

THE

Desert

M A G A Z I N E



JANUARY, 1938

25 CENTS



3 HOURS FROM LOS ANGELES

THE DESERT INN



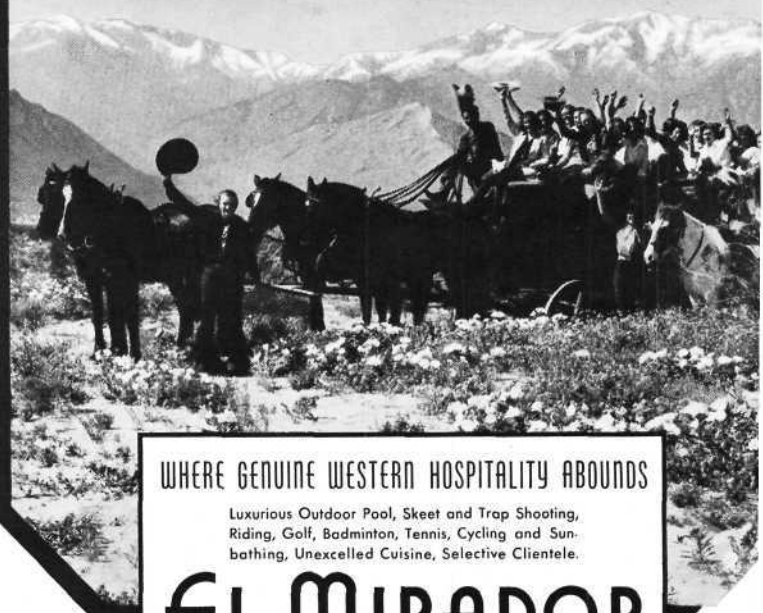
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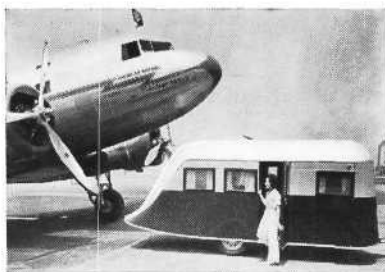
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DESERT

Calendar

for January

Civic groups in the desert area are invited to use this column for announcing fairs, rodeos, conventions and other events which have more than mere local interest. Copy must reach the Desert Magazine by the 5th of the month preceding publication. There is no charge for these announcements.

DEC. 26—Duck season ends in Arizona.

DEC. 31—Quail season closes in California desert area.

JAN. 1—New Year dances at various Indian pueblos in New Mexico.

JAN. 1-2—Sierra Club of California to make overnight camp at Chuckawalla springs and hunt geodes in Chuckawalla mountains.

JAN. 6—Installation of Indian governors in New Mexico pueblos.

JAN. 7-8—Rodeo Association of America to hold annual convention at Ogden, Utah. Headquarters at Hotel Ben Lomond. President, Maxwell McNutt, Redwood City, Calif.; Secretary, Fred S. McCargar, Salinas, California.

JAN. 22-23—Buffalo hunt in House Rock valley, Arizona. Only 12 buffaloes to be killed.

JAN. 28-29 — Rodeo at Palm Springs.

JAN. 28-29-30—Rodeo at Casa Grande, Arizona.

JAN. 29-30—Sierra Club of California to camp overnight at Borego Palm canyon and explore Borego painted desert.

DESERT OF THE PALMS DESCRIBED BY WRITER

Written for desert visitors who wish to know more about the trees, flowers, geology and geography of the Southern California arid country, Don Admiral of Palm Springs has just published a 56-page booklet entitled "Desert of the Palms."

Printed in attractive style for the Desert Magazine press, the new handbook is profusely illustrated with actual photographs taken in the area covered.

January, 1938



Vol. 1

JANUARY, 1938

No. 3

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The Desert Magazine is published monthly by the Desert Publishing Company, 597 State Street, El Centro, California. Entered as second class matter, October 11, 1937, at the post office at El Centro, California, under the Act of March 3, 1879.

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Editor: Randall Henderson

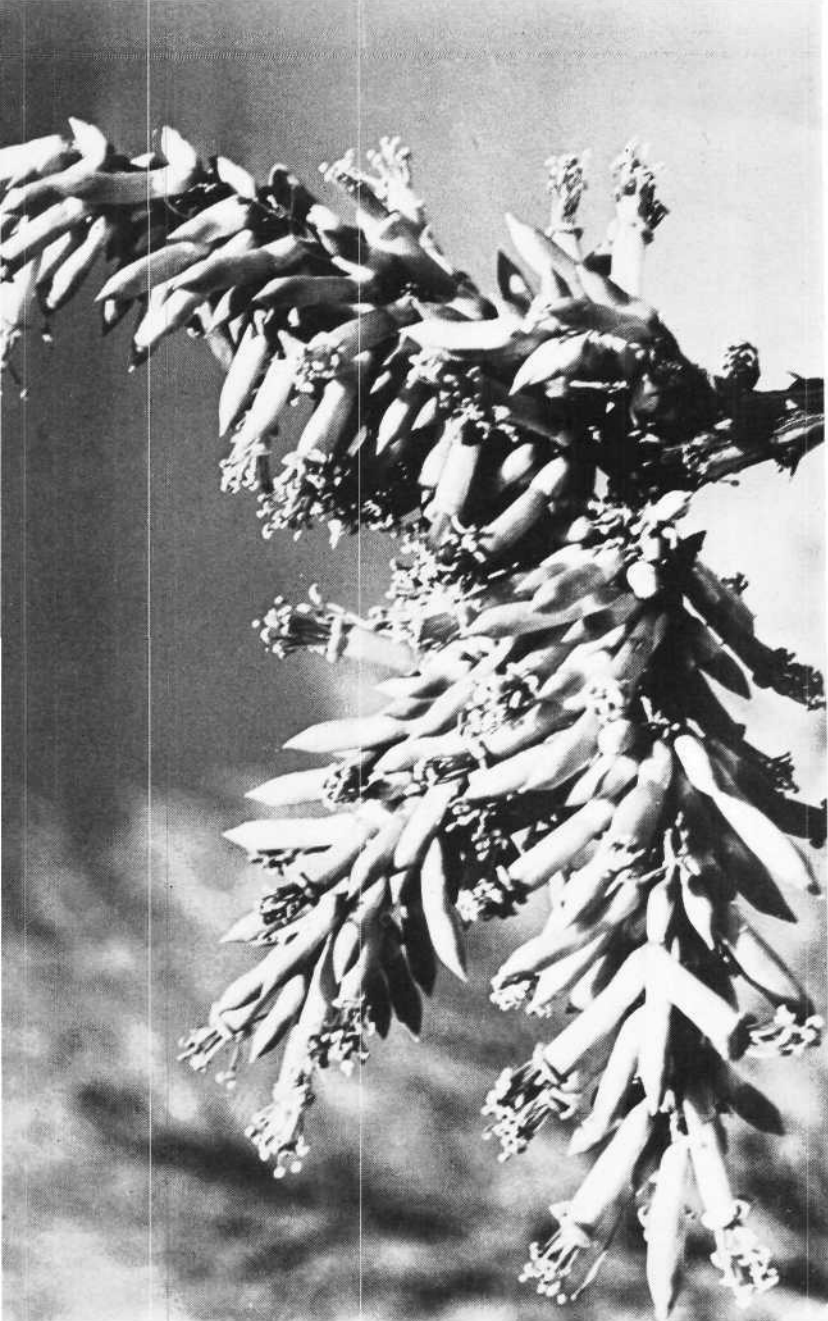
Associate Editor: Tazewell H. Lamb

Business Manager: J. Wilson McKenney

National Advertising Representatives: S. H. Williams & Co., Inc., Los Angeles, San Francisco, Chicago, New York.

Manuscripts and photographs submitted must be accompanied with full return postage. The Desert Magazine assumes no responsibility for damage or loss of manuscripts or photographs although due care will be exercised for their safety.

Notice of change of address should be received by the circulation department the first of the month preceding issue.



Ocotillo

By CLAIRE MEYER PROCTOR
1119 N. Fifth Street
Phoenix, Arizona

This is the first prize winning photograph submitted in the November contest of The Desert Magazine.

This is an enlargement of a photo taken with a Recomar 18, S. S. Panchromatic film, f22, 1/50, color filter, at noon.

The Trojan

By WALTER FORD
1410 Cedaredge Avenue
Los Angeles, Calif.

Winner of the second prize in the November contest, this picture is one of the realistic stone images found in the Hidden Valley section of the Joshua Tree National Monument of Southern California. Picture was taken with a Contax, Panatomic film, f6.3, 1/50, at two p.m.





Water That's Guarded by Thorns

By DON ADMIRAL
Desert Scientist of Palm Springs

THIS is the story of a desert plant that has been made famous by misinformation.

Bisnaga, or Visnaga, the Mexicans call it. But to a majority of Americans it is Barrel cactus. In the fiction books it is an ever-present source of water for parched desert travelers.

In truth, the Barrel cactus does yield a limited amount of liquid if the top is removed and the inside tissue is pummeled with the end of a stick or stone. In an emergency it quenches the thirst—but I have yet to come upon evidence of this cactus having saved the life of a thirst-maddened wanderer on the desert.

The water is there—but it is surrounded by a formidable barrier of spines which are both strong and sharp. The most striking thing about Bisnaga is the beautiful pattern of its thorny fortress. For detail and harmony the spiny network that covers this plant is one of nature's masterpieces.

The yellow flowers which appear in the spring grow in a crown-like circle at the top, forming an exquisite picture against a background of yellow, white, pink and red spines.

Candy makers found a commercial use for the Bisnaga. In former days they hauled it in by the truckload and made cactus candy, a sweetmeat which closely resembles candied melon rind in flavor. Laws have now been passed to protect the plant, but cactus candy is still a saleable novelty—even when there is no cactus in it.

Before the protective regulations were passed serious inroads were made on the striking field of Bisnaga which grew in the Devil's Cactus Garden northeast of White Water in the Colorado desert of Southern California. Thousands upon thousands of huge barrels, sometimes seven or eight feet tall, grew there. Despite the work of despoilers, the garden still contains many fine specimens of this cactus.

Bisnaga, Barrel cactus and Cylinder cactus are inclusive terms referring to the species of large cacti that are cylindrical in form. The terms are most aptly applied to *Echinocactus acanthodes* (Lemaire), for it is the largest, of widest distribution and most numerous. This species is also known by the names of *Echinocactus cylindraceus* (Englemann), and *Ferocactus acanthodes* (Britton & Rose). Other cacti falling under the three common names of Bisnaga, Barrel and Cylinder are the variety *Rostii* of *Echinocactus acanthodes*, *Ferocactus Lecontei* and *Echinocactus Wislizeni*.

Bisnaga is well equipped for life on the desert as its internal structure is such as to allow for the storage of moisture during the rainy season, to be used later during the dry seasons. Its roots are not particularly strong and often the plant is loosened and falls over. After lying uprooted for many months in the hot desert sun, the plant, if righted, may again grow. It is constructed somewhat as an accordion in the sense that the plant slowly contracts under conditions of limited moisture but during a rainy winter will gradually expand with the storage of water until the distended sides notify the world that a period of prosperity has overtaken the Bisnaga.



By MERLYNE M. OSBORNE

"IT IS lovely here—lovelier every year. But I wonder if Palm Springs with all its charm isn't missing that intangible something which drew people here when this was a primitive little settlement and life was simpler?"

It is a question which thoughtful persons often ask Nellie M. Coffman of the Desert Inn.

"People always loved Palm Springs," she answered, "even when there was nothing here but a few flapping tents.

"Sometimes when that question is asked I offer the visitor an opportunity to go back to the dear old days. I still own a few acres of undeveloped desert near the Village. I offer to build the same kind of a little tent house we had thirty years ago. I'll furnish it with a plain iron bed, and an oil heater and a wash basin and pitcher just as we used to have. And I promise I will come around every winter night and put hot stones, wrapped in newspapers, in the beds as I did in the old days. No one has ever accepted my offer. They all want their bathrooms."

We were seated on the veranda of Mrs. Coffman's enchanting retreat at the base of San Jacinto peak in the Southern California desert. There were folks from the Village and guests from the outside. All the rest of the world is "the outside" to desert dwellers. A New York broker was telling a young woman who spends her days over an art loom about the fickleness of the stock market. A Village newspaper editor was chatting with an eastern society girl who found the desert "an adorable place" for horseback riding.

"Perhaps, in a way, we do miss something that was

"Hotel keeping is nothing more than housekeeping on a larger scale," says Nellie M. Coffman, whose Desert Inn at Palm Springs is the mecca for travelers from all parts of the world. Mrs. Coffman arrived at Agua Caliente springs, as Palm Springs was then called, in a typical desert sandstorm nearly forty years ago. The first "Inn" was a collection of tenthouses. But their owner envisioned the day when city dwellers would seek the warm desert sunshine for relaxation and health—and today her dream has come true.

Famed Guests Play in Her 'Sandpile'

here in the early days," continued Mrs. Coffman. "But you know nothing stands still. It either grows or it decays, and I want to be where there is growing."

There is a clue in this last remark to the unusual character of the woman whose Desert Inn is the mecca of travelers from all over the world. She has never stopped growing.

Years ago she had a vision and she has been able to make it grow into reality. Now, at an age when most women are playing bridge or knitting for their grandchildren, Mrs. Coffman not only is the guiding spirit of a famed hotel but she also is the benign mother of a whole desert community which has made amazing growth in recent years.

Inside the wrought iron gates that tactfully but firmly shut out the curious throngs who flock to the Village, Mrs. Coffman has kept the best of the old Palm Springs and embellished it with the new, without destroying the effectiveness of either. Cottages and larger units of suites and rooms are scattered about the Inn grounds among the old willows, the gnarled mesquite trees and the fluttering cottonwoods that were native to the place.

"Eleven years ago," Mrs. Coffman said, "when we were about to build the new hotel, I looked at the plans and found that they had ignored my trees.

"What are you going to do about that willow tree?" I asked Mr. Charles Tanner, the architect.

"Cut it down, of course," he replied.

"Indeed, you'll do no such thing," I told him. "You'll just cut that unit in two and move half of it forty feet south."

"He thought I was crazy, but he did it."

The Persians knew that there is no more soothing sound on the desert than the music of running water. Their gardens are full of rills and fountains. In the same way, the murmur of the little stream in the old Tahquitz ditch as it flowed down to the Indian reservation from the mountain canyons was one of the dearest memories of Old Palm Springs. The canal remains today and the water ripples down the rocky flume and along the way gathers rose petals and the blossoms that fall from the mesquite trees.

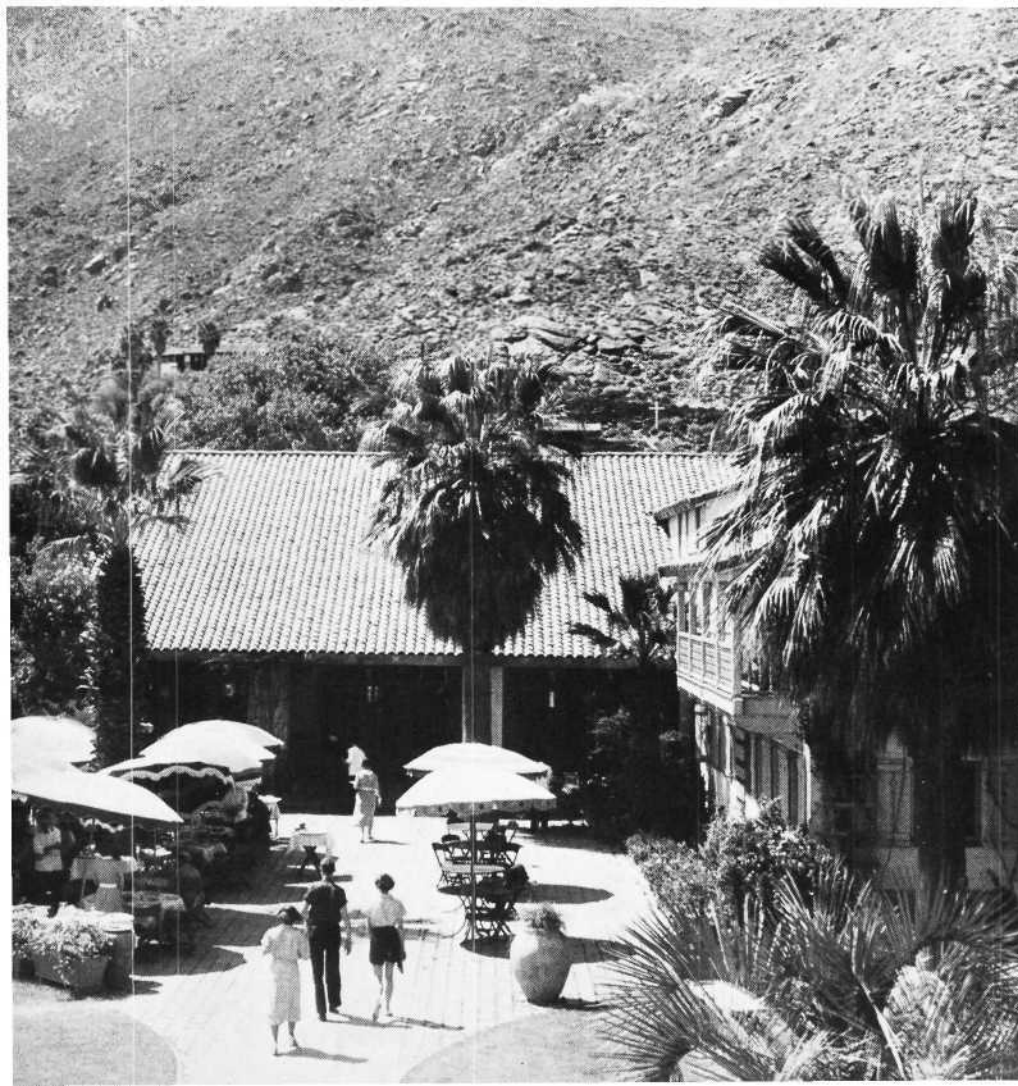
One of the original guest houses of Desert Inn. These were in use for a period of ten years. Beside the house is Melba, the musical burro, who played a noisy role in the pioneering period of Palm Springs. This particular tenthouse was occupied by Mrs. Coffman for a number of years.

