seems that much of the beauty of
the landscape had been destroyed by
the ugliness of the gutter along the
road—beer cans, whiskey bottles, soft
drink bottles and literally hundreds of
empty beer cartons.

Perhaps it would be the proper
thing to approach the breweries and
distributors and enlist their coopera-
tion in finding a solution. Good luck
to Mr. Heald and his "one man cam-
paign." I hope it emerges into a na-
tion-wide campaign in the not far
distant future.

HAZEL K. DUNN

Growth of a Pinyon . . .

Port Angeles, Washington

Desert:

I read with much interest in your
November issue Ruth Cooley Cater's
story about the birth of a pinyon tree.
Perhaps some of your readers would
be interested in knowing how well
these trees grow in a domestic garden.

Friends sent me some seed in Octo-
ber, 1940, and I planted them in coffee
cans. Two of them grew and in May,
1941, I transplanted them to my gar-
den. They were about six inches high
and the larger one had a tap root
which circled the inside of the can
three times.

With a pointed stick I made a hole
so deep the root could be straightened
out. Now, 12 years later, the larger
one is 12 feet high and produced its
first pine cones this year—five of them.

MRS. C. W. SELLIN

From Another Desert Pen . . .

Altadena, California

Desert:

Although his desert was on the op-
posite side of the globe from our
Southwestern sands, the Persian poet
Omar Khayyam wrote many beautiful
verses in his *Rubaiyat* which can be
appreciated fully by American desert
dwellers today.

One of my favorite passages, from
Edward Fitzgerald's translation, indi-
cates that, in some ways at least, the
world has changed little since Omar
wrote in the 12th century:

"The World Hope men set their
Hearts upon

Turns Ashes—or it prospers; and
anon,

Like Snow upon the Desert's
dusty Face,

Lighting a little hour or two—is
gone."

GERTRUDE K. BROWN

Here and There—on the Desert

ARIZONA

Indian Claim Rejected . . .

PARKER—Damage claims amounting to \$500,000 filed by Mojave and Chemehuevi Indians who seek compensation for the use of approximately 3000 acres of land on the Colorado River Indian reservation as a Japanese relocation camp during World War II, have been rejected by the U. S. federal government. Actually, the Japanese evacuees cleared and leveled several sections of rich valley land along the Colorado during the occupancy, and thereby increased the value of the reservation. Hopi and Navajo settlers have been moved to the lands since the Japanese were released from their relocation quarters there in 1945.

Basque Herders Imported . . .

CASA GRANDE — To help tend the 75,000 sheep which winter in Salt River and Casa Grande valleys, the sheep men this year are bringing in 36 experienced herders from the Basque region in Spain. Sheepherding is a 24-hour-a-day job which requires many skills and an intimate knowledge of sheep. Basques are natural herders, and a special act of congress makes it possible to bring in 500 of them annually to serve the nation's 23 wool-growing states.—*Arizona Republic*.

Emery Kolb Is Honored . . .

GRAND CANYON—Emery Kolb, who has spent 50 years taking pictures of Grand Canyon was honored recently at an anniversary party staged by friends. Kolb bought a studio at Williams, Arizona, in 1902, and in 1911 he and his brother Ellsworth ran the treacherous Grand Canyon rapids in order to make a photographic record of the trip. In 1915 Emery began showing the pictures in public and has been presenting two showings daily at his South Rim studio.—*Coconino Sun*.

Claims Interest in Buried Loot . . .

BUCKEYE — A cache of buried gold said to be worth \$85,000, which was found near here in 1944 by Private Eston Wallace of Fort Huachuca, has become the cause of a superior court action. Carl Tenny, Phoenix attorney representing Wallace, says he believes the buried gold was bandit loot. According to the attorney's story, young Wallace, then aged 11, saw a corner of a rusty metal box in a newly

plowed field. Lester Wade, manager of the farm where the treasure was found, claimed the box on behalf of the owner of the land. Years later Wallace learned that he had a proper claim to an interest in the loot by reason of having found it. The box contained bullion and coins turned over to the U.S. Treasury in 1948. Action has been brought to determine the legal ownership.—*Arizona Republic*.

Desert Population Growing . . .

PHOENIX — Arizona's population has increased by 100,000 to a total of 853,000 since the 1950 census was taken according to a survey made by Arizona State College, Tempe. About half of the increase is in the City of Phoenix.—*Arizona Republic*.

Indian Fiesta Planned . . .

PHOENIX—Tribal leaders of seven Indian groups have given their approval to an all-Indian festival to be held at the state fair grounds February 28 and March 1. The program is to feature a rodeo, Indian dances, music by Indian bands and exhibits of craftsmanship. Tribes represented at the Inter-tribal council meeting where the project was approved were: San Carlos Apaches, Yuma Quechans, Pima-Maricopas, Hualapais, Hopis, Papagos and the Colorado River tribes.—*Arizona Republic*.



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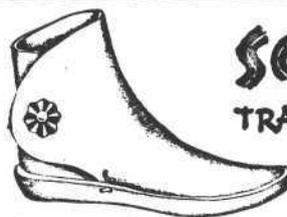


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CALIFORNIA

Jaeger Retires From Teaching . . .

RIVERSIDE — Mexican people in Chihuahua generally are very poor, but they take pride in the appearance of their countryside, and while the roads are not always perfect, they are never lined with the tin cans and other litter which now mark nearly all well-traveled roads in United States. This is the report brought home by Edmund C. Jaeger, teacher and author, following a recent trip to the Chihuahuan desert. After 30 years as instructor in Riverside College, Jaeger has retired from teaching and is devoting his time entirely to Nature study and writing. He is now working on his next book, *North American Deserts*. — *Riverside Enterprise*.

Desert Park to Honor Patton . . .

SAN BERNARDINO — Members of the American Legion met here in November with an interim committee of the California state legislature to urge that a site on the Colorado desert where General Patton trained his army for the African campaign, be set aside permanently as Patton State Park. Senator James Cunningham who conducted the hearing for the legislators assured the veterans he plans to recommend the park at the next session of the legislature. The site probably would be somewhere along Highway 60 between Indio and Desert Center. — *Desert Sun*.

Deer Killed in Death Trap . . .

BISHOP—Twenty-six deer met a tragic death in the High Sierras during November when in passing over an icy saddle north of Bishop Pass they slipped and fell 150 feet to the rocks below. Al Baxter, instructor at Deep Springs school came upon the death trap and reported it to Fish and Game officials in Bishop. Fred Jones, assistant game manager, immediately packed into the area and confirmed the report of Baxter. It appeared, he said, that the deer coming out of the back country ahead of an approaching storm slipped on ice which had been covered by newly fallen snow where the slope was 45 degrees. Bloody trails leading away from the trap indicated that a few deer had survived the fall, Jones said. — *Inyo Register*.

