

Desert

DECEMBER, 1972 50c

ICD 08256



ALL NEW D-TEX "COINSHOOTER"

ANOTHER UNBELIEVABLE "FIRST" FOR D-TEX

ENGINEERING TEST REPORT

TO: Bill Mahan
D-Tex Electronics

Field trial of new models of D-TEX metal detectors developed for coin shooting.

TYPE A — On all detection the audible signal goes up (frequency increase). On ferrous material (bottle caps and etc.) the meter goes to the left. On non-ferrous (coins, rings, etc.) the meter goes to the right.

TYPE B — On ferrous material (bottle caps and etc.) as well as foil, the audible signal goes down (frequency decrease) and the meter goes to the left. On non-ferrous (coins, rings, etc.) the audible signal goes up (frequency increase) and the meter goes to the right.

Both units were used continuously 2-1/2 hours, Sept. 9, 1972. The Jaycee Jubilee was held in this area one week ago, and the area has been worked extensively with various brands of detectors each day since.

The author used the Type A unit and R. C. Pollan used the Type B unit. R. C. Pollan says the Type B unit never misled him even once. The author was fooled only twice by foil, but each time the foil was folded several times until it was nearly 1/8" thick and about one square inch area.

Many aluminum can pull rings were dug up along with other non-ferrous objects. No trouble at all was caused by ferrous bottle caps nor by ordinary pieces of foil.

One 1965 quarter was found almost on edge about 4" deep. Most of the coins were from near the surface to about 2" deep.

The Type A unit is slower to use as the audible signals are all the same and it consumes time to check the meter direction on each one. The Type B unit was operated almost entirely by the audible signal alone, seldom referring to the meter.

R. C. says this type detector almost makes coin shooting a cinch. You get a signal, you dig, and almost every time you get a coin.

We returned to the same site Sept. 10 and hunted about 3 hours. We also spent about an hour checking out some old house places. Finds for both days were as listed below:

Pollan:

Total Odd bits of jewelry, 1 ring
both days: 115 coins — \$4.60

Mullings:

Watch fob, Brooch, odd bits of jewelry
65 coins — \$3.12

Pollan used the Type B unit exclusively. Of course, my opinion is that this accounts for his finding the most coins.

Many coins were found while working amidst so much debris in the form of bottle caps and foil that we would have abandoned the area if we had been using conventional detectors.

I recommend the Type B unit because of the simpler and faster operation.

We both agree after this field trial that a giant step forward has been made for the coin shooters. It looks very much like another FIRST for D-TEX!



W. M. Mullings

R. C. Pollan



W. M. Mullings

W. M. Mullings, Professional Engineer
License #22390, State of Texas

*The Type B unit will be in production soon in two models—Model I with meter, Model II without meter. Write today for special folder on the "Coinshooter" or for our 1972 catalogue of all D-Tex units with folder included.

P. O. BOX 451 R9

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Garland, Texas 75040

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Volume 35, Number 12 DECEMBER 1972

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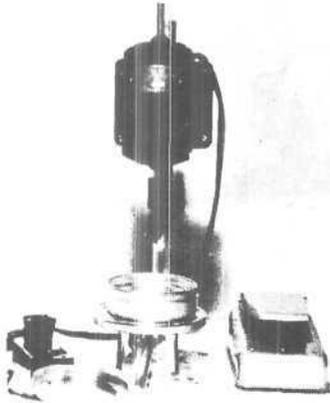
THE COVER:

Looking like the Star of Bethlehem a December sun rises over the desert, its rays reflected on the desert plants, and bringing light to darkness. Although the unusual photo by David Muench, of Santa Barbara, was taken in Arizona, it is a Christmas scene that can be enjoyed throughout the Great Southwest.

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LOTTIE M. SHIPLEY



A Peek in the Publisher's Poke

THIS ISSUE brings to a close our 35th year and it has been a rewarding one from several aspects. *Desert Magazine* continues to grow. Not the meteoric increase that some magazines experience through high-powered promotions for that is not our way, but by word-of-mouth and through increasing numbers of subscribers who give gift subscriptions.

Increased advertising has enabled us to add pages and additional color photos which so many subscribers have repeatedly requested.

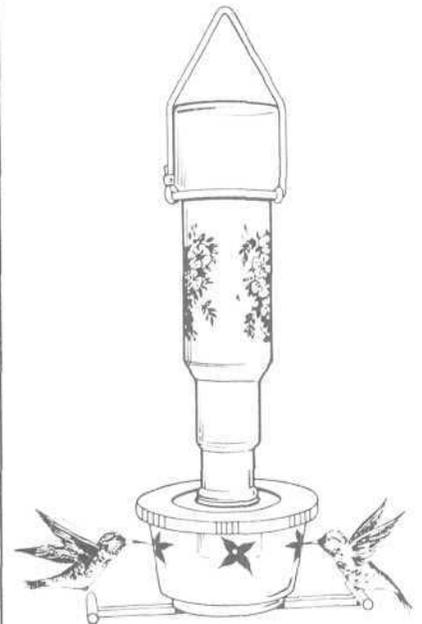
Another reward has been the wonderful words of encouragement and praise that are consistently added at the bottom of monthly renewals and book orders. It really makes it all worth while when our labors are so warmly appreciated. It is our hope that we may continue to merit such a response.

In appreciation of the continuing increase in our mail-order book department we are implementing a policy change. Effective November 15, 1972, there will be no charge for handling and mailing. This policy change will not affect the manner in which your orders are handled. We will continue to ship in sturdy containers to ensure safe arrival, and orders will be processed the day they are received, subject to stock on hand.

The staff wishes each and every one of you a Happy Holiday Season and a Happy New Year.

William Kuyper

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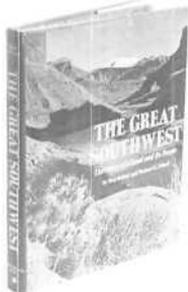
Book Reviews

by Jack Pepper

All books reviewed are available through
Desert Magazine Book Shop

THE GREAT SOUTHWEST

By
Elna Bakker
and Richard G.
Lillard



From the standpoint of geography it is a simple matter to describe the Great Southwest. It extends from the Tehachapi and San Bernardino Mountains in California to the rolling plains east of the Sangre de Cristo Mountains and the red waters of the Pecos River in Texas, and from the southern parts of Nevada, Utah and Colorado to the northern areas of Mexico.

The states of Arizona and New Mexico are within the center of this vast complex of the North American continent through which flows the Colorado River and its many tributaries, such as the Gila and Salt Rivers. It is composed of deserts, mountains and plateaus, the topographical boundaries of which vary according to the scientific approach such as plant and animal life, rainfall, geology, archeology and paleontology.

But it is a monumental task to chronicle the prehistoric past, Indian cultures, invasion of the White Man, the ever-changing moods and color of the mysterious lands, and today's progress—and resistance. In their Introduction, the authors set the keynote of their book:

"It is a land of deserts, flat or rumped, of monumental ranges, or stupendous canyons that encompass all the known areas of geological time, of blowing sand dunes, of narrow valleys green with cottonwoods and cultivated crops, and of occasional irrigated plains. It seems vast because of wide visible distances and because the places people want to reach are far apart. Like many other deserts it is naturally rich in plants and wildlife, and it

December 1972

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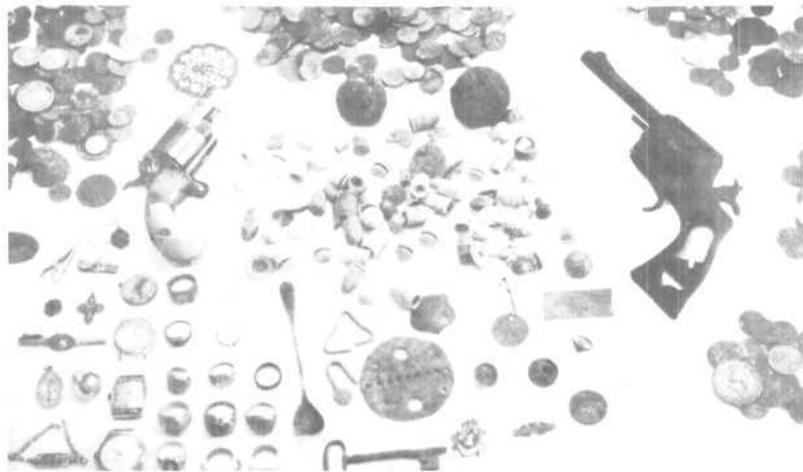
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BOOK REVIEWS, continued

holds stark evidence of human activity older than written record—dwellings under sandstone cliffs and many-storied pueblos, now ruins among the brush and grass. It is a modern urban and technological scene as well. The buildings of the biggest towns — Phoenix, Juarez, Mexico, El Paso, Tucson, Chihuahua, Albuquerque and Las Vegas—thrust up into machine-age air near mountains rising from plains that disappear around the earth's curvature.

"It is a provincial empire, sometimes charming, sometimes overwhelming, and sometimes ugly . . . it is ever enticing to exploiters of natural resources and nowadays also to tourists, artists, scientists, archeologists, and affluent pleasure-seekers, young and old"

The publishers of *The American West*, an outstanding "Magazine of Western History," commissioned Elna Bakker and Richard G. Lillard to capture the past and present panorama of the Great Southwest. Through text and photographs, they have succeeded in accomplishing this monumental task. Elna Bakker is a noted naturalist, author, educator, artist and lecturer. Richard Lillard, Ph.D., has written many books and articles on American Civilization and is a former Fulbright lecturer.

To put The Great Southwest in perspective they have divided the book into four parts. Part One, Land of Space and Sun, deals with the geology, climate, rainfall and landforms of the various areas. Part Two, Natural Communities of Life, presents the plant life and animal worlds. Part Three, The Mark of Mankind, starts with the prehistoric Ice Age wanderers and continues the historic trail through the Basket Makers, Pueblo Indians, coming of the Spanish and the final invasion of the Anglos.

Part Four, The Legacy of Progress, is the most ambitious—and controversial—part of the book. It deals with the "progress" of the 20th Century and the effect the white man has had on the Indians and the land of the Great Southwest. It ends with a chapter entitled, "Man and Manana—The Challenge of tomorrow in the Southwest; how to enjoy, and not destroy, a glorious land."

A comprehensive book on this area and history of the American continent was long overdue. The publishers and the

authors are to be congratulated on their outstanding presentation of *The Great Southwest*. For those who live in the Great Southwest, and for those who want to understand the ecological problems facing us today—and for those who want a beautifully written pictorial on our land—this book is highly recommended. It will also make an ideal Christmas present.

Large 9x11 format, hardcover, heavy paper stock, illustrated with historic and present-day black and white photos and beautiful four-color presentations by the West's outstanding photographers, plus maps, index and suggested reading section. Only \$13.95 until January 1, 1973, then \$17.50.



CALIFORNIA STATE PARKS

*Compiled by the editors of
Sunset Books*

Most outdoor families are familiar with the national parks and recreation areas in California, which, unfortunately are usually crowded during the weekends. However, not too many people are aware of the hundreds of excellent state parks, beaches and recreation areas throughout the state.

The new and revised edition of *California State Parks* describes these desert, mountain and seashore recreation areas, what they offer, facilities, best visiting times and the history of the various areas. It is illustrated and has excellent maps. This book is for outdoor families looking for less crowded and less known recreation areas. Large 8x10 format, heavy paperback, 127 pages, \$2.95.

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Obsidianites are plentiful and make good cutting or tumbling specimens.

AN OMINOUS winter sky and a brisk, cold wind warned of an approaching storm as we headed south from Goldfield toward Nevada's Montezuma Mountain country. We were exhilarated by the excitement which always accompanies the prospect of exploring country new to us. In this case, a region with a name that has conjured visions of untold treasure since the days of the Aztecs. Our "spoils" were to be fine specimens of opalized wood and other gem cutting material. "The Devil take the storm!"—

MONTEZUMA'S

we would not be deterred.

Plans for the trip had begun a number of moons previously, when Bob and Edna Tenney of Santa Barbara, California, had showed us the fine wood specimens they had collected during a trip to the Montezuma locale. We knew *Desert's* rockhound family would be interested in this location and that was the only excuse we needed to search for "Montezuma's Treasures."

Six miles south of Goldfield, we left U.S. 95 and turned west through a newly-



Many roads in the heart of the Montezuma Silver District lead to mines.



Petrified wood
is found in the low hills
of white ash at Montezuma.

painted cattle guard. Our route followed a graded, dirt road which began a gradual ascent as it wound through a narrow canyon before exiting onto an alluvial basin. When we reached a road "Y" (3.5 miles from the highway) we kept to the right. The left branch is a circuitous route to Silver Peak.

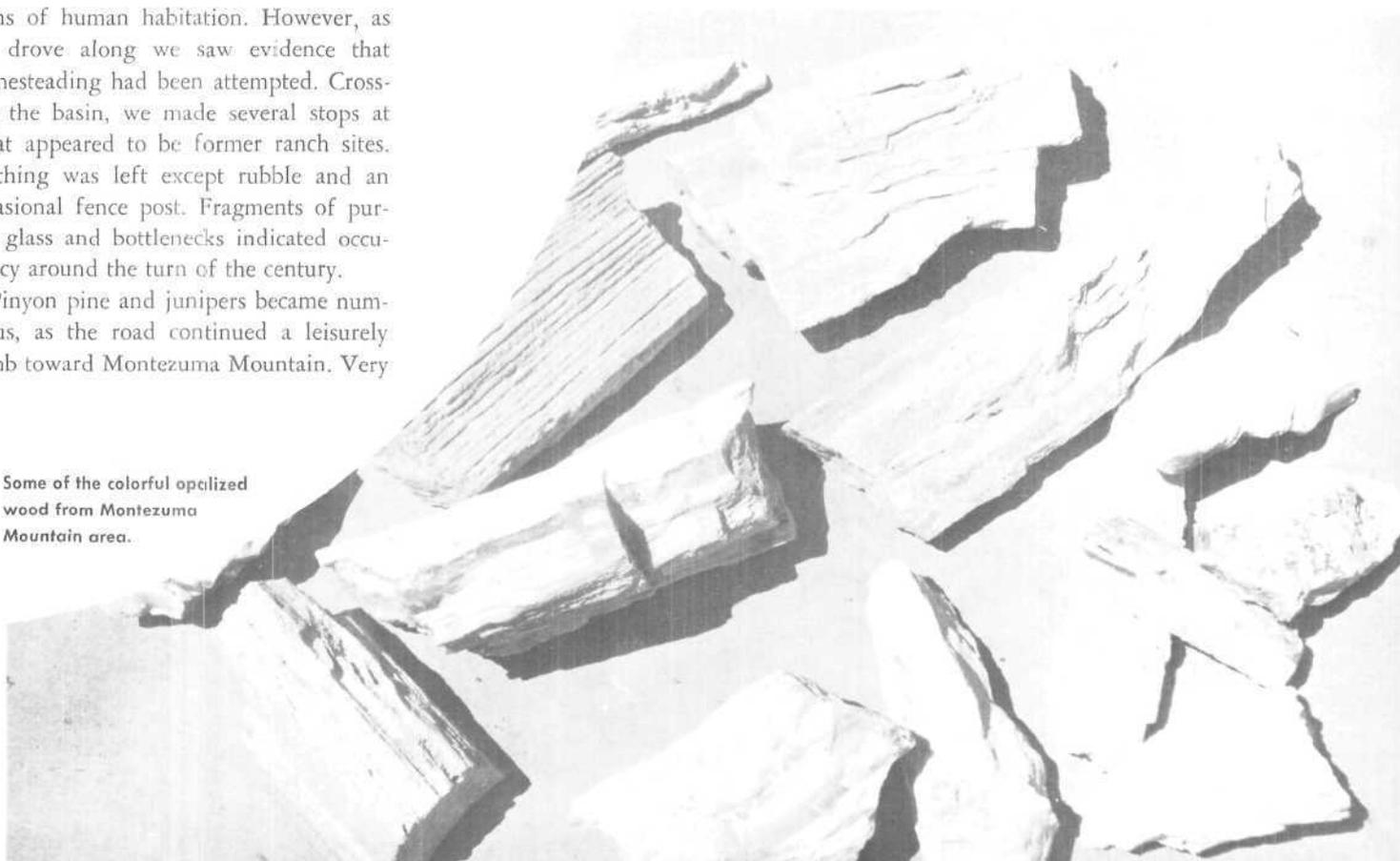
Unnamed ranges encircled the high desert valley and towering above them all was cloud-shrouded Montezuma Peak. As far as the eye could see—and this was a considerable distance — there were no