"Hotel keeping is nothing more than housekeeping on a larger scale," declares Mrs. Coffman.

But she is more than a housekeeper. She is a home maker. She likes to see people comfortable and enjoying themselves. She keeps an eye on everybody from her own flock of grandchildren to the newest guest.

This evening she sent the children off to Banning to a high school dance. Their guardian is Segundo. He has been her chauffeur for 20 years and she knows they are safe with him.

Tomorrow Mrs. Coffman will take a mother's place at the wedding of a young girl. The house boys are busy trimming one of the cottages with white flowers for the ceremony. In the eve-



ning there will be a barbecue at the tennis court. The Palm Springs ranch boys are busy around the charcoal pit. Monday morning the school board will come to breakfast at the Inn. From the early days of the Village Mrs. Coffman has taken an active part in school affairs and now she maintains an elementary school within the hotel grounds for the children of the winter visitors.

There are 50 tribesmen on the Agua Caliente reservation which adjoins Palm Springs and Mrs. Coffman calls most of them by their first names. Many of them work around the Inn as gardeners or entertainers.

This little group of Cahuilla Indians celebrates a curious festival every two

In architecture and furnishings there has been a miraculous change in the Desert Inn since the tenthouse days—but there still prevails that atmosphere of homelike simplicity which Mrs. Coffman has always sought for her guests.

years, the Feast of the Dead, when honor is paid to those who have died during the interval. After a week of dancing and games which stir the participants to an emotional frenzy, the Indians go to the burial grounds at dawn, and just as the first rays of sun touch the tip of Tahquitz peak they burn life-sized effigies of the dead upon the graves. The Indians are sensitive, and it is annoying to them to have curious white visitors come too near during the ritual.

"One October many years ago," said Mrs. Coffman, "I told one of the Indians I would like to see these rites. In a few days he came back to me with a message from his chief: 'He say you come. You not laugh at Indians.'"

"I told him that of course I would not laugh, and since that time I have taken many people to see these interesting ceremonies."

Mrs. Coffman does not carry the entire burden of the Desert Inn establishment alone. Her two sons, George and Earl, are her partners, and the three of them have divided the responsibility into congenial units.

It was Nellie Coffman, however, who first saw the possibilities of the desert as a playground. She first heard of the Springs in 1899 when she spent a summer in Strawberry Valley as Idyllwild was then called. There she met Mrs. Keen who later established Keen's camp in the San Jacinto mountains. Mrs. Keen told her about the hot springs in a grove of native palm trees down at the desert base of San Jacinto.

Her friend painted such a glowing picture of the spot that Mrs. Coffman resolved to see this strange paradise. She took one of her small sons and bought a railroad ticket to old Palm Springs station, now Garnet.

Arrived in Sandstorm

They arrived in one of those sandstorms which sweep down unannounced from San Geronimo pass. The mail carrier drove them to the settlement in his rickety old spring wagon, the dished wheels sinking deep into the sand. Struggling against sand both underfoot and in the air, it took them more than two hours to drive the six and one-half miles to Palm Springs.

The driver dumped his guests without ceremony at the door of a dimly lighted adobe house and departed. Their knock was answered by an elderly man clad in a skull cap and a funeral frock coat. The greeting was none too cordial and after a meager supper they were directed to an icy bedroom.

Here Mrs. Coffman spent a wretched night nursing an earache and hoping

she would live long enough to get back home again. She was still awake when the sun came up—and then her misgivings began to vanish. An incomparable desert sunrise was followed by one of those perfect days—and Mrs. Coffman was captivated.

Her next trip to the desert was made in the milder weather of February. She wrote for accommodations for herself and sister, and Dr. Wellwood Murray, first citizen of the Village, who kept a little health resort near the hot spring, said she might come.

WILL TELL ABOUT GEM STONES OF THE DESERT

Desert gem stones! Where are they found? How can they be identified? What is the value of them? What do they look like in the rough?

These and many other questions about the semi-precious stones found in the desert areas will be answered in a series of articles to be published in the Desert Magazine beginning with the February number.

Copy for this new feature is being written by John W. Hilton, practical expert in the identification and also the cutting and polishing of desert gems. Pictures will be given to aid the amateur collector in identifying the specimens.

Hilton is known to many desert visitors as the owner of a picturesque gem shop along Highway No. 99 in Southern California between Indio and Oasis. He is also a writer, artist and photographer. Some of his Desert magazine articles will be accompanied by sketches showing the location of the fields from which he secured specimens for his own collection.

As the two got off the train the station master, who was also the postmaster, came running up, very excited:

"Get right back on the train," he exclaimed. "The old doctor's changed his mind. He says you can't stay. You'd better go on to Indio or you won't have any place to eat and sleep."

Mrs. Coffman had not started for Indio and she had no intention of going there. The postmaster furnished temporary lodgings and Mrs. Coffman eventually made a working truce with the eccentric doctor.

The Indians were having trouble

over their water rights when Mrs. Coffman next visited the desert. A white man from over the mountains was going to run a private ditch across the reservation whether the Indians liked it or not. When diplomatic negotiations failed, the tribesmen captured the intruder with his son and tied them to a tree on the reservation and held them for thirty-six hours.

Carrying this tale back to Santa Monica, Mrs. Coffman horrified her family by informing them that she meant to take them all out to the desert to live. "When I told my father that I planned to develop a winter resort on the desert, he exclaimed: 'Oh, my poor girl!'"

"Father," I argued, "you believe in Los Angeles. You feel that some day it will grow right down to the water's edge here at Santa Monica. Well, all those people you expect to see in Los Angeles will want some place to play. I mean to have a sand pile in Los Angeles' back yard."

Small Beginning

Nearly thirty years ago the Desert Inn was opened. The main building was a six-room cottage, the one now used for an art gallery. There were also a 10x12 tent house and four little screen rooms spread over an acre and three-quarters.

The first guests were two reporters from the Los Angeles Times. They came one night, cold, tired and famished. Lamb chops, hot biscuits and salad served on a red checkered table cloth by candle-light completely won the newspapermen. They spread the good word and soon guests began to come in numbers.

The homelike atmosphere of the Inn is due partly to Mrs. Coffman's success in keeping many of the same staff year after year. Returning guests like to find the same waitress and gardener to greet them on their arrival.

"Quon Woon, the Chinese chef of early days, was with me for twenty-one years," Mrs. Coffman explained. "He became a friend and support to me. I remember a day during the war. My son had just left for France and I was sitting alone in a darkened room after bidding him good-bye. Someone knocked at the door and there was Quon with a little supper tray."

"'You better eat,' he said. 'Don't you worry. God keep care of him.'"

And so the home maker goes on with her glorified housekeeping, a benign influence, preserving the best of the old and looking with discriminating approval on the new. A fine, vital, humorous personality, Mrs. Coffman is showing people what Westerners mean when they talk about the lure of the desert.



He is Bringing Water to a Thirsty Desert

By WILLIAM E. WARNE

WHEN Frank T. Crowe, general superintendent for the Six Companies, Inc., reached the bottom of the excavation pit for the foundation at Parker dam a few weeks ago he sent a telegram to John C. Page, Commissioner of Reclamation at Washington, which read in part:

"It was the toughest hole ever undertaken by fool man."

Immediately the reply came back:

"Congratulations! You were the right

kind of a man for that job."

To those who do not know the men it might appear that this was a rather dirty crack for the High Chief of the Bureau of Reclamation to make to the No. 1 Construction Boss of today's generation of American engineers.

But to those acquainted with Frank Crowe and John Page, it merely confirmed what they already knew—that the new Commissioner in the Reclamation office at Washington has a well de-

veloped sense of humor in addition to other fine qualities.

As Commissioner of Reclamation, John C. Page is the directing head of one of the biggest technical organizations in the United States. His Bureau is now engaged in reclaiming an additional 2,000,000 acres of arid land in western United States. Although he has been in his present position only a year, his Bureau is clicking with the precision of a well-oiled machine—because his men like him and have confidence in his integrity and ability. Here is a glimpse of a man who is playing a leading role in the development of the desert.

Page and Crowe worked together on the Herculean task of building Boulder dam, one as the chief administrative officer representing the federal government, and the other as the construction chief who put through the biggest engineering job ever undertaken on North American soil two years ahead of schedule. They have been together on a firing line which was a terrific test of both character and skill.

Both of them passed the test with flying colors. Crowe is qualified for a bigger job if human imagination and capital can provide one. Page has been promoted to the highest office which his department of government can offer.

Crowe's name has been in the headlines many times. But Page, until his promotion to his present high post in Washington, was not so well known.

Plays Lead Role

Since he is destined to play a leading role during the next few years in the development of the arid west, readers of the *DESERT MAGAZINE* should have a better acquaintance with this man.

He is 50, was born in Syracuse, Nebraska, comes from old American stock, and was educated as a civil engineer at the University of Nebraska and at Cornell. He has worked for the Bureau of Reclamation for more than 25 years, climbing slowly through the ranks without fuss or feathers, until now he is at the top. He is married and has two daughters, one married and residing at Boulder City, Nevada.

Meeting him on the street, you would glance at features that have been weathered by sun and wind, and pass him as just another westerner. He claims he has a homely face, and no one has ever been heard to contradict him on this score.

But if ability, and a knack of going straight to the heart of a problem and then rationalizing it in an unexcited way, coupled with a friendly and unassuming manner were traits that were

Continued on Page 23



CCC Boys built this administration building for the Park Service at Colossal cave.
U. S. Park Service Photo

Bandit Trail Led First Visitors to Colossal Cave

By JONATHAN BART

ASHERIFF'S posse in hasty pursuit of four express train bandits brought to Tucson the first news of a great "hole in the ground" which has since become a famous tourist attraction. Colossal Cave, 29 miles south-east of Tucson is a "different" underground limestone formation which merits the visit of any traveling desert fan.

Although the story of Colossal Cave began millions of years ago, it has found a place in human record for only a few years.

It was in 1884 that four masked bandits held up and robbed a train at Pantano, a Southern Pacific railway station in southern Arizona. They escaped on horses with a loot of \$62,000

and made their way to the Empire ranch near Vail. There they forced a negro named Crane to provide them with fresh horses, curtly told him he could find his horses at "the hole in the grounds."

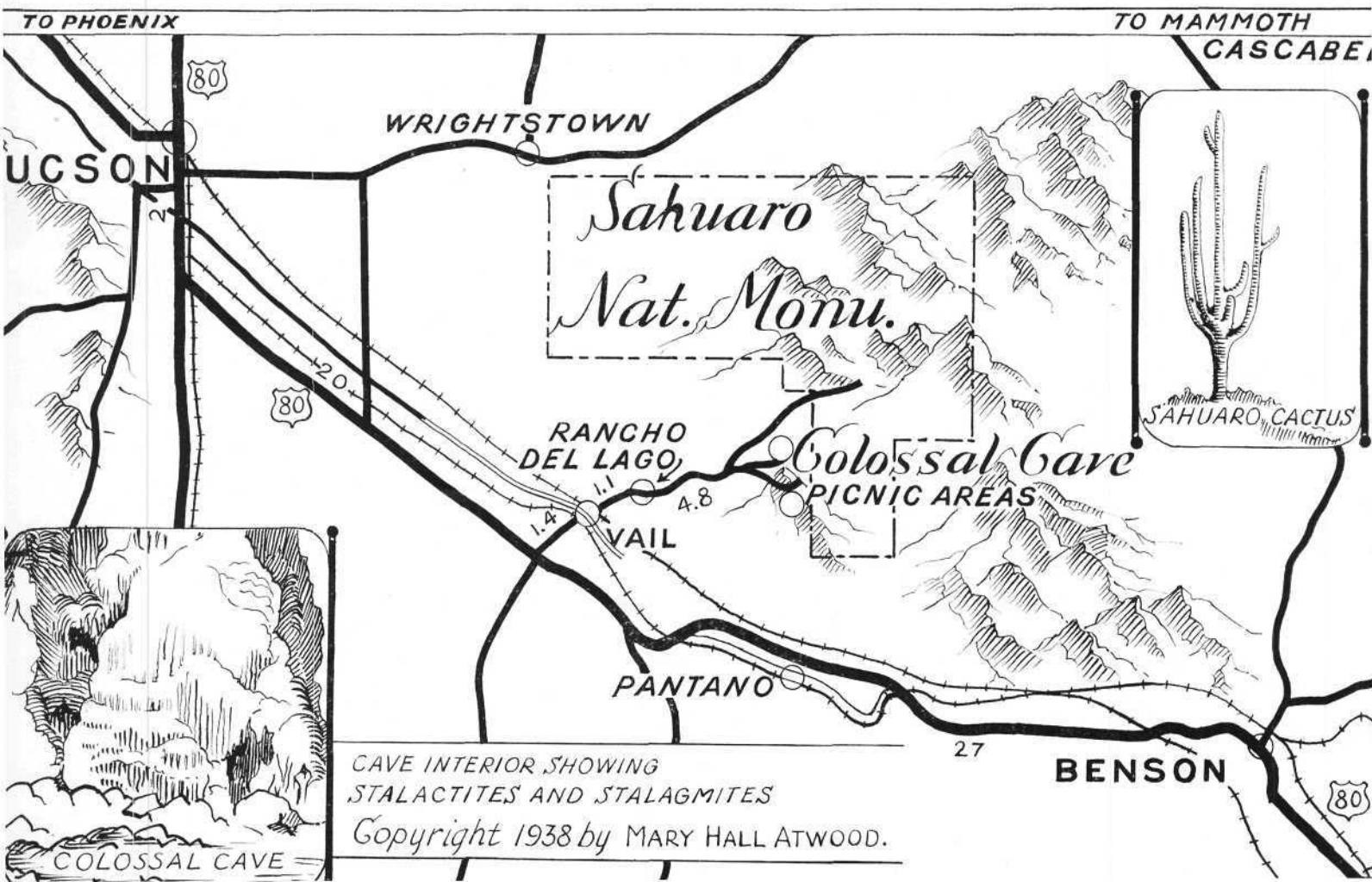
Meantime Sheriff Bob Leatherwood and a small posse of soldiers found the bandit horses and followed tracks five miles up a nearby canyon to a sahuaro covered hillside. There they found the mouth of a dark cavern into which footprints disappeared. Not being familiar with the passages and fearful that the bandits would ambush them, the sheriff and his men waited to starve the desperados out.

They waited several days but the bandits did not appear. Then word was

brought to them that the outlaws had been seen in Willcox, that three had been killed and the fourth had been captured. The survivor was sentenced to 28 years at the Yuma territorial prison. He served his time and was released in 1912.

Some time later the ex-convict was seen in Tucson but about the time officers decided to keep an eye on him, he disappeared. Deputies went to the hideout on the mountain and searched it thoroughly. They found some empty mail bags but no trace of the missing \$62,000. Apparently the robber had made his escape with the loot across the nearby Mexican border.

Frank Schmitt, a naturalized German, filed a mining claim on the cave in





Organ Pipes in Colossal Cave.

1922 and two years later obtained a permanent lease from the state. With shrewd foresight, he developed the cave so that tourists would pay for the chance to see its grotesque formations.

When the New Deal came along in 1933 he turned the lease back to the state in order to make the property eligible for improvements by the federal government. The state subleased it to Pima county and the Tucson chamber of commerce became its sponsor.

Two hundred CCC boys were put to work cleaning up the many passageways, laying stone walkways, installing indirect electric lighting and hand rails. In three years the government spent \$500,000 on the project.

In 1924 Schmitt took Prof. Hibbard of the University of Chicago and two other men on a tour of exploration in the seemingly endless series of passageways. They took food for three days but were gone seven days and six nights in the still darkness underground. By chains they measured the distance they had traveled as 39 miles. They did not find the end of the Caverns.

They did find, however, a second exit which now bears the appropriate title of Robber's Exit. Drafts along the tunnels told them there were other openings but they were not able to find these.

From 1922 to 1933 Schmitt escorted 15,000 adults and 1,200 children on the tour of inspection of the first main passage, which is about three-quarters of a mile long. The complete round trip

tour with a few side trips is a mile and a half long. The guide fee of one dollar a person helps to maintain the service.

The Colossal Cave trip is a two-hour adventure in geology and symbolism. Near the entrance is the sunrise and sunset illusion which Schmitt calls the "Bingen on Rhine" exhibit. By means of rheostats he is able to produce startling changes of light on a fantastic castle formation of stalagmites.

Names have been attached to many of the weird limestone formations, all beautifully lighted by hidden wires and bulbs. There is the Drapery Shop, the Devil's Chamber, the Bridal Chamber and Altar, the Dinosaur and Elephant, Fairyland and the Witch's Grotto, the Praying Nuns and the Chimes, the Pipe Organ, and the Waterfalls. Tourists are constantly thinking up new names for the figures they see.

The autoist who wishes to visit Colossal Cave drives south and east out of Tucson on the El Paso highway (U.S. 80) 22 miles to a junction with a graveled road turning north toward the Rincon mountains. At 1.4 miles from the junction he crosses the railroad tracks at Vail, at 2.5 he passes the Rancho del Lago, and at 7.3 he arrives at the large parking area near the mouth of Colossal Cave.

