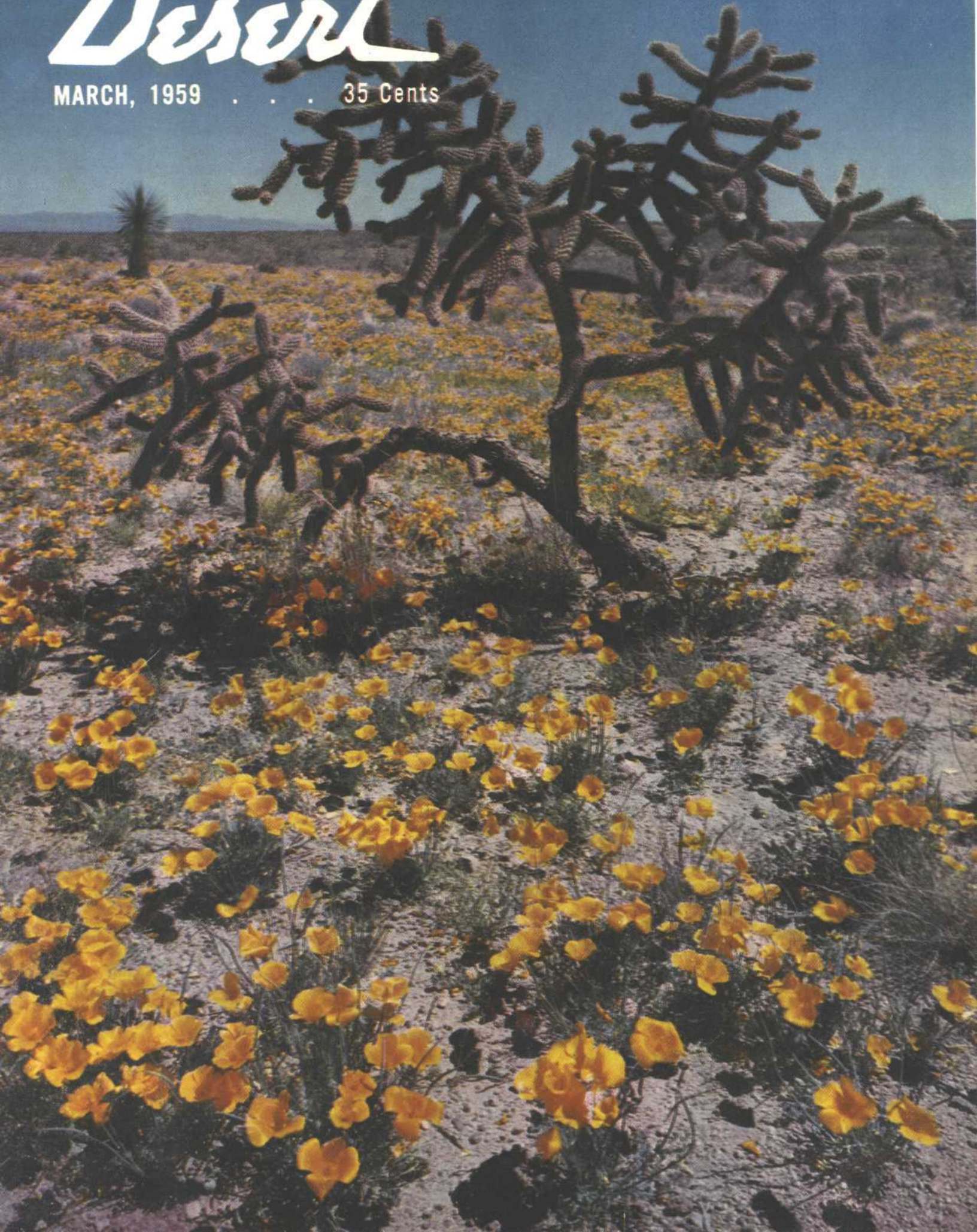


Desert

MARCH, 1959 . . . 35 Cents



... some of the best of the West

DESERT BOOKS



Recommended by the Staff of Desert Magazine

GOING LIGHT WITH BACKPACK OR BURRO, a Sierra Club publication, edited by David R. Brower. This pleasantly written book tells about open-trail travel, and how to do it. Clothing, camp menus, handling of pack stock, and outdoor first-aid are some of the topics covered. There are 152 pages of text and illustrations. \$2.