TREASURES

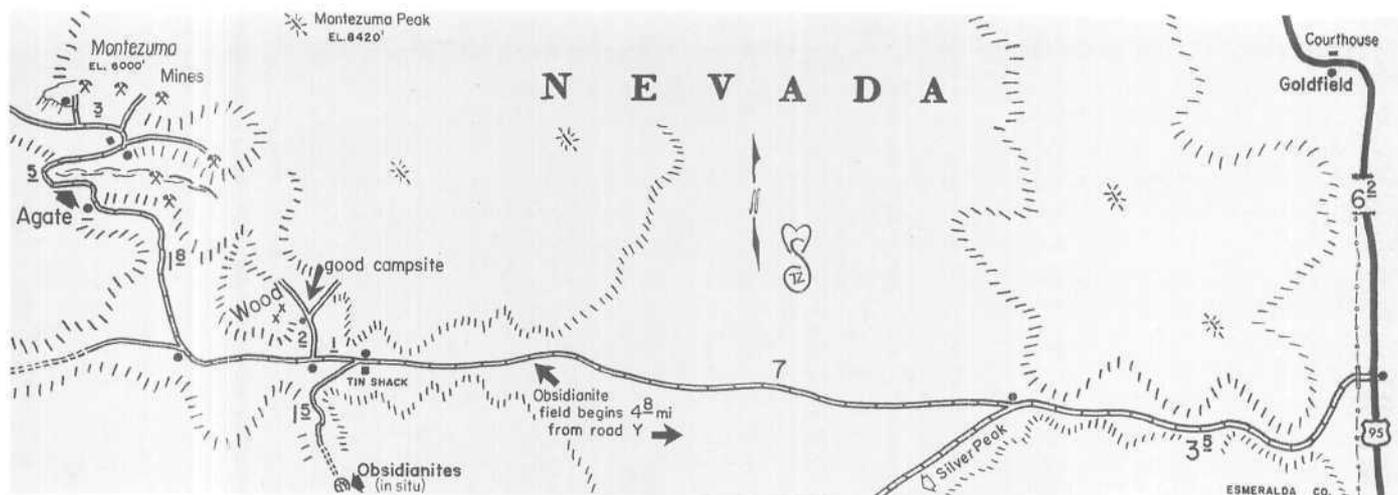
by Mary Frances Strong
Photos by Jerry Strong

signs of human habitation. However, as we drove along we saw evidence that homesteading had been attempted. Crossing the basin, we made several stops at what appeared to be former ranch sites. Nothing was left except rubble and an occasional fence post. Fragments of purple glass and bottle-necks indicated occupancy around the turn of the century.

Pinyon pine and junipers became numerous, as the road continued a leisurely climb toward Montezuma Mountain. Very



Some of the colorful opalized
wood from Montezuma
Mountain area.



small obsidianites had been observed whenever we had stopped and at 4.8 miles from the Road "Y," we entered a field of fair-sized specimens. They occurred on both sides of the road for the next several miles and were of good cutting and tumbling quality. We had found the first of Montezuma's treasures!

"Watch for the tin shack on the left," Edna had told us. "The turnoff to the wood area is only a short distance beyond it." We were hoping the shack would

still be standing as the Tenneys had given us only directions, not mileages. It was, and we turned right into a little valley one-tenth of a mile beyond it. The first wood specimens were spotted as soon as we parked the pickup. We had found the second treasure of Montezuma.

The petrified logs occur in compacted ash and removal requires some strenuous digging. They are opalized and the color ranges through gray and white to dark brown with green, yellow and red inter-

persed sparingly. Annular rings have been replaced in some specimens.

We had a good day for digging—on the cool side. The wind abated and the storm appeared to have passed to the north. Several fine wood specimens were added to our collection.

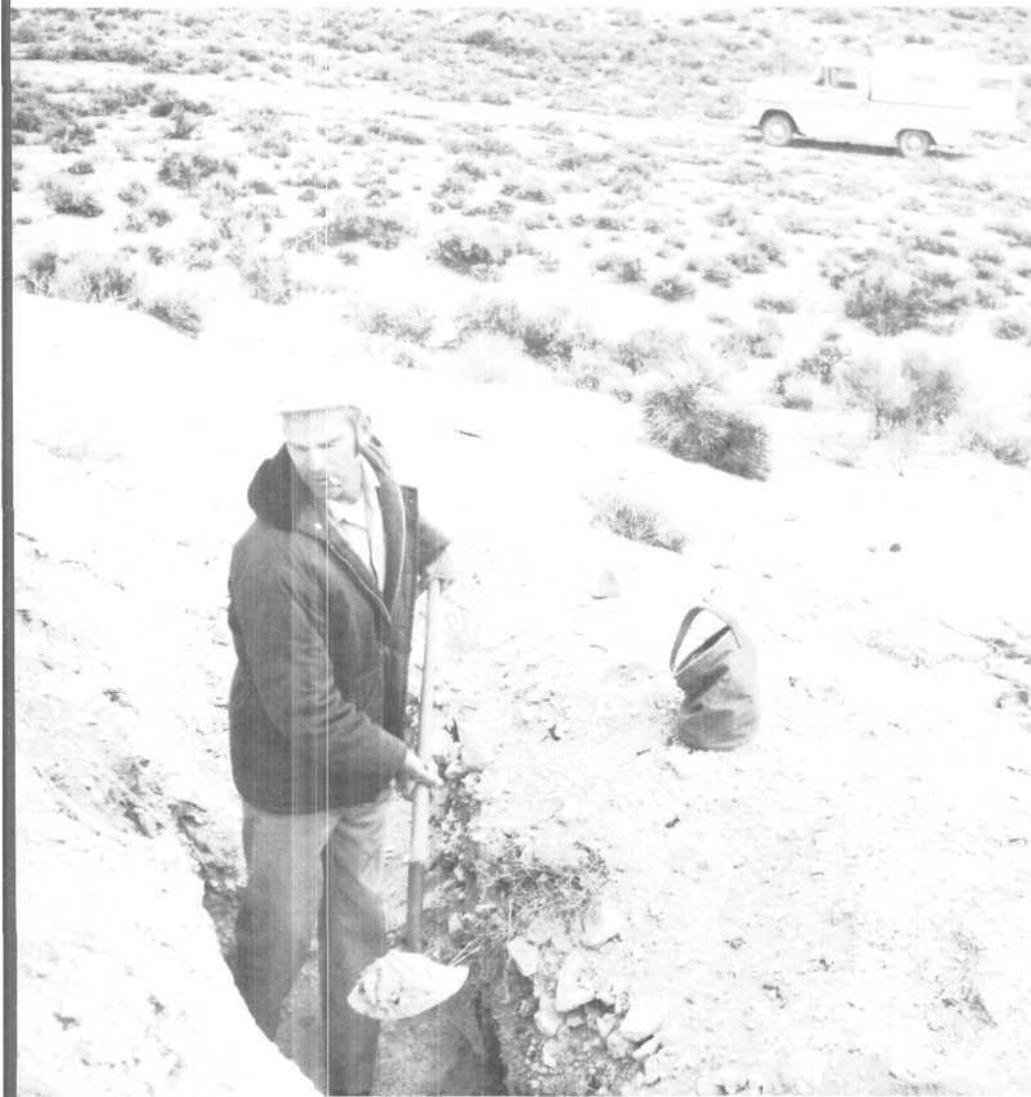
This location is easily reached via good dirt roads and trailers may be taken to the diggings. The little valley makes an excellent camping area—elevation approximately 5,500 feet.

Jerry had noticed a trail to the left immediately beyond the tin shack and wanted to check it out before continuing to Montezuma Mountain. We were glad we did because at its end was a deposit of obsidianites in-situ. Generally, they are found as float—scattered over the ground. Geologically, this deposit is extremely interesting as it consists of alternating layers of obsidianites and perlite with an occasional nodule of christobalite. Several shallow, open cuts indicated some exploratory work had been done in the past.

Anyone interested in geology will enjoy visiting this location. The road is a bit tough and climbs a steep hill toward its end where it is difficult to turn around. It would be advisable to park just before the steep climb. It is only a short hike to the deposit which is identified by what appears to be a mine dump on the mountainside.

We returned to the main road and in less than two miles were climbing a steep,

Hardrock digging is necessary to obtain fine opalized limb sections. Little valley in background makes a good camping area.



narrow canyon. Numerous mining operations were high on the hills above us. Agate and chert specimens were noted on the talus slopes on both sides of the road. They were quite plentiful—some with good color and pattern. There were also tons of "leaverite." We found a three-pound, fortified agate which was exceptionally nice and several multi-colored specimens during the short time we explored the slopes. They were the third treasure at Montezuma!

Our route continued to the top of a high ridge, then rapidly dropped into a small valley in the heart of the old mining activity. Tracks and trails led in every direction to mine dumps, adits and prospects on the heavily-scarred mountain-side. A tin building and several other remnants of fairly recent operations remain. One off-road was clearly posted "Keep Out."

We crossed the canyon, climbed another hill and followed the road into a glory hole where our reward was a spectacular view. A series of mountain ranges were spread out before us in a symmetry of form resembling troops readied for inspection. The colorful Silver Peak Range seemed to fit snugly along the base of the lofty White Mountains when, in reality, a deep desert basin—Fish Lake Valley—separates them.

Exploring the glory hole turned our thoughts to the original treasure of Montezuma Mountain—silver, the elusive lining for all of man's dreams.

The rich silver veins were discovered in 1867 and the usual sequence of events followed. Numerous claims were staked, a mining district organized and a camp formed. Three years later, the need for a mill became imperative. With blood, sweat and determination, a 10-stamp mill was dismantled and hauled by wagon to Montezuma from Yankee Blade—a distance of over 100 miles. It reportedly operated only four months!

Approximately \$500,000 in silver and a small amount of gold had been wrested from the mountain when mining began to decline in 1887. The mines had supported a sizeable camp including a post office which closed in 1888. The district was quiet for over a decade, then heavily great boom periods at Tonopah and Goldfield. Mining continued into the late prospected and reactivated during the 1920s.

The mines on Montezuma Mountain are

private property. Visitors in this area must refrain from collecting any mining equipment or memorabilia. All "No Trespassing" signs must be respected.

The treasures of Montezuma include several good gem fields, beautiful high-desert country to explore and an interesting old mining district to visit. Perhaps the greatest treasure is the invitation offered to leave the busy main stream of our lives and wander along the trails left by the brave men who tamed the West. Early day explorers and prospectors—we salute you! □

FREE 1972

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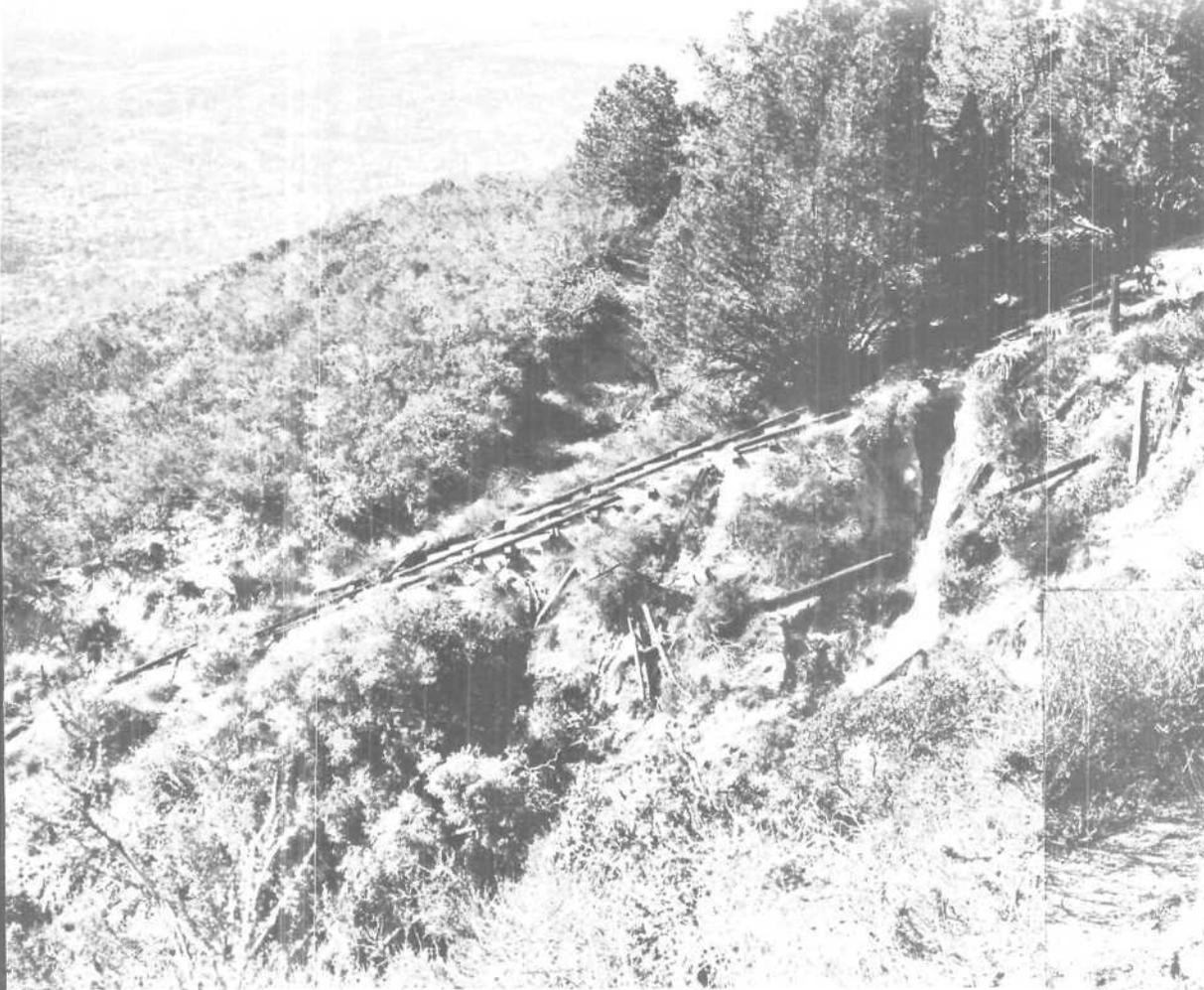
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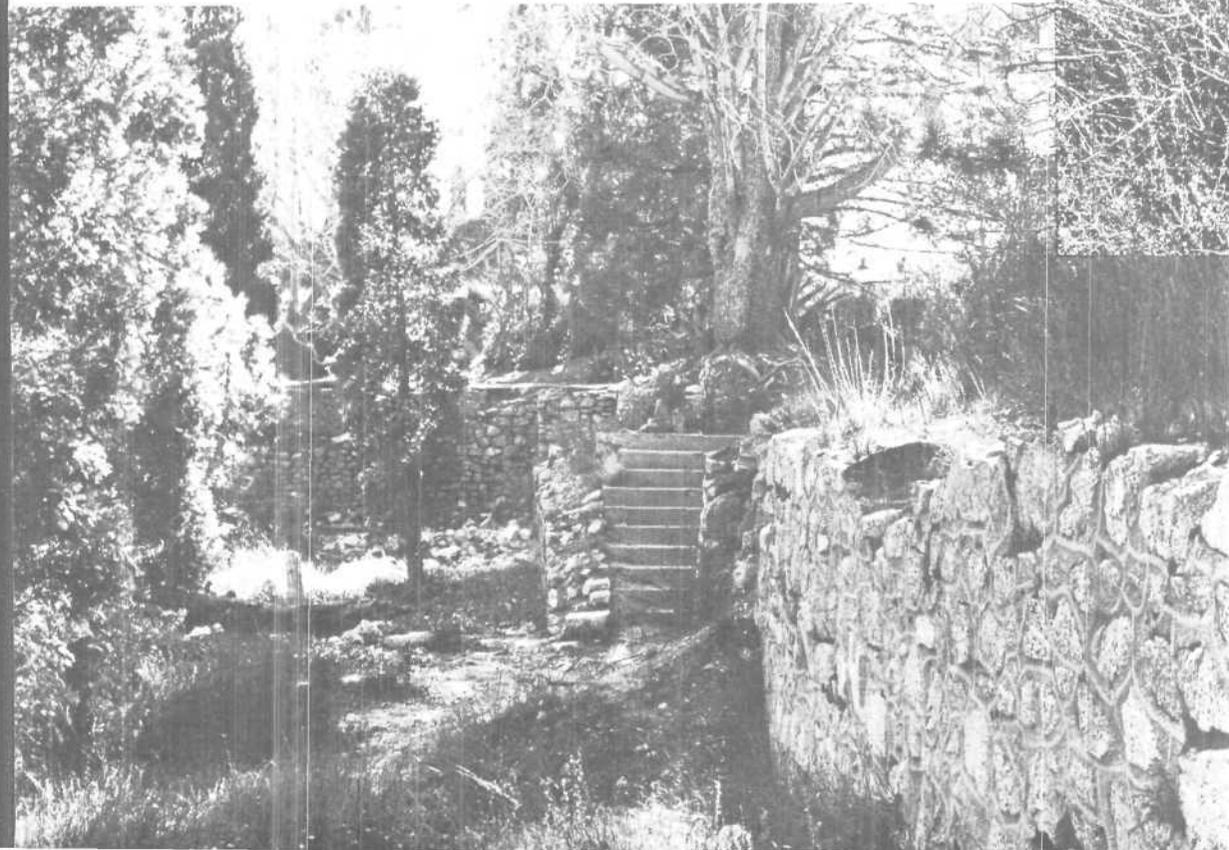
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A

by
Joe Blackstock



Up this slope (above) the 3,000-foot railway pulled two cable cars into the cloud-covered mountain above Los Angeles. The rails have since been removed. In the background is Altadena and north Pasadena. Once the center of a beautiful garden (right) this is all that remains of the water fountain. All photos by the author and Leeann Voegelé.