Two large picnic areas are provided nearby. El Bosquecito has a barbecue pit and will accommodate 500 people. Sevilla is a smaller camp area which

will accommodate 200 people. Both places have piped water and sanitation facilities. Camping overnight is permitted but staying for longer periods is not encouraged. A shelter room is provided for tourists caught in inclement weather.

WANTED DESERT PICTURES

Prize contest announcement

TO THE amateur photographer who sends in the best photographic print each month the Desert Magazine will pay cash prizes of \$5.00 to first place and \$3.00 for second place winners.

There is no restriction as to the place of residence of the photographer, but prints must be essentially of the desert.

Here are the subjects which will be favored by the judges:

Close-ups of desert animal life.

Close-ups of desert flora.

Unusual personal or candid camera pictures.

Desert homes and gardens.

Strange rock formations.

Exceptional pictures of desert water-holes and out-of-the-way scenic places.

While other types of pictures are not excluded, the above will be given the preference.

The Desert Magazine is seeking fine photography, and composition and lighting and the use of filters, etc., will be no less important than subject in the decision of the judges.

Rules governing the contest follow:

1—Pictures submitted in the January contest must be received in the office of the Desert Magazine by January 20.

2—Winners will be required to furnish original negatives if requested.

3—Prints must be in black and white, 2¼x3¼ or larger.

4—No pictures will be returned unless postage is furnished.

For non-prize-winning pictures accepted for publication \$1.00 each will be paid.

Winners will be announced and the prize pictures in the January contest published in the March issue of DESERT MAGAZINE.

Address all entries to

CONTEST EDITOR, *Desert Magazine*
El Centro, California

Irateba,

Big Injun of the Mohaves

By ARTHUR WOODWARD

ON the deck of his noisy little tin pot steamer the "Explorer," Lieutenant Joseph C. Ives stood in the hot May sunshine of 1857 anxiously scanning the happy, noisy crowd of Mohave Indians, clustered along the banks of the Colorado river. Ives was hoping to see two friendly faces in that naked throng, two Mohave men who were well known to him, the faithful guides of Lieutenant Whipple in 1854, Cairook and Irateba, the most important leaders of the Mohave tribe.

"You know um Cairook and Irateba?"

Mud plastered heads of shy river Indians nodded yes and no.

Cairook, yes. "Him across the river. Him come bimeby."

Irateba? Black eyes roved restlessly one to the other. Irateba? They did not know him by that name.

On the edge of the throng sat a tall, well formed man, naked save for a breech clout. Now and then his eyes turned toward the white men in the midst of the animated throng. Ives caught one of the roving glances. The seated figure rose to six feet of bronzed Mohave manhood. A shy smile of recognition crossed the strong brown face.

Ives Meets Irateba

Ives pushed through the crowd and held out his hand. He had found Irateba, one of the two men he sought to aid him in his exploration of the desert lands that lay on either side of the tawny flood of the swirling Colorado.

Piloted by Irateba, Ives entered unknown terrain on the eastern shore of the river. When at last the party penetrated mountains strange to the Mohaves, Irateba and his friends turned back, loaded with presents and carrying with them the good will of the Americans.

The following year Cairook and Irateba were actors in one of those inexplicable frontier tragedies.

One muggy afternoon, early in August, 1858, a party of Iowan emigrants, the first wagon train over Beale's new road, rested in the shade of the cottonwoods prior to crossing the Colorado into the Promised Land of California.



Irateba, Chief of the Mohaves when the soldiers first came to the valley of the Colorado river. Sketch was drawn by Gloria Widmann from an original wood cut which appeared in Harper's Weekly in 1864.

The men, weary after a morning occupied in making the wagons ready for the river passage, sprawled in the shade of the vehicles taking a much needed siesta. Two little girls sat playing with their dolls. One of the girls was removing the glass beads from a pair of Indian moccasins obtained in crossing the southern plains. All was quiet with the sultry stillness of mid-day heat.

Then quite suddenly death rode out of the leafy river undergrowth on a flight of fire hardened Mohave arrows, and the heavy air throbbed with the clamor of Mohave war cries.

There had been some difficulty when the train reached the banks of the stream. The Mohaves had demanded and received gifts in payment for passage through the Indian lands and the white men thought the matter settled.

However, the Mohaves decided that here was a group of defenseless men, women and children with many fine cattle, wagons and other valuable plunder. Why not slay the white intruders and take all their belongings?

The dazed midwestern farmers stumbled to their feet and returned the fire with ready rifles. Brown, leader of the wagon train, who had been out-

side the camp with a timber cutting party, spurred his horse through the attackers, leaped the lowest point in the wagon barricade and rolled into the dust under the cottonwood tree, his body feathered with shafts.

"Rose," he gasped, calling to Leonard J. Rose, one of the organizers of the party. "Rose, where's my wife? I'm shot full of arrows . . ." and died.

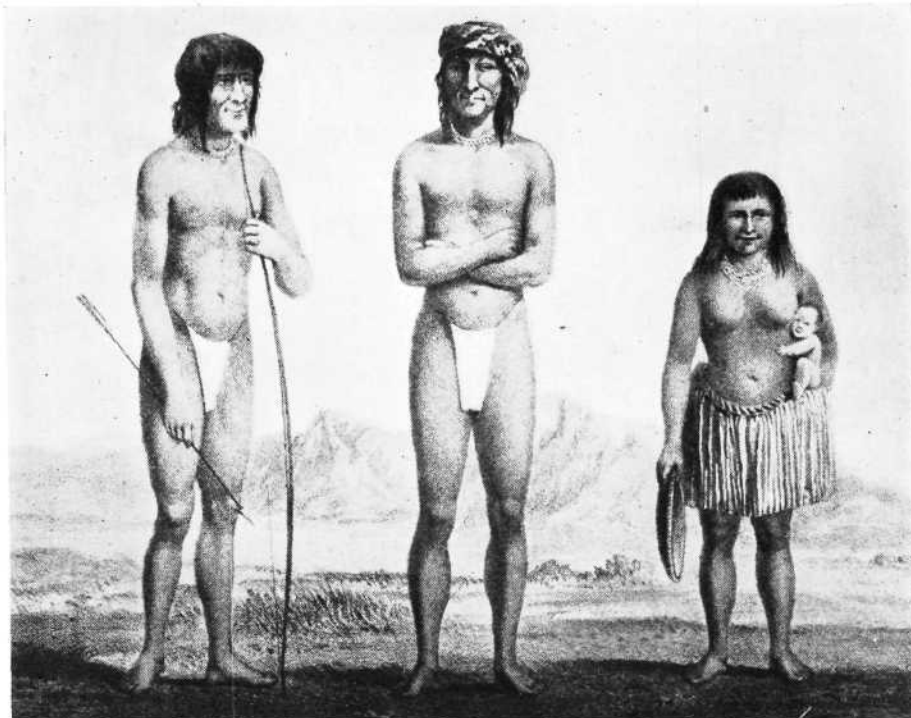
In the meantime the emigrants had recovered from the initial surprise and, maintaining a spirited fire, drove the Indians back. The latter rounded up the bulk of the emigrant's stock and drove the animals across the Colorado to the California shore. That night the dispirited group, under cover of the hot desert night retreated from the river, halting at intervals with bated breath. A renewed attack was expected at any moment. Overhead blazed a fiery comet, which to the terrified survivors seemed an omen of doom.

Irateba vs. Army

It is said that Cairook was one of the leaders of this attack.

The result of this outrage was that Colonel Hoffman with a detachment of troops was despatched to Mohave territory with instructions to select the site for a post. His small command was attacked by the Indians and it is recorded that Irateba commanded the warriors in this skirmish. The Indian leader posted himself on a point of vantage in a mesquite tree. Observing that the soldiers had fixed bayonets and being unfamiliar with such a procedure, he shouted to his men: "They have stopped up the ends of their guns. They cannot shoot. Go in and give them the knife."

This was a costly error on the part of the Mohaves and the Indians were



Irateba (left), Cairook and Mohave squaw and papoose. This is a reprint of an old lithograph which appeared in Ives' report of his exploration of the Colorado river.

soon dispersed by heavy musketry fire.

This affray took place in January, 1859. Hoffman retreated, but in April he returned once more to the heart of the Mohave country with a force of 600 men, infantry and artillery. The Indians, awed by the display of force, were glad to sue for peace.

Under a green arrow weed ramada, with freshly cut cotton wood logs as seats, blue clad troopers and breech clouted Mohave warriors, headed by six of their important leaders, Irateba, Cairook, Tomas, Capitaran, Carriou, and one other, unnamed, met in coun-

cil on the morning of April 23. It was a windy day and the Indians coughed constantly. All were on edge and they became more nervous as they saw a cordon of armed soldiers gradually encircle the whole camp.

However, the American officers managed to allay their fears and eventually the treaty of peace was concluded. The Indians agreed to allow the white men to build a fort in Mohave territory. White emigrants were to be allowed to pass through unmolested and in order that the whites might be sure the Indians would keep the peace, Hoffman demanded the surrender of nine hostages.

The six chiefs volunteered to serve as such. It developed afterward they didn't know what the term hostage meant. Cairook is said to have acknowledged at this time that he was the ring-leader in the attack upon the emigrant train. He was taken as one hostage. His nephew and the nephew of Irateba were also taken. Six more were selected and sent down on the river steamer to Fort Yuma where they were imprisoned in the guard house.

Confinement irked the sons of the desert. It was a new and hated experience to them to be enclosed in a narrow room with small barred windows. They could not understand why the white men kept them shut up in a house. In desperation one of the captives begged a soldier guard to do him the favor to cut his throat and let him

Continued on Page 24

Fort Mohave in the 1860's.



Wild dog of the desert—that is how Edmund C. Jaeger describes the coyote. "This wild dog has a reputation of being a coward," says Jaeger, "yet he is in fact a ferocious carnivore who pursues his prey with daring and skill. . . . Relentlessly trapped and shot at by stupid gunners and killed by paid poison squads, he is no more king in his kingdom. We are genuinely sorry, because the coyote in his natural range is an animal worthy of our respect and admiration and a valuable destroyer of noxious rodents."—From "The California Deserts."

Coyote

Is the coyote's fear of man a natural-born instinct? Or is it an acquired trait? You may take either side of the argument you wish. But no matter what your view may be, you will find interest in this story of actual experience with a young coyote, told by a man whose veracity cannot be doubted. Laurence M. Huey, the writer, is a zoologist associated with the Natural History Museum of San Diego.—Editor.

By LAURENCE M. HUEY



OUR PARTY was camped in the mesquites on the western edge of the dry Laguna Salada lake bed 25 miles below the international boundary in Lower California.

A shallow well known as "Poso Demara" furnished brackish water for a score or more of cattle that ranged through the desert shrubbery. These cattle were tended by Yermo, a 20-year-old Indian boy.

One day while riding range he discovered coyote tracks leading into a large hole in a sand dune not far from his palm-thatched hut. That was in April, 1936.

A few days later he returned to the hole and tunneling into the sand found a den in which were five young coyotes with eyes just beginning to open. Selecting one of the largest of the puppies, a female, he determined to try his luck at raising it.

It was seven months later, near Thanksgiving Day, when we first met Yermo and his coyote. The puppy was almost full grown. Yermo came to our camp to pay his respects a few hours after our arrival. Two of us were in our tent preparing natural history specimens when we heard his cheery "Buenos Tardes" outside.

When I opened the flap to bid him welcome I was astonished to see a coyote skulking under the truck and sniffing at the lunch box on the running board. Yermo noted my surprise and explained that the animal was his pet.

The coyote had been raised with two dogs as companions. Like most Indian dogs all three were thin of flesh. Their only food was what they could hunt for themselves. The fur coat of the coyote was more sleek and the tell-tale depressions between her ribs less noticeable than those of the other two. She was quick and cunning, and her keen eyes better able to see the nocturnal rodents that lived about the mesquite covered dunes.

"Preety" was the name Yermo had given her. Where he picked up this broken English word I was unable to find out, although I talked with him many times. It was the only English word he ever spoke and the only one he seemed to understand. The coyote responded to the name, or, when out in the brush, came in answer to the Indian's shrill whistle.

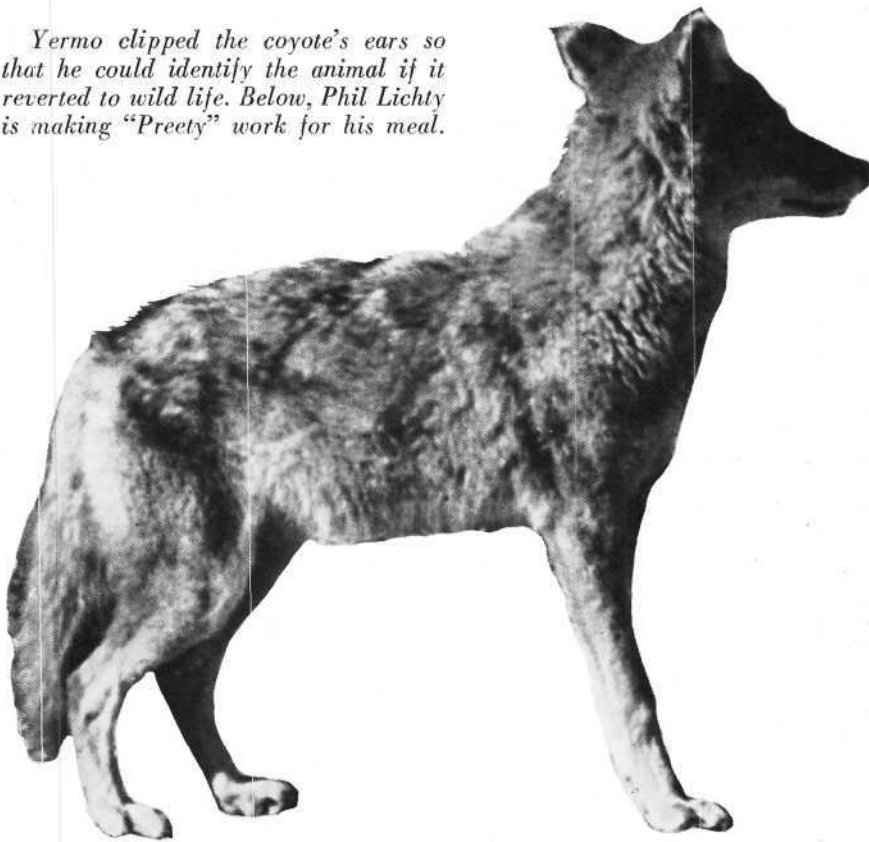
Preety soon located the garbage pit, and then was attracted to the tent by the smell of freshly skinned birds and small animals. She made several attempts to enter—but that was forbidden ground.

Finally Yermo mounted his mule, unloosed his lariat and swung it deftly over the animal's head. When he started away the coyote hung back and put on all four brakes, but to no avail—it was come along or be dragged.

When we showed some concern that the animal would be choked to death, the Indian stopped his mule, pulled in the riata and hoisted his pet into the saddle and into his arms. The half-strangled beast offered no resistance and actually seemed thankful for the ride.

Yermo must have fastened Preety that evening for we saw nothing

Yermo clipped the coyote's ears so that he could identify the animal if it reverted to wild life. Below, Phil Lichty is making "Preety" work for his meal.



up the task of satisfying the hungry coyote. He held food high in the air while she jumped for it. We took pictures of this act, but apparently the camera held no fear for this daughter of the sand dunes. As long as there was food to be had nothing else mattered.

Preety's crowning proof of domesticity came one night when Charles Harbison, another member of our party, slept in the open near the tent. Some time during the night we were awakened by a provoked voice in the outside darkness, "Get out o' here you blankety beast."

"What's the matter?" one of us shouted.

"I was awakened by that blamed coyote licking my face," he exclaimed. "and that is carrying this friendship business a little too far."

A day or two later we moved. There has been no further report of Yermo and his pet. But this experience is told for the added insight it will give into the character of a desert animal which under normal conditions regards every man as its enemy.

more of her until after lunch the following day. She came into camp by a circuitous route while we were working on our specimens. Nosing around under the dining table looking for crumbs she found a bar of soap, still moist from the noon dish washing.