* * *

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* * *

MINERALOGICAL JOURNEYS IN ARIZONA, by A. L. Flagg. This booklet of 93 pages of text and photos is devoted to Arizona's minerals. More than a half century of gem and rock and ore collecting in Arizona backs up the author's report. Fine photos and general maps are included in the volume. \$4.95.

* * *

THE JAYHAWKERS' OATH, by William L. Manly, as edited by Arthur Woodward, is a 168 page document, through letters, diaries and personal recount, of the Gold Rush days. Manly, a hero in the rescue of the survivors of the ill-fated Death Valley pioneers, was one of the top chroniclers of the west of a century ago. Many fine line sketches plus a colored map are included. \$6.

* * *

BUILD YOUR OWN ADOBE, by Paul and Doris Aller. If you are interested in do-it-yourself adobe construction, this is just the book to get you underway. Practical in its approach, the book is easy reading and touched with humor. Quality printing goes into the 110 pages of text and photos. \$5.



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* * *

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* * *

THE NAVAJO AND PUEBLO SILVERSMITHS, by John Adair. Beautifully printed and well illustrated, this definitive work, in its 216 pages tells of the history of the fascinating silversmith craft among the Indians of the Southwest. The pioneer craftsmen and their locations are documented by the author. A thorough study of the economy of Indian silversmithing is part of the report. \$5.

* * *

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* * *

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Publisher's Notes

I know that all our readers will take special delight in exploring Fable Valley this month with Nell Murbarger and the Kent Frost party.

Fable Valley, as seen through the eyes of Nell Murbarger, is the exact place you and I always wanted to discover while exploring the way you and I always dreamed of exploring—in some far-off, hidden corner of the Southwest.

The scent of cedar and sagebrush lies heavy around the story of Fable Valley. *Desert Magazine* is pleased to open a new area of exploration for its venturesome readers.

* * *

Though the road to Fable Valley is not yet ready for trailer travel, we do have an illustrated article this month of special interest to the trailering members of *Desert's* family. (Our recent reader survey pointed out that one out of six of our readers own or live in trailers.)

"... trailers have created a new way of life," states one of the captions for the article. This is especially evident in the desert, where wintering trailerists will build up a city all their own in a fortnight, then abandon it as quickly when summer approaches.

* * *

Years ago one of *Desert Magazine's* most popular features was the "Landmarks of the Desert" contest. We plan to revive it, bringing back into *Desert Magazine* some of the reader participation that seems to fit well with a friendly and informal magazine such as ours.

* * *

A review of our circulation records indicates that *Desert*, in stride with the Southwest, is growing. New highs in newsstand and subscription distribution were reached in December and January. Christmas gifts of a year's subscription to *Desert* reached a new record. To which a grateful publisher can only add: "And please remember that *Desert Magazine* will also be the ideal birthday gift for someone you think highly of. Don't wait until Christmas to give the perfect gift!"

* * *

And, as usual, we are always looking for new writers and photographers. To retain its appeal, a magazine must seek refreshing change, while holding to the basic format it chooses as its own.

The Southwest is chock-full of challenge for the creative folks who would write or photograph. Many of them have been within our pages in the past. We will meet many more in the months ahead.

CHUCK SHELTON, publisher



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MARCH, 1959

Number 3

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ABOUT THE COVER . . .

... Desert Gold—poppies, bright as the sun itself, greet the spring in the company of a prickly cholla cactus. Josef Muench took this photograph on the desert near Willcox, Arizona. Chances are this year's desert wildflower show won't be as good as last year's spectacular blooming, but there are always some flowers—and whether you find one or one billion, the beauty and the mystery are ever-present.



DISCOVERING FABLE VALLEY

BY
NELL MURBARGER

SINCE EARLY morning we had been pushing our way into the lonely vastness of southeastern Utah. Spreading fanwise to the west of Monticello across 20,000 square miles of wild broken terrain, this is a land of savage beauty—a land without pavement and virtually without people.

Climbing slopes dressed in autumn's crimson and gold, our jeeps topped the 10,000-foot Abajo Range and con-

tinued on across high arid mesas and through dense forests of quaking aspen and pine. We skirted the rims of dark canyons that plunged toward the Colorado River, and from lofty headlands we looked toward the Henry Mountains, The Land of Standing Rocks—and the edge of the world.