Plant Trial Citrus Crop . . .

VIDAL—On the mesa not far from the Colorado River near the Riverside-San Bernardino county line, an important experiment is being made in the growing of citrus fruits. Harry Demarel of Covina and Lewis Miller have planted 40 acres in lemons on land that until recently was an arid waste.

Another 40 acres are to be planted in oranges. Planted last February, some of the lemon trees have grown shoots from eight to ten feet long.—*Riverside Enterprise*.

• • •
Claims Record Catfish . . .

NEEDLES—Wando L. Tull of Barstow believes he caught the biggest channel catfish ever landed in California and the second largest in the United States when he brought in a 35-pound fish recently. It was caught in Topoc lagoon with hook and line.—*Imperial Valley Weekly*.

• • •
Improvements in Anza Park . . .

BORREGO SPRINGS—New headquarters area with residence for park personnel and picnic grounds is being planned for Anza Desert State Park according to Ranger Maurice Morgan. The new headquarters site is to be on Highway 78 not far from the historic Yaqui Well. — *Borrego Sun*.

• • •
Davis Dam is Dedicated . . .

NEEDLES—High state and Reclamation Bureau officials gathered along the Colorado River north of here on December 10 for the formal dedication of the recently completed Davis Dam. Costing \$119,000,000 and creating a 67-mile long reservoir known as Lake Mohave, the dam was named in honor of Arthur Powell Davis, who before his death played a leading role in the planning of dam construction in the Colorado River. Davis is a rock-filled dam rising 138 feet above the normal river level and having a crest of 1600 feet long and 50 feet wide. It is the seventh dam to be built in the lower Colorado River, the others being Laguna dam at Yuma, Imperial dam, Hoover dam, Metropolitan dam, Parker Indian dam, and Morelos dam below the Mexican border. Recreational facilities at Lake Mohave are to be administered by the Lake Mead recreational personnel.—*Desert Star*.

• • •
Indians to Lease Famous Spring . . .

PALM SPRINGS—Tribal council of the Agua Caliente tribe of Indians here voted late in November to lease the famous spring from which this community derived its name. Indian Agent Lawrence Odle stated that bids would be invited for the leasing of the property, which for many years has yielded a small income to the tribe. The bath house at the spring has not been kept in first class repair and the recent improvement of Indian avenue adjacent to the spring has interfered with the successful operation of the place.

Work Starts on Salton Park . . .

COACHELLA — With \$123,000 budgeted for use this year and a total allocation of \$400,000 set aside for the development of Salton Sea State park, preliminary construction work already has been started on California's newest desert park project. Work scheduled to be completed by next summer includes boat slips along the seashore, trailer court, and residence for the ranger in charge.—*Coachella Valley Sun*.

• • •
NEVADA

State Losing on Licenses . . .

FALLON—Nevada is losing considerable income due to laxity in the issuance of hunting and fishing licenses, say state conservation officials. According to Jim Negley, patrol chief, a person is required to reside in Nevada six months before being eligible for a resident hunting or fishing license. "Two many resident licenses, which cost much less, are being issued to people who are more or less transient," the chief said, "and thereby depriving the state of needed income for fish and game purposes." The policy in the future is to enforce the law as to residence in the state more strictly, before licenses are issued. — *Fallon Standard*.

• • •
Says Legislators Underpaid . . .

RENO—Nevada legislators are paid \$15 a day, and it is not enough to attract high caliber men and women, according to Assemblyman Don Crawford, who has just been elected to another term after serving 10 years in

the state legislature. "Congressman in Washington receive \$15,000 a year," Crawford pointed out, "and I have no fault to find with that, "but I honestly believe that if state legislator's salaries were commensurate with the responsibility they have we would get a better type of law-maker.

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Paiutes Are Community Problem . . .

LAS VEGAS—Social welfare groups here are seeking the answer to a problem involving a little settlement of Paiute Indians who are living on the crest of the hill north of town. These Paiutes are orphans in the sense that they are not under the jurisdiction of the Federal Bureau of Indian Affairs, nor any other governmental agency. They are living on land deeded to them by Helen J. Stewart in return for services rendered her father, William J. Stewart. The community of Las Vegas is interested in improving sanitary conditions in the Indian village, and in getting the children into school, and also in arranging for hospitalization. Clark County Council of Social Agencies in inaugurating a program which they hope will solve the dilemma. — *Las Vegas Review-Journal*.

NEW MEXICO

More Schools for Navajos . . .

SHIPROCK—Award of a \$1,149,533 contract for the construction of a Navajo school here has been announced by Indian Commissioner Dillon S. Myer. The building is to provide classrooms, shops, library, kitchen, dining areas, gymnasium and adminis-

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trative offices for 700 Navajo children. Contract was let to Lempke, Clough & King of Albuquerque. So far the Indian Bureau has let contracts totaling \$5,106,744 out of the \$6,568,100 appropriated by congress for the Shiprock school project.

Millions for Roads . . .

SANTA FE—The next session of the New Mexico state legislature will be told that it will require from 200 to 300 million dollars during the years immediately ahead to bring the state highways up to proper standards. A survey is being made by the State Highway department, and exact figures as to the needs have not been released. — *New Mexican*.

Heavy Indian Vote Cast . . .

FARMINGTON—Heavy vote was cast by the Navajo Indians in the presidential election in November. In some precincts the Navajos held the balance of power and in Otero County elected a man who is said to be the first Indian county official in state history. The Mescalero Apaches are said to have voted strongly on the democratic side, while the Navajos in San Juan county voted the GOP ticket. The Indians were inclined to make a field day of the election, and some of them traveled long distances to the polls. — *Farmington Daily Times*.

Navajo May Be Indian Bureau Chief

GALLUP — Senator-elect Barry Goldwater of Phoenix is reported to be contacting other senators in behalf of the appointment of Thomas H. Dodge, a Navajo, as chief of the Bureau of Indian Affairs in Washington. Dodge, now superintendent of the San Carlos Apache reservation, is son of the late Chee Dodge who served for many years as chief of the Navajo tribe. — *Salt Lake Tribune*.

Drouth Threatens Farm Lands . . .

ALBUQUERQUE—Three consecutive years of drouth have deprived New Mexico soil of so much moisture that the state is wide open for disastrous erosion by wind, according to agricultural advisors. Unless heavy rains fall during the winter season the threat of a dust bowl disaster is feared.

Indians Want Congressman . . .