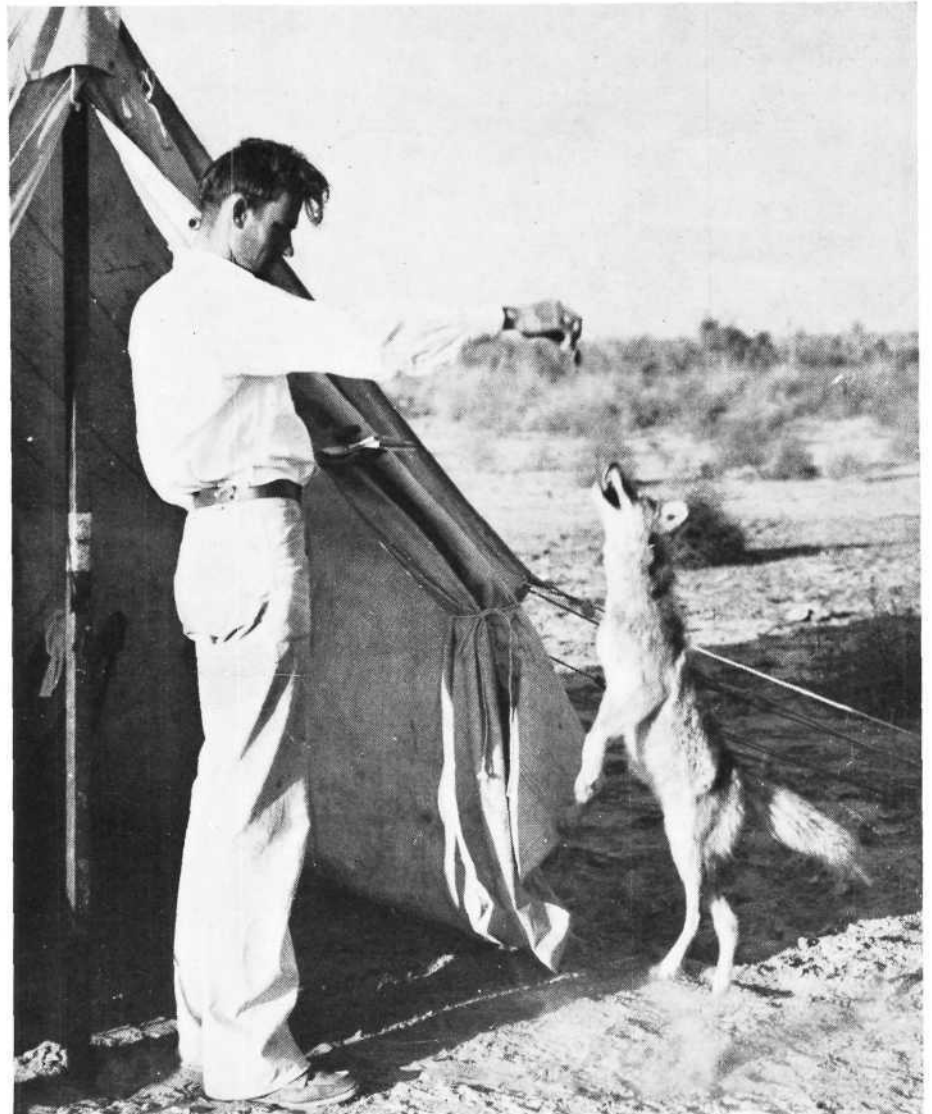
Then a strange thing happened. The coyote began rubbing its face on the soap, first on one side and then the other, repeating the performance many times. There must have been a sweet scent to the soap that she liked. In all my experience with canines I had never seen anything just like this before.

Then Preety moved to the garbage pit and not only ate the bird and mammal bodies we had deposited there, but also the newspapers in which they were wrapped. To climax the meal she ate the tinfoil which had been removed from a brick of cheese. There seemed to be no limit to her appetite.

Later she came to the door of the tent where I was working and when I tossed pieces of meat from the skinning boards she caught them with the skill of a well-trained dog. I reduced the size of the bits of meat and then she began closing up like a baseball catcher on a tight play, until she was snatching the food out of the air only a foot from my hand. Her lightning-like agility was phenomenal.

But I carried the game too far. There came the moist piece of meat that failed to loosen from my hand and I felt the sharp teeth graze my fingers. That ended the ball game.

Phil Lichty of our party next took



Where Indians Found a Desert Paradise

By RANDALL HENDERSON

THERE IS ONE sheltered canyon along the western edge of the Southern California desert where I go occasionally—and find myself thinking “what a perfect paradise those ancient Indian tribesmen found when they discovered this campsite.”

Generally speaking, the desert Indians who occupied the Cahuilla basin between the Colorado river and the coastal range led a sorry existence. Father Font, who accompanied the De Anza expedition, described them as “so savage, wild, and dirty, disheveled, ugly, small and timid, that only because they have human form is it possible to believe they belong to mankind.”

But I am sure that the good padre would have had a more cheerful entry for his diary if the route had led him to the camping grounds of the little band of Cahuillas whose former home is now called Andreas Canyon.

Andreas is one of those picturesque palm-lined arroyos which time and the natural elements have created at the

desert base of San Jacinto mountain. There are many scenic canyons along the eastern base of San Jacinto. All of them have natural charm. But Andreas has an added element of interest due to the well preserved relics of ancient Indian civilization which are still to be found there.

I have visited many of the deserted villages of the desert Indians. But at none of the others is it as easy to visualize the daily life and routine of the aboriginal dweller as at Andreas. The stage props and background are there for an artist who would re-create on canvas the domestic scene of a Cahuilla family of 200 or 500 years ago.

Indians Found Shelter

A spacious cave was used for shelter. Just outside the entrance is a huge slab of rock in which are the grinding holes where countless generations of Indian women crushed the seeds and nuts and acorns which were their main food supply. In the dark recesses formed

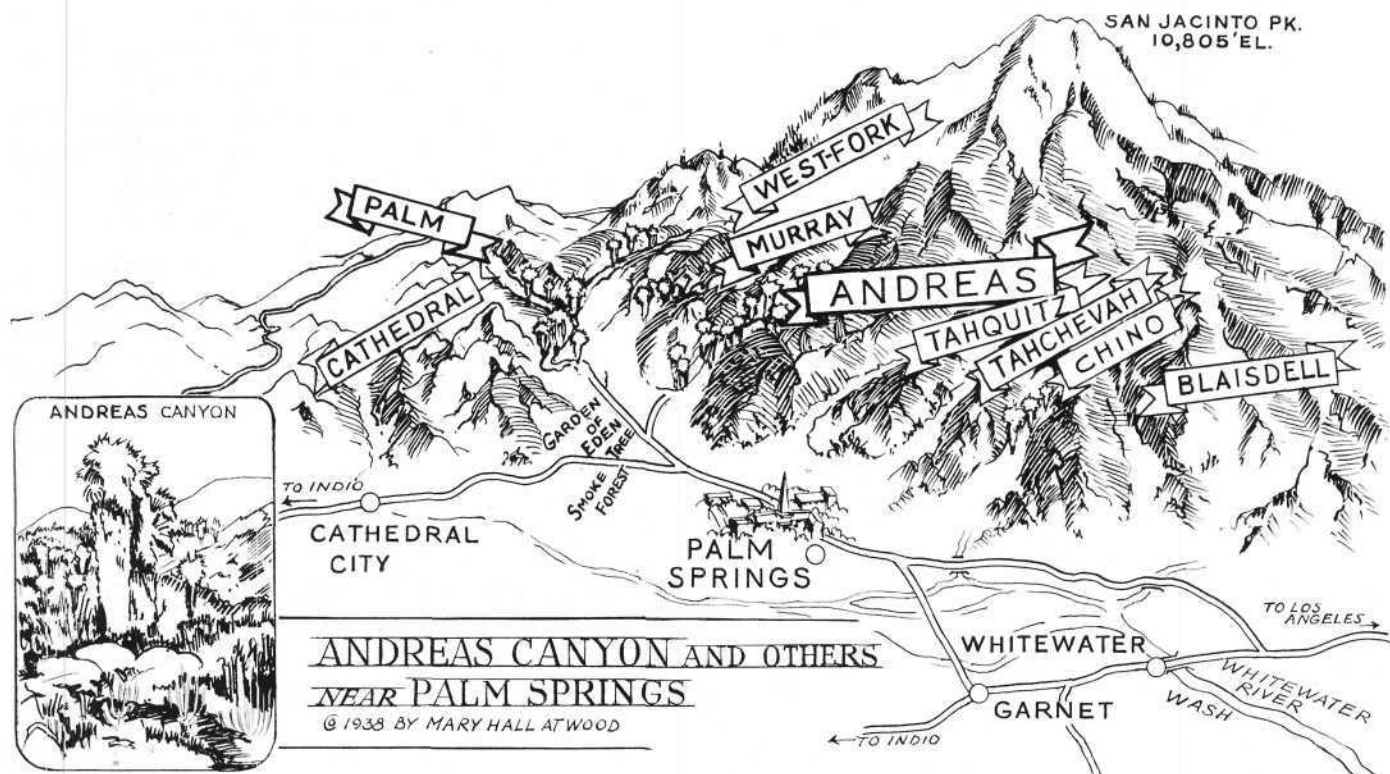
by boulders which are piled high over the roof of the cavern there still remain faint traces of the only written language known to the Indians—pictographs, in red paint.

A few steps from the entrance is a stream of cool mountain water, fresh from the snow banks high up on the slopes of San Jacinto. Four miles down the trail are the hot springs with curative powers well known to the prehistoric Indian dwellers.

Native palm trees and mesquites growing on the fan that spreads out at the mouth of the canyon bear seeds of high nutritive value. Wild sheep and deer and rabbits were numerous in this area when the white men came.

The abundant life, to a primitive Cahuilla Indian, consisted of water, food, shelter and security—and he had them all in Andreas canyon.

Nearly every visitor to Palm Springs has visited Palm Canyon. But it is only within recent months that Andreas Canyon has become accessible to the motoring traveler. Thanks to the initiative of a progressive Indian agent and the interest of an enterprising community, a new road now leads off from Palm Canyon highway at a point four miles from Palm Springs, and ends near the old Indian cave. Here is a new recreational area which will be visited by increasing numbers of desert visitors as it becomes better known and the projected improvements are completed. Future plans include the building of a swimming pool



through which will flow a constant stream of fresh mountain water.

Andreas is more precipitous than Palm Canyon. It does not contain as many of the native *Washingtonia* palms—but the floor of the canyon is a jungle of trees and shrubs of many species. Sycamores, cottonwoods, alders, willows and mesquites grow in a dense thicket of smaller shrubs. Wildflowers are in blossom every month of the year.

The canyon was named for Captain Andreas, Cahuilla chief whose adobe home during the latter part of the 19th century was located on a bench above the creek and a half mile up the canyon. According to the meager records available, Capt. Andreas was an able and worthy leader until the white man taught him how to distill strong drink from the grapes and figs which grew in his little orchard. His venture in illicit liquor trade ended, however, when Dr. Wellwood Murray, who operated a health resort at the hot springs, convinced him that alcohol was bad medicine and emphasized the lesson by destroying the still.

Near the entrance to Andreas canyon is a magnificent grove of *Washingtonias* which provides a green canopy of growing palm fronds for the playground beneath.

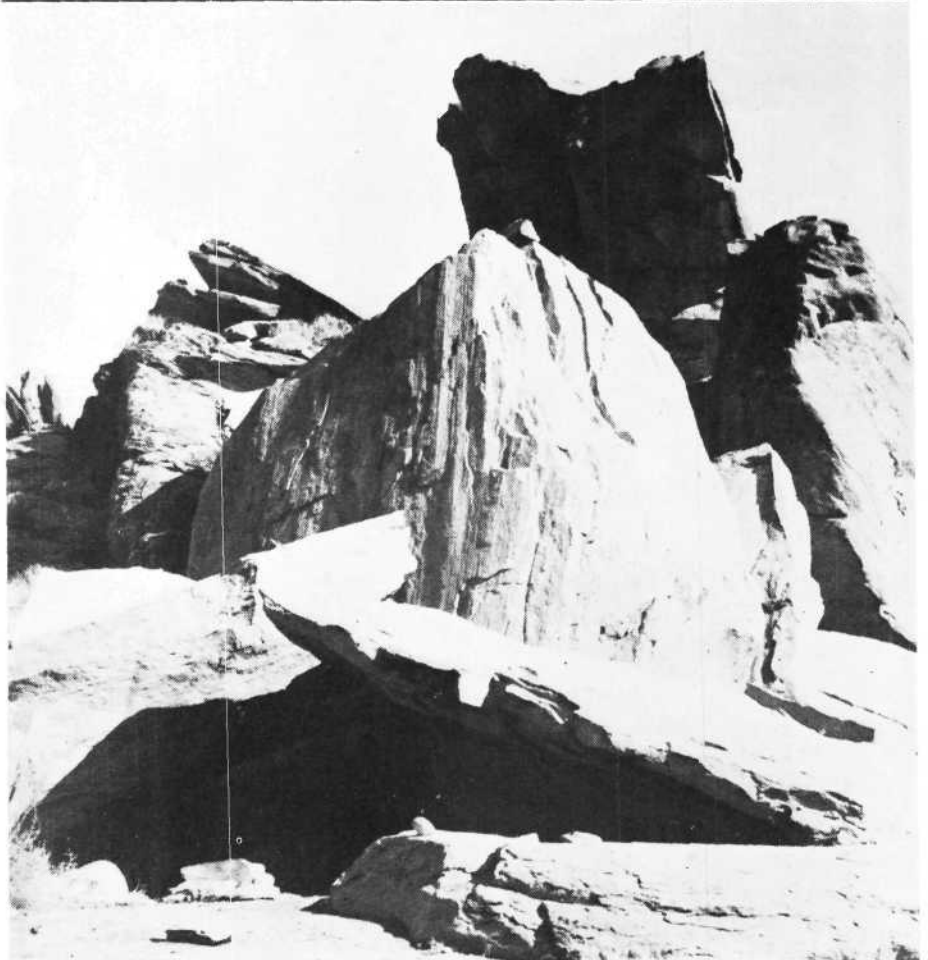
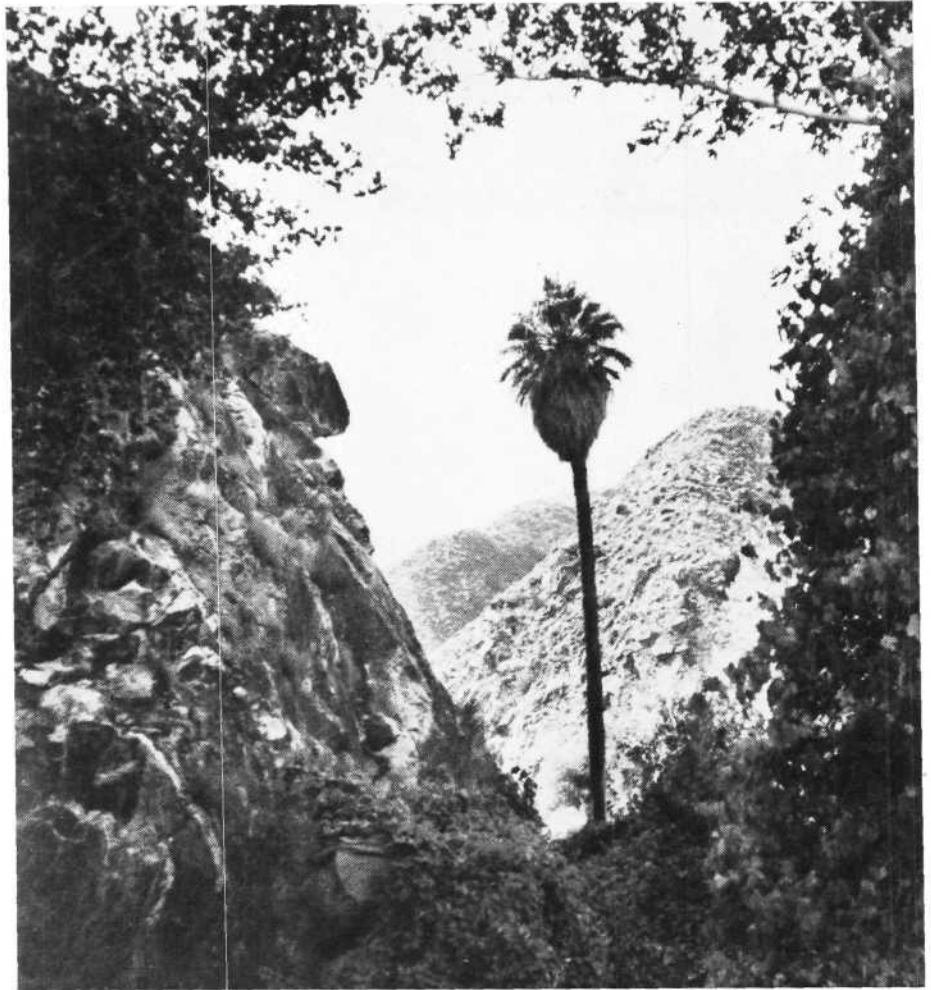
A mile up the canyon the rocky walls close in and form a precipitous gateway. Just above this natural portal is a majestic veteran of the palm family that towers high above the jungle of other trees. So outstanding is this palm that it was given special mention in the books of both George Wharton James and J. Smeaton Chase. James called it the "Lone Palm," while Chase gave it the more romantic title of "La Reina del Canyon."

Apparently it is the lone survivor of an older generation of palms that were swept away by one of the raging torrents of water which come down the

Continued on Page 31

Upper picture—Veteran palm in Andreas canyon to which J. Smeaton Chase gave the name "La Reina del Canyon." This picture was taken less than two months ago by the editor of Desert Magazine.

Lower picture—Shows the entrance to Indian cave near the end of the Andreas canyon road. In the dark recesses of the rocks above the cave are faint traces of Indian pictographs.



Heat and Hardrock Not Terrifying to These Desert Invaders

By J. WILSON McKENNEY

THEY MOVED the portal of one of the world's greatest tunnels 100 feet in order to avoid desecrating the grave of an early California pioneer, yet they pushed their great aqueduct across the breadth of a great state, over wide deserts and through hardrock mountains without deviating a foot from the most efficient flow across the greatest natural barriers.

Engineers who planned the Colorado river aqueduct 242 miles from the Colorado river to the Los Angeles coastal plain found an old Spanish grave at the western foot of the San Jacinto mountains directly in the path of the proposed conduit. They had hurried consultations, refigured their estimates and specifications, changed the course of the tunnel, encouraged a movement

to preserve the grave and erect a historical marker.

This is one of the curious records of sentiment triumphing over engineering precision. Will the ghost of the Spaniard serve as a guardian angel at the portal?

No series of events in any history is more thrilling than the daily routine of the men who are carving this, the world's longest artificial river, out of the desert wastes.

The thrills will not be recorded in the engineering histories of the aqueduct. There will be no record of the fear in the miners' hearts when supports gave way and death stalked them in dark tunnels far underground. And who will ever know the whole story of the motives which prompted fellow workers to brave danger in order to effect unsung

rescues?

In every little rocky arroyo over an area of 25,000 square miles on the Mojave and Colorado deserts are little sun-whitened wooden stakes, the trails of pathfinding surveyors. The hardships and thrills of these desert men would make another adventurous chapter in the conquest of the wasteland.