Pines and cypress now grow in the foundation of what once was the chalet atop Echo Mountain.

CABLE CAR IN THE CLOUDS

NORMALLY WHEN one envisions a ghost town the thought of dusty ruins located miles from the nearest road and city come to mind.

There is one such ruins in Southern California which doesn't quite fit that criteria because it is only a short walk from many miles of roads and overlooking one of the most populated portions of the world.

Located amid the San Gabriel Mountains which border the Los Angeles basin on the north, the tremendous engineering feat known as the Mt. Lowe Incline Railway still remains, if only in ruins, as a monument to one of the more remarkable men of this century.

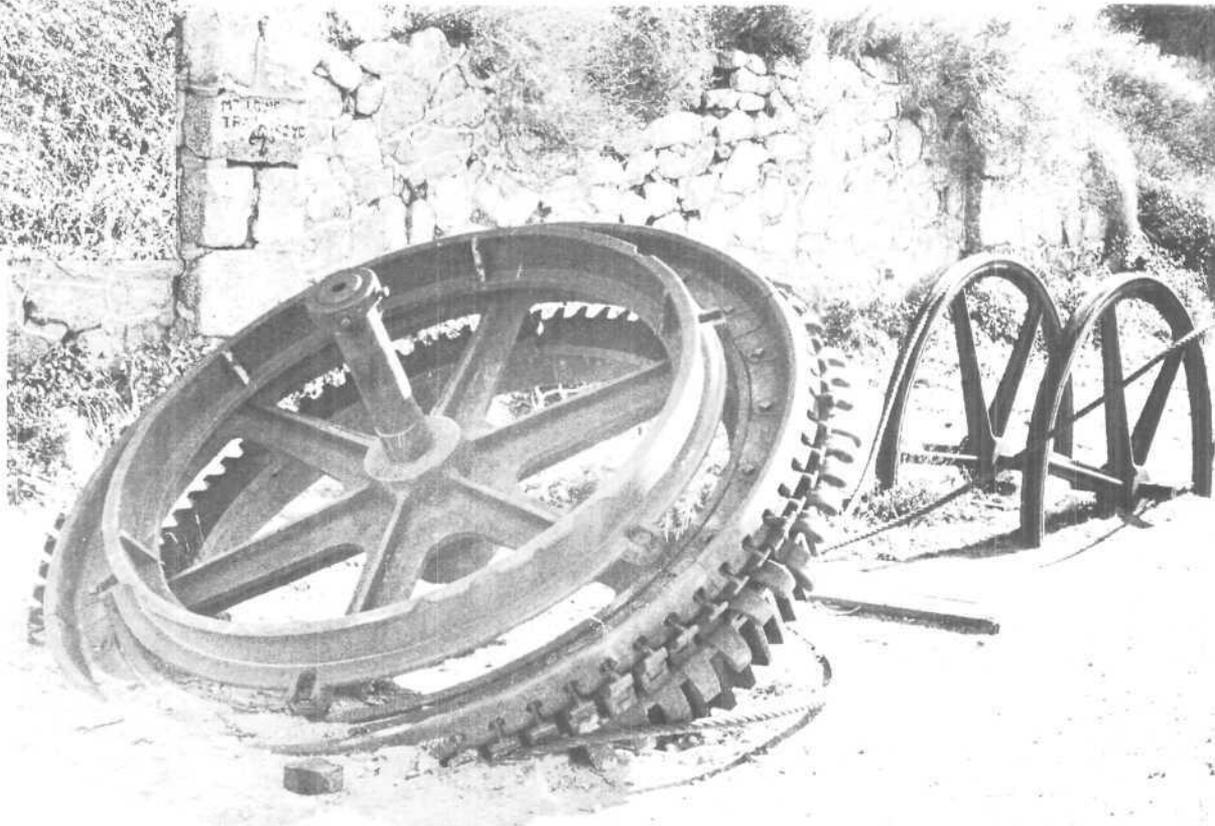
In 1891, Professor Thaddeus S. C. Lowe and a brilliant engineer, David J. MacPherson, began constructing a railway and 3,000-foot incline up an angle of as much as 62 percent from Altadena to the top of Echo Mountain. On Echo was the

Chalet, one of two hotels in the Lowe complex, as well as a terminal for an electric trolley. This trolley took passengers on a thrilling, winding trip deeper into the mountains to Crystal Springs where Ye Alpine Tavern was located in the shadow of the 5,593-foot mountain named for Lowe.

For 40 years, this complex was one of the most popular recreational and tourist attractions of the Los Angeles area but a turn of the century visitor would hardly recognize the ghost which remains.

The site of the Chalet on Echo Mountain now is reached only at the end of a 3½-mile hike from the northern end of Lake Avenue in Altadena up the Sam Merrill Trail. This area, called the White City, has the most viewable remains of the project.

There are still parts of the wheelhouse and the foundations of the Chalet are still standing. The U.S. Forest Service (the



The giant cable wheel of the Mt. Lowe Incline Railway today is a monument to the past.

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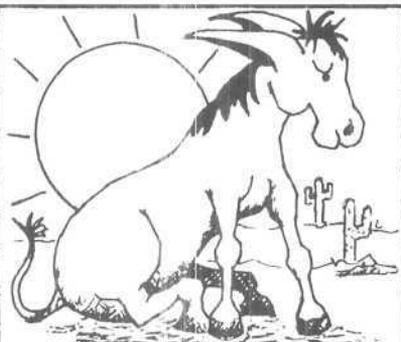
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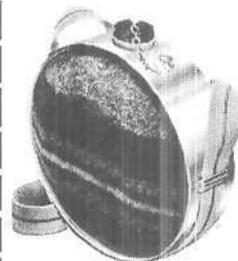
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View down the slope to the bottom of Rubio Canyon and the lower station of Mt. Lowe Incline Railway.

area is entirely within the Angeles National Forest) has dynamited the buildings but it doesn't take a great deal of imagination to see what was once a center of activity in Southern California.

On the eastern side, the visitor loses sight of exactly where he is because the towering Italian cypress and thickly leaved trees make even the ruins a special spot. Cactus and other exotic plants still linger here and there in the shadows.

The western slope of what is really just a north-south ridge is a haven for bottle collectors with many nice specimens having been discovered in the bits of pottery and kitchen equipment.

Taking the railbed north from Echo Mountain, it is a 1/2-mile hike to the site of Ye Alpine Tavern. Still nestled in a beautiful sylvan valley, the area is now called Mt. Lowe Campground. Most of

the remains of the tavern have been removed from view.

To the southeast of the campground and up the extension of the fire road is Inspiration Point where a magnificent view of the basin—on a clear day—may be had. This point, equipped then with telescopes, still is in good condition although only the supports for the telescopes remain.

It took Lowe and MacPherson two years from start to finish on the hardest part of the project: the incline. From its start in Rubio Canyon, the system had counter-balanced cable cars on which passengers boarded after a ride on the steam-powered Los Angeles Terminal Railroad to Altadena.

At a time when smog was unheard of, the view from Echo Mountain must have been limitless. In addition to the view and

the facility, Lowe, never lacking in showmanship, provided visitors an extra attraction. He purchased a three million candle-power searchlight, a feature of the 1893 World's Columbian Exposition in Chicago, and installed it on Echo Mountain. Should any person in the Pasadena area below the mountain have wished his house illuminated, he need only have built a bonfire and the searchlight would then turn night into day around his home.

In 1896, Lowe needed more capital so he issued \$500,000 worth of bonds on his railroad. Later, he defaulted on the bonds and was forced to liquidate his holdings and turn over ownership to others. While the project remained in operation until the mid-Depression, Lowe, with his fortune gone, retired to a small frame house in Pasadena where he lived until his death in 1913.

In the planning of the project, little thought had been given to preparing for the disastrous forest fires which annually plague the San Gabriels. In 1936, Ye Alpine Tavern and surrounding buildings were destroyed by fire and never rebuilt.

The White City had been similarly ravaged earlier and when the damaging March storm of 1938 hit the Los Angeles area, the bare slopes gave way and most of the railroad trestles were destroyed. The then owners, the Pacific Electric Railway, abandoned the line and pulled out the rails and other equipment for salvage.

In a book by H. M. Page, "Pasadena: Its Early Years," a tribute was written about the project: "Collis P. Huntington, then president of the Central Pacific Railroad, declared it far surpassed every

European mountain railway at the time, and Count Commendensky, then Imperial Superintendent of Military Roads in Russia, who visited Pasadena after the road was completed, declared it the most marvelous feat of mountain engineering he had ever seen in all his travels. Baron Berg of Austria praised Lowe's works, and a party of four of the leading engineers of Germany who came to the United States expressly to study the Mt. Lowe line said that no mountain railway ever built up to that time equaled it in safety, efficiency and attractiveness." □

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SPEEDING COMMUTERS through Cajon Pass do not find it very impressive: a long, winding valley through scarred mountains which seem to have surrendered to the din of cars and trucks and trains.

However, this natural cleavage between the San Gabriel and San Bernardino Mountains merits more than an incidental glance. It is a crucial "escape route" for literally millions of travelers to and through the desert each year. Some 95 percent of all out-of-staters who drive west to the coast descend into the urban area of Southern California through Cajon Pass.

Today, at Cajon Summit (el. 4,200), you can look north out onto the expansive Mojave Desert or south down into Cajon Canyon. In 1851, the Mormon expedition, with its 150 wagons and no road down, looked south across the fertile San Bernardino Valley and made a decision—"down we'll go."

They weren't the first, however. Indians living along the north face of the San Bernardino Mountains and on the Mojave Desert regularly followed canyons from near the headwaters of the Mojave River (by Cedar Springs, Summit Valley, etc.) up and over, coming out near what are now the cities of Devore and Highland.

The old Spanish Trail, established in the 1770s, followed the Mojave River south but branched off through what is now Hesperia and Summit Valley, exiting into Cajon Canyon via Crowder Canyon.

None of these routes was a winner. Rains, landslides, snow and heat made foot travel laborious, horse travel perilous, and wheeled travel nearly impossible. So in 1860, spurred by gold commerce in Holcomb Valley, John Brown of the Verde Ranch (Victorville) began hacking out a toll route through the steep canyons. By 1861 it was open and today you can still follow most of it; a keen-eyed motorist can even see part of it from Interstate 15 near the junction of Highway 138.

Brown's Toll Road was actually a short stretch of narrow roadbed striking northeast from Cajon Canyon at Crowder Canyon (see map). Tourists stopping at the Highway 138 off-ramp to Wrightwood/-Cedar Springs will notice a California Historical marker on the northeast side of the freeway—this is at the mouth of Crowder Canyon. Parts of a washed-out roadway can be seen 50 yards up the canyon.

TRAILS, TOLLS



Several trails crisscross Crowder Canyon (above) where once pioneers camped. The marked path (below) follows famous Brown Toll Road and is now part of the California Riding and Hiking Trail. Overall view (opposite page) of the 110-year-old toll roadbed through Crowder Canyon to the Mojave Desert.



by Van P. Wilkinson

Photos by the author

The Toll Road snaked up Crowder Canyon about one mile, then through an open valley, following the riverbed. Some four miles from the freeway, the original road cuts north up and over the summit near what is now the railroad siding of Summit. Highway 138 to Cedar Springs follows a few miles of the route, affording many places to park and hike the trail.

At both ends of the Toll Road stood a collection house and gate. The lower gate was about three miles down from the mouth of Crowder Canyon, near a tiny settlement called Cosy Dell. The upper gate, harder to pinpoint, was close to the summit in one of the moist valleys above Crowder Canyon, perhaps toward Horsethief Canyon.

Between 1861 and 1881 the Toll Road served its purpose, making possible weekly stage runs to Panamint. But the coming railroad and emerging alternate routes spelled doom for the treacherous path. New roads were cut by 1885, serving the new rail line.

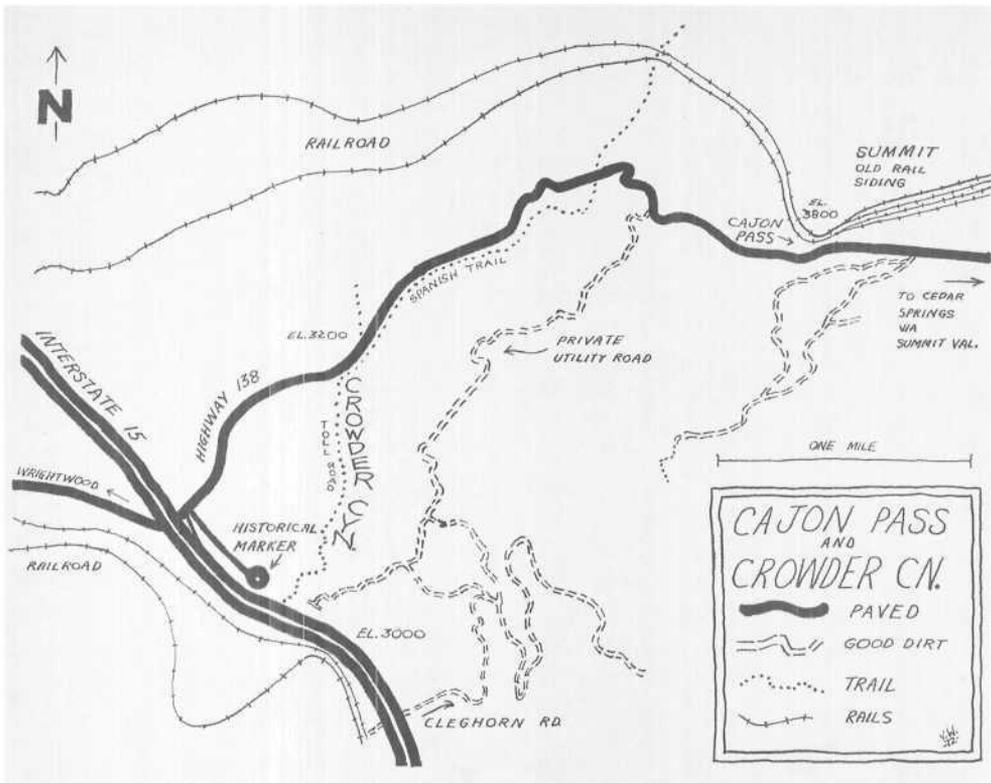
Each major flood in this region (1862, 1885, 1916, 1938, 1967) did great damage to the topography of Cajon Pass, violating even the best engineered roads across these mountains. It takes about 45 minutes via Interstate 15 from the Victor Valley to San Bernardino today. In the 1920s it was a half-day trek. In the 1890s, long before the National Old Trails Highway program, it was often an overnight affair. It took the Mormons, in 1851, one month to lower their disassembled wagons down a quarter mile ridge near the summit.