SANTA FE—At a 4-day convention of the National Congress of American Indians held in Denver in November it was proposed by Judge N. B. Johnson of Oklahoma that the Indian population of the United States be given a non-voting membership in congress, the same as is given to Alaska and Hawaii. The delegates to the convention which was attended by 250 Indians representing 60 tribes, also

adopted a resolution providing for the selection of an Indian who would be recommended to President-elect Eisenhower as the choice of the convention for the post of Indian Commissioner in the Department of Interior. Speakers at the convention, although very critical of the federal administration of Indian affairs, went on record as opposing the transfer of the management of Indian schools, hospitals, irrigation and forest services from the federal government to the various states. — *Farmington Daily Times*.

UTAH

Lands Closed to Miners . . .

MOAB—Federal engineers charged with the administration of AEC are encountering delays in the development of uranium sources due to the fact that many classes of withdrawn public lands are not open to mining location. The ban on mining is effective on land withdrawn by federal agencies for purposes of air navigation sites, national parks and monuments, military sites, coal, oil shale, reservoirs, public water reserves, geological survey structures, Bureau of Reclamation sites, Indian reservations, stock driveways, power sites, phosphate, petroleum and nitrogen reserves. Practically all the land along the Green and Colorado rivers has been withdrawn as power sites. — *Moab Times*.

New Bridge Over Green River . . .

VERNAL—Residents of both Utah and Wyoming as well as inter-state travelers were grateful in November when the new \$312,000 bridge over Green River at Green River, Wyoming, was completed. A highway artery costing \$1,500,000 and connecting Green River with eastern Utah's Uintah mountain region is expected to be completed in 1954. — *Vernal Express*.

Better Facilities at Zion . . .

CEDAR CITY — Added facilities for campers are to be provided in Zion Park before next summer, according to Supt. Paul R. Franke. About 160 additional camp and trailer sites are to be made available, more stoves, benches and comfort stations added, and better lighting provided for the campgrounds. An allotment of \$45,000 has been made for the work. — *Iron County Record*.

Home of the Gobblers . . .

PROVO—Utah will have furnished 1,900,000 of the turkeys consumed by American Thanksgiving and Christmas diners, according to estimates of the United States Department of Agriculture. About 90 percent of the birds are shipped to points outside of the state. — *Salt Lake Tribune*.

Desert Valleys Protected by Natural Barrier Says Engineer

During long ages, the forces of Nature erected a dam 60 miles wide and 37 feet high between the Gulf of California and the interior valleys of Imperial and Coachella, and this natural dam is a thousand times safer than any man-made dam in existence. This conclusion of M. J. Dowd, consulting engineer for the Imperial Irrigation, was made public recently in answer to sensation-seeking writers who persist in spreading the fear that the Gulf of California may some day overflow the delta of the Colorado river and flood the below-sea-level valleys of Southern California.

The 1905-07 break of the Colorado River was spectacular and, in the past, furnished the basis for many stories about the dangers of the Colorado to Imperial Valley. However, the building of Hoover Dam eliminated the flood dangers, and Lake Mead, created by Hoover Dam, also caught the major portion of the silt which formerly reached the lower river in large volumes.

Now it is being claimed by several writers that, since the silt is no longer reaching the Gulf, the Gulf tides are washing away the delta, and soon, in this manner, the barrier between the Gulf and Imperial Valley—which is the delta—will be eroded away and this Valley covered by Gulf waters.

That there is no foundation for these claims, Dowd showed by pointing to the fact that recent photographs of the area around the mouth of the Colorado River, compared to maps made by the United States Navy in 1873-75, show no change in the location of the mouth of the Colorado River. Furthermore, the point of high tide in the delta has remained unchanged for the past fifty years.

Another fact pointed out by Dowd, is that there has been virtually no change in the amount of silt reaching the Gulf, since the break of the River

into Imperial Valley in 1905-07. During that period, the entire flow of the River discharged into Imperial Valley, which, of course, carried with it all of the silt. A year or two later, there was a major change in the course of the River some twenty miles below the California-Mexico boundary, and since that time the River has spread out to the west, depositing most of the silt, very little reaching the Gulf.

Dowd pointed out that the delta was built by nature over the past millions of years, and the slopes which have been established to and under the Gulf will not change, regardless of the volume of silt reaching the Gulf from the River.

Dowd also stated that these facts are supported by reports from L. M. Lawson, American Commissioner of the International Boundary and Water Commission, United States and Mexico, and by the Scripps Institution of Oceanography, which is located at La Jolla.

Following the major San Francisco earthquake in 1906, which occurred during the break of the River into Imperial Valley and the creation of Salton Sea, rumors were circulated that this earthquake had opened up underground cracks through the delta from the Gulf to Salton Sea, and it was seepage and leakage through these cracks which was causing Salton Sea to rise. A most thorough investigation at that time showed the rumors to be baseless.

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ANSWERS TO DESERT QUIZ

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- 1—California.
- 2—Never thereafter tell the truth.
- 3—Volcanic rock.
- 4—Acomas.
- 5—Hualapais.
- 6—Black with orange markings.
- 7—Cooking food.
- 8—The gold rush to California in '49.
- 9—Miners in discussing certain open pit types of operation.
- 10—Stones and mud.
- 11—The road or highway.
- 12—Calico.
- 13—Red.
- 14—Arizona.
- 15—Author.
- 16—U.S. Highway 66.
- 17—Wickenburg, Arizona.
- 18—Superstition Mountains in Arizona.
- 19—Navajo Indians.
- 20—Washingtonia palm.

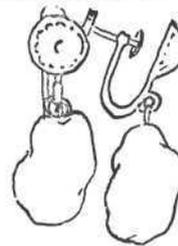
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Amateur Gem Cutter

By LELANDE QUICK, Editor of The Lapidary Journal

With the ever increasing number of persons interested in America's third largest craft hobby, and its fastest growing hobby of any kind, it is no wonder that our desk is forever piled high with unanswered mail from these interested people. It has been reported to us that people sometimes become a little bitter because their mail is not answered. It just becomes an impossibility, even working seven days a week, to keep up with this killing correspondence, the great bulk of it from people who do not enclose a stamp to pay the freight on their reply.

For a long time we have wondered why someone doesn't write a book that will supply between two covers the answers to 99 out of 100 questions our correspondents are continually asking. Then when a letter comes in asking "where can I go to gather any rocks in Texas when I spend my vacation at Aunt Minnie's?" we could just say "look in the book." Or maybe Aunt Minnie lives in Oregon, Washington, Minnesota or Colorado and we could give the same answer. When someone writes a letter and asks "where can I buy some of this bouquet agate I've been reading about?" or tiger-eye, tourmaline or turquoise etc., what a comfort to be able to write and say "see the book."