Thousands of men lent their brains and brawn in a struggle with the desert which has already lasted a dozen years and may continue another two years.

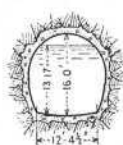
Who could "take it" best and why? What caused men to stick to their jobs in the desert? Was it the thrill of accomplishment, the determination of men long jobless, or a combination of undefinable qualities?

The Desert Magazine reporter talked to engineers, office clerks, cooks, dozens of men on the project in quest of the answers. A division engineer in one of the Metropolitan Water District's neat air-conditioned desert offices poised a pencil over his polished desk and thought a moment before he replied.

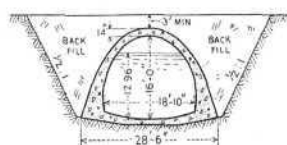
"Well, it's hard to define," he said, "but I can say that out of thirty years in big construction camps of all kinds, I have never known an outfit to treat the men better, serve better food, or provide better dormitories than they do

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA COLORADO RIVER AQUEDUCT

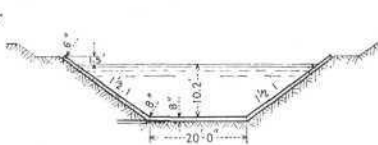
HEADQUARTERS 306 W 3RD STREET LOS ANGELES CALIF — FIELD HEADQUARTERS - BANNING, CALIF
FRANK E WEYMOUTH - GENERAL MANAGER AND CHIEF ENGINEER



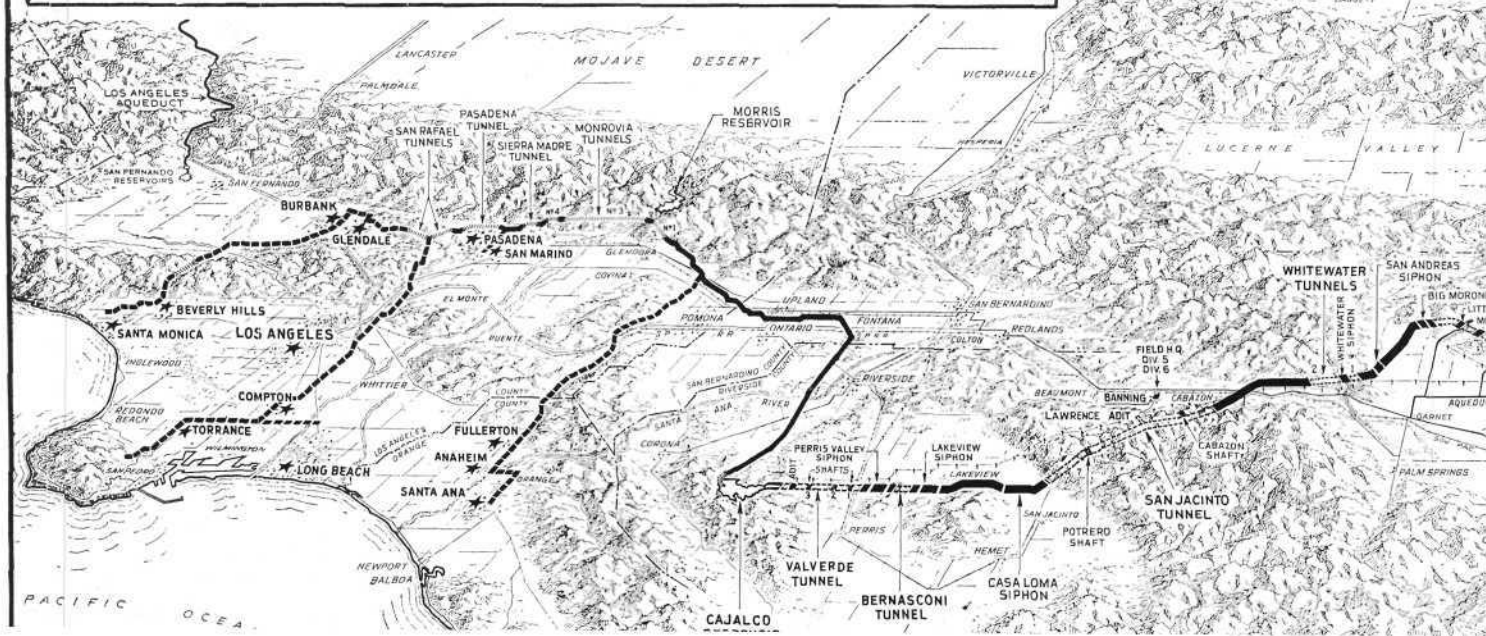
TYPICAL SECTION
GRADE TUNNEL



TYPICAL SECTION
GRADE CONDUIT



TYPICAL SECTION
LINED CANAL





Surveyers who mapped the 242-mile route of the Colorado River aqueduct across the Mojave and Colorado deserts became almost as adept at scaling precipitous rock faces as the native lizards of the desert. There are 90 miles of tunnel along the route.

on this job." This ideal condition, he concluded, is the chief factor in maintaining high morale.

At least 30,000 men have worked on the big job for varying periods of time. Even during the general shutdown of the past summer, with the major construction practically completed, the payroll averaged 4700 men.

In a project of these proportions, requiring the provision of facilities for communication, transportation, water, and power in a vast uninhabited area, much has been learned about meeting and solving the problems presented by the desert.

Virtually every technical point concerned with construction of the aqueduct was settled on paper long before the dirt began to fly. Chief Engineer Frank E. Weymouth had a large corps of engineers working under his direction for three years prior to the official dirt-turning ceremonies. The only problematical factor which could not be reduced to mathematics was the human reaction to desert conditions.

The desert has always resisted change. Only by great effort has man bent the arid wastes to his will. So with great care and foresight the engineers assigned to the job planned to smooth Nature's hazards.

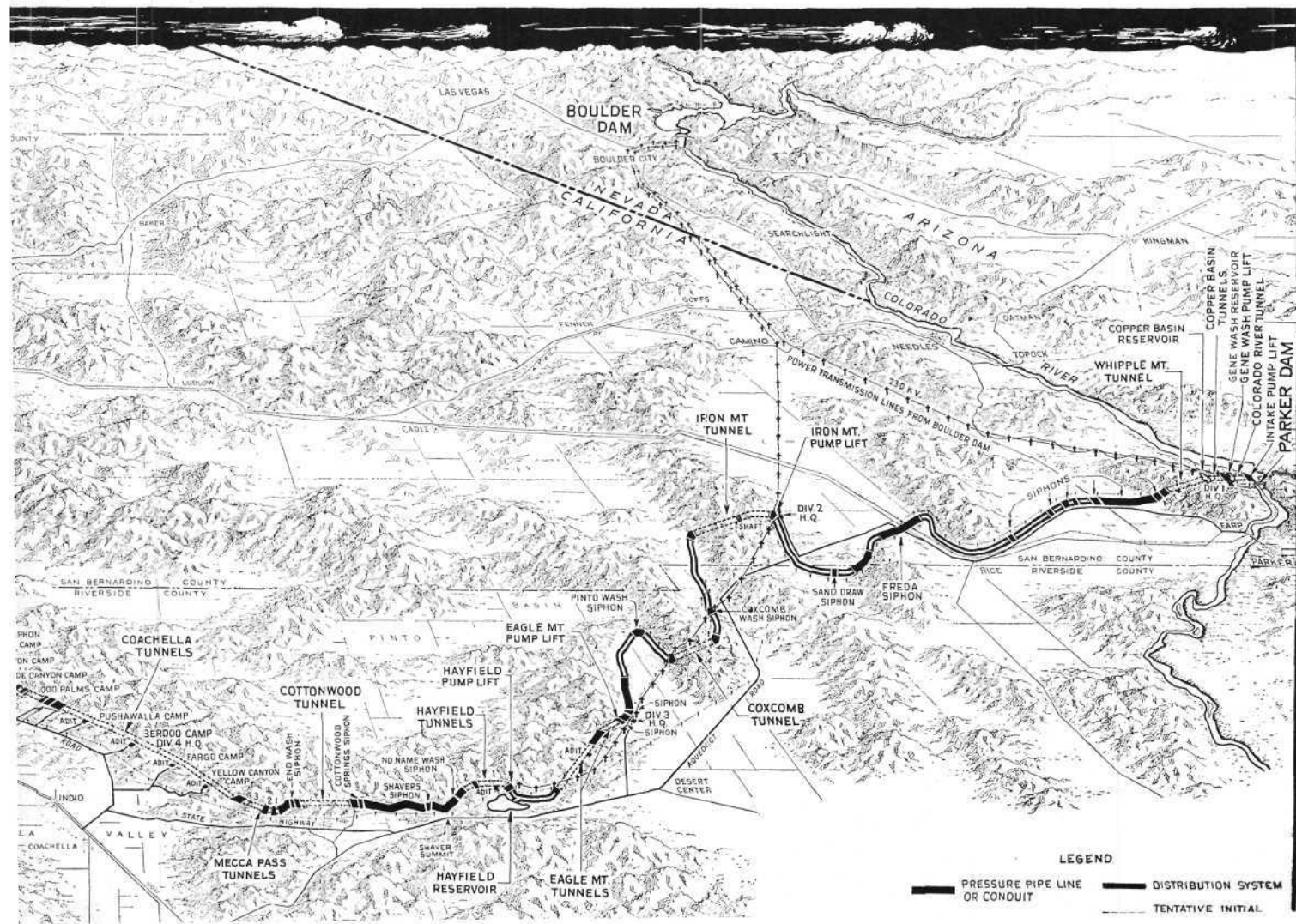
They built a system of paved high-

ways in places the prospector's burro had never reached. They sunk wells and piped water great distances. They erected enough power and telephone lines to serve several cities, built modern towns with every factor to assure comfort and safety of the workmen.

Some of the men who accomplished this task in the field have learned to "take it." There's John Stearns, for instance. He is division engineer in charge of operations from Iron mountain to the Coachella tunnels and his headquarters are on the edge of the Eagle mountains north of Desert Center. He has spent four years on this job and three decades in the business of bossing men, materials, and figures.

"Weather conditions are not the greatest barrier to progress on a job of this kind," Stearns said. "With air conditioning in dormitories, mess halls, and offices this factor is reduced to a minimum. Of course no concrete is poured in the open during the summer months and temperatures rarely go above 90 degrees in the tunnels. So we have Old Man Climate by the horns. I think the biggest hazard is temper. A man must control himself. On a job like this when you are so far from entertainment and change of environment, the misfits will show up. And the fellows who have the character will also develop. Individual weakness and strength

Photo by WILL N. FOX





Thanks to the artistry of Will N. Fox, official photographer for the aqueduct project, an unusually fine photographic record has been kept of the work and workmen. The above pictures show a section of the big concrete conduit in San Geronio pass, and a group of the structural steel men on the job.

always crop out sooner or later on a big job, not only on the desert, but anywhere."

"Who can 'take it' best?" Stearns considered a moment. "Well, I think the young fellows from 25 to 30 stand the gaff best. The old miner was our toughest problem during the first months of the tunnel jobs. The hard rock miner is traditionally a hard liver. He might work faithfully for twelve days but when he took his two days off he almost invariably became drunk, engaged in a free-for-all fight, and came back to camp all battered up.

"We beat this condition by putting smart young fellows in the tunnels as chuck tenders. They helped the miners at the automatic drills. The first time a miner came into camp after a big binge he found that the chuck tender

had moved into his place and a new boy was helper. The old hard rock miner finally worked his way off the job. The boomer doesn't stand much chance on modern jobs."

"Turnover? Labor turnover rose and fell during the various phases of construction. It averaged I'd say from seven to eleven percent per month. Reasons? Construction laborers often keep on the move just to see new scenery or to be with a buddy. They might transfer to some other part of the aqueduct, leave for some new job they had just heard about, just because they didn't like the color of the foreman's hair. The percentages show, though, that most men stuck with the job until it was finished."

Steve Ragsdale keeps liquor out of his stores along the highway. John

Stearns keeps it out of his camps. The two men are suspected by the workmen of being almost fanatical against drunks. They managed to close several of the more notoriously unlawful liquor joints on the highway in an effort to reduce an alarming fatality record among hard-drinking auto-driving aqueduct workmen.

"They used to tell me in the rail-roading days," the engineer said, "that you couldn't lay rails without liquor. I believe that's all foolishness. We can lay three times as much rail or concrete or anything else in the construction business if we keep liquor out." This philosophy may have accounted for some of the achievement records set by Stearns' men.

Stearns graduated from Cornell in 1906, started engineering on eastern railroads and came west to help build the first Los Angeles aqueduct under Wm. Mulholland.

Pioneer Surveyors

For several years before the Metropolitan Water District was formed and millions appropriated to divert Colorado river water to the Los Angeles coastal plain, Engineer D. C. Walker cruised the desert, checking on more than 100 variations of proposed aqueduct routes.

"We went places in those old Model T's that prospectors had never reached or where they did not dare to go." Walker reviewed the pioneering days with apparent relish, comparing the small tents of the field parties with the present attractive air-conditioned office buildings.

"Most of the first crews on the desert were made up of young surveyors, clean fellows in splendid physical condition. We had real mountaineering jobs. The tough work in the open set the fellows up and made them hard as nails. Although I was older than most of the men, I have been used to a life of roughing it and this job was just a continuation of my life's work."

The experience of the builders of Boulder dam taught the District engineers that a workman well fed is a workman well satisfied. Here is a typical breakfast table: platters of fresh fruit, bowls of dried or cooked cereal, fried ham and eggs, hot flapjacks, fresh milk, hot coffee, French fried toast, honey and butter, hot biscuits. If any customary breakfast food is overlooked, it is probably the chef's mistake. Great quantities are placed on the table. The men are unhurried—they can take it or leave it—and they preserve a high average of table etiquette.

"Yes, many young men have made good out here," said Walter Neale,

Continued on Page 26



CLIFF PALACE

Photo by W. M. Pennington

THE FEEL OF THE DESERT MYSTERY

MYSTERY is the chief impression conveyed by this view of ancient Cliff Palace. The contrasting lights and shadows in the scene display more than bare piles of lifeless stone. For this largest ruin in the Mesa Verde group was the communal home for generations of the Southwest's prehistoric builders, and the careful workmanship of Stone Age mechanics stirs the imagination of modern beholders.

Who were the builders? Where did they come from? What became of them? The types of masonry displayed in the ruins seem to resemble those of no other race of ancient people.

A Navajo legend asserts that the cliff-dwellers, who were displeasing in the sight of certain gods, were turned into fishes and carried away by the floods. Navajo Indians, accordingly, will not eat fish.

Possibly long continued drought may have driven the people from their prehistoric apartment houses. There are said to be Hopi legends which indicate kinship with the ancient people who lived in these cliff dwellings.

Cliff Palace is the most pretentious prehistoric apartment house built by ancient men of the Southwest without the aid of metals.



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WINNER

CLARA LEE TANNER, assistant professor of anthropology at the University of Arizona, Tucson, won the \$5.00 prize offered by The Desert Magazine for the best identification of the November Landmark photograph. Mrs. Tanner's prize story is printed beneath the picture.



Home of Col. Boyce Thompson

Boyce Thompson Southwestern Arboretum

By CLARA LEE TANNER

BOYCE THOMPSON Southwestern Arboretum is situated in the Pinal Mountains 65 miles east of Phoenix, near Superior, Arizona. It is on Highway 60. Railway connections are circuitous: from Phoenix via the Southern Pacific to Magma, then via the Magma Arizona line to Superior.

Upon his retirement from mining activity in 1923, Colonel William Boyce Thompson started construction on his home, Picket Post House. Soon he had planned a great adjoining Arboretum. In 1924 several residences were built, an irrigation system installed, a storage reservoir constructed and temporary shelters erected for plant research. The following year two great structures were added for the handling and propagation of plants. In 1926 an Administration Building was constructed. Here were housed offices, laboratories, library, herbarium, seed room, photographic room and supply rooms. Two greenhouses adjoined. Later additions include further residences, a guest room, an outdoor amphitheater, garages and other work rooms.

A total of 1,127 acres in the Pinal

foothills has been acquired for use by the Arboretum. This area is virtually in the center of the 500,000 square miles it is to serve. Within the Arboretum acreage elevation ranges from 2,300 feet to 4,400 feet above sea level. Different soil types, temperatures varying from a minimum of 25 degrees to a maximum of 112 degrees F. and topography including rugged crags, rolling hills, level mesas, deep canyons and high peaks present variable circumstances requisite to the pursuits of the Arboretum.

The aims of the Arboretum are, "—research, investigation and experimentation in agriculture, horticulture, biology, botany, arboriculture and other scientific subjects." This plant laboratory further cooperates with individuals, institutions and associations engaged in similar work, and prepares, publishes and circulates the results of their own efforts. The field includes investigation of plants from this same climatic zone throughout the world: central Asia, Australia, Africa, southern Europe and South America.

NEW MEXICO LANDMARK

Who knows the story of this ruin?



PRIZE OFFER

To the person who sends to the Desert Magazine the most accurate identification of the above landmark, together with the most accurate and informative story of not over 300 words telling location, accessibility to railroad or highway, and its history, a cash prize of \$5.00 will be paid.

To be eligible for the prize, answers must be in the office of The Desert Mag-

azine, El Centro, California, by January 20, 1938. The name of the winner together with the prize winning reply will be printed in the March number of the magazine.

Writers should give the source of their information, stating whether the facts quoted are a matter of record or hearsay. Answers should be written only on one side of the page and addressed to Landmarks Department, Desert Magazine, El Centro, California.