An active and gracious living testimony to the rigors of Cajon Pass is Mrs. Claire Beckmann. Employed as Secretary to the Principal at Victor Valley High School, Mrs. Beckmann remembers the days in the early 1920s when going between her family's homestead in Apple Valley and San Bernardino added a few bruises to one's posterior:

"From our ranch in Apple Valley to the top of Cajon Pass was the pleasant part of our journey to San Bernardino in the early '20s—unless the weather was cold and windy, in which case the side curtains on our Model T did little good. Then, one could only bundle up as best he could and try to keep from turning blue. Of course, there was the ever-present dust, ruts, and bumps of the dirt roads

continued on page 42

AND TURNPIKES





Sandy Trails to Adventure

by Walter Ford

Walter Ford shows Jack Pepper water hole at Seventeen Palms oasis.

EXTENDING WESTWARD from the Salton Sea in California's Imperial County is a series of washes that once served as highways to adventure for seekers of gold in the badlands beyond. Adventurous travelers still follow these sandy trails, but their numbers have been augmented by searchers for wealth of other sorts: the serenity of secluded palm oases, the solitude of steep-walled ravines, and the fragile beauty of deserts in bloom. These are the riches sought by many off-trail desert travelers today.

Arroyo Salado, one of the longest washes west of the Salton Sea, penetrates deep into Borrego Badlands. At about six miles from State 86 it divides into two sections. The north fork swings upward to cross the old Truckhaven Trail where it descends from the mesa above. The south fork continues past the Seventeen Palms turnout, then on to Arroyo Salado campground. A short way beyond it meets the Borrego-Salton Seaway.

Examples of oddities in stone known as "concretions" may be seen protruding from the walls along Arroyo Salado and

on the adjacent mesas. In former years they were scattered around so profusely that with a brief search you could locate practically any shape your imagination could conceive. The failure of some visitors to realize that concretions are an inherent part of the desert scene and carry them away, has reduced their number considerably, but it's still a fascinating area to visit.

The beach line of ancient Lake Cahuilla cuts across Arroyo Salado. Storm water flowing over surrounding mudbanks occasionally uncover old campfire sites containing bits of bone and charcoal from depths of several feet. This camp debris may have been left by dwellers along Lake Cahuilla, or their history may reach back still further before the inland sea was formed. It's an interesting spot for weekend archeologists to explore. However, remember that digging within the Anza-Borrego State Park is prohibited.

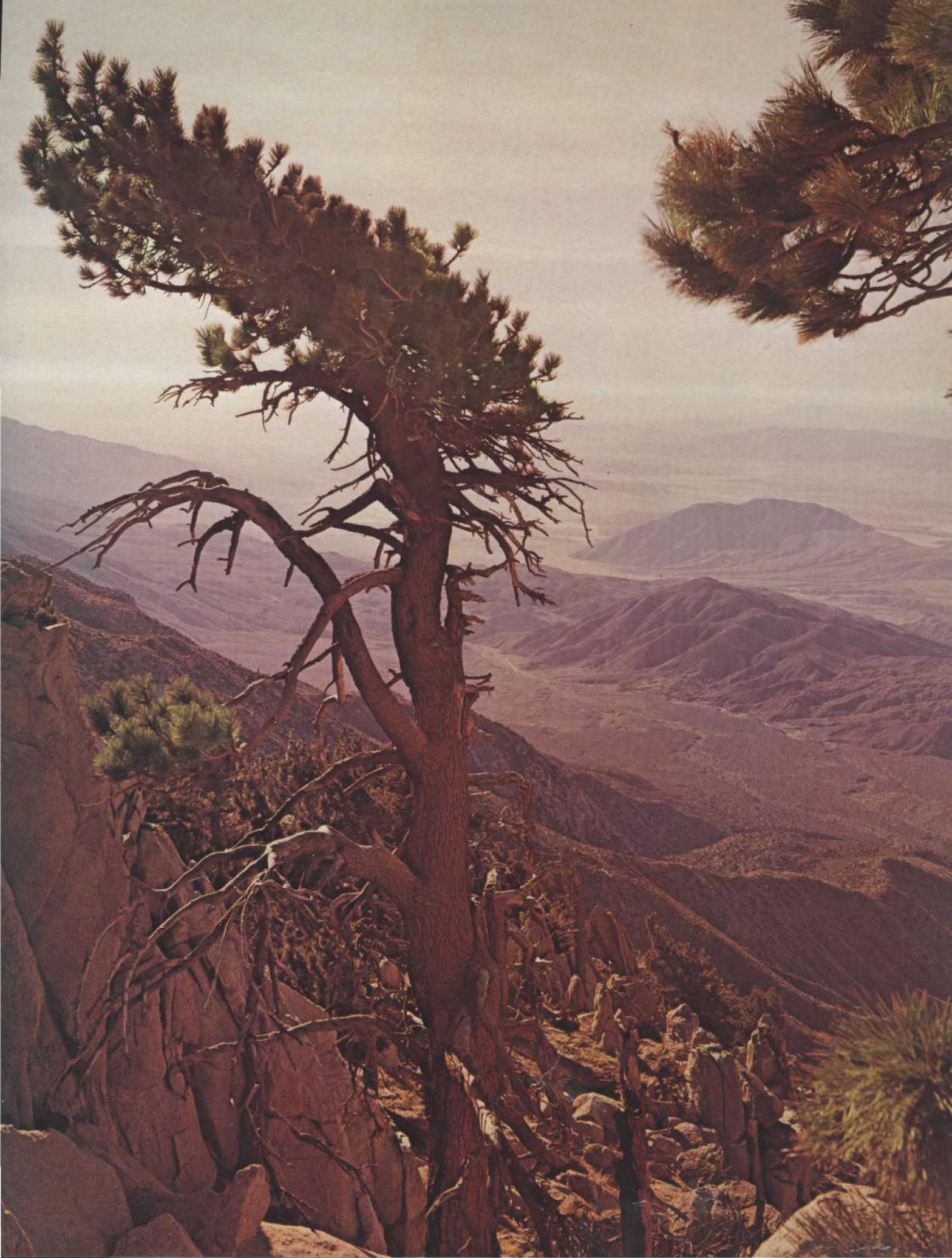
Seventeen Palms Oasis, which lies 12.3 miles west of State 86, has long been a source of water for wayfarers passing through the region. In describing its

spring for the U.S. Geological Survey in 1909, Walter C. Mendenhall wrote: "When the spring is kept open the water is fairly good, but it becomes bitter and bad by neglect and disuse. The soil is impregnated with alkaline and salts."

Anza-Borrego Park rangers try to keep the spring open and free from pollution. They know how important its water is to wildlife of the region and that, in spite of its unpleasant taste, it is capable of saving human lives.

On a warm spring day I found a note at Seventeen Palms, written in Spanish, which read in part, "We were four companions, lost and dying from thirst and God directed us to this little waterhole." The note was dated March 8, 1951, but the scene could be reenacted any day with only a change of characters.

On the north side of Arroyo Salado, 1.9 miles west of Seventeen Palms, there is a clay hill that once contained a large cave and a mine shaft in the floor of the cave. Over the years the shaft gradually filled up. In 1929, A. A. "Doc" Beaty of Borrego Springs used the cave to store food



in while his crew built the original Truckhaven Trail. The cave became known as "Beaty's Ice Box." It has since collapsed, but the hill remaining still carries the original name. The late Bill Schnocka, old-time prospector of the Badlands, once told me a buried treasure story about the cave that had sinister connotations not contained in the typical lost mine tale.

Bill said that back in the early 1900s, a prospector was known to make frequent trips into Borrego Badlands and return with enough gold to meet his needs. One day he left a companion in camp at Seventeen Palms to return within two hours. He

was never seen again. The incident was a topic for speculation among prospectors for years, then came a day when one of them concluded that only one place in the area could swallow a man so completely.

Either through accident or foul play, the missing man and his gold had to be in the previously overlooked shaft. The word got around but by that time the shaft had filled in completely and was beyond reopening with ordinary means. And so it remains today, a tomb for a man and his treasure, or just the last resting place of a myth.

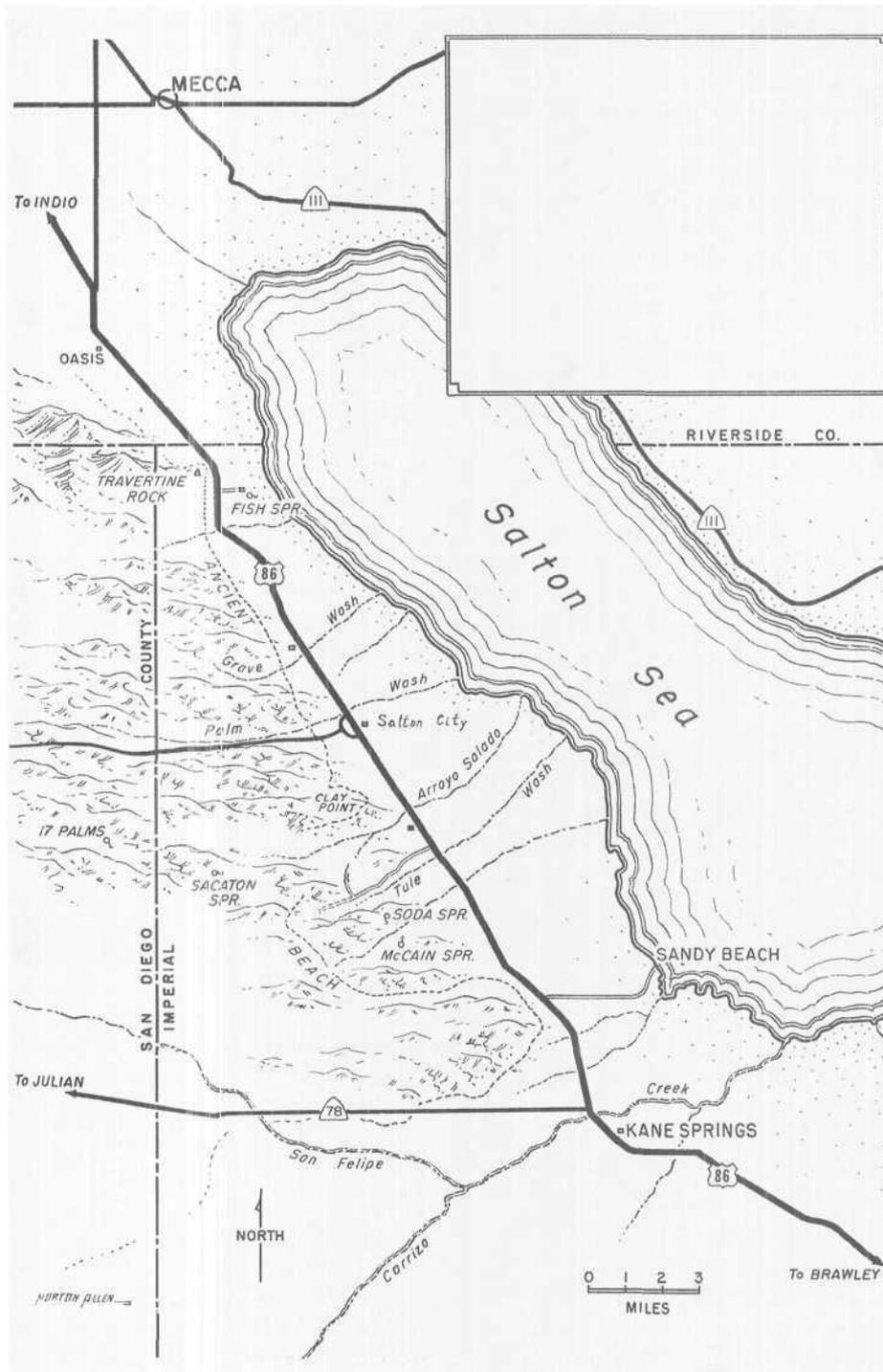
A trip through Palm Wash can be an

exciting adventure. You can wander over the floor of an ancient sea and search for fossilized remains of creatures that lived beneath its waters. You can look for the bed of a river which geologists believe once flowed southward through the land, or try to solve the mystery of the footpaths that thread across the mesas. If you seek solitude, there are deep ravines to explore where the only sound you hear will be that of your own breathing.

To enter Palm Wash drive under the bridge 0.8 miles north of Truckhaven, and proceed westward approximately 3.8 miles. Here a fire-scarred palm trunk and two small trees mark the location of a prominent landmark and waterhole of other days. The oasis presents a forlorn appearance today, but hopefully the young palms may escape the fate of the parent trees and grow to restore it to its former beauty for future generations to enjoy.

Desert washes may be located by numbers on the bridges that cross them. Those described are: Arroyo Salado, 58-13; Palm Wash, 58-46; Grave Wash, 58-48; and Big Wash, 58-50.

Four Palms Oasis lies hidden beyond a ridge about one mile south of the burnt palm. During winter and spring months, if there has been sufficient rain, water from a spring beneath the palms cascades down to a pool about ten feet below. It's a delightful spot for a picnic, lunch, or just idle dreaming.



Back in 1940, an old-timer, lolling in the sun at Truckhaven, told me about a still that was operated at Four Palms during Prohibition days. "It wasn't easy to reach," he said, "but it was the only place around here a feller could get a drink. Don't know what happened to the owner - disappeared one day and never came back. He was making good money, too." Most likely the answer could have been found in court records of the day.

Road maps show the beach line of Lake Cahuilla crossing Palm Wash less than a mile west of State 86, but there is evidence in the upper reaches of the wash that an arm of it extended six or seven miles further west. Clay sediments and petrified wood tell of the area's submergence in the inland sea and trees which turned to stone along its floor.

About nine miles west of the highway a tributary leads off from Palm Wash and continues northward to Sheep Tank, an historic waterhole of the region. An Anza-Borrego Park ranger said the distance to the tank was 1.5 mile, but recollections of previous visits make it somewhat more. However, in either event, when you see a large arrow and the word, "gold" carved in the canyon wall, you will have traveled the right distance.

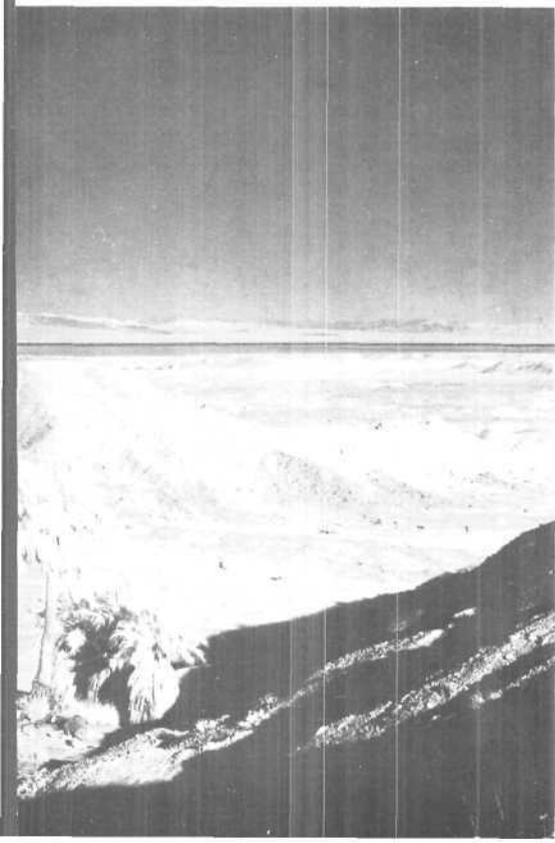
The waterhole is a short distance up a side wash on the west. Occasionally boulders moved into the wash by flash floods prevent driving all the way to the water-

hole. When that occurs, walking can have its compensations. When there is no car noise to frighten them, desert bighorn sheep may be seen in the wash below their watering place.