Seven hours we had traveled since breakfast—and in all that time had seen no vehicle or person other than the two jeeps and five members of our

own party, nor had we glimpsed one place of human habitation. And now, the sun was dipping toward the western horizon, and we were inching down a steep loose dugway scratched into the shoulder of a precipitous canyon—a trail at times so narrow that our outside fenders hung over empty space. Reaching the sandy wash at the bottom of the canyon, we followed it to its junction with a larger canyon angling in from the southeast, and here Kent Frost braked the lead jeep to a halt. For a moment he sat without speaking as he surveyed the wide cliff-bordered trough ahead, its floor carpeted with sage and etched by jagged arroyos.

"This is it!" he said at last. "Unless I've figured wrong, this is Fable Valley."

Fable Valley — a name that had stirred our imaginations and haunted our dreams; and now to have that name manifested in rocks and canyon-sides was almost like rubbing an old brass lamp and having a genii step forth.

Only the evening before, the five of us had sat around the fireplace in the Frost home at Monticello, talking about this remote valley. We had wondered what we would find here. Until a few weeks prior to our visit it had been impossible to enter the valley except afoot or on horseback. Consequently, the valley was little known.

Last summer the Forest Service cut a primitive four-wheel-drive road into the area, and Kent and Fern Frost immediately began making plans to explore the valley. To accompany them they invited Mary "Becky" Beckwith of Van Nuys, California, Dr. William "Bill" Thompson of Richmond, California, both veteran river runners, campers, mountain climbers and long-time friends of the Frosts. They also invited me.

Until this talk of Fable Valley began, I hadn't supposed there was one scenic spot in southeastern Utah which Kent didn't know like the inside of his own pocket. Reared on a dry-land homestead south of Monticello, he has spent most of his 40 years running the rivers, hiking and jeeping over every mesa and through almost every canyon, and since 1953 operating a jeep-guide service carrying explorers, adventurers, photographers and others to all parts of this magnificent desert wonderland. That even Kent Frost had not explored Fable Valley was

They journeyed to a little-known valley in the heart of rugged
Southeastern Utah—a new frontier for adventuresome explorers
— and found an Indian paradise abandoned 700 years ago.



Trail into Fable Valley still is on the rugged side, and strictly limited to four-wheel drive vehicles.

the best possible testimony to its inaccessibility and remoteness.

"I don't have any idea what we'll find there," Kent said on the eve of our departure. "Probably nothing important, but we'll see some new country—and we might find a cliff dwelling."

And now that we were 80 road-and-trail miles west of Monticello and as close to our goal as the jeeps could take us, the next order of business was to select a campsite in the nut pines and junipers. As darkness settled in the canyons, we fell to gathering dry wood for our night and morning fires. Fern prepared a good hot supper, the others of us selected level spots and unrolled our sleeping bags, and by the time the first star appeared we were well settled and making big plans for the morrow.

Sunrise next morning found breakfast eaten and camp made shipshape, and after each of us collected the articles he thought he would need for a day of exploring on foot, we were on our way. The air at this elevation of nearly 6500 feet was frosty enough to make a jacket feel comfortable, but the sky was clear and blue, and a beautiful day was in prospect.

Only a short distance from camp we crossed a deep storm-cut arroyo at the confluence of Fable Valley and the side canyon through which we had descended the previous evening. A

small stream coursed through the bottom of the arroyo, and we were delighted to find a good spring of cold water gushing from the cutbank beneath a clump of small willows.

Beyond the arroyo we headed south across the sage-grown floor of Fable Valley, having entered it midway between its upper and lower ends. As the target for our first day's exploration we had voted to go to the head of the valley and return.

We had not walked a quarter of a mile before we noticed a tall rock promontory on our right. Rising abruptly to a height of 125 feet above the valley trough, it formed a conspicuous landmark quite unlike anything else in this vicinity. It was not until we had approached quite near to it that we caught sight of the Indian ruin

built upon a rock spur halfway up the side of this great natural tower.