Genuine Navajo Rugs Identified by Labels

(From Holbrook Tribune-News)

For the first time one may now purchase a Navajo blanket with trade-mark of authenticity protected by the United States government.

When Harold L. Ickes, Secretary of the Interior, approved regulations for the use of certificates of genuineness for Navajo all-wool hand-woven fabrics, he established a method of protecting both the buying public and the Indian craftsmen in the making and marketing of high-grade Navajo products.

Certificates of authenticity will be fastened to rugs and blankets with wire caught in a lead seal. The certificates state the weight and size of the fabric and certify that it is made entirely of locally hand-spun wool, woven by a member of the Navajo Tribe on a traditional Navajo loom. Certificates stat-

ing the facts can be obtained by anybody dealing in Indian goods. To protect the certificates from misuse, however, anyone wishing to use them must give \$500 bond and obtain a license from the Indian Arts and Crafts Board, a government organization which seeks protection, better marketing, and higher standards for Indian crafts products.

Navajo rugs and blankets are the first Indian-made products to receive this protection because of the economic importance of the craft, whose sales total hundreds of thousands of dollars annually. Standards for silver were promulgated many months ago, but government stamps of authenticity have not been supplied as yet.

NEEDLES, CALIFORNIA—

Preliminary work has been started on the construction of a power line to deliver Boulder dam electricity to Needles, the project having been undertaken by the Needles Gas & Electric Company.

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California

Alone in its field as the hours-fastest and only extra-fare daily train between Chicago and California, the Chief is to be dressed anew from end to end this winter. With delivery of car after car of their new light-weight equipment, sheathed in gleaming stainless steel, the six regular trains of the daily Chief are gradually acquiring the matchless beauty and comfort of the famous Super Chief.

THE SUPER CHIEF

This superb extra-fare train, Diesel drawn and streamlined in stainless steel, strictly first-class and but 39¾ hours between Chicago and Los Angeles, attained instant and continuing popularity among discriminating California travelers — for its roominess and beauty of appointment, its speed and smooth-riding comfort.

• Again this winter, four times each week, the Chief will carry a through Phoenix Pullman from Chicago, and there will be splendid service to and from San Bernardino, to Palm Springs, via both the Super Chief and Chief.

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Santa Fe System Lines
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BOULDER CITY, NEVADA—

Construction of a series of horseback trails to two of the highest peaks on the Nevada side of Boulder dam is to be started at once, according to the announcement of Guy Edwards, superintendent of the Lake Mead recreational area. Four new rangers and three naturalists are being added to the park service forces in this area. A coast-guard cutter is to be shipped from Honolulu and launched on the lake.

WINDOW ROCK, ARIZONA—

Two more summers of work will be required to complete the excavation and restoration work at the prehistoric Kinishba Pueblo, according to the estimate of Byron Cummings, director of the state museum. University students working with a band of 25 Apache Indians at the pueblo during the last two seasons excavated 140 rooms and restored 70, including five 2-story structures.

PHOENIX, ARIZONA—

Approximately 160,000 bales of Arizona's estimated 260,000-bale cotton crop had been ginned December 1 according to figures compiled by local growers. Shortage of labor is reported in several sections.

NEEDLES, CALIFORNIA—

Two new caves recently discovered in the Providence mountains near the well known Mitchell caverns are reported to have yielded a number of interesting Indian artifacts.

NOGALES, ARIZONA—

Construction is now in progress south of the international border on the first unit of the 1,193-mile highway to connect Nogales with Guadalajara. The project now being built involves an expenditure of \$1,120,000. The entire route from the American border to Guadalajara is scheduled to be completed in 1938, opening a new west coast route for Americans desiring to visit Mexico City by motor.

TUCSON, ARIZONA—

Portions of the facade of the San Xavier del Bac mission, founded by Father Eusibio Kino in the latter part of the 18th century, collapsed during the latter part of November. The damage occurred at night, a few hours after Papago Indians had held mass in the ancient structure. Church authorities have not yet announced their decision regarding the rebuilding of the old mission. Rev. Father Mark Bucher is priest in charge.

PALM SPRINGS—

For the purpose of holding regular rodeo programs for the entertainment of guests during the winter, a Palm Springs Rodeo association has been formed, with Frank Bogert as president and Jack Wentworth as secretary. The first program was staged Sunday, November 28. Trav Rogers is in charge of the events.

GRAND CANYON, ARIZONA—

As an aid to air travel in the Grand Canyon area the U. S. Weather Bureau has established a new meteorological station here. Reports are made every six hours to Chicago and relayed from there to other points.

PALMDALE, CALIFORNIA—

To combat the increasing damage done by coyotes in the South Antelope valley, Los Angeles county has offered a bounty of \$1.00 for each animal killed after November 6. Claimants for the bounty must first register at the office of the county game warden. Hides must be registered within 10 days after the kill, and affidavits signed as to place where the coyote was slain.

MILFORD, UTAH—

Unemployment has ceased to be a problem here as a result of a rich lead, zinc and silver strike made a few weeks ago 18 miles from this city. Assays showed value running from \$30 to \$200 a ton. The strike was made by Ambrose McGarry and his three brothers of Los Angeles.

YERMO, CALIFORNIA—

Showing the relative popularity of the desert highway routes, the California department of agriculture which operates the border quarantine stations, announced the following count of vehicles and passengers for the month of October:

Parker—1,623 cars, 4,051 passengers.
Daggett—6,933 cars, 3,382 passengers.
Yuma—8,643 cars, 23,345 passengers.
Blythe—10,464 cars, 28,002 passengers.
Yermo—12,611 cars, 36,352 passengers.

These figures do not include trucks or stage coaches.

YUMA, ARIZONA—

Federal aid is to be given for the restoration of the old Arizona prison located on a hill overlooking the Colorado river, according to assurance given by W. J. Jamieson, state WPA director, to Yuma civic groups which are sponsoring the project.

SELIGMAN, ARIZONA—

Adding approximately 128,000 acres to his other holdings, W. L. Mellon, Jr., nephew of the former Secretary of the Treasury, recently purchased the historic Fort Rock ranch south of here. The ranch is named for the old Fort Rock station of the Hardyville-Prescott stage road. Already the owner of the Apache Maid ranch near Rimrock, Mellon is now one of the largest cattle raisers in the state.

INDIO, CALIFORNIA—

For the purpose of protecting Coachella valley wildflower areas against grazing cattle and sheep, the Riverside county chamber of commerce has named George Ames, Mrs. M. E. Alderman, Don Admiral, Francis Koehler and Mrs. Roberg as members of a special committee to plan protective steps.

EL CENTRO, CALIFORNIA—

Congressman Ed. V. Izac is preparing legislation to be introduced in congress providing an appropriation of \$100,000 for the construction of an agricultural station on the desert mesa east of Imperial valley. The station will be devoted to experimental farming preparatory to the opening of 350,000 acres of new desert land along the route of the All-American canal which is scheduled to be completed in 1939.

PHOENIX, ARIZONA—

Discussing the recent scientific trip to the Shiva temple in Grand Canyon, M. R. Tillotson, superintendent of the national park there stated recently that there are a number of other "sky islands" along the Colorado river which have not been scientifically explored. He mentioned the "Fish Tail" plateau which is about 25 miles downstream from Shiva as one of these.

BOULDER CITY, NEVADA—

According to the statement of W. E. Corfitzen, assistant engineer of the U. S. Bureau of Reclamation, clear water from Lake Mead has lowered the bed of the Colorado river for a distance of approximately 50 miles below Boulder dam. The average depth to which the riverbed has been degraded along the first eight miles below the dam is 6.7 feet. It is estimated that during the first 25 months after the completion of the dam 12,000,000 cubic yards of silt have been scoured from the bed of the stream.

AMARILLO, TEXAS—

Only 17 miles of U. S. 66, known as the Will Rogers highway, remained to be completed between Chicago and Los Angeles, according to the report of President Carl Hinton at the annual meeting of the road association in this city November 22. It was stated that the uncompleted link, which is between Amarillo and the New Mexico line, will be open before spring.

PHOENIX, ARIZONA—

More than a half million persons visited Arizona's 15 national parks and monuments during the past season according to park service reports.

Grand Canyon National park drew 297,800 compared with 268,400 during 1936.

Other national monuments included Canyon de Chelly, 1,090; Casa Grande, 27,700; Chiricahua, 6,015; Montezuma Castle, 10,650; Navajo, 329; Organ Pipe cactus, 5,000; Petrified Forest, 161,190; Pipe Springs, 4,200; Saguaro, 15,000; Sunset Crater, 4,800; Tonto Forest, 5,900; Tumacacori, 214,100; Walnut Canyon, 10,960; Wupatki 2,200.

PALM SPRINGS, CALIFORNIA—

Plans have been initiated by Warren Pinney of El Mirador hotel to provide winter snow sports for guests at Palm Springs. Through cooperation with resort owners at Idyllwild, ski runs and toboggan slides are to be laid out in the Fern valley area. The services of E. Des Ballets, Swiss sports expert, have been secured to plan the new playground.

MOAPA, NEVADA—

Discovery of another important Nevada cave five miles south of Mexican Wells recently was reported by S. Maus Purple, engineer and archeologist. Purple said that he had not completed exploration of the new caverns, but that they evidently extended a considerable distance underground. They are of the usual limestone formation with striking stalactites and stalagmites.

LAS VEGAS, NEVADA—

Between 75,000 and 100,000 bass, some of them weighing as much as five pounds, were transferred from the Las Vegas hatcheries to Lake Mead during the latter part of November. The transfer was made under the direction of Claude Mackey, WPA director. According to Mackey more than 300,000 bass have been placed in the lake during the past year.

PIOCHE, NEVADA—

More than 4500 upland game birds, mostly pheasants and partridges, have been distributed by the Nevada state fish and game commission in 15 Nevada counties. The distribution of fowl by counties was: Churchill 860, Clark 150, Douglas 450, Elko 150, Esmeralda 10, Eureka 150, Humboldt 150, Lincoln 150, Lyon 656, Mineral 30, Nye 10, Ormsby 496, Pershing 150, Washoe 992, White Pine 150. This is the largest planting of birds in any one year in the history of the state.

YUMA, ARIZONA—

Pecan growers in the Yuma valley are marketing the largest nut crop in the history of this industry here. It is estimated the output will exceed 400,000 pounds. Better grade nuts are said to be bringing 24 cents a pound.

TUCSON, ARIZONA—

Wild turkeys will again be available for southern Arizona hunters if plans initiated by the Pima County Game Protective association are successful. The association, Dr. Harry E. Thompson, president, is planning to secure birds from northern Arizona where they are still plentiful for restocking the Catalina, Santa Rita and Rincon mountains. The state legislature will be asked to close the season until the turkeys have become reestablished in sufficient numbers to warrant hunting.

HE BRINGS WATER

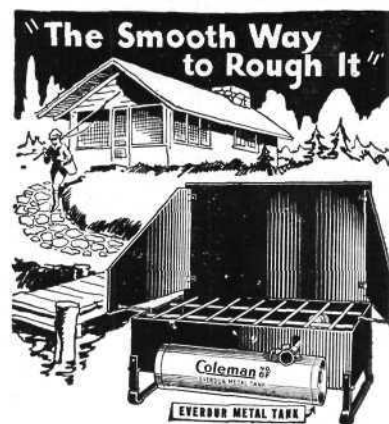
Continued from Page 7

apparent on the exterior of a man, then you would take a second look at John Page. He has all of these to a remarkable degree.

When he was appointed Commissioner, after serving as Acting Commissioner for a year following the death of Dr. Elwood Mead, he received congratulations in telegrams, letters and penciled notes by the bale from all parts of the west. They came from governors and farmers, and from muckers who had been on the midnight crew at Boulder dam—all friends of John C. Page.

He is a builder, a practical man, with a deep sense of responsibility to desert people. He doesn't know every wash and sand dune in the arid states, but he is familiar with an amazing number of them.

In the year since his term of office began, Commissioner Page has given the Reclamation Bureau an efficient and competent administration. He is directing the largest construction program ever undertaken by the federal government in the field of reclamation, and he is doing it in a manner to win the confidence of westerners and Washington's officialdom alike.



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Folks who know how to enjoy the great open desert at this time of year always include this famous COLEMAN Camp Cook Stove. You can use clear motor car gasoline and have an appetizing meal prepared in just a few minutes.

Before you start on a desert trip, see this compact COLEMAN CAMP STOVE.

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It's available in two sizes to meet the needs of almost every space requirement.

Small size, two burners \$ 8.85
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29 Years of Successful Service

Irateba—Big Injun of the Mojaves

Continued from Page 11

die. Then he would be free of the stifling room and the endless misery.

The thermometer hovered around 118° in the shade that fatal afternoon of June 21, 1859, and the guards, feeling sorry for the poor devils cooped up in the guardhouse, allowed the prisoners to come out on the porch where it was a trifle cooler. A few hundred feet east of the prison flowed the broad muddy flood of the Colorado. Captive eyes gazed longingly at the murky waters.

Cairook could stand it no longer. Suddenly he seized the musket of the nearest guard by the muzzle, then grappled with the soldier. The other prisoners immediately broke and ran for the river. The trooper wrenched free and lunged at Cairook, stabbing the Indian in the abdomen. Cairook staggered away on a faltering run. A Minie ball through his head tumbled him in the hot dust. The other guards began firing on the glistening black heads of the escaping prisoners as they swam frantically through the river currents. Four were slain, two were wounded but escaped with the other three who were never captured.

Cairook's death left Irateba the undisputed leader of the Mohaves, which position he was to fill for the next fifteen years.

After his accession to chieftainship of the Mojave nation, troubles between the white men and that tribe ceased and the people along the river gave Irateba all the credit.

Gold fever swept the Colorado in the early '60s. Prospectors swarmed upstream and spread out across the arid lands of Arizona. New towns mushroomed into existence over night. Irateba remained staunch in his friendship and although the white men were engaged in war to the hilt with the Apaches, the Mohaves steered a neutral course, even aided the newcomers on occasions.

In 1863 Irateba guided John Moss and William Furlong to gold fields be-

yond the Weaver and Walker diggings on the Hassayampa and a new copper district was named after him.

Moss was Indian agent at the time and he thought it would be a good idea to take Irateba on a trip to the east to show him the power of the Great White Father, thereby making the Mohave leader an even more powerful ally.

Accordingly, on December 2, 1863, Irateba and Moss arrived in San Francisco on the steamer *Senator* from Los Angeles. Irateba was good copy for all the newspapers of the Golden Gate city. He was referred to constantly as the 'Big Chief' or the 'Big Injun'. He had the run of the city and was invited to all sorts of functions. He stayed at the Occidental Hotel and ate his meals at the "What Cheer House." He was garbed in somber black and wore a tall light felt sombrero. On January 13 Moss and Irateba sailed for New York on the *Orizaba*.

Big Chief Returns

Four months later Irateba returned from a triumphal tour of the eastern cities and a reportorial wag in San Francisco described him thus as he made ready to sail south to Los Angeles whence he would go by wagon train to Ft. Mohave:

"On the wharf stood Irateba,
On his head a general's chapeau;
Chinese thingumbobs on his shoulders;
Colt's revolvers in his waistbelt
Bowie knives and swords enough to
Sink a seventy-four gun frigate
In his baggage; and a pleasant
Fragrance, as of Eugene Clicquot,
Or the wine of Bourbon county;
Issuing from his mouth and nostrils
Like the fog from the Pacific
On a lovely summer morning.
Then he went upon the steamer,
Told the captain he could start her;
Turned and waved his hand in parting;
Heard the newsboys say: "Forever
Fare thee well old Irateba."
Then descended to the cabin,
And inquired the hour for dinner.
Thus departed Irateba—

Irateba the big Injun—

In the glory of the sunrise;
In the roseate mists of morning,
To the blessed lands forinist the
Deserts of San Bernardino.
What he did and what he saw there,
When at home among his people;
What he said of Mr. Lincoln,
New York and the Yankee nation;
What he told about his journey;
How he felt when once again he
Stood on his old stamping ground
You shall hear from us hereafter."

In truth it was time Irateba was returning home. The Mohave tribesmen were growing restless. All sorts of rumors were drifting like smoke among the arrowweed and mud rancherias of the Indians. Irateba had been imprisoned. Irateba had been shot. The white men had poisoned him. Wipe out the white men before they destroyed all of the Mohaves.

Then Irateba, arrayed in all the glory of a major general's uniform with a cocked hat on his head, his chest ablaze with various medals, including one about the size of a 'dobe dollar set with colored stones and inscribed, "IRA-

"Bill" Conway

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ROOMS WITHOUT BATH
FROM \$1.25

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D A T E S

and other desert fruits.

Near Indio on Palm Springs Highway

Write for descriptive folder and price list

SNIFF'S DATE GARDENS

Dept. D, Indio Calif.



TEBA, CHIEF OF THE MOHAVES, ARIZONA TER.,” revolvers in his belt, a long Japanese sword at his side and his pockets stuffed with daguerreotypes of Washington politicians rattled out of the west in an army wagon and all was peace on the river.

Oddly enough Irateba's trip acted as a boomerang on his prestige. The uniform and the young arsenal he carried awed his followers but when the old leader began relating his experiences his stock fell to zero. In short, who could trust a man who told so many lies?

Early in March, 1865, the Mohave slew a Paiute medicine man for failing to cure some small pox patients. In retaliation the Paiute killed two old Mohave women and the feud was on. In September word was received that a band of Paiutes were on their way down the river to attack the Mohave stronghold on Cottonwood Island. The Mohaves decided to carry the war to their enemy and Irateba, as befitted a leader of his people, sallied forth in all the glory of his Major General's uniform at the head of his warriors. The Mohaves had borrowed a dozen shot guns from some of the miners at Hardyville, and about a dozen of the latter went along to see the fun.