When people write in to ask "who makes the Hillquist line of lapidary equipment—or Frantom or the Stonemaster, etc?" it would save so much time to refer them to a book. Ah yes, it would be a dream come true if there just was a book to which we could refer that would contain the answers to some of the following typical questions: "I am going to New England and I wonder if you can tell me if there are any rockhound clubs there and when they meet? I am going to take a trip through the South and I'd like to know if there are any museums there that have good mineral and gem displays. Where can I buy some jet to cut? Are there any magazines about rocks besides yours and if so where can I get them and for how much? I see some stuff advertised as "desert lapis." What is the real name for that stuff? Recently I heard of a book called *Getting Acquainted with Minerals*. Who publishes it, how much is it and where can I buy it? Does any one make a little lapidary machine, not too expensive, that I can use in an apartment? Where can I buy some diamond drills? Who sells desk pens for the pen sets I've ground? What is this whoosh powder and where can I get it? What are Kimberly diamond blades? Where can I buy this peel-em-off cement you write about? We are going to organize a gem club here and we would like you to write our constitution and by-laws for us and tell us how to organize. I live in Iowa. Does anyone in this state sell lapidary equipment? Can you suggest any motels on the Oregon coast where the owner will take me by the hand right to a nice pile of agate? Could you give me a list of all the dealers in Washington as I am going to spend a vacation there and I don't want to miss anyone? Where can I buy some tools for silver work?" This could go on for another thousand questions but it would become boring.

This all leads up to the revelation that right now, at the very moment you are

reading this and agreeing with us that such a book would bring Utopia, the presses are rolling it out. Soon after the horns quiet down from the New Year tooting you will be able to get a copy of a book that will tell you the description of all oddly named materials and where they come from. The name and address of every firm of any kind in America that has anything to sell to the rockhound from amber to zircon, from a \$30 lapidary outfit to a \$250 diamond saw, from sand paper to standstone, from a lapidary kit for \$3.00 you can use on your knee to an elaborate and intricate \$350 faceting outfit.

This book will list every book that has been printed in the English language about gems from the beginning of printing. It will list most of the mineral books and most of the jewel craft books. It will tell you just where you can buy any presently available book on these subjects and give the name of the publisher, the address and the price. You can find out the time and meeting place and the name and address of the secretary of most of the more than 400 gem and mineral clubs in America and Canada. You can find out exactly where to go to collect all sorts of gems in a half dozen states and there are some excellent maps. The new book will tell you who makes each one of the many trade marked pieces of equipment and items of supply, will tell you a hundred short cuts you can use in your shop, will tell you exactly how to cut some of the most difficult gem materials, such as tiger-eye etc.

Well friends it doesn't cost much—it's only \$1.25 (\$1.29 to those lucky enough to live in California) and it can be purchased from the *Desert Magazine* office after January 1. The name? Oh yes—*The Rockhound Buyers Guide*—not a pamphlet, not a magazine, a real bound book and only \$1.25. And just in case you may wonder who wrote this boon to the rockhound—we did.

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Gems and Minerals

Carefully Clean, Prepare Fossil Specimens for Cabinet Display

October issue of the *M.G.A. Bulletin*, monthly organ of Marquette Geologists Association, Chicago, includes an article by T. J. Scanlon, president of the American Federation of Mineralogical Societies, on "A Method of Cleaning and Preparing Plant Fossils for the Cabinet." The article, first published in the Society's March, 1943 issue, was repeated by request of members interested in fossils from the Mazon Creek beds in Will County, Illinois.

This region is very productive in plant fossils due to the surface mining of coal. The fossils are found in egg-shaped nodules or concretions, commonly called ironstones. These concretions when first uncovered are of a blue-gray clay and are quite hard. When given a sharp blow with the hammer along their perimeter they split into two halves along a natural line of weakness formed by the enclosed fossil. When the nodules have been exposed for a year or more they take on a rusty red color and lose some of their toughness and hardness and must be dealt a lighter blow or they will shatter.

The method advocated by Scanlon for the Mazon Creek specimens may prove valuable to other collectors throughout the country, as his suggestions seem applicable to many types of plant fossils.

"When the collector has split a nodule," Scanlon advises, "and a worthwhile fossil is exposed, a fold of paper should be placed between the halves and the nodule wrapped carefully and packed so that the newly exposed surfaces do not rub together. After the collector has made up his bag and returned to his workshop the fossils should be unwrapped and sorted. Any which have splintered or cracked the wrong way are put aside for special attention. The others are washed of all soft clay in running water and then allowed to dry.

"If the specimens are of the freshly uncovered hard types the gypsum which usually has been deposited obscures the veins and must be removed. A soft wire brush may be used without injury to the fossil. Where the gypsum is imbedded in depressions, a nut-pick, small pen knife or other sharp pointed instrument may be used to remove the gypsum, taking care not to scratch the fossil.

The next step is to rub the fossil with a fiber brush and then a soft tooth brush, rubbing with the direction of the veins, and being careful not to rub the matrix around the leaf form if possible. The stone can be finished off with a rubber brush, the kind used for suede shoes. You will find that the fossil stands out with a dull polish, which high-lights the veins and pinnule attachments of the stems and the outline and contour of the specimen.

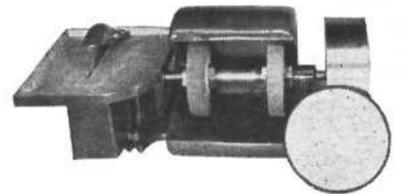
"Now with the aid of Dr. Janssen's book *Leaves and Stems from Fossil Forests*, or your own knowledge of paleobotany, you will have a good chance of making a correct identification of the specimen.

"With more weathered nodules it is best not to take a chance with the wire brush or metal picks. Use a soft tooth brush and

hardwood picks, and then finish with the rubber brush. The splintered and cracked specimens, after careful washing and drying, can be cemented together with silicate of soda, being careful to use it sparingly so that it does not squeeze out when the parts are pressed together. When the cement has set the specimen can be polished and identified.

"Of course all specimens should be labeled after they have been identified. A good method is to type out on a strip of paper the name and locality where the specimen was obtained. The strip of paper is then placed on the rounded side of the nodule and covered with a piece of Scotch tape. Then on the edge of the shelf of your cabinet you can place a duplicate strip covered with the tape. If you have a good assortment of specimens you can arrange them according to Genera, Family, Order and Group.