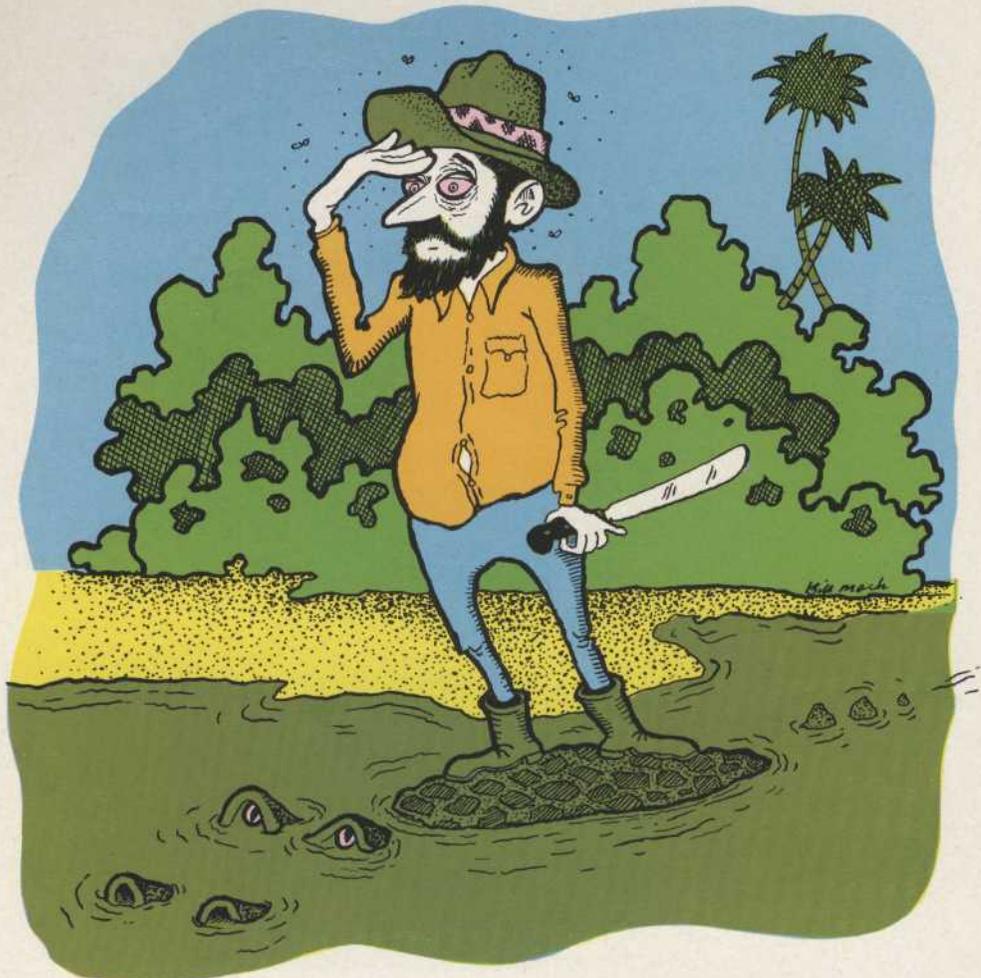
Up to a few years ago, there was a sign carved in a wall near the waterhole which read: "Water found here by N. N. Nunn and H. D. O'Neil, March 9, 1889." As reported to me by another Anza-Borrego Park employee, a neophyte ranger was told to remove unlawful signs within the park. He interpreted his instructions too literally. When a co-worker found him he had chiseled away all but one name and the date of the historic sign. I was told that he left the park service shortly after.

Grave Wash was named for a grave that was located at a side of the wash. The late Judge C. A. Routhe of Ocotillo Wells told me that a pile of stones that origin-

continued on page 42



Cove near Four Palms (left) is good camping area. Baylor Brooks (right) inspects the word "gold" made by an unknown prospector in Palm Wash. The author (top, right) uses a metal detector to search for the famous Lost Pegleg nuggets. One of the many beautiful washes with smoke trees (above) in the Anza-Borrego area.



An explorer always looks forward . . . ever alert for the jungles hidden dangers.



An explorer always

DIARY OF A JUNGLE

THE ISLAND of the King, "La Isla del Rey," a low-lying, jungle-choked narrow strip of land across the estuary from the Mexican fishing village of San Blas, has had an interesting and bloody history.

Once the site of a major Spanish fort, the frequent stopping place for marauding pirates, and the possible home of the legendary ruler, Nayar the King, the man who gave the state of Nayarit its name, the island is a fertile ground for explorers of all types.

The island's many rocks are studded with Indian petroglyphs that are certifiably pre-Aztec. There art tumbled boulders scattered across the tiny isle that may

be the incredibly ancient remains of a walled city or huge fortress. It is also the resting place of the mysterious triangular stone, inscribed with cryptic symbols, that my expedition discovered.

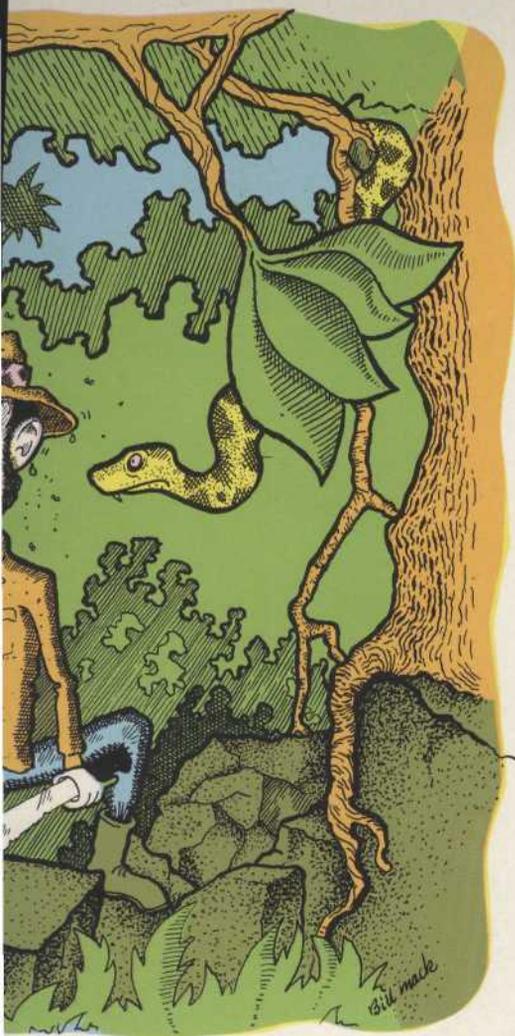
First rumor of the existence of such a curiosity came from the gnarled boatman who ferried me across the narrow estuary where I had been making drawings of the convoluted petroglyphs that are hidden in the lush jungle foilage.

Ramon, the dugout driver, casually mentioned that there was a stone, partially covered by the roots of higuera, a native wild fig tree, that was different from the usual run of Indian artifacts. He, himself, had not seen it, but the many Huichole

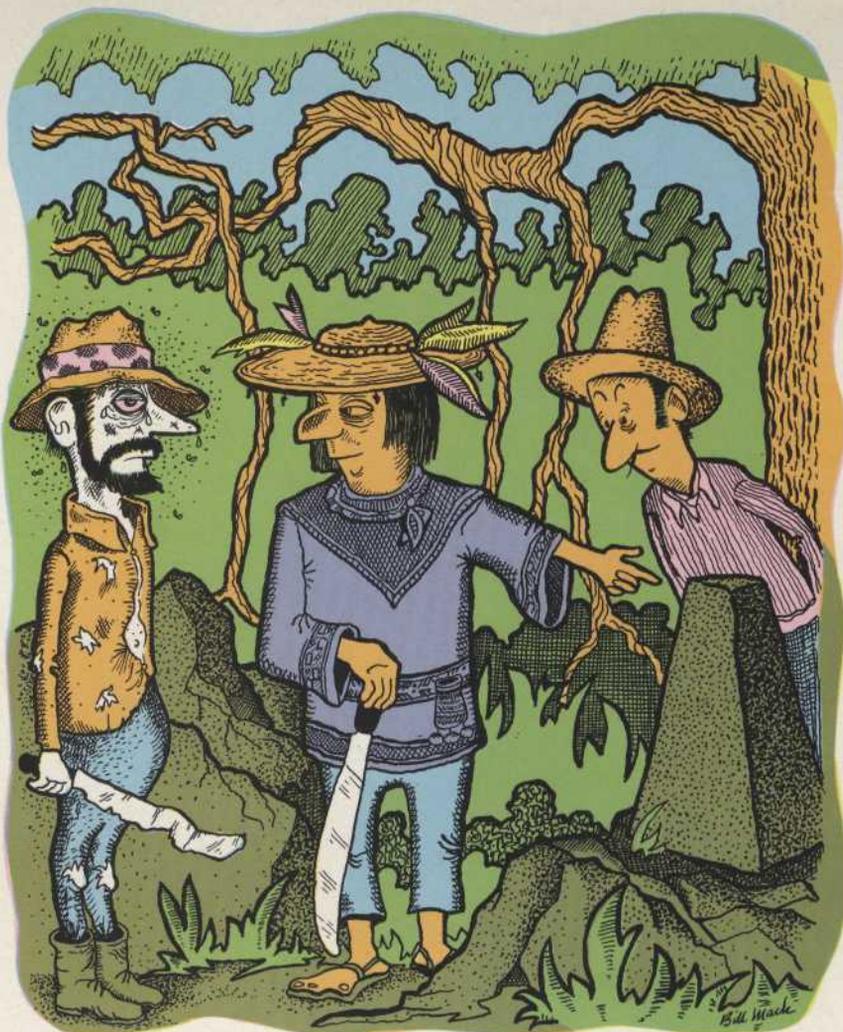
Indians he had taken to the island for their sea worship ceremonies knew of its existence and whereabouts.

Ramon could only guess that it was near the tiny coconut plantation in the island's center and generally located near a stand of large rocks and several wild fig trees. It was, he said, very difficult to get to as the jungle, with its twisted vines and heavy undergrowth, made each step a machete swinging ordeal.

The trails that criss-crossed the island were not maintained and even those in regular use were so rapidly overgrown by the encroaching foliage that they were difficult to traverse. But his story had fired me up and before our cedar canoe had



rules in the face of danger.



An explorer always must expect small disappointments.

THE EXPLORER

by Bill Mack

touched the shore, I knew that I was going to find that stone.

And find it I did. With it I found new knowledge of jungle survival. The first rule of survival is "don't go." If you want jungles go to Acapulco or Puerto Vallarta, rent a room in the Hilton, and gaze toward the horizon (landward, of course). There in the distance is the jungle, just where it should be—in the distance.

The second rule is if you hire a native guide, make absolutely sure you don't hire a part-time Huichole Indian.

As a natural rebel I disregarded my own rules and have become famous in Mexican archeological circles for my discovery. The story of the legendary stone

has been told and retold throughout Mexico and, for all I know, throughout the world. Whispered silently in museums, shouted across the excavations of Near Eastern archeological digs, boomed across the decks of scientific expedition boats and snickered at in college classrooms, it is a tale wrought with bravery, fierce hardships, dedication, loyalty—and sheer stupidity.

Preparations for the expedition were quickly made. Inasmuch as I lived in San Blas there were no problems with a base camp. I had all of the approved jungle gear, a razor-sharp machete (made, as I found out, from recycled aluminum foil), a gallon of insect repellent and snake-

proof boots.

The boots were also foot-proof, refusing to bend at the places boots are supposed to bend. I walked around like a stoned Frankenstein monster, a fact that probably made the boots reptile resistant. Any reptile with a grain of sense would flee in terror to avoid being smashed by those gargantuan *zapatas*.

The major problem was securing an authentic Huichole Indian. These colorful highland dwellers are extremely reticent to do anything for anyone, particularly a gringo. They aren't any more civil with the Mexicans either. Fortunately, our little town had a resident Huichole. He was an Indian on weekends only as he

was employed as the primary school custodian during the week. But he was a genuine Huichole and grudgingly admitted knowing of the whereabouts of the stone.

I expiated his fear of the ancient gods by a ritual ceremony used by explorers the world over. It is an impressive ceremony. It consists of slowly reaching the right hand to the right hip pocket and, with great solemnity, plucking a fat wallet from its resting place.

With a murmured chant of "how-muchhowmuch," several greasy Mexican ten peso notes are ceremonially tendered toward the stolid Indian who, with the cupidity and corruption gained by the association with the white eyes, snatches the proffered loot with a speed that would bring tears to the slitted eyes of a bushmaster. The ceremony is completed by his low chant of "moremoremore," and is accompanied by the moneyman's ritual shaking of his head and subsequent retreat to the nearest cantina for a drink of watered tequila. So much for ancient customs.

With my gear in order, my Indian guide in tow, I marched bravely down the main street of San Blas toward the boat landing with Daniel, the Huichole, tagging behind. It was a sight of rare derring-do and was greeted by the street loungers who gave us the Mexican hand signal for a happy journey — the index finger pointed at the side of the head and slowly rotated.

Once on the island shore, Daniel and I began our survey. Daniel, smelling highly of garlic which he had rubbed all over himself in the preposterous primitive idea that it would repel insects, pointed toward the horizon where a grove of higuera tree tops could be seen. It was, as Ramon had indicated, close to the coconut grove, so we decided to take the main trail to the grove and cut inland from there.

It was fairly easy walking with the exception of the vast swarms of jejenes (a tiny gnat sometimes called a "no-see-um") that hovered about my head. I had liberally dosed myself with a super space-age technologically superior insect repellent.

And it did work—for about three minutes.

As perspiration ran down my face, the knowledgeable gnats began their attack. The sweat was doing a magnificent job of washing off the repellent. Daniel, smelling like a rancid stew, was unaffected by the millions of flying, biting and crawling horrors that make the Mexican jungles such a fun place.

At the plantation our expedition was joined by Miguel, a doe-eyed and black-mustached renegade who was hired to help us hack our way toward the fig trees.

It was work of the most repulsive kind—hard. Every step was accompanied by arm-swinging, muscle-busting machete work. After about an hour I found that, by some mysterious scientific principle I didn't quite understand, my machete had become noticeably heavier. It was, at this point, about 240 pounds, a figure that continued to increase as the day wore on.

Our frequent breaks were enlivened by Miguel who told of his mighty prowess with the local girls. The fact that there were no local girls did not deter him, and his stories became more lurid and disreputable with each pull at his gourd canteen. The gourd was filled with fermented coconut juice, a beverage much favored by plantation workers, the mentally disturbed and masochists.

That night we made camp under the shelter of a large overhanging rock and, despite the insects, slept like pole-axed hogs. The first crack of dawn, as the travel writers say, we literally oozed out of our blankets. The jungle night dew had saturated everything and my snake-proof boots had turned an alarming green suede from the overnight mold.

The second day was a real buster. Hacking and crawling, we managed to stumble into the grove of higuera trees about 3:00 P.M. and immediately flopped down for a siesta. We needed it, especially Daniel. The eagle-eyed Indian had bumped his head with that of a seven foot boa who was sleeping on a branch, his head dangling down toward the trail. With an innate wisdom born of his Indian ancestry, the stolid redskin stopped dead still and viewed his adversary. The snake did likewise.

It was at this point that Daniel displayed his good sense. He got the hell out of there with all of the speed that a hyped-Huichole could muster. The snake, still a little drowsy, went back to sleep, head



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dangling, and dreaming, no doubt, of fat iguanas and girl-type snakes.

Miguel was first to arise from our soggy siesta bed. He shuffled around the area, obviously in search of fermenting coconuts, and his groans woke Daniel and I from our stupor. Suddenly I realized that this was the moment that every explorer savors—we were within reach of our goal. While we hacked around the surrounding growth, I let my thoughts wander. Would this stone prove to be another Rosetta Stone, the unraveling of the mysterious hieroglyphic writings of the shadowy ancestors of the Aztecs? Perhaps they would name it for me, although I had to admit that the "Mack-Stone" sounds more like a trade name for a second rate grinding wheel.

While I was so occupied I heard a shout from Daniel. He had found it! I raced toward where he stood, a look of great pride etched all over his bronzed face. He was holding the branches of a large bush away from the object he had uncovered.