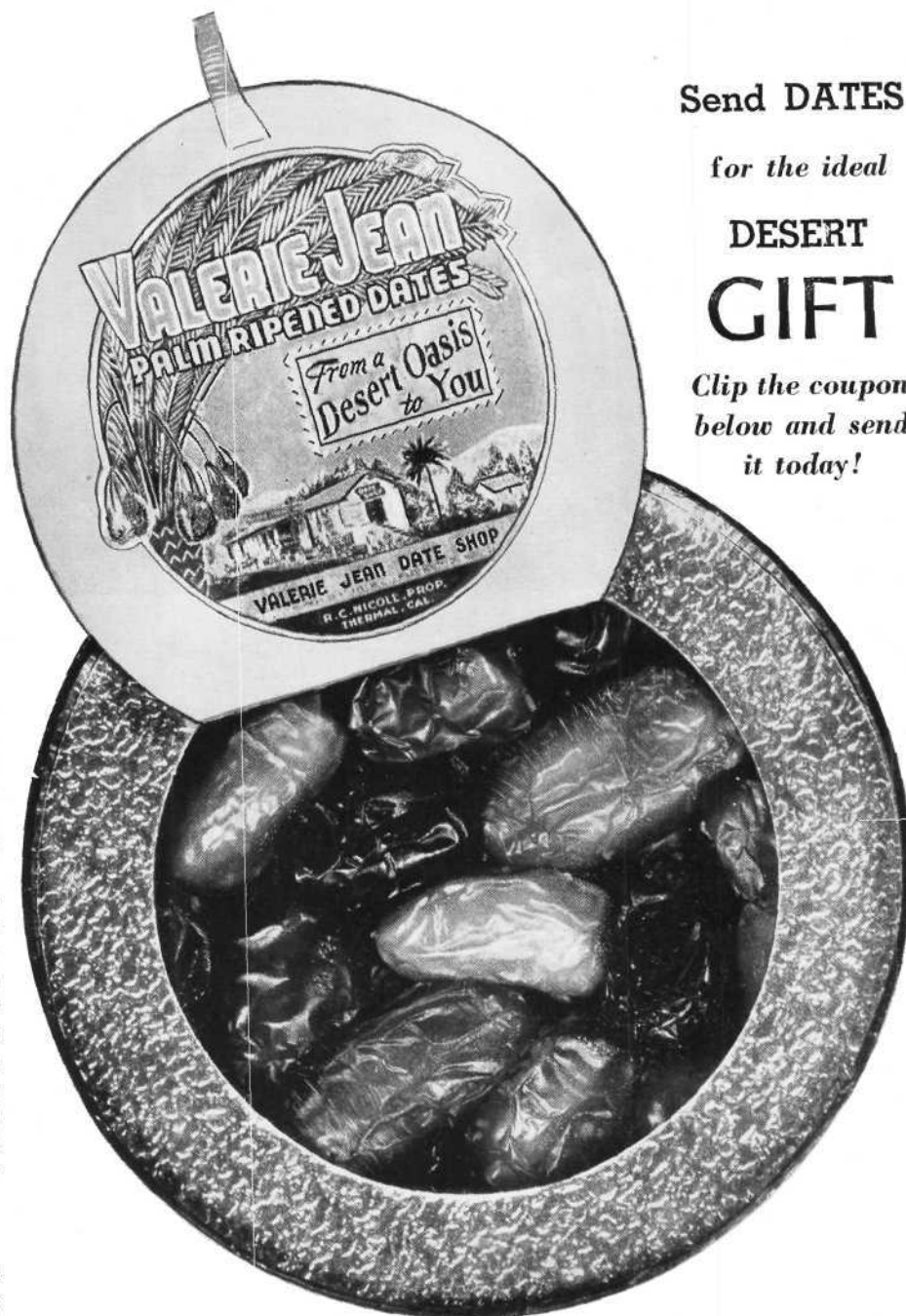
In their ignorance and eagerness the Mohaves unlimbered the shotguns at long range on the Paiutes, whom they met about twenty miles north of the Island. The Paiutes retorted to the shotgun bombardment with gestures "more forcible than elegant" and then closed in with arrow, knife and war club. The Mohaves lost their nerve and fled. The Paiutes raced after them and there was a running fight all the way to Cottonwood Island.

Mojaves in Retreat

The Mohave warriors arrived there in time to send the women and children to the protection of Fort Mohave, while Irateba and two of his head men remained behind to destroy the crops to prevent the Paiutes from enjoying them.

While thus employed the enemy caught them and then it was that Irateba suffered the crowning insult that virtually destroyed what little remained of his prestige.

The Paiutes were itching to lift old Irateba's scalp but they feared the wrath of the blue coated soldiers. Irateba was a friend of the white man. So, they did something, which, from the Indian point of view was even worse than death. They stripped Irateba of his glittering regimentals and put them on their own chief "Sic-a-hoot". Then they chased Irateba home in his birthday suit. It was all very embarrassing



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R. C. NICOLL, Prop.

Thermal, Calif.

Enclosed is my check for \$..... for which please send me the following order of palm ripened California soft dates, the beautiful pack as illustrated above:

- 3-pound containers, prepaid any place in U.S.A.
@ \$2.15 \$.....
- Two 3-pound containers, prepaid to one address
in U.S.A. @ \$3.90 \$.....
- Cases of 12 3-pound containers shipped express
charges collect, @ \$19.20 per case \$.....

Name

Shipping Address

☐ Check here if you attach mailing addresses for above packages. Acknowledgement card will be sent to you.

Irateba

Continued from Page 25

and Irateba was very, very angry. So much so that the following year the Mchaves again met the Paiutes and whipped them.

However, Irateba was no longer the leader he had been. His words were disregarded and as the years went by, he became grief stricken, and said a writer in 1870:

"The old man is here now with his tribe, but he looks feeble, wan and grief stricken. Age has come to Irateba but it has brought to him no bright and peaceful twilight. Dark and cheerless appear the skies of his declining years."

During the height of his power, Irateba was considered worth a regiment of soldiers to the white men living along the Colorado and in his old age, the white men respected him and mourned his loss when he died.

Death overtook Irateba on a bright May morning in 1874. He was about sixty years old.

Following tribal custom, Irateba's remains were cremated and today, no one knows where his ashes lie.

A trail, a mountain and a mining district were given his name, yet who remembers him today? Irateba, the 'Big Injun', grand old man of the Mohaves.

29



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—To every desert lover there can be no more hallowed terrain than that of 29 Palms Village. And here, with estate-size homesites still held down to ground floor, you have a surety of profit that a single pleasure visit will prove to you.

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City

Heat and Hard Rock

Continued from Page 18

maintenance engineer. "But don't overlook the advantage of experience among older men. It is difficult to say what age withstands desert conditions best; it must be a toss-up."

By the end of summer all the 92 miles of tunnel had been completed except a section of the San Jacinto tube. Here the builders found their greatest engineering problems. The two other "hot spots" of the aqueduct are the distribution lines in the coastal plain and the dam and intake above Parker.

Most visitors consider tunnel construction the most dramatic because of the noise and the consciousness of competitive struggle between drilling crews. But the work at Parker dam offers a thrilling show.

On July 29 the first bucketful of concrete was dumped on bedrock, 237 feet below the surface of the Colorado river. This excavation is believed to be the deepest ever made to reach a foundation for the construction of a dam. Paradoxically, the visitor a year or so hence who views the completed dam will see only an 80-foot elevation and may find it difficult to realize that more than three-quarters of the structure is hidden under the river mud.

Big Dam Job

The completed dam will back up a lake fifty miles long with a static shoreline. Three miles up the river from the dam is located the intake for the aqueduct. Three lifts will carry water back from the river through two small reservoirs which will serve as desilters. At Gene Wash and Copper Basin reservoirs dams are being built in a country so rough that even the lizards lose their direction.

So much for the statistics. The men on the job are old hands, most of them having put in time at Boulder dam. Frank Crowe of Boulder fame is bossing the construction for J. F. Shea Co., one of the famous Six Companies. E. A. Moritz is construction superintendent for the U. S. Bureau of Reclamation, which dictates the specifications for the dam. The Metropolitan Water District arranges the financing for this phase of work.

Herb Cutler is resident engineer for the District at the river headquarters. He is long and thin, refuses to wear a hat in the August sunshine, and his high bald spot is a rich tan. He calls his men by their first names and appears to be one of the most popular men on the job.

New records were made by the hard-rock boys who hammered their way through range after range of desert mountains.



One of the old timers, Herb came to the desert nine years ago to pack a transit over barren mountain ridges. He describes the original engineers as "three-fourths mountaineer and one-fourth surveyor."

Evidence that engineers do not spend all their thinking moments on figures and graphs is revealed when Cutler grows enthusiastic over prehistoric animal tracks found deep in tunnel rock near the river. And he delights to show visitors the bandit of Bandit Wash, a grotesquely garbed sahuaro cactus near the road at Copper Basin.

"Out here in this division," Cutler said, "we are about six hours of hard driving from the city. We have some difficulty in getting men to come out this far to work. But the depression helped our labor situation in a way. I'd say that more than half of our men are married and many of them bring their families here to live."

"You know the greatest part of the work on the aqueduct was done by contractors. Their organization differed from the District force account work in a few details, most of them making their own provisions for mess and quarters. There was wide variation in standards, in fact there still is evident difference between the contractor's camp and the District camp here at the dam. Some of the contractors set their own table, others contracted the feeding."

"Many of the family men who came

Sez Hard Rock Shorty of Death Valley

By LON GARRISON

"I MIND one time," offered Hard Rock Shorty, "that I was real insulted."

He yawned widely, filled his pipe, made sure the shade was going to last, and then proceeded.

"I hired ma out as a guide to take this Dude down into Death Valley, an' he could ask more questions than a cross-cut full o' four year old kids. 'Why' was this and 'What' was that until I got tired of it an' interrupted to tell about my peetrified injun.

"Right here," I explained careful like, "I found a peetrified injun! An' right by him was a peetrified bow. Acrosst the canyon was a peetrified deer, an' right b'tween 'em a peetrified arrer. The injun'd shot at the deer, an' they was all peetrified right on the spot!"

"The Dude thunk that over for a minute.

"But how about the force of gravity?" he asked.

"Oh, her?" I says. "I guess she was peetrified too."

"The Dude thunk that over some more an' then's when I got insulted.

"You know?, he said. 'I don't believe a damn word of it!'"



out to the job built little squatter settlements. Some of these temporary shacks are still being used along the river and you will see abandoned campsites all along the aqueduct route. Trailers were much in vogue as living quarters for a while."

When work began on the project along a 242-mile front and 10,000 workmen came to make their temporary homes on the desert, a roadhouse boom developed. Houses of questionable entertainment sprang from the dry sand overnight. Now most of these enterprising establishments are decaying hulks, their gaudy banners fading in the hot wind. During the tunneling days the roadhouse operators enjoyed a rushing business but with the passing of the hard rock miner the houses were abandoned.

Several small towns sprang up to serve the "aqueducter." Earp, Crossroads, and Whipple were put on the map along the river between Parker and the dam. Rice and Vidal boomed for a time.

At picturesque bends in the river near Whipple are settlements with curious names: Mesquite Flats, for instance, where small houses of cheap construction nestle cozily among the willows and cottonwoods. Secure in the knowledge that there will be no more floods, machinists and carpenters and cement workers have thrown together wood

and old iron and brush to make themselves habitable homes on the banks of the brown river. The land is closed to entry, there are no rents or taxes, wood and water are free, electricity is considered unnecessary, and food can be bought at the nearby highway stores.

Back in the field headquarters of the District at Banning is a young man, Richard Stephens, Jr., who carries the title of office engineer and much of the responsibility of personnel coordination.

"While our work is located on the desert," he said, "this is not in any sense a reclamation project and none of the water to be carried in the aqueduct will serve desert communities. But you will see that the desert is our problem and we will always have to study it. The factor of desert cloud-bursts, for instance, will always keep us on our toes."

The men who are building the Colorado river aqueduct have learned how to "take it." Any big construction job will magnify the strength or weakness of men. But on the desert, just as the size of the distant mountains is magnified, so the characters of men grow large. Those who couldn't stand the enlarging process got out from under and those who could stayed with the job. They are real men, glorious in their strength.



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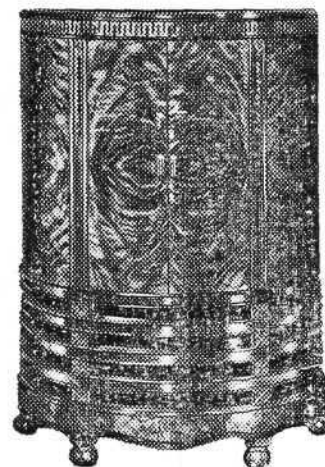
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POETRY



NATURE'S EMERGENCY STATIONS

By JEFF WORTH

DEJECTEDLY the pack burros followed the trail, ears flopping listlessly, eyes and nostrils ringed with trail dust and pack cinchas sagging from gaunted flanks. Behind them at fifty yards the famished prospector walked as though in a dream.

Under a burning copper sky that seemed to press down on their heat seared bodies they had crossed miles of brush covered flats since leaving the last water hole. Somewhere in the shimmering distance ahead the trail led to hidden Lost Horse Tank and safety—if they were still on the right trail. If not, there was but one answer.

Almost at once the trail turned sharply to the right and sloped away to the bottom of a flood-scarred wash nearly a mile in width. Immediately the pack animals gave attention and as the cadence of creaking packs changed, the heat dazed owner realized that the brutes sensed the presence of water close at hand.

With quickened pace the bottom of the wash was reached and there in the granite reef, which formed

the floor of the arroyo, erosion had carved a natural reservoir. Almost with an audible prayer of relief the man fought the crazed animals back, after the first few long draughts, to prevent ill effect from over indulgence in Nature's life saving gift.

Throughout the entire southwestern country this same drama, with slight variations, has been enacted numberless times as venture-some pioneers mastered the arid wastes. From the famous Tinajas Altas or High Tanks of the Camino del Diablo to the equally famous Turkey Track Tanks of the northern route, an ever protecting Nature left these reservoirs for the use and safety of the desert wanderer.

To the early scout, trapper or adventurer a knowledge of their exact location was of prime importance. On many routes, dangerous or perhaps otherwise impossible, desert crossings were made safe by these natural tanks and the story of many of them is replete with incidents of romance, adventure and sometimes tragedy.

nearly every detail of home gardening, from cost to insect control.

When to plant, how to plant and exact information as to the preparation of seed beds are included. There are also tables showing the frost dates in all sections of the state, and the relative distribution of vitamins in each of the common vegetables. This is a helpful and authoritative booklet for home gardeners, not only in Arizona, but the whole arid Southwest.

OMNIPRESENCE

We see His sign in the heavens
In grey banked clouds unfurl'd,
The rain is His benediction
To dry and thirsting world.

He lives in the shaded forests,
Where crystal waters flow—
In the star shot sky at midnight—
And day break's golden glow.

He lives in the desert ridges
Of sandstone, shale and clay.
He lives in the fading sunset
As night enfolds the day.

—Jeff Worth

THE LURE OF THE DESERT

I hear the desert calling me
Away from town and noise,
Out into broad expansive places—
To drink in worth-while joys.

I feel the desert luring me
Away from idle talk
To thoughts of big eternal things,
While o'er the sand I walk.

This shifting sand that in the Spring
Is carpeted with flowers
Of choice perfume and color rare,
To help enrich the hours.

And edged with hills of varied hue
Reflecting the sunset glow;
I'm sure the desert's calling me.
It's the sweetest call I know.

—Blanche B. Williamson

WHERE SHORTY SLEEPS

(To the memory of Shorty Harris)
He chose it well, this resting place
He asked us for at long, long last,
Out here in his Death Valley Land,
So far away, so hushed, so vast.

The coyotes walk more softly here
And seem to mute their wailing
cries—
The wind dies down, and softly sings
A requiem here, where Shorty lies.

A band of nomad burros pause
Beside his grave and quietly stand
To pay a tribute to a friend
They one time knew in this strange
land.

No city's din, no raucous noise
To this far place will ever seep,
Where here beside his partner
Old Shorty lies, so fast asleep.
—Adelia M. Prudden

TURNIPS IN THE BACK YARD

For those desert dwellers who find pleasure and profit in growing their own vegetables, the University of Arizona college of agriculture at Tucson has just issued a little book containing nearly all the answers.

The bulletin, entitled "The Home Vegetable Garden in Arizona," was written by Fred Draper and revised by M. F. Wharton and Harvey F. Tate. In its 54 pages are discussed

LETTERS

It is both helpful and stimulating to the editor of the Desert Magazine to receive letters from readers. If they contain suggestions and helpful criticism so much the better. The magazine, now two months old, has received a gratifying response, but its publishers are not going to sit down and rest on past laurels. We want it to be more interesting every month. If you have any thoughts that will help, please mail them in. Following are a few extracts from the mail of the last few days:

Los Angeles, Calif.

My dear Sir:

Imagine my delight when I chanced upon a copy of The Desert in Las Vegas. A long felt want is realized at last. More power to you. I believe with John Burke of the De Anza that it will find an eager market in large cities with those who have dreamed of the desert but have never seen it except in the movies.

DANIEL BOONE HERRING.

Winterhaven, Calif.

Dear Randall and Mac:

You fellows certainly complicate matters for me. As a result of a long life spent on the deserts of the Southwest I claim authority to criticize western stuff that gets into print—and now you chaps spring an edition that I can't find a single criticism in. You surely hit your stride in the December number from every angle, style, balance, subjects and make-up. Congratulations.

T. J. WORTHINGTON.

Calexico, Calif.