"Some of the specimens can be readily identified without removing the gypsum deposit. If they would not be improved by polishing, they should be labeled and placed in the cabinet as they are. Of course all the fossil specimens collected do not merit a place in the cabinet because of duplication. Nevertheless they should be identified and labeled. They can then be stored for exchange or trade."



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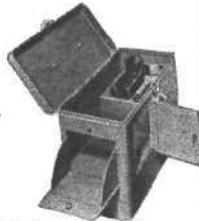
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AUSTRALIAN OPAL CABS: \$5.00 and \$10.00 each. Small but beautiful, every stone a gem. A beautiful cultured pearl for your collection \$5.00. Ace Lapidary, Box 67D, Jamaica, New York.

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

Ray C. Mitchell, director of the Humboldt Park Lapidary and Metal-crafts was scheduled to be the speaker at the December 6 meeting of Marquette Geologists association of Chicago. He was to discuss methods used in the working of precious metals.

At the November meeting of the Gem Collectors Club of Seattle Lulu and Loyd Robersons told of the beautiful turquoise jewelry now being made in Mexico and elsewhere by grinding the stone and mixing it with cement. As the cement takes a good polish, the resulting gem stones are a fine deep blue turquoise in color. The Robersons also found Mexican silversmiths making imitation turquoise jewelry with turquoise-colored plastic bought in sheets.

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**ORGANIZE MINERAL CLUB
IN NEEDLES, CALIFORNIA**

For the purpose of organizing a mineral and gem club, rockhounds of Needles, California, met November 17 in the high school library. Paul Drury of Las Vegas, Nevada, spoke and showed colored slides of outstanding mineral collections. The new group invites members from Needles, Kingman, Parker, Essex and surrounding communities.

Stan Hill showed colored slides of different minerals, briefly lecturing on each one, at a recent meeting of the Mineralogical Society of Southern California.

There are four causes of earthquakes, Richard M. Stewart, mining geologist, told members of Hollywood Lapidary Society. Fault movement is the principal cause; others are volcanic action, landslides and the collapse of roofs of underground caverns. California experiences an average of 200 shocks a year, Stewart estimated. He showed slides of damage suffered by the Arvin-Tehachapi area in the July 21 quake.

Red and yellow streamers of Pasadena Lapidary Society guided members on a November field trip to Horse Canyon, California. The trip may be made in one day, but some members brought camping equipment and stayed overnight.

For the November meeting, Minnesota Mineral Club secured a set of three-dimensional stereoscopic color slides of National Parks scenes. Photographed stereoscopically by means of polarized light, the pictures are projected upon a specially prepared screen and viewed with polaroid spectacles.

George Shumway, submarine geologist with Scripps Institute of Oceanography, showed colored slides of underwater scenes and displayed rock specimens collected on the ocean's floor at a meeting of the gem and lapidary division of San Diego Mineral and Gem Society.

With a turkey dinner at the Fruitland Grange Hall in Tacoma, Washington, Tacoma Agate Club marked another birthday milestone in November.

A monthly lapidary feature has been added to *Rock Rustler's News*, bulletin of the Minnesota Mineral Club. In November it described, with pictures and text, how to stud a factory made belt buckle with polished agate. The page also includes valuable shop hints for the amateur cutter.

**SAN ANTONIO SOCIETY
ELECTS 1952-53 SLATE**

Col. A. S. Imel was elected president of San Antonio Rock and Lapidary Society in recent balloting. He will be assisted in the year's activities by R. C. Farquhar, vice-president; Miss Hazel Gray, secretary, and Mrs. Clyde Schertz, treasurer.

J. C. Fletcher appeared as guest speaker on a recent program of Northern California Mineral Society, San Francisco. He first spoke on diamond tools, explaining why they are so hard to find, and then showed a film on silverware.

As their November field trip, members of Long Beach Mineral and Gem Society attended the Death Valley 49ers' Annual Encampment in Death Valley, California.

Ruth Simpson of Southwest Museum chose "Ancient Man of Our Southwest Deserts" as her topic when she spoke at a meeting of San Fernando Valley Mineral and Gem Society, California.

Six members—Walter Reinhardt, Lloyd Underwood, Dorothea Luhr, Dorothy White and the J. R. Andruses—of the Gem and Mineral Society of San Mateo County, California, told of summer collecting trips at the group's first fall meeting.

John Orman, Hank Henninger and Gerald Backus brought back such beautiful petrified wood specimens from Boron Dry Lake, California, that Compton Gem and Mineral Club immediately planned a field trip to the region. Turnoff to the field is off U. S. Highway 466, approximately 18 miles from Mojave.

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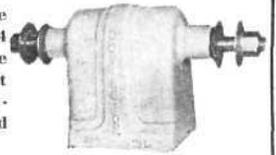
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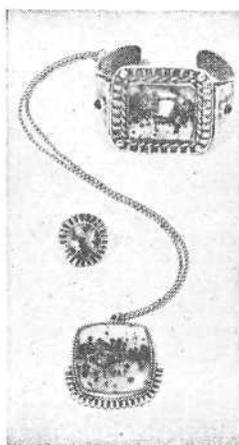
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Dr. Owen B. Dwight lectured on the lost leaf method of casting in copper, gold and silver at the November meeting of San Gabriel Valley Lapidary Society. He illustrated his remarks with colored slides and examples of his own work.

Mineralogical Society of Arizona borrowed an idea from Dona Ana County Rockhounds of Las Cruces, New Mexico, and staged a rockhound liar's contest at a recent meeting in Phoenix.

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Frank Loveless, Jr., past president of Humboldt Gem and Mineral Society, Eureka, California, spoke on cutting and polishing stones at a early fall meeting of the group. Visitors from the Del Norte County Gem and Mineral Society were special guests.

Upon breaking them open, members of San Diego Mineral and Gem Society found their volcanic rock specimens from the San Dieguito River contained green epidote, pale essonite garnet, minute quartz crystals, zeolite, stilbite or cleavage calcite. The trip also yielded chalcopyrite, epidote, calcite, pyrite, muscovite, chrysocolla and galena specimens from the dump of the Encinitas copper mine near Olivenhain.

"Before fossilization could take place, it was necessary for the animal to possess an exoskeleton or a skeleton," explained James O. Montague of Wisconsin Geological Society in an article on Paleontology in the November issue of Chicago Rocks and Minerals Society's *Pick and Dop Stick*. "The invertebrate animal must have a hard covering of shell or chitin, and the invertebrate animal must possess a skeleton of bones. Of the countless millions of animals that lived in past ages, comparatively few became fossilized. Unfavorable conditions allowed putrefactive bacteria to destroy the dead animal before a protective burial could take place." Montague, known as "Fossil Jim" in Wisconsin mineral circles, has been a rockhound for more than 20 years.