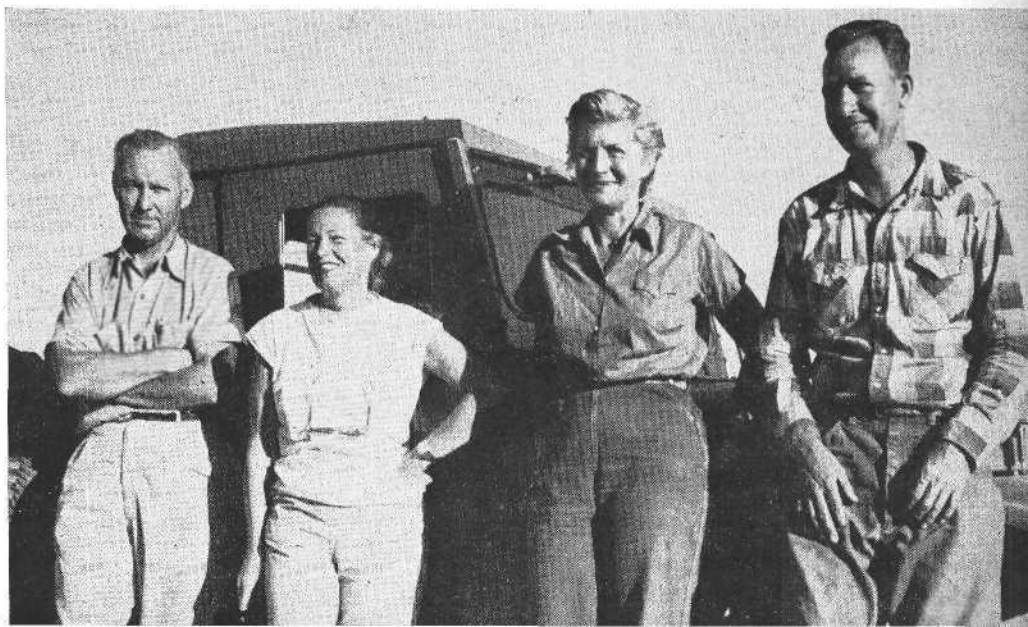
The ruin was half-circular in form and constructed of stone masonry, but any door or window leading into it was not visible from our point of observation. We also discovered that a low stone wall, like a parapet, stood on the top of the promontory. Without a ladder or rock-climbing equipment it appeared impossible to reach either ruin without great risk to life and limb. It was quite obvious that the great rock had served as a watchtower; and if a guard had been needed, then it seemed logical that there must have been habitations above or below this point.

With anticipation quickening our footsteps, we pressed on up the valley.

We began finding beautifully chipped chert and agate arrowheads, and fragments of broken pottery were almost everywhere we looked. Quality and design of these potshards indicated that the ware was typical of that found in other ancient pueblo sites throughout the Colorado plateau region and south into New Mexico. In addition to the corrugated and plain gray cooking ware, a great many of the shards carried black-on-white and black-on-gray designs, and a few were black-on-red.

Our next discovery was a small ruin in the southwest wall of the valley. Becky and I spotted it first, and soon as Bill responded to our shouts, he and I scrambled up the rocky slope to the structure.

Situated in the shelter of an overhanging sandstone ledge, the ruin included three rooms — evidently one



The explorers, from left: Bill Thompson, Becky Beckwith, Fern and Kent Frost.

large dwelling room and two smaller cubicles used for storage purposes. The living room, which measured 6x15 feet, had a ceiling nowhere over five feet high, and blackened by smoke. Both partitions and front wall were constructed of stone masonry chinked and plastered with mud mortar.

Granaries

Before Bill and I had finished measuring and photographing this ruin, Becky called to us that she had found two small granaries in the next ravine. They were well constructed storage rooms but not especially unusual, and soon we were hurrying up the valley.

Tingling with the thrill of discovery and anticipation of the yet-to-come, I felt a terrific upsurging of joy as my feet carried me on into the glory of this October morning. Our way led into a thicket of small oak trees, where we scuffed along through the soft brown dust of a game trail patterned with the cloven prints of deer and the pads of smaller wildlings. A Steller's jay screamed his watchman's warning, and two large bucks and two does bounded away through the grove into the autumn-brown grass and the sage. Here and there were a few last reminders of summer — a few purple asters and scarlet gillias, the last tip-top blossom of an Indian paintbrush. There was no sign of contemporary man—not a gum wrapper, film box or even a footprint.

The little grove of oaks blended into a grove of nut pines, and when we emerged from the trees we lifted our eyes to sweep the surrounding cliffs—and suddenly my breath caught in my throat and I was staring at a

sight I shall never forget as long as I live.

In a wide sandstone cave, halfway up the northeast wall of Fable Valley, nestled a large cliff dwelling—and in that first matchless moment of discovery it looked more wonderful to me than any of the far greater ruins preserved in our national parks and monuments. The knowledge that it was unpublicized, unnamed, unrestored and even unexplored, for all we knew, made it a grand and personal thing.

We had a feeling that if we explored this fine ruin now, anything else the day might bring would be an anticlimax, so saving the best for last, we continued up the valley.