There before my eyes was a geometricaly tapered object, approximately two feet tall, pyramidal in structure, its incised lettering obscured by jungle lichens. Daniel had hacked off several of the encompassing higuera roots and I knelt down to gently remove the lichens. As I put my hand around the tiny pyramid my fingers felt its grainy, and slightly familiar surface. It was an entirely different stone than is native to the island. As the lichens were brushed away I read the fabled inscription:

75-1

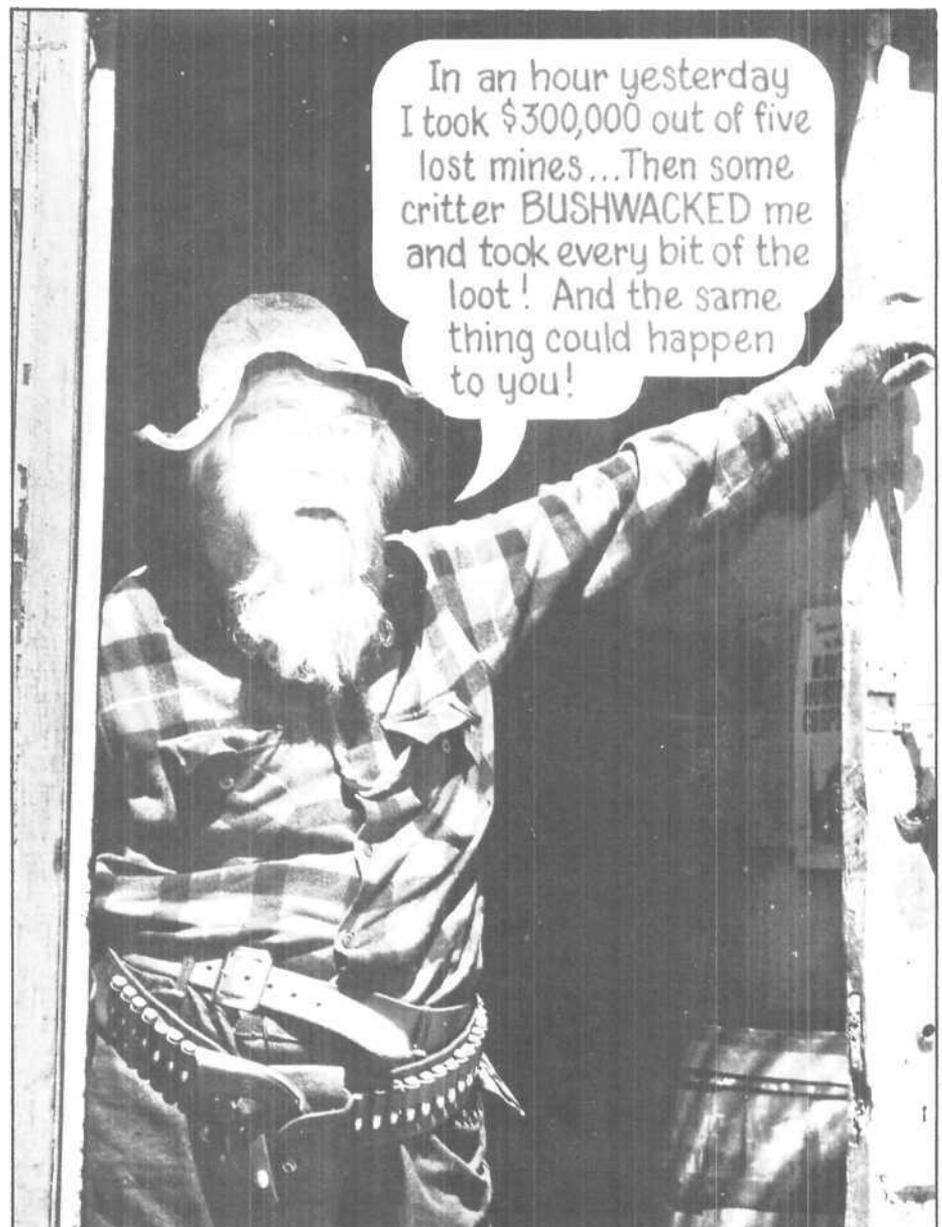
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Mexico, D.F.

We had discovered the famous, mysterious and legendary stone that only the Indians and about 10,000 civil servants in Mexico knew about. It was a concrete geodetic survey marker placed in the jungle by the enterprising Mexican Department of the Interior.

Fermented coconuts have a tangy taste, and once one has become accustomed to their undeniable side effects, are quite good. They also have excellent nutritional properties especially for those of us who have retired to the interior of the island to escape the crude and vulgar horselaughs of our colleagues.

Things aren't all bad however. Tonight, Miguel and I are going out and look for girls. □

December 1972



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Desert GOES TO A

Although it was a down-to-earth affair, most of the participants seemed to be out of this world last month during the 5th Annual West Coast Championship Treasure Hunt which is sponsored by the Prospectors' Club of Southern California.

The reason it was "out of this world" is that metal detector enthusiasts and treasure hunters live in a world of their own when they are out in the back country. And at their annual get-together they happily relive their adventures of the past year. During the three-day convention they lived, ate—when they took time—and talked (some with pretty tall tales) treasure hunting and coin shooting.

More than 1,500 enthusiasts from the Western states in 320 vehicles of all sizes and descriptions (including one airplane which landed on the asphalt highway and taxied into the camping area) converged on Galileo Park, near California City, for the family outing.

The two main events were the Ladies Metal Detector Contest and the West Coast Championship Treasure Hunt. A week prior to the convention, P.C.S.C. officials had planted thousands of silver-painted pennies in areas which were not disclosed until just before each competition. Within the limited time, the contestant who found



Galileo Park in the Mojave Desert (above) provided ample room for the Treasure Hunt. Below are contestants in the Ladies Metal Detector Contest.



Part of the 110 "coin shooters" at the ready line (below) prior to the start of the Championship Treasure Hunt. Murray Hirota (right) directs gold panning event.



TREASURE HUNT

by Jack Pepper

the greatest number of planted coins was the winner.

Metal detectors of all makes and sizes are used in the competitive events. However, as one P.C.S.C. official pointed out, "it is like racing automobiles—it is not so much the metal detector itself, but a combination of luck, experience, knowing your detector and what it can do, physical stamina, plus the right approach."

Other events included the junior and adult gold panning contests, supervised by Murray Hirota, the World Champion Gold Panner, and the overall Prospectors' Olympic in which points are awarded for gold panning, metal detecting, drywashing and mineral identification.

Between the adult events were activities for children, and, between activities, visitors and participants were able to see the newest innovations in metal detectors and treasure hunting equipment displayed at booths by dealers.

During the Saturday night program films were shown by Bill Mahan of D-Tex Electronics and Charles Garrett of Garrett Electronics, both traveling all the way from Texas. Karl von Mueller, well-known treasure hunter; Johnny Pounds, editor and publisher of the popular *The Treasure Hunter*, and Jack Pepper of *Desert Magazine*, were guest speakers.



Using all types of detectors, women (above) search for coins. Convention speakers, left to right, (below) were Johnny Pounds, Karl von Mueller and Jack Pepper.



It was a family affair. While adults used metal detectors, the kids (below) used their hands to find coins scattered by P.C.S.C. officials. It was finders keepers!





Bobbie Walters



Murray Hirota



Micky Hirota

*Desert's roving
cameraman catches
contestants (above)
in action.*

*Winners in the
youngsters' contests
(right) were
Tim Chapman,
Robert Hande
and Peggy Lansberry.*



*Bob Soebner, right, winner of the gold panning contest, receives
congratulations from Mickey Hirota, world champion gold panner.*





Rachel Handley



Larry Hoover



Ken Yerty



Winners in the Ladies Metal Detector Contest (left) were Micky Hirota (1) Aloha Pepper (2) and Edna Murbach (3).



Winners in the West Coast Championship were, left to right, Don Pepper (1) Len Burkett (2) and Don Chapman (3), who was also the overall Olympics winner.



Photo by Jack Turner

The Feathered Desert Xerophile

by K. L. Boynton

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LIKE SALT and pepper, cactus thickets and wrens go together, and the pair—some has long been a familiar sight to desert travelers. Yet nothing much was known about the bird until the Andersons—a husband and wife team of scientists—reported their investigations made near Tucson. They were some 20 years observing and studying the cactus wren, and their monumental work provides the foundation for research going on today.

On the face of it, all this seems a big-to-do about a bird whose conservative brown and white-streaked and spotted feathers are far from fancy and whose rusty buzz-saw song, while loud and lusty, is scarcely dulcet.

The truth of the matter is, however, that in the cactus wren you have something special: a true xerophile—a lover of dry places who lives by preference amidst spiny cactus and thorny shrubs the year around, and whose offspring

arrive batch after batch in the desert's summer when the temperature is the highest and no free water available.

While some desert birds exist by making long flights to water, the cactus wren doesn't bother. Nor does he use the cactus for moisture nor water that might be found in old woodpecker holes. True, he is an eater of insects, a diet which provides preformed water for him, but so are many other birds that can't make it in the desert. Unlike them, he has developed a pattern of behavior to exploit desert living to the fullest and with the least expenditure of energy. And, through the ages, his clan has developed a reproductive strategy that makes family raising under the stressful conditions of high temperature and water deprivation a cinch. Hence the continuing scientific delving into how the bird does it.

One thing becomes immediately apparent: in cactus wren circles, nest building is THE BIG THING. It goes on the year around. Summer and winter, each adult—male or female—sleeps in a nest of his own. He may indeed build a new one for himself whenever the mood dictates, and at family raising times, additional nests of the same design are built for nurseries.

Old in construction know-how, the cactus wren leans to the modern in taste, for his edifice is a pouch-shaped affair resembling a milk bottle laid flat in the crown of the cactus. There is an entrance at one end, reached by a handy landing twig growing nearby, and the doorway itself, pointing outward, is surrounded by a protective circle of bristling spines. Inside the entrance is a vestibule and passageway leading downwards to the bulging nest cavity proper, which is comfortably lined with a padding of feathers worked into felt-like thickness that keeps the cactus spines from sticking through.

Architecturally sound, the nest has a foundation floor well supported by twigs, and a sturdy skeleton framework carefully put together with coarse grasses and shredded yucca fibers. It takes about two days to build, most of the work being done in the first two or three hours of the morning with operations getting underway well before sunup.

Besides being a fine example of wildlife craftsmanship, its construction style is a compromise for desert conditions where the daily fluctuation in temperature may be more than 68 degrees. The nest is, in short, a major reason for the

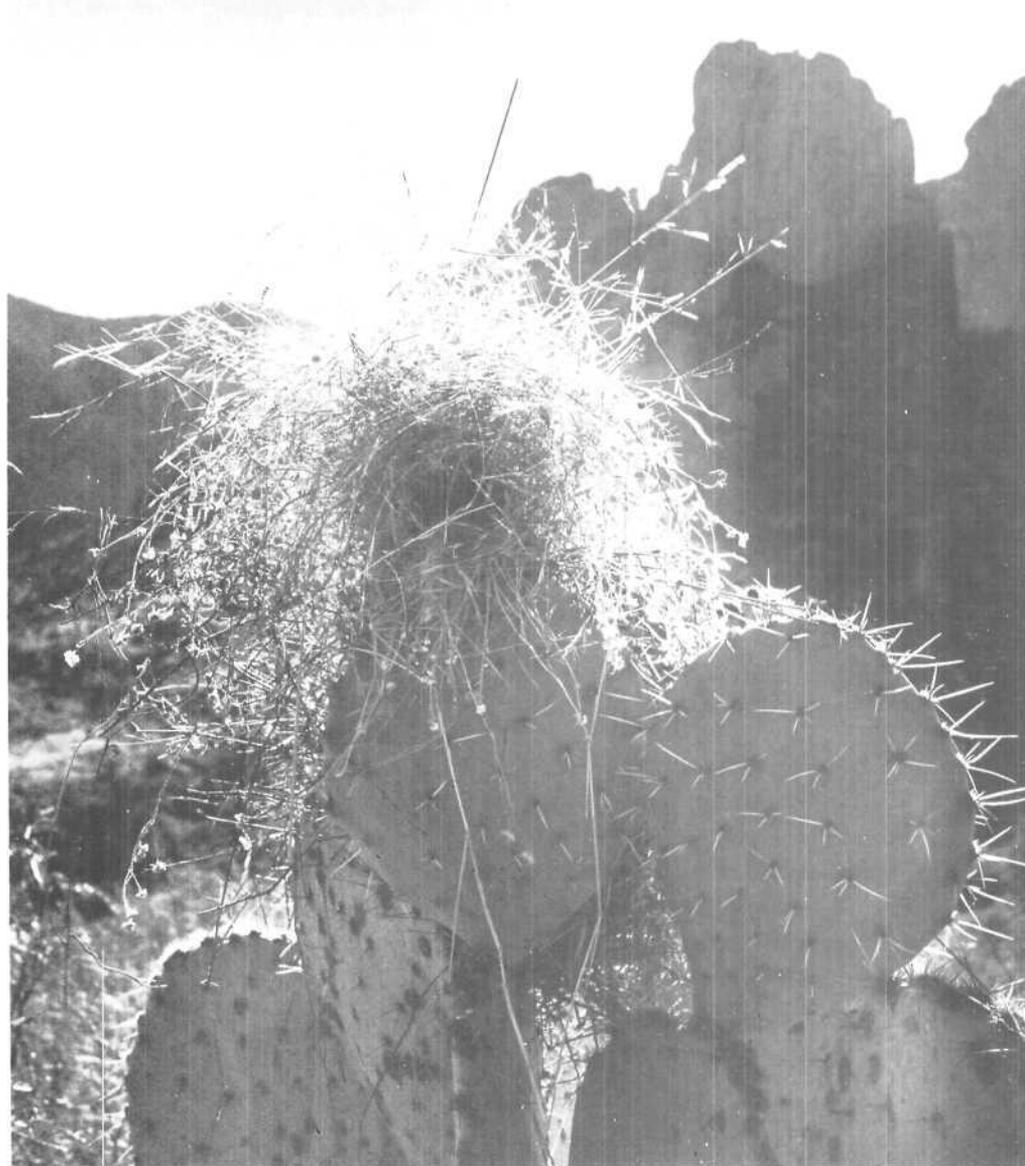
bird's success. Enclosed, it helps retain heat in cold weather. In hot, it provides an umbrella from the direct rays of the sun. Its feathered architect obviously knows that location is the prime factor in any real estate venture, hence the nest placing gets first attention. During the cool parts of the season, the wren orients his nest to avoid the wind. His hot season nest, on the other hand, faces into the wind, and the resulting air conditioning reduces the temperature inside considerably.

Since the breeding season of these birds runs from March through August, and what with two or perhaps three broods being standard, much of it has to go on in the hot time of the year. Then it is that the enclosed nest plays an increasingly important role in species survival, for its location and construction is critical to the correct temperature regulation of the

young. Keeping nestlings warm enough and cool enough is always a problem.

At birth, cactus wren hatchlings, like other altricial birds, are cold blooded and cannot generate their own heat. They must be brooded even in hot weather, and surrounded with warm air for at least seven days while they are gradually developing their own heat-making machinery. The enclosed nest is a snug one, and its insulated warmth greatly reduces the amount of energy the little fellows have to expend to keep warm while developing their temperature controls.

To make things tougher, however, the nestling period is an extra long one of some 20 days and during this period changes in the temperature regulation system of the nest must be made. Heat is added quickly when an adult is brooding, and heat is conserved by nest insulation and the huddling of youngsters. All this



This cactus wren home is also an artistic design. Photo by Henry Tefft, Jr.

is fine in cool weather. But these same things, nest insulation, infant huddling and adult brooding, while essential for chick welfare, also slow down heat dissipation and this causes a serious problem in summer's high temperature. Now heat must be unloaded from the nest lest the chicks become too hot. What to do?

Cactus wrens, wise in desert living, solved this problem long ago by a combination of adult and nestling behavior patterns used in conjunction with their enclosed nest, and it seems don't overlook a bet. Take just the matter of waste materials deposited by the young, for example. Fortunately cactus wren fecal matter is delivered in neat little sacks which are hauled away promptly by the parents. That is, early in the season when the temperature is cool. But in the hottest time of year, things are different. The parents, formerly neat as a pin in nursery house-keeping, suddenly cease their disposal service, and the fecal sacks are retained in the nest.

Observing this sudden sloppiness so contrary to wren nature, caused the team of biologists Robert Ricklefs and Reed Hainsworth to raise their eyebrows very high, and they knew that somewhere there had to be a reason. Subsequent investigation showed the feces to be com-

posed of about 66 percent water, and that when a nest has three or four growing nestlings in it all eating heartily and not housebroken, it is going to get an accumulation of feces-water in the bottom of it in no time at all. The presence of this water, tests showed, can lower the nest temperature as much as three degrees.