The three basic types of rocks—igneous, sedimentary and metamorphic—were described by Joseph W. Baker of Yuma, Arizona, at the first fall meeting of Shadow Mountain Gem and Mineral Society, Palm Desert, California. Igneous rocks once were molten, Baker explained. With ages of wind, sun, ice, rain and friction, the rock weathered and made possible the formation of sedimentary rocks—sediment deposits of igneous rock particles held together by natural cements—and metamorphic rocks — rocks metamorphosed or changed by extreme heat and pressure. The lecture followed potluck supper attended by 120 members.

Searles Lake Gem and Mineral Society, Trona, California, has organized a course in prospecting. Classes are taught by Wilson Zondell of the California Adult Education Plan at the Trona school laboratory.

In preparation for a field trip to the Mesa Grande district and the Himalaya mine, President Jim Hall of Southwest Mineralogists conducted an examination in tourmaline. Frank Trombatore received the highest score and was awarded a faceted gem as a prize.

SAN PEDRO SOCIETY PLANNING FIFTH SHOW

Committees are hard at work on the fifth gem and mineral show of San Pedro Lapidary Society, San Pedro, California. Their first show in nearly three years, members are anxious to accumulate a large and unusual collection of displays. Already promised are exhibits by the Gem Cutters Guild of Los Angeles, Mr. and Mrs. George Raymond and the sea shell collection of John Q. Burch.

November field trip of Coachella Valley Mineral Society was planned to the Sage tourmaline area in Southern California's San Jacinto Mountains. In addition to fine pink and green tourmaline, members hoped to collect graphic granite for bookend material.

Twin Buttes was the destination of a group of Coachella Valley Mineral Society Juniors on a recent overnight outing. New officers of the juniors are Merritt Hamner, president; Conrad Vargas, vice-president; Evelyn Mabbitt, secretary, and Nancy Mathews, field trip chairman.

Charles Moore admitted he didn't know anything about rocks and was making no promises when he invited Dona Ana County Rockhounds to visit his ranch near Hatch, New Mexico. But samples of petrified wood, agate and jasper which he had picked up near his home and showed at a club meeting seemed to warrant exploration, and the club planned a field trip to the ranch. They found good small cutting pieces and, on the way home, excellent opal specimens.

A second talk on "Geology for Rockhounds" was presented at the October meeting of El Paso Mineral and Gem Society by Dr. W. S. Strain of Texas Western College. That month's field trip was to Aleman Ranch, a good carnelian location.

Natural resources of Wyoming and Nevada were studied by Orange Belt Mineralogical Society, San Bernardino, California through two Department of Interior films shown at a recent meeting.

Benefiting the club treasury, Everett Gem and Mineral Club, Everett, Washington, held a Dutch auction in October.

"A Rockhound Abroad" was Mrs. Erna Clark's topic when she spoke at the November meeting of San Diego Mineral and Gem Society. Illustrating her remarks with colored slides, Mrs. Clark told of visiting the ancient salt mines in Bavaria, Mt. Etna and the Giant's Causeway in Ireland, mineral and gem centers of France, Italy and Germany.

Delvers Gem and Mineral Society of Downey, California, planned a November field trip to the mineral quarry at Nuevo, California, a few miles east of March Field. Faceteers and lapidaries hoped to find asterated smoky quartz, clear quartz and black tourmaline. Garnet, magnetite crystals, feldspar and mica also are found on the site.

Mineral Society, has named committee chairmen for the 1952-53 season. Ernest Parshall heads the membership committee; Mrs. R. A. Short, field trip; Mrs. H. F. Meissner, finance; Bob Roots, juniors; Mrs. Olin Brown, hospitality; Mrs. Calvin Simmons, exhibits; and Olin Brown, library.

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CRAFTSMEN IN GERMAN TOWN HAVE CUT GEMS 2000 YEARS

Ursula Letovsky is a manufacturing jeweler in Omaha, Nebraska, and when she traveled to Germany to visit her mother this summer, she made it a point to stop at the ancient gem cutting center of Idar-Oberstein to purchase supplies and cutting material. Her talk to fellow members of Nebraska Mineral and Gem Club about her trip was reviewed by Charles N. Schwab in the society's bulletin, *Nebraska Rock-hounds' Rear Trunk*.

"Gem cutting, buying and selling have been the principal occupations of Idar-Oberstein residents for the past 2000 years," Miss Letovsky told her audience. The town was a natural gem center, the area yielding many large agates of good quality and the swift-running Idar River furnishing water power. The abundance of cutting material and the low cost of manufacture permitted the craftsmen of Idar-Oberstein to dominate the semi-precious gem industry throughout the world. Ring size cabochons once were produced at a cost of only one or two cents each. Strands of matched beads in graduated sizes were cut, drilled, polished and strung for as little as five cents per bead.

After many years the local agate supply was depleted and it was thought the industry must die. However, some Idar emigrants to Brazil and Uruguay discovered numerous agate locations in those countries, gathered them and shipped them to Germany as steamship ballast. The South American agate was not as well colored as the native stone, so the Idar workmen perfected their famous methods of heat coloring and dyeing.

There are no large factories in Idar. The work is done in homes or in small buildings where no more than a half dozen workers are employed. The coloring is accomplished by soaking the slabs in a color bath in large stoneware crocks. The slabs soak for six months or longer until the desired shade is obtained.

The agate cutting techniques are closely guarded Idar trade secrets handed down from father to son. Outsiders are not permitted to learn the trade. The method of cutting has changed very little in 2000 years and Miss Letovsky said she observed no change in the ten years since she last was there.

Water power turns the huge cutting wheels slowly. The wheels are as large as five feet in diameter and one foot thick. The operator lies on his stomach on a low padded platform so that he may brace his feet and apply greater pressure on the work.

Supply and demand have caused many ups and downs in Idar, but the industry has survived. Workmen presently are turning out bushels of synthetic stones for the American trade. When Miss Letovsky asked one of the men why he did not modernize and speed up production, his answer was, "Why should we? We all are making money and keeping everyone employed this way."

A. L. Jarvis was guest speaker at a recent meeting of Fresno Gem and Mineral Society, Fresno, California. He brought his lapidary equipment and demonstrated methods of cutting and polishing stones.