Two Graves

As we walked on, we seldom were out of sight of chert chippings and potshards, and continued to find occasional arrowheads — all small to medium in size and some displaying exquisite workmanship. From time to time we came upon the nearly obliterated evidence of what may have been small surface dwellings; or we found sections of rough stone masonry fitted into some niche in the sandstone wall to our right. We also discovered two installations consisting of a rectangle of flat stones set on edge to enclose a plot of earth 24x30 inches in area, with a larger flat stone implanted at one end. These rock enclosures were almost identical to the sepulchers described in Dr. Byron Cummings' *The Ancient Inhabitants of the San Juan Valley*, published by the University of Utah in 1910, and there is no doubt in my mind that each marked the site of a grave.

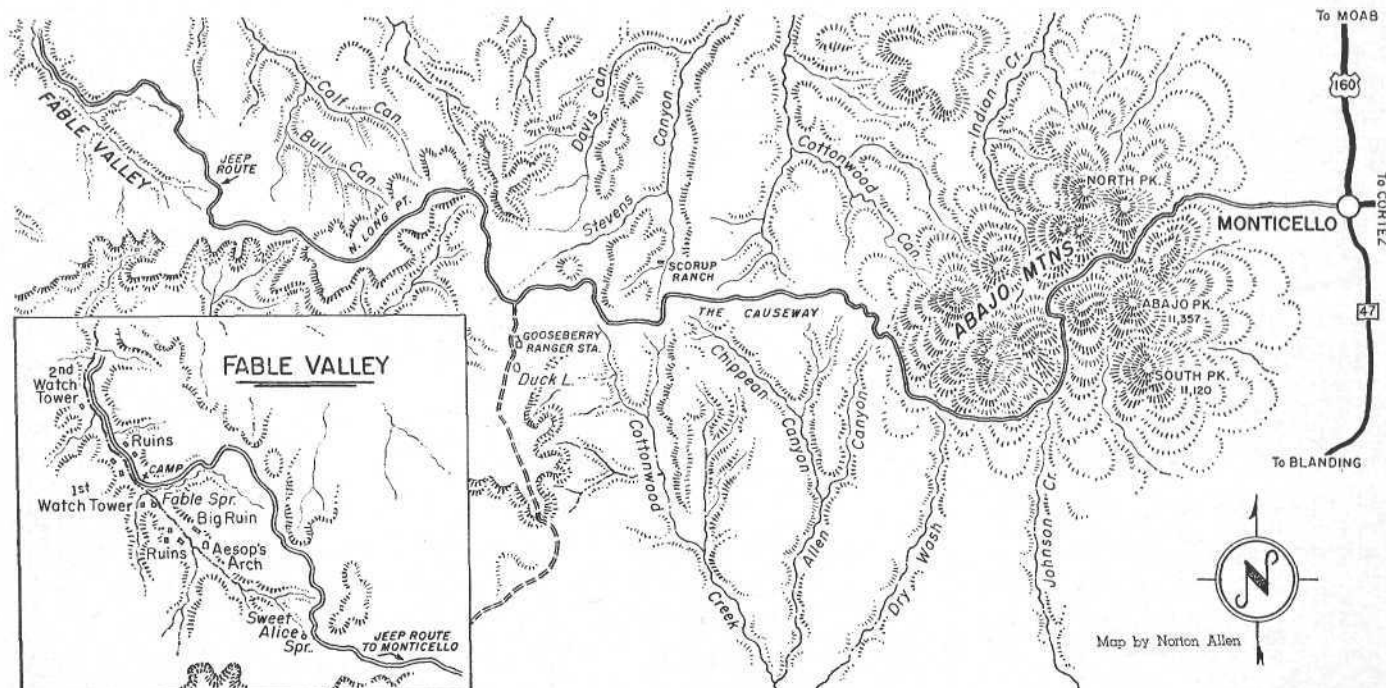
At 11 o'clock we reached a major fork in the canyon. Kent elected to travel the left-hand fork to its head, while Bill, Becky, Fern and I went up the right fork a short distance and then returned to the junction where Kent rejoined us. As the arroyo at this point has a firm sandy floor threaded by a small flow of cool water, it was a pleasant place to eat lunch, refill our canteens, and bathe feet wearied by five hours of steady walking. After 30 minutes' rest beside the little stream we felt much refreshed and were eager to be on our way back to the big ruin.