Feeding technique is another slick behavior trick that shows the cactus wren's first rate adaptation to desert conditions. With the enclosed nest to protect the youngsters from the direct rays of the sun, the adults have more time to forage for food for the family. They go at it in a surprisingly scientific fashion. Insect eaters, they work from dawn to dusk, hunting actively on the ground, overturning small stones looking for choice tidbits, flying to mesquite, catclaw, creosote, paloverde, to check branches and foliage for menu items.

But where they hunt is closely keyed to temperatures. When conditions are cool, they work the very warmest spots in their environment—the open places on the ground with no shade and where the sun gets the insects going early. As the day's temperature starts climbing, the birds move out of the sun, tackling the slightly shaded areas next. Finally, during the hottest part of the day, they put their attention on trees with the thickest foliage. Late afternoons and evenings find them back in warmer, open areas looking for end of day snacks.

The matter of grocery delivery to the nests being all important, Ricklefs and Hainsworth set about finding what the schedule was. They fixed up some 16 nests so that the birds had to land on perches that triggered recording devices and they found that, like everything else, feeding of the youngsters is geared to tempera-

ture. Until the day reaches about 95 degrees, food is shoved into the young on a fast paced schedule, but as the temperature climbs, deliveries begin to slow down until at 113 degrees the adults call it all off and sit quietly in the shade themselves.

What about the youngsters then? Well, with the umbrella over their heads and air coming in the front door, they're set to handle their own problems. When the nest temperature hits about 98 degrees, their body temperature begins to rise, too, and keeps pace. But it always lags behind that of the air. Up the air temperature goes, and so does that of the small nestlings, but still lagging, thanks to their big areas of bare skin and slow warm-up rate. When the nest gets a hot 104 degrees, the youngsters open their big mouths and, panting, make the most of this wide expanse of evaporative surface to unload heat via their lungs. When older, they also hold their wings away from their bodies. Their ability to stand high body temperatures, plus their means of dissipating excess heat by evaporation, enables them to stay a degree or two below even a hot nest temperature of 111 degrees.

Thus it is that adult and youngster alike avoid heat stress and water loss, and why these cactus wrens can live where there is no free water. Hence the dry, hot desert is wide open for them.

Interesting enough, although many wren families live in close proximity, time and energy consuming quarrels are held to a minimum, thanks also to behavior. Territories are set up in January, the lord of the coming household announcing his establishment of boundary lines by pre-sunrise "singing" a harsh and grating racket clearly heard 1,000 feet away, and delivered with such vigor that the feathers of his neck stand out from the internal vibration. The lady of the house takes care of expelling other females from the vicinity and once the breeding territory is established, it is maintained as a roosting area for the pair for the remainder of the year. This system works fine, limiting the number of pairs in the immediate vicinity and keeping the pairs together. Not that boundary disputes never happen. Indeed, they do, with noisy battles taking place in the air with much fluttering, grabbing with bills and feet and furious pecking. They always end in a draw, each contestant retiring hastily to a spot well within his own territory. The Andersons were

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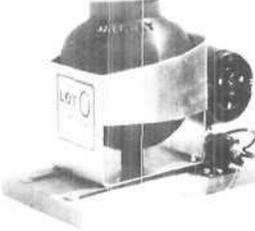
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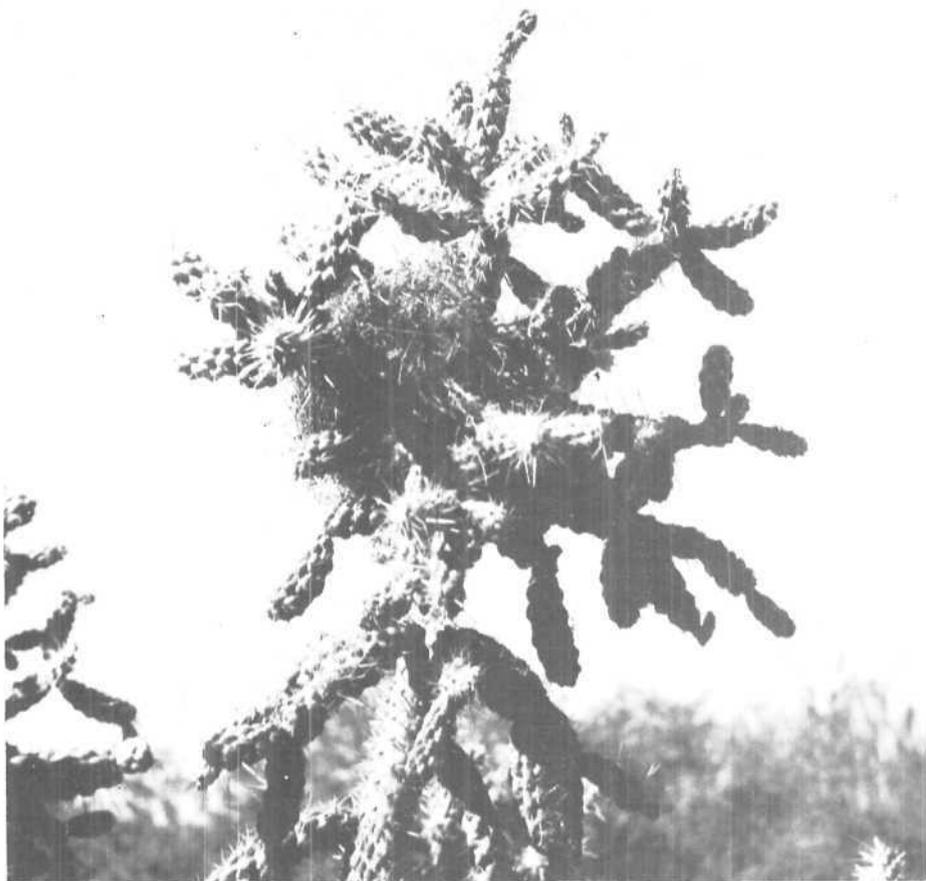


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A cactus wren desert penthouse also provide protection.

amused to see that fledglings stayed within their family territory, probably because their parents were there and hence the food supply. But if perchance Jr. did wander across the line, squabbles with neighbors promptly ensued, involving whole families.

What with woodrats destroying nests, ground squirrels eating the eggs and probably the young, small owls and curved bill thrashers tearing up nests, the wrens have their trouble. But surprisingly, many pairs have 100 percent success in raising three or four clutches a year. They are a vocal lot, constantly keeping in voice contact, warnings being frequently sounded, rising to a frantic buzzing if a roadrunner is sighted. At fledgling time, the adults sing to the young, apparently directing them to leave the nest and if this doesn't work, they withhold food—stopping a short distance away with it in plain sight. Junior's empty stomach encourages him shortly to venture forth, and the nest is finally abandoned.

Housing is always short in desert regions and so the ex-nests of cactus wrens are much in demand. Lizards (the *Uta* especially) are glad to move in. A white-footed mouse may do a bit of remodeling

and take up residence. Small snakes are quite apt to become the new householders. And so it is that this big member of the wren family, xerophile that he is and free from the need of living where there is water, provides shelter for desert dwellers less well endowed.

So when his loud and raucous voice shatters the quiet of your camp long before the day has even opened an eye, and, snatched from slumber it seems to you that here, indeed, is a very pushy bird with an exceedingly loud mouth, just retire further into your sleeping bag and let him sing. He's got a big day ahead of him, and all in all, he's a very good fellow for the desert to have around. □

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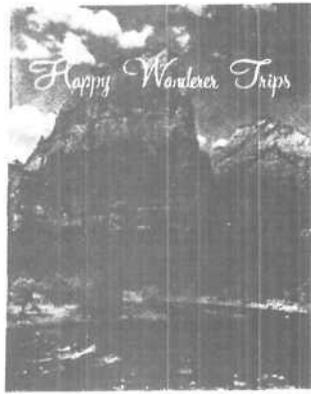
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Nancy Kelsey



Benjamin Kelsey

Nancy Kelsey... Pioneer Traveler

by Marion Holbrook

ONE OFTEN hears a child say, "I can too, do it!" There must have been some of the same childlike determination in the members of the Bartleson-Bidwell party who brought the first wagon train overland to California. They left Missouri on May 4, 1841, with no knowledge of what lay ahead—they only knew California was due west from Missouri.

However, naive they might have been concerning the venture, their determination carried them through. They reached their destination safely six months later, despite deprivations and fears along the way.

John Bidwell, an adventurous young man, just 21 years old, organized the party. (Bartleson refused to go unless elected Captain.) Bidwell's desire to see California had been inspired by fabulous tales told about that area's marvelous fertility and constant sunshine. Though he fired the enthusiasm of several hundreds to begin with, by the time the starting date arrived only 69 members of the Western Emigration Society gathered to make the journey.

They were joined, at the last moment, by a small group of missionaries and fur trappers headed for Oregon who accompanied them as far as Soda Springs in the southern part of present Idaho. There a vote was taken. The majority voted to proceed to Oregon with experienced guides. The rest, 32 in number, put their trust in God and pressed on.

Of that number, there was but one woman. Nancy Kelsey, the wife of Benjamin, was the mother of a baby daughter. Only seventeen, one wonders what prompted this young woman to take such chances with her own and her baby's life. Maybe she was desirous of raising her family away from Missouri where there was constant threat from fever and ague. Wasn't it true only one man in California had ever been known to have a chill? It was said people traveled a distance of eighteen miles just to see him shake!

That this group of people attempted the trip was astonishing. That they accomplished their purpose seems miraculous. A number of humorous, and very strange, things happened during the trip.

"Just a few days after we left Soda Springs," Nancy related years later, "a young man named Dawson rode ahead to scout the trail. He soon came running

back into camp on foot, naked, shouting hysterically that a thousand Cheyennes had attacked him, stolen his guns and clothing. We gathered the wagons into a circle and prepared for a raid.

"Shortly, a friendly-looking group of about 20 Indians rode into camp. They explained it was necessary to disarm Dawson because he became so excited at sight of them they feared he would do someone harm! The company, amused, dubbed Dawson 'Cheyenne' and the name stuck the rest of his life."

The group broke trail where wagons had never been, drove through Cache Valley, now Utah, and in late August entered Promontory Valley where 28 years later the Golden Spike would be driven. They rolled along the dry salt plains north of Salt Lake with the sun beating down upon them. One morning they found a pass across the northwest corner of the lake leading to a beautiful fresh water lake in a valley.

"We were amazed to see this old Indian coming towards us," said Nancy. "He said he had expected us; that he had dreamed of our coming. He seemed filled with joy to see us. We gave him gifts and he turned from east to west with his arms upraised in prayer. It was then the men decided it best to abandon the wagons. Water was scarce and pulling the wagons hard on the animals. We packed as much as we could on the horses and oxen and gave much more to the old Indian. He again implored the Heavens to accept his thanks. I have never seen a happier or more religious man. We all wondered why he lived in that valley alone and how he could have known of our coming."

Even before the party reached Salt Lake City they had consumed all their provisions, existing on what game they could kill. After abandoning the wagons they killed most of the oxen and jerked the meat. Continuing farther they were forced to eat horse and mule meat. By the time the group reached the eastern slopes of the Sierra Nevada, most of them were on foot. One day they ran into a group of friendly "Digger" Indians and traded cloth and trinkets for food the natives offered. They thought it tasty until they learned the sweet morsels were dried grasshoppers and crickets rolled with honeydew gathered from reeds.

During the three weeks it took the party to cross the mountains, they ran out of

provisions and had to live on roasted acorns for two days. When they reached the San Joaquin plains the first game they killed was a fat coyote. Bidwell, who later became Governor of California, wrote in his memoirs that his share was only "the lights and windpipe," but he found it a welcome change from mule meat, roasted it over coals and greedily devoured it. On October 4, 1841, the 32 "Western Emigrants" reached the ranch of Dr. Marsh near what is now Martinez. In December, the Kelseys traveled to Sutter's Fort in Sacramento, taking 15 days to make the trip in a leaky rowboat.

From 1851 through 1859, Nancy and Ben moved around California, buying and selling land. The town of Kelseyville took its name from a ranch they purchased in Lake County. They were in Napa when the Bear Flag war broke out; Nancy provided the cloth for the first Bear Flag and helped make it. Later, they traveled to Humboldt County and helped start the towns of Eureka and Arcata.

In 1861, Ben amassed a large amount of money from a successful gold-mining venture. Intending to buy cattle, they started for Texas. Comanches attacked the camp one day while the men were hunting wild turkey. Nancy and the children managed to hide but she forgot about the money and the Indians stole it. After that, until his death in 1888, Ben was a traveling preacher, spreading the gospel up and down the Pacific Coast.

Until 1888, Nancy Kelsey's life was a series of adventures. "I have enjoyed riches and suffered the pangs of poverty," she related. "I saw U. S. Grant when he was little known. I baked bread for General Fremont and talked to Kit Carson."

After Ben's death, Nancy, a daughter and son-in-law homesteaded in a region in California called the Cuyama, where the counties of Kern, San Luis Obispo, Santa Barbara and Ventura converge. Almost until the time of her death in 1896, she rode her pinto pony over the countryside helping needy neighbors.

Nancy's last wish was to be buried in a store-bought coffin, not a box of boards hammered together. Friends took up a collection to buy the coffin and one of the neighbors drove his wagon to Santa Maria and brought it back. Nancy Kelsey, the first white woman to cross the Sierra Nevada into California, died a happy death. □

Calendar of Western Events

This column is a public service and there is no charge for listing your event or meeting—so take advantage of the space by sending in your announcement. However, we must receive the information at least three months prior to the event. Be certain to furnish complete details.

NOVEMBER 17-19, RIO GRANDE ARTS & CRAFTS ASSOCIATION'S annual show. More than 200 artists and craftsmen displaying original handcrafted items for sale. Indian, Spanish and Anglo cultures represented. Jewelry, rugs, furniture, paintings, etc. Albuquerque (New Mexico) Convention Center. Write P.O. Box 14325, Albuquerque, N.M. 87111

NOVEMBER 18 & 19, RIVER GEMBOREE sponsored by Silvery Colorado River Rock Club, Davis Dam Recreation Hall, Bullhead City, Ariz. Free admission, door prizes, demonstrations, etc. Ample camping facilities. Features chalcedony roses this year. Write Box 431, Bullhead City, AZ 86430.

NOVEMBER 25 - DECEMBER 3, INDIAN ARTS AND CRAFTS EXHIBIT sponsored by Heard Museum, 22 East Monte Vista, Phoenix, Arizona. Exhibits from North American Indians. All entries for sale. Write Doris Heady at above address.

DECEMBER 3, ANNUAL WINTER PHOTO CONTEST, Top of Palm Springs Aerial Tramway. Open to professional and amateur photographers. Prizes, Ten models. For information on this event and others write Palm Springs Aerial Tramway, P.O. Drawer FF, Palm Springs, CA. 92262.

DECEMBER 14 - 17, TOWN OF BETHLEHEM, after famed Oberamorgau Passion Play. Pageant has more than 150 actors from Hi-Desert Playhouse Guild, Joshua Tree, Calif.

JANUARY 11 through 14, THIRD ANNUAL GEM, ROCK & HOBBY SHOW, sponsored by Palo Verde Improvement Association, Palo Verde, California (20 miles south of Blythe on Highway 78). Write Box 95, Palo Verde, CA. 92266.

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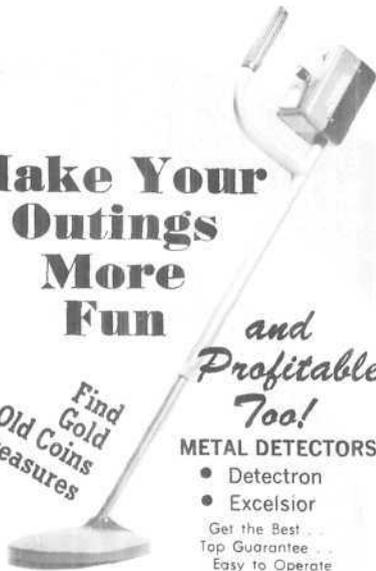
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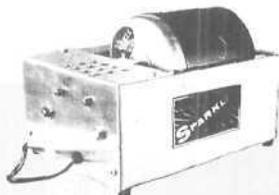
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Rambling on Rocks

by

Glenn and

Martha Vargas

MERCURY

The Other Liquid

EVERYONE THINKS of minerals as solids, and this is usually true. Of the thousands of minerals, only two are found in the liquid state; these are mercury and water. On occasion, asphaltum is found as a thick tar-like material, but because of its highly variable composition, most mineralogists do not class it the same as minerals.