"Although known since 1529, fluorite—or fluorspar as it is commonly called—was not discovered in Illinois until 1818. Now approximately 75 percent of this country's fluorite output is produced in that state." These and other interesting facts about calcium fluoride were told by O. P. McMican when he discussed the mineral at a meeting of Yavapai Gem and Mineral Society, Prescott, Arizona. A second speaker, Francis M. Baer, told about favorite collecting sites in the west. One of the best, he said, is at Zapata, "hard by the Rio Grande 50 miles east of Laredo. Most of this area eventually will be inundated upon completion of the Falcon Dam." The speaker reported this area yields a variety of fine agate and agatized and jasperized wood.

Agate, jaspagate and petrified wood were among specimens brought home by members of El Paso Mineral and Gem Society from a field trip to the agate fields near Los Lunas, New Mexico.

Opening the 17th year of club activity, Donald Pick addressed the Colorado Mineral Society on "Star Sapphires and Star Rubies." Pick, a Denver jeweler, displayed a choice selection of the cut gems.

Ed Danner showed colored slides of his vacation trip through Scandinavia and the Swiss Alps to fellow members of the Mineralogical Society of Southern California at a meeting in Pasadena.

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Persian, waterworn nuggets, large range of blues, approximately 25 nuggets per ounce. Price per ounce \$2.00.

Castle Dome, hard natural shape nuggets. Price per ounce \$1.00.

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Castle Dome chunk material. Price per ounce \$1.00. All of the above materials are impregnated to improve hardness. None are dyed. A majority will cut to advantage.

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Professor Gros discussed earthquakes at the first fall meeting of Orange Belt Mineralogical Society, San Bernardino, California. He illustrated his remarks with slides taken while flying over the many faults in California.

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Specimens with Fire, each..... .50
Specimens without Fire, each..... .25

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1/2-lb. Precious Topaz, mine run..... 3.00

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Just Between You and Me

By RANDALL HENDERSON

GUESS NEARLY all of us have some favored ideas which we hope the new administration in Washington will carry out. One of my favorites is the proposal made by the Hoover commission that the name of the Department of Interior be changed to Department of Natural Resources, and its functions enlarged to include all that the new name implies.

"Department of Interior" is a rather uninspired sort of a name that could mean nearly anything. "Department of Natural Resources" focuses attention on the problem of making the best possible use of our God-given soil, water, minerals, forests, etc. Given the proper authority, and directed by men with vision, such a department would make the conservation of our natural resources one of its chief goals.

Probably one of the reasons why the Hoover report made such a hit with me was that it proposed to include not only the work of the reclamation bureau but also the stream control and navigation functions of the U. S. Army engineers in the new department of natural resources. I think the long-standing and wasteful feud between the reclamation engineers and the army engineers is a national folly which should be brought to an end without delay.

* * *

One of my correspondents—a man whom I would like to know much better—is W. Scott Lewis, a naturalist who lives in Hollywood, surrounded by his botanical gardens. Although in his eighties, Scott has an avid interest in everything that God created—rocks, insects, birds, flowers, reptiles, wildlife of every description.

And because of his enthusiasm for all these subjects his mind keeps young, and his lectures are always popular. Formerly a dealer in rocks and minerals, he now devotes most of his time to lecturing, and to securing Kodachrome slides for his programs.

Scott has a great tolerance for everything except one-track minds. In the little mimeographed *Nature Bulletin* he sends out nearly every month he writes:

"Specialization is necessary in science, and is quite all right if not carried to an extreme. . . . But sometimes they become so centered in their own work that they find themselves fettered by lack of knowledge of what others are doing. Unless they are careful, they become mentally lop-sided.

"We know rockhounds who have no interest in any field of nature except rocks. We know bird students whose only interest is adding a new species to their life list. . . . Because we are interested in crystals we forget that wildflowers are even more remarkable and more beautiful. But the fact that we are interested in wild-

flowers doesn't mean that we should fail to hear the song of the birds.

"It is all right to have specialties. But as we grow older our interests should expand and not contract. Thus we pave the way for a longer life and a happier one. Mental activity keeps the brain young, so the more we study the younger we become. The moral is to forget the date on your birth certificate, and buy more books."

* * *

As you ride across the desert, remember always that in the great expanses of sand which border the highway along much of your route there are literally billions of tiny seeds, brought there by the winds, dormant perhaps for years, but waiting for the rainfall which will start the miracle of germination—and bring to the face of the desert great fields of gorgeous blossoms.

Not every year is a "wildflower year" on the desert. It takes more than normal moisture to transform those dormant seeds to living organisms. And it is too early yet to make an unqualified forecast that 1953 will be a year of exceptional flowering. However, we have had heavier-than-normal rainfall during the fall and early winter on the Southern California desert—and we are hoping. The February issue of *Desert Magazine* will carry a more definite forecast.

* * *

My congratulations to Barry Goldwater of Phoenix on his election to the United States Senate. Through his occasional contributions to *Desert Magazine*, and our common interest in the exploration and publicizing of the Southwest, I have known Barry for many years, and I have a very high regard for both his ability and his character. He is one of the most versatile men in my acquaintance—business head of one of Arizona's largest department stores, photographer, lecturer, aviator, civic leader, explorer—he finds time for all these things, and does them all well. Arizona has always been represented in Washington by strong capable men—and Barry Goldwater is worthy of that tradition.

* * *

And for your New Year may I pass along some thoughts which Bessie Stanley wrote for *Coronet Magazine* four years ago?

"He has achieved success who has lived well, laughed often, and loved much; who has gained the respect of intelligent men, the trust of good women and the love of little children; who has filled his niche and accomplished his task, who has left the world a little better than he found it, whether by an improved poppy, a perfect poem or a rescued soul; who has never lacked appreciation of earth's bounty or failed to express it; who has looked for the best in others and given them the best he had."

Books of the Southwest

THEY'VE LEARNED THE ART OF HAPPY LIVING

"The walk is part of the gift." Dorothy Pillsbury in *Adobe Doorways*, sequel to *No High Adobe*, writes more stories of the gay and charming people, Spanish-Americans, Indians, Anglos, who live on Tenorio Flat, enchanted "little wedge of New Mexican soil." Gay, charming—yet much more than that — simple, heart-warming people who have truly made an art of living.

One of them, Rafaelita, a Santa Fe Indian woman, Dorothy Pillsbury saw walking along a dusty road with a heavy burden wrapped in a shawl between her shoulders. Rafaelita was on her way to deliver two graceful earthen bowls which she had made for a beloved Anglo friend's birthday. When the friend, deeply touched by the lovely present, insisted upon driving Rafaelita home, the woman smiled the inward-springing smile of the wise Indian who has lived many years, and declined, saying gently, "The walk is part of the gift."