Gentlemen:

I am very much pleased with the initial number of your very interesting and complete magazine. Judging from the first number only I would say that though others will undoubtedly try to imitate such a novel and needed magazine, they will never catch up with you.

I note the contents, and think at once of another: Descriptive logs of trips, comprising log, pictures, description of route and some or all of the following: Scenery, people, history, plants and animals.

H. M. ROUSE



Organ Pipe Cactus in Southern Arizona

Courtesy Scenic Trails Magazine

Fowler, Colorado.

My dear editor:

The second issue of the Desert Magazine has just arrived and as I turn its pages for the first glance I am happy to find it still clean from rubbish and gaudy advertisements. You may be new in the magazine field but I believe if you hold to your present policy you will soon be the most liked magazine in the market.

R. D. MUTZ.

Long Beach, Calif.

Dear Mr. Henderson:

Thank you again for instigating the Desert Magazine. The second issue is even better than the first. We love it.

DORIS CALDWELL.

P. S.—Trill to an Ocotillo—

Ocotillo, Ocotillo

(To be spelled without an 'a')

Though you antedate Cabrillo,

Honor still comes not your way

Though you flourish by the million
Where the hopeless horned toads play,
Ocotillo, scribes octillion
Still will spell you with an "a"

Spare, I pray, the poor mis-speller
Harmless as a armadillo;
Just be glad when some gauche feller
Doesn't call you Ocotillo.

Imperial, Calif.

Desert Magazine:

Who is this man, signs as Stingle

Claims he writes the world's worst
jingle?

And who's the bozo, Desert Steve

Says his rhymes make poets grieve?

Usurpers all, for I'm the vet

Who ranks as Satan's laureate.

T. D. McCALL.

Cambridge, Ohio.

Gentlemen:

That's the finest bang-up job east or west of the Rockies. And that's not one bit of "election soft soap." Perhaps some of it may be because I like all the things you talk about, yet I've spent more than seventeen years in branches of advertising, and it is truly refreshing to see "God's country" done so beautifully. You must have a wonderful printer.

DAMON S. TEDRICK.

Los Angeles, Calif.

Gentlemen:

As an Australian whose youth was spent in the bush of that country, I have always had pleasure in the outdoors of California, especially the desert, and have spent many weekends roaming over its sandy spaces. I am particularly interested in the flora and will appreciate further articles such as the one on the Creosote bush. With regard to such articles, might I suggest that where possible you show a close-up of the plant, or flower, so that it might be easily identified by those like myself who are interested but are not botanists.

WILLIAM C. OKE

Calexico, Calif.

One copy of the Desert Magazine has been received. We hope that you have received the order for two copies before now. We are very much pleased with the magazine and are keeping it under lock and key until we get our next copy. You are making history and preserving it and we are proud of what you are doing.

BESSIE H. WOFFORD
Librarian



Pancho Contento on his way to Calexico, where he always finds the best for the least.

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BOOKS OF YESTERDAY and TODAY

—a monthly review of the best literature of the desert Southwest, past and present.

BEAUTY BEHIND THE MASK OF AN AUSTERE DESERT

"A BIG mysterious land, a lonely inhospitable land, beautiful, terrible," Mary Austin describes the whole desert country from the east slope of the Sierras at Truckee River to the sink of the Mojave River.

Coming to the eastern California Desert country with her husband in 1892, Mrs. Austin immediately set her mind to work making the most of her experience, the result being that a memorable American classic was produced. The value of her book "The Land of Little Rain," Houghton Mifflin Company, 1903, was recognized first in England, following which critics in this country acclaimed the little volume to be of real significance. Today this desert classic, now out of print, is considered a valued rarity.

In diction, choice as Emerson's, the author describes the minutest desert life, nothing being too small for her keen eyes. Even the rat trails to water are mentioned. She "laid an ear to the snow to catch a muffled hint of their eternal busyness fifteen or twenty feet under the canyon drifts."

Again she states, "I have pawed about for hours in the chill sward of the meadows, where one might properly expect to get one's death, and got no harm from it." Again: "One hears by night, . . . the crepitatious rustle of the unfolding leaves and the pushing of flower-stalks within."

As a botanist and an artist she describes a world foreign to many. Terming herself: "Your true idler, with days and nights to spend beside the trail."

The author allows a chapter for each characteristic of this vast desert area explaining "each peculiarity of the land and what is astir in them" in minutest and most accurate detail.

Wins Confidence of Indians

Mary Austin won the confidence of the Piute Indian women. She would squat for hours on the dirt floors of their campoddis at a time when white women's presence was taboo. Other white women were told: "You are not wanted." But Mary Austin was welcome. From this source she learned the exact information given in her chapter on Indian basket making.

In a vague way without knowing just why, countless persons love the desert,

but Mary Austin, with her keen penetrating mind, was able to state in her classic just what the desert meant to her. "The earth is no wanton to give up all her best to every comer, but keeps a sweet, separate intimacy for each . . . The real heart and core are not to be come at in a month's vacation. One must summer and winter in the land and await its occasions."

Mary Austin rubbed elbows with miners, saloon-keepers, stage coach drivers, Indians, sheep-herders and all manner of "sun-dried derelicts" in order to extract their stories.

Only one who knows the desert intimately, knows just how accurate is her description of it. Sometimes the reader must know her country and its history in order to follow intelligently the story. For instance, in her story of Jimville: The "Minietta" and "Defiance," are names of old mines. The town of Lone Pine is called by a Spanish name. Very often the author uses Indian names for persons, places and mountains, expressing a preference for Indian names where possible to use them.

She states: "You see in me a mere recorder." Even the desert smells do not escape her pen. She speaks of the early spring pungent sage; the burning campfire sage; the palpable smell of bitter dust up from the alkali flats and the smell of rain from the canyons.

It is a book which deserves not to pass into obscurity, but should be a guide-book for increasing numbers of lovers of the desert.

GERTRUDE C. SUTLIFF

DESERT TREK OF REFUGEES IS TOLD IN FICTION

WITHOUT claim to historical authenticity, Dr. De La Rhue's story "Spanish Trails to California," Caxton Printers, 1937, is nevertheless a charming contribution to the fiction of early Spanish migration to California. There is life and movement in every sentence.

The first half of the book is laid in Spain where King Philip's Inquisitors heap trouble and torture on all who oppose the Church, rich and poor alike. Grandee and peon, with the cunning aid of the gallant Alcalde of Malaga, escape the stupid tyranny of Philip by

leaving Spain in three small ships bound for America.

Don Ramon Davidas, leader of the expedition, has with him a cosmopolitan and able company: Juan Galdos, the barrel-like fencer; Benito Yuseff, the Jew; Capt. Serrano, the military refugee; and Senor Dominguez.

The geography of the journey from Tampico on the Gulf of Mexico to Southern California is rather vague. The actual traverse is accomplished in a few pages, leading the reader to wonder at the choice of title. A resident of the Southwest area will question how it was possible for the expedition, after fording the Colorado at Yuma, to be caught in a "Santa Ana" and blown overnight in some mysterious way to the southern edge of Death Valley. Equally mysterious is the way in which several thousand head of cattle, horses and sheep are herded across the Colorado and Mojave deserts and over the San Bernardino mountains without mentionable loss.

But the movement and charm of the story, devoid of romantic frippery, are compensation enough for any confusion which may result from distortion of geography. After all, the book is offered as fiction. As such it provides evenings of thrilling entertainment.

J. W. M.

Indians Found a Paradise

Continued from Page 15

canyon at infrequent intervals. In his book "California Desert Trails," Chase gives a graphic description of one of these floods—one which caused him an uncomfortable night and nearly drowned his pack horse.

There is no well-defined trail up the floor of the canyon, but the hiker who has the hardihood to push his way through the jungle of cats-claw and other desert shrubbery for a distance of three miles will be rewarded by the view of a gorgeous cascade, crowned

by a beautiful grove of palms.

While much of Andreas Canyon is Indian land, the picnic grounds at the mouth of the arroyo are now open and easily accessible to the motorist.

But I'll warn you—don't try to hike up the canyon in one of those abbreviated costumes which are so popular with outing parties. For this is a favorite home of the cats-claw—and this little desert shrub is an uncompromising foe of all who invade its domain.

MINING BULLETINS ARE ISSUED BY U. S. BUREAU

Of interest to the mining industry are two new bulletins recently issued by the U. S. Bureau of Mines. The papers are:

"Sampling and Testing of a Gold-Scheelite Placer Deposit in the Mojave Desert, Kern and San Bernardino Counties, California," by H. W. C. Prommel.

"Mining and Reduction Methods and Costs at the Oceanic Quicksilver Mine, Cambria, San Luis Obispo County, California," by A. W. Frohli.

Weather

November Report from
U. S. Bureau at Phoenix

Temperatures—	Degrees
Mean for month.....	62.3
Normal for November.....	59.7
Highest November 3.....	90.0
Lowest November 28.....	40.0

Rain—	Inches
Total for month.....	0.00
Normal for November.....	0.70
Total Jan. 1 to Nov. 30.....	4.96
Normal Jan. 1 to Nov. 30.....	6.78

Weather—	
Days clear.....	18
Days partly cloudy.....	9
Days cloudy.....	3

W. B. HARE, Meteorologist.

From Yuma Bureau

Temperatures—	Degrees
Mean for month.....	64.1
Normal for November.....	62.4
Highest November 3.....	90.0
Lowest November 14.....	43.0

Rain—	Inches
Total for month.....	0.00
67 year avg. for Nov.....	0.29
Total Jan. 1 to Nov. 30.....	3.95
Normal Jan. 1 to Nov. 30.....	2.94

Weather—	
Days clear.....	23
Days partly cloudy.....	7
Days cloudy.....	0
Sunshine 94% (294 hours out of possible 314 hours)	

Colorado river—
November discharge at Grand Canyon was 396,000 ac. ft. Discharge at Parker 388,000 ac. ft. Estimated storage behind Boulder Dam Dec. 1—15,075,000 ac. ft.

JAMES H. GORDON, Meteorologist.

The Desert Market Place

Buy, sell or exchange desert craftwork, art, or property in the classified section of the DESERT MAGAZINE.

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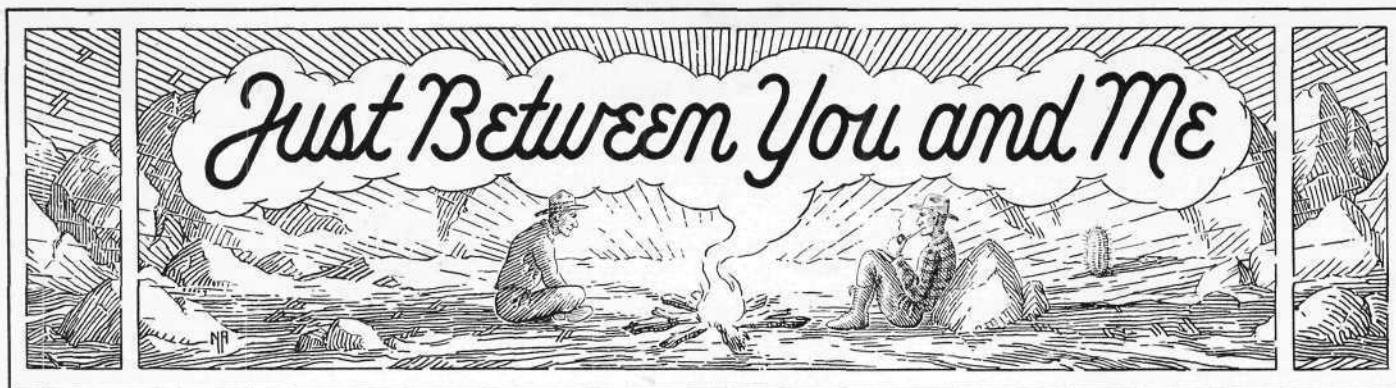
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By RANDALL HENDERSON

THERE is always something new and interesting on the desert. On Thanksgiving Day, in one of the many canyons which carry storm water away from the slopes of Coyote mountain, I found Smoke trees in full bloom. And on the sheltered slopes of the sand hummocks there were patches of purple verbenas growing just as luxuriantly as if it were a warm March day after a winter of heavy rainfall.

The four seasons, as we know them, mean nothing to the plants and the flowers on the desert. Their growing and flowering cycles are governed by rainfall and temperatures. This year the abnormally warm fall weather and late summer rains on the desert area west of Imperial valley in Southern California produced a winter array of color hardly less brilliant than is usually found in the spring months.

* * *

I mentioned Coyote mountain. I should be more specific because there are almost as many Coyote mountains in the arid Southwest as there are legendary lost mines. And that is quite a sizeable number.

In this instance I am referring to the Coyote peak which is located in the southwest corner of the Colorado desert along Highway 80. According to geologists it is one of the strangest conglomerations of rock and clay to be found anywhere on earth.

On and around this mountain are found fresh water shells, tourmaline gem stones, beautifully tinted marble, gypsum, fossils, coral, and even a trace of gold and silver—and this is just the beginning of the list of rocks and minerals and marine specimens which have been brought from there.

On this Thanksgiving Day trip I was traveling in my old '29 model cactus jumper. It isn't a very fancy car on the highways—but how it does clamber over the rocks and sand dunes when I start off across the virgin desert.

I followed a winding arroyo which gradually became narrower as the precipitous walls of clay and conglomerate on both sides became higher. Unexpectedly, the canyon opened up and there before me was an amphitheater-like basin whose steeply sloping walls presented such an array of color as no artist ever could match.

No doubt many other persons have found their way into this colorful bowl—but for me there was all the thrill of a newly discovered treasure.

The grand thing about this desert domain that extends from the Mexican border to Salt Lake City, and

from Palmdale and Banning to El Paso is that the road-builders and the chambers of commerce have found but a tiny fraction of it. There are still a hundred thousand secluded canyons and old Indian trails and peaks and tinajas each waiting to give you and me the thrill of a new discovery.

I have been traveling over the desert for many years—and the more I go, the longer grows my list of additional places which I have a yearning to explore. A single lifetime isn't long enough really to become acquainted with one little corner of the great American desert.

* * *

I have just been reading the proofs of Don Admiral's story of the Barrel cactus, which appears on another page of this number. Don seems to have done a very thorough job of exploding the popular myths about this member of the cactus family.

He is right. Bisnaga is one of Nature's masterpieces. It really is entitled to acclaim on its own merit—without all the false glamour which has been thrown around it by writers who probably never saw a Barrel cactus.

Only once in my experience have I resorted to the tapping of a Bisnaga for water to quench a burning thirst. It was a disillusioning operation. I still believe that the time and effort lost in scalping that thorny veteran would have taken me to the next water-hole with energy to spare.

Bisnaga is well able to protect itself against all enemies except those morons who attack it at the roots and cart off the whole trunk.

Thanks to stringent laws and a growing indignation on the part of desert people against these landscape robbers, they are becoming less active.

* * *

This new idea of putting government certificates on the rugs and blankets made by desert Indians to protect city tourists from being sold shoddy substitutes, is fine. Both the Indians and the tourists will be benefitted.

I would suggest that if the city dwellers want to reciprocate, they should put identifying certificates on those colored stop-and-go signals so that we desert rats can distinguish them from the neon signs when we go to the big town for a holiday.

* * *

And now, I hope that 1938 will bring to each reader of the Desert Magazine an added measure of courage, of tolerance, and of understanding—for these are the blessings that the Desert would bestow on its friends.



Send Bushels of Beauty

*to your eastern
and northern friends
... through the
Desert Magazine*

While the desert trees and shrubs display their verdant beauty and graceful sandhills reflect the warm winter sunshine, your friends in other less favored sections of the country are shivering in snow and ice.

They will appreciate the graphic personalized story of the desert as told monthly in the Desert Magazine. No gift you could send to your northern or eastern friend will be more appreciated than a subscription to YOUR magazine of the desert.

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Photos by Scenic Trails



BEN HULSE

WILL YOU HAVE REAL SERVICE OR EXPENSIVE TALK WHEN YOU BUY FARM EQUIPMENT?

Talk is cheap to the machinery dealer but expensive to the owner of machinery who, after purchasing equipment, finds no service when his machinery shows need for parts and mechanics.

Service requires an adequate stock of parts and an ample number of trained mechanics within close call of the places where machinery is being operated. After 27 years of experience in selling, owning, and operating machinery, we have concluded that adequate parts stock carried by the dealer should consist of a minimum equal in value to double the original purchase.

For example, a "20" h.p. tractor selling for \$1800 should be backed by a stock of parts valued at \$3600. A "30" h.p. tractor that sells for \$2700 must have a stock of \$5400. A "45" h.p. tractor sells at \$4000, should be backed by a stock of \$8000. A "70" h.p. tractor which sells for \$5000 should be backed by a parts stock valued at \$10,000. These four pieces of machinery should, then, be backed by a stock of parts valued at \$27,000 in order to give the tractor user adequate service. No machinery dealer who expects to give service should carry a smaller stock of parts, regardless of the number of tractors in use.

This policy is doubly necessary in intensively cultivated areas such as Imperial, Yuma, and Mexicali valleys, where tractors are expected to run 24 hours a day throughout the year.

We carry complete stocks of parts for every piece of machinery we sell, regardless of whether it is a tractor or allied lines of equipment. This we will demonstrate by permitting prospects, buyers or owners to review our records, parts stock and mechanical force. OUR PARTS SERVICE OVER A PERIOD OF TEN YEARS HAS FILLED 98 PER CENT OF ALL DEMANDS PLACED AT OUR COUNTER.

We can demonstrate that we have trained mechanics available for any emergency that may arise within ten minutes after a phone call reaches one of our four offices.

If you make the proper investigation of real service and will not be satisfied with talk alone when you are in the market to buy new tractors, your decision will be immediate. You will purchase one of the economically operated "Caterpillar" tractors.

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