Water, in case you did not realize it, is a mineral, found naturally as the liquid, the solid (ice) and the vapor (clouds). This makes water an interesting substance mineralogically, but that is another story.

Anyone who has handled the silvery li-

quid, mercury, knows of its property of flowing rapidly out of the container or the hands. Thus the common name, quicksilver. It easily breaks up into round globules which roll away and break into smaller globules. The metal has a high surface tension that holds it into these globules, but as it has a high specific gravity (is thirteen times heavier than water) and the slightest shock will break it into smaller pieces.

The name mercury is taken from the name of the Roman messenger of the gods. He was reported to be able to move very rapidly from place to place when carrying messages.

Mercury actually is rare as a liquid in the natural state, and is usually found only as small globules among its ores. The most common ore is cinnabar, or mercury sulphide. In the pure state it is bright red, soft, 2 to 2½ in hardness, and is eight times heavier than water, which has a specific gravity of 8. This is not a common ore, but often forms large bodies. The other mercury ores are much rarer.

There are a number of famous cinnabar mines in various parts of the world. Mercury has been a valuable metal from medieval times. The most important of all are the mines at Almaden, Spain, which have been worked for over 200 years. When extensive cinnabar deposits were found in central California, the mines were named New Almaden.

The next most famous mines are at Idria, Italy, again of old vintage. These have an American counterpart also; New Idria, about one-hundred miles south of New Almaden. Probably the next best known mines are at Hunan, China, but little is heard of them today.

From the standpoint of the mineral collector, crystals of cinnabar are very rare and interesting. Of the mines named above, only the Chinese deposits have produced crystal specimens. Some localities in Europe have produced fine crystals, especially Yugoslavia. Here in our own desert, fine small crystals have been found at the Snowshoe Mine, Humboldt County, Nevada.

Some of the Nevada crystals are clear enough to cut into faceted gems. It is obvious that gemstones of 2 in hardness do not wear well, so these are kept entirely in collections. Regardless of the softness, a cinnabar gem is a beautiful sight. A clear, bright blood red, with excellent

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brilliance. The brilliance is due to a refractive index that is nearly half again higher than that of diamond.

The pure mineral is cut as cabochons on occasion, but it appears to make better stones if it has a small amount of impurities. These evidently tend to hold it together. It takes lustrous, metallic polish, but again the gems are soft, and not usually set in jewelry.

Cinnabar does appear as an excellent gem material, however, in the form known as myrickite. This is cinnabar mixed in opal or agate, and was named after "Shady" Myrick, an early-day desert southwest prospector.

When this material is good, it produces excellent red-splashed gems that will wear well. They have a bad tendency to turn black if exposed to sunlight for long periods. The black is the other sulphide of mercury or metacinnabarite.

Metallic mercury is extracted from cinnabar by what is known as a retort. This is a type of furnace that will roast the ore, drive off the mercury as a vapor, transport and cool it in tubes, and allow it to condense into the liquid. We knew one operator that allowed the mercury to flow out of his retort and collect in a large, heavy bucket. At times he would have a number of quarts of the metal in the bucket. He used this to mystify and impress his visitors. He would brush the surface with his fingers, shake the bucket to show it was a liquid, and then invite the visitor to push his fist down into the bucket. This was found to be impossible.

As mercury is more than thirteen times heavier than water, the bucketful weighed more than the visitor, and he did not have enough weight to push down into it.

A very interesting use of mercury is based upon its great affinity for some of the other metals, especially gold and silver. If liquid mercury comes in contact with these metals in the relatively pure state, it will attach and completely coat it.

The gold miner has found this property an excellent aid in removing gold flakes from sand and other impurities. The gold-pan miner had only to pour an amount of mercury equal or greater than the gold into the metal and sand mixture. A small amount of stirring and all the gold would be taken up by the mercury, and with the impurities being left be-

hind. The gold-laden mercury was then poured into a small piece of cloth, and the excess mercury squeezed back into the original container.

Gold that is recovered by grinding the ore in a mill is run over a table covered by a mercury-coated sheet of metal. As gold, sand, water, etc flow over the table, the mercury catches the gold, allowing the other materials to flow on past.

The gold-pan miner removed the mercury from his gold dust by placing it in a fry pan on the fire. The mercury was driven off as a vapor, leaving a lump of pure gold. This method of removing mercury made many of the miners our first mercury poisoning victims, but they undoubtedly never knew it! Mercury vapor is a potent poison and very hard on teeth. As the miners stood close to the fire that was baking out their gold, they inhaled the vapor. Dental information of the early days is scant, but that available indicates that many of them had teeth that degenerated early in life. It is now suspected that mercury was the culprit.

Our present day environmental emphasis on mercury poisoning is not like that above, but is instead due to some of the highly soluble mercury compounds that are used in some manufacturing processes, and are lost in waste products. These compounds, known as salts, are also potent poisons, and are easily absorbed by all living things.

Mercury has a very long history of use and abuse by mankind. Many of its properties are very interesting and useful, but that property of being a liquid, is the most interesting of all. □



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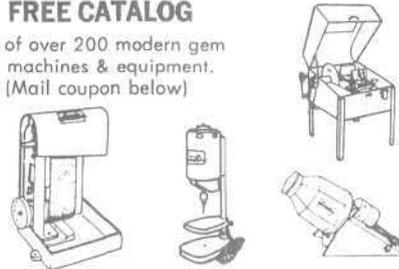
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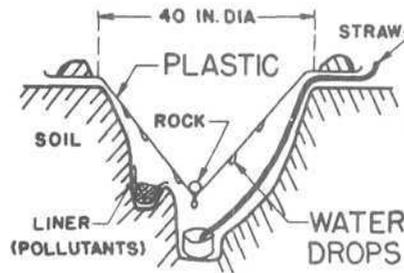
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SANDY TRAILS TO ADVENTURE

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ally marked the location of the grave was washed away many years ago. Although the area has few scenic attractions, it may appeal to followers of nebulous treasure trails. This is the country where the late Henry E. Wilson, inveterate searcher for the legendary lost Pegleg gold, hoped to attain fulfillment on his half-century-old dream.

When Henry began his search back in 1900, he followed an old Indian trail which wound around the base of the Santa Rosa Mountains and ended at Fish Spring, near the present Desert Shores Marina at Salton Sea. In 1951, after reviewing all of the Pegleg lore he had collected during his 50-year search, he became convinced that on the day of his first trip when he was crossing from Grave Wash to Big Wash, he passed a hill on which was spread Pegleg Smith's black gold. Shortly after Henry asked me to accompany him on a final search for the lost bonanza.

About eight miles from the highway we followed the old trail from a ridge on the south down to the edge of Grave Wash, where it vanished completely. This section of the trail is still plainly visible. We continued on through some of the roughest terrain west of Salton Sea, crossing Little Wash and finally reaching the north rim of Big Wash with no sign of the old trail. The years had dimmed Henry's memory and he had trouble recalling old landmarks, but he was in no hurry. There was always "tomorrow." Unfortunately, I had not arranged for an extended stay, so we had to abandon the search.

Henry believed the results of our search were very inconclusive. "The gold is there and the next time I'll find it," he said. But he never went back. Personal problems arose which required his moving to northern California, but letters up to the time he passed away always confirmed his belief that Pegleg's nuggets still lay waiting to be rediscovered, just as he saw them 50 years before.

There are ten or more major washes along the 25 mile stretch northwest from State 78 where you can enjoy many exciting weekends under desert skies. But take them slowly. Allow time to explore their many facets and you will discover a new world of pleasure. One to which you will want to return again and again. □

TRAILS, TOLLS AND TURNPIKES

continued from page 17

but no one seemed to mind because we were used to nothing else.

"The road over Cajon was an experience. It was carved out of the side of the mountain—just wide enough so that two cars could pass every quarter mile or so. The blind curves were legion and hardly a month went by but someone ran off the road and over one of the many steep banks. This was before the advent of the white line; often the fog was so bad that cars could travel only five miles per hour. If you were unfortunate enough to get behind a truck, there you remained — there was no possibility of passing, especially up-grade. So a trip to San Bernardino from our apple orchard in Apple Valley, a distance of 45 miles, took about four hours with luck (no flats or broken axles)."

For those wishing a more accelerated encounter with Cajon Pass, specifically Crowder Canyon, take Interstate 15 to the Highway 138 off-ramp. Head toward Cedar Springs about 200 yards and turn right (south) on the frontage road to the California Historical Marker. You are at Crowder Canyon.

The trail up the canyon is part of the California Riding and Hiking Trail system; it is well-trodden, marked, and worth the effort. Fifty yards up the canyon stands a washed-out bridge. Further along, the roadbed is covered by landslides and the walking trail is actually atop the rubble, giving you some idea of the precipitous voyages made here 100 years ago.

Some three quarters of a mile up the canyon the trail emerges into a wider, wet valley and a tangle of roads, powerlines and paths. Hunt here for debris of weary travelers and for Indian markings—it was a stopping place for both.

Highway 138 intersects Crowder Canyon (and follows it) about one and one-half miles from the freeway. Trail bikes with spark arresters and 4WDs can be used here in the low fire hazard season, but not on utility roads or posted land.

For the stalwart, a hike due east of Crowder Canyon leads to Cleghorn Road and a view of San Bernardino Valley. If it's clear, you'll see what the Mormons did when they decided, "Down we'll go." Probably, you'll see layers of pollution and just whisper, "Here I'll stay." □

Letters to the Editor

Letters requesting answers must include stamped self-addressed envelope.



Good Points . . .

I would like to make the following comments on the environmental statement concerning departmental implementation of Executive Order 11644 pertaining to the use of off-road vehicles on the public lands.

1. Some form of rotating "closed area" system should be considered instead of arbitrarily and permanently closing areas to ORV's. A one to three year closing, depending upon specific conditions, would give an area time to heal wounds caused by overuse of any sort—grazing of cattle, hikers, horsemen, and ORV's.

2. An "off-road vehicle operator" license could be considered, requiring a test and inspection of the vehicle to assure conformance to good standards of off-road operation.

3. The department should consider requiring low pressure, high flotation tires for off-road operation. There are many tires now available which are quite gentle to all types of terrain and it would certainly be worthwhile for this element of operation to be considered. Banning tires with aggressive tread design and/or narrow "foot print" would greatly facilitate preservation of our public lands.

There is no doubt that some sort of control is necessary. However, it is my opinion that there is an over-reaction to the use of vehicles on public lands. Having spent an extensive amount of time in the back country and having witnessed the total destruction caused by loggers, the unsightly and terrain-destroying use of lands by cattle, the litter of backpackers, miners and hunters, ad nauseam, I feel too many of the sins have been placed on off-road vehicles. It would be impossible to gather enough ORV's together in one small area to create anywhere near the damage that would be done to that same small area by loggers whose operations are condoned by various government agencies!

To close the vast desert areas of the west to off-road vehicles would essentially make them useless and would be most inequitable. It is virtually impossible to either walk or ride horses for any distance through these areas due to lack of water. It would certainly be a tragedy for those of us who enjoy the tranquility of the desert (yes, we support strict muffler laws) to be prohibited from using our public lands.

Here, again, it is agreed that there should be some control, especially in the convenient

areas overused by all types of recreational pursuits by people whose only interests are noise, speed and "togetherness."

There are many more things that could be said, both pro and con, concerning the environmental statement. Let it suffice, however, to strongly recommend a more logical, practical and equitable solution than closing the public lands to off-road vehicles.

WILLIAM R. JANOWSKI,
Reno, Nevada.

Stay on The Right Side . . .

Sincerely enjoyed Enid C. Howard's *Canyon of Broken Dreams*, as a displaced Coloradan should.

However, in all fairness to the good people of Lake City, please, let's leave it on the western slope of the Colorado Rockies, not as the story states on the "other side" (eastern) of the Continental Divide. The "lofty and forbidding mountains" which separate Lake City from Ouray, Telluride and Silverton are all of the San Juan and Uncompaghe Ranges, and all on the Pacific Ocean side of the Continental Divide.

Lake City, itself, is on the Lake Fork of the Gunnison River, which joins the Colorado near the town of Grand Junction.

LEWIS C. CRILEY,
Los Angeles, Calif.

Open Again . . .

Regarding Cerro Gordo Mines (out of Lone Pine, Calif., 7½ miles up the grade from Keeler). The mine was discovered in 1865, became the biggest silver producer in California. We have managed to keep the place as original as possible. It is one of the few authentic "ghost towns" in California.

We recently received a "note to the Editors, Desert Magazine, 1968" written by Mr. and Mrs. Harry Livesay, San Jacinto, Calif., they sent a photograph of a sign above Keeler stating that Cerro Gordo Mines were closed to the public.

We'd like the Livesays and all the rockhounds, bottlehunters and photographers to know that Cerro Gordo is again open to the public. Bottle-hunting still proves good. Especially in the old Chinatown section. Rockhounds will note: There are 97 different ores and minerals to be found here.

The altitude is 8600'. We suggest warm clothing for early morning and evenings. Also, plenty of gasoline and water. Welcome to Cerro Gordo. We shall enjoy meeting you.

BARBIE and JACK D. SMITH,
Owners, Cerro Gordo Mines.

Mysterious Caves . . .

Re: "Lost Spanish Mine" by George Thompson in the October, 1972 issue.

Mr. Thompson's "mine" is known as Avalanche Cave and was fully explored in May 1956 by members of the Salt Lake Grotto of the National Speleological Society. The cave drops approximately 200 feet in a series of drops and steep slopes and, after a 130 foot lateral extension at the bottom, dead ends in solid rock. No modifications by man, Spanish gold miner or otherwise, were seen and it was concluded that the cave was a natural phenom-

non and not man-made.

It does seem to be an enigma that this shaft is in sandstone and conglomerate, as Mr. Thompson pointed out, rather than in limestone. Caves, however, are known which have formed in every type of bedrock, from lava, through shale, to ice. East Hellhole Cave near Kanosh and Providence Cave near Logan are two other examples of Utah caves which are formed in conglomerate or conglomeritic sandstone. The proper geologic conditions to form caves in this type of bedrock are not common but are also obviously not unique.

The true secrets hidden in the darkness of caves are scientific and recreational. The treasures there are for the trained scientist and not the amateur to dig in. The amateur discovers for he is legion and the scientist uncovers for he is trained. The thrill of underground explorations matches that of any above ground sport. However, the writing on walls, leaving of trash, collecting of pretty formations, and so forth, is as great as any environmental insult we do above ground. Let the caves keep their mystery for the next person by leaving no evidence of your passing and perhaps someone will do as much for you.

JON F. HAMAN,
Grand Canyon, Arizona.

Greatly Heartened . . .

It is truly encouraging to see the efforts that are being made to keep the desert clean. I am referring especially to the article, *Fast Camel Cruise*, in the October, 1972 issue.

Recently I purchased a Land Cruiser, and I have had some reservations about joining the ranks of the 4WD people. But after seeing the effort made by the sponsors of the *Fast Camel Cruise* to preserve the desert landscape, I am greatly heartened. Congratulations to them!

Please continue to bring to the attention of *Desert* readers the positive aspects of desert activities of all kinds.

MONTE C. HARPER,
Bakersfield, Calif.

Now We Know . . .

In your August, 1972 issue, on page 43, I saw the photograph sent in by Mr. Ronald S. Johnson of two adobe discs, ten feet in diameter and two feet high. He asks what they are and what they were used for.

I immediately recognized these as two of the clay pigeons that Paul Bunyon missed when skeet shooting. I trust this answers Mr. Johnson's question.

Your not recognizing the clay pigeons leads me to believe that you are probably not aware that the lining for the conduit through the mountains for the All-American Canal was made with the barrel from Paul's shotgun. Also, I have recently verified the fact that Meteor Crater and also Sunset Crater were formed when a couple of shot left the pattern and landed with great force.

As a Westerner, you must be aware that the Bisbee Mine is really the metal part of one of Paul's shells and that the wadding and cardboard portion were recycled into the Sequoia National Forest.

J. CLEMENT JOHNSTON,
Lake View, New York.



MERRY CHRISTMAS
AND
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to Silver Streak owners,
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