Anglos, Spanish-Americans wander delightfully through *Adobe Doorways*. There are Mr. and Mrs. Bodget, retired from 40 years of city apartment living, who learned that "art and life are one" as they spent happy years adobe building—walls, terraces, laundry room—but never quite getting to the studio where art was to be pursued in painting and wood carving. There are the inimitable Mrs. Apodaca, her daughter — "that Carmencita" — and Mrs. Apodaca's shawls. The drape of a shawl tells at a glance whether Mrs. Apodaca is happy or overwhelmed by some world shaking family impasse.

When an alarm clock has completely upset the Apodaca household with its "teek-teeking day and night, snipping off time," Cousin Canuto brings Carmencita a wrist watch for "time should be a matter of great privacy" and offers to bury the alarm clock among his hollyhocks. "Maybe then they will blossom a month early."

And Cousin Canuto, the perennial romantic, goes off on a long search for a sign language with which to greet courteously the "little man on the plato" (flying saucer) — if one should chance to land on Tenorio Flat.

An enchanted wedge indeed. Would that there were more such wedges,

more Mrs. Apodacas and Cousin Canutos, in this world where time is anything but a matter of privacy and where the little man on the plato is more likely to be greeted by the FBI than with friendly sign language. Published by The University of New Mexico Press, Albuquerque. 197 pp. \$3.50.

LEGENDS, ANECDOTES, HISTORY FROM NEVADA'S PIONEER PAST

Since 1946, a series of advertisements has been appearing weekly in Nevada newspapers, depicting scenes from the state's rich pioneer past. Last year these ads were gathered together and published in a 204-page paperback book, *Pioneer Nevada*.

Each page, 8x12 inches in size, represents a complete advertisement, designed and written as a single anecdote having some significance in Nevada pioneer history. Careful research insures the authenticity of costumes, furnishings and architecture shown in the pen-and-ink illustrations by Paul Nyeland. Old records, pioneer newspapers and the recollections of old-timers supplied material for the stories.

Readers will find *Pioneer Nevada* an exciting chronicle in story and pictures of early days in the sagehen state.

Published by Harold's Club, Reno, Nevada. \$2.00.

PETRIFIED FOREST STORY TOLD IN COLORFUL BOOKLET

Agatized Rainbows is a small booklet published by the Petrified Forest Museum Association and the Arizona State Highway Department to tell visitors the story of Petrified Forest National Monument. In a very readable style, Author Harold J. Broderick, park naturalist, relates the history of the forest and its establishment as a national monument, explains the phenomenon of petrification and the geological structure of the area and outlines the primitive cultures which lived in the region in prehistoric times.

More than 20 full-color photographs illustrate the text. In addition to photographs of the forest and its specimens, views of the Painted Desert, Sunset Crater, Grand Canyon, Wupatki Ruin and other National Park Service units of Northern Arizona are shown.

Copies of the 24-page booklet may be obtained by writing the Petrified Forest Museum Association, Holbrook, Arizona. Retail price is 25 cents, 30 cents postpaid.

PIONEER NEWSPAPERS TELL STORY OF FRONTIER STATE

With the arrival of the gold-seekers in the Southwest in the 1850s, rough-and-tumble mining camps mushroomed almost overnight on the desert plains and mountain valleys of the Arizona frontier. As soon as there were enough people to read the news—of which the rowdy, brawling townspeople provided an abundance—the pioneer newspapers were born.

The first, the *Weekly Arizonan*, began its career at Tubac, near the Mexican border, in the spring of 1859. More quickly followed, many gasping only through election time, others, starved for supplies, dying under the hardships of printing or when a slow-drawing editor lost his argument with a touchy reader.

For more than a decade, Joseph Miller has been delving into the Arizona State Archives, studying these old newspapers, finding in their pages thrilling tales of the Old West. Gathered together and edited, the yellowed clippings tell, better than any history, what Arizona was really like in the harsh frontier days.

The Arizona Story, compiled by Miller and illustrated with the warm, humorous brush drawings of the famous Western artist, Ross Santee, is an absorbing chronicle of adventure, intrigue, Indian raids, gun battles, lost mines, characters, lore and legend, blood and thunder of the early Southwest.

Published by Hastings House, 345 pages, endmaps. \$5.00.

NEW MAP SHOWS HISTORICAL SITES IN CALIFORNIA

During the 400 years since California was discovered by Hernando de Alarcon and Juan Rodriguez Cabrillo, nearly 500 geographical points within the present boundaries of the state have acquired more than passing historical significance.

All these places—496 of them—are shown on a new map titled *Marked Historical Sites of California*, published by the Automobile Club of Southern California.

Data for the map were compiled by Phil Townsend Hanna, editor of *Westway Magazine*, and William Webb. Each of the historical points, officially registered by the California Department of Natural Resources, is described briefly on the reverse side of the map sheet.

Map is 29x42 inches in color. This is a limited edition and is available at \$1.50 at the offices of the Auto Club. May be ordered by mail from main office at Figueroa Street at Adams, Los Angeles.

SENSATIONALLY NEW FREE 56 PAGE FALL CATALOG

This unique catalog is 8½"x11" in size. It is profusely illustrated with pictures of almost all items offered. Your shopping will be made easy — order by mail or visit our shop to select your gifts. This catalog lists Gem Cutting Equipment, Grinding Wheels, Diamond Blades, Sanding Cloth, and Polishing Powders, Jewelry Making Tools, Sterling Silver Sheet and Wire, Blank Ring Mountings, Jewelry Findings such as Earwires,

Bails, Locket Loops, Chain by the foot, Bezel Wire, etc. Field Trip Books and Books of all kinds on Minerals, Gems, Jewelry Making, Prospecting, Uranium, etc.

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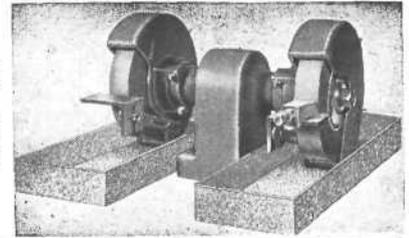
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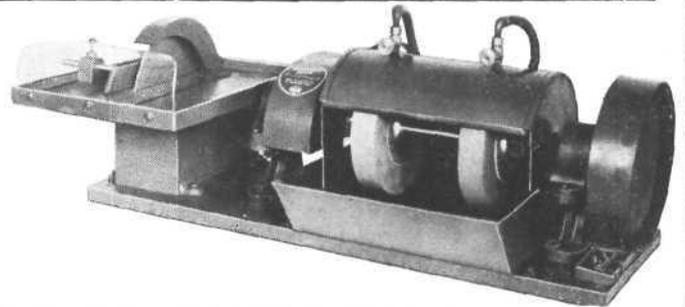
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