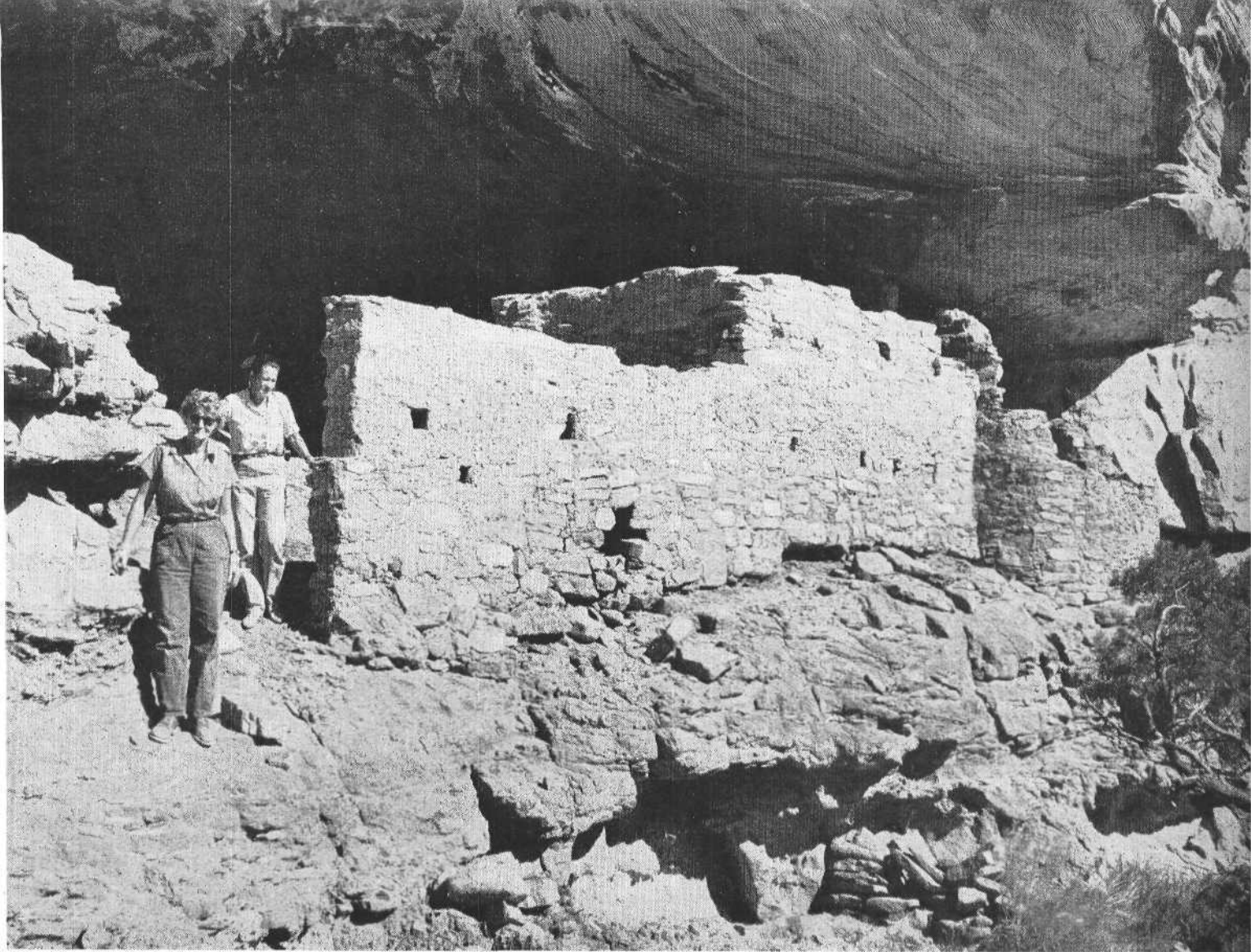
We crossed to the northeast side of the valley for the return hike, and were following along the foot of the bordering wall when Fern shouted that she had found a sandstone arch. It was a nice little window, about a dozen feet across in its widest dimension, and since it seemed unlikely that it bore a name I suggested we call it Aesop's Arch for it seemed to me the old Greek maker-of-fables should have some recognition in Fable Valley.

Tight Little Rooms

A short distance beyond the arch, at the mouth of a tributary canyon, we came upon two small granaries. Fitted into a narrow crevice beneath an overhanging ledge, they were constructed of stone masonry and mortar — tight little rooms with small neat doorways. Both were empty, and neither had an inside diameter of more than five feet.

Ascending a ravine about 1000 feet east of the big ruin, we reached the approximate level of the cave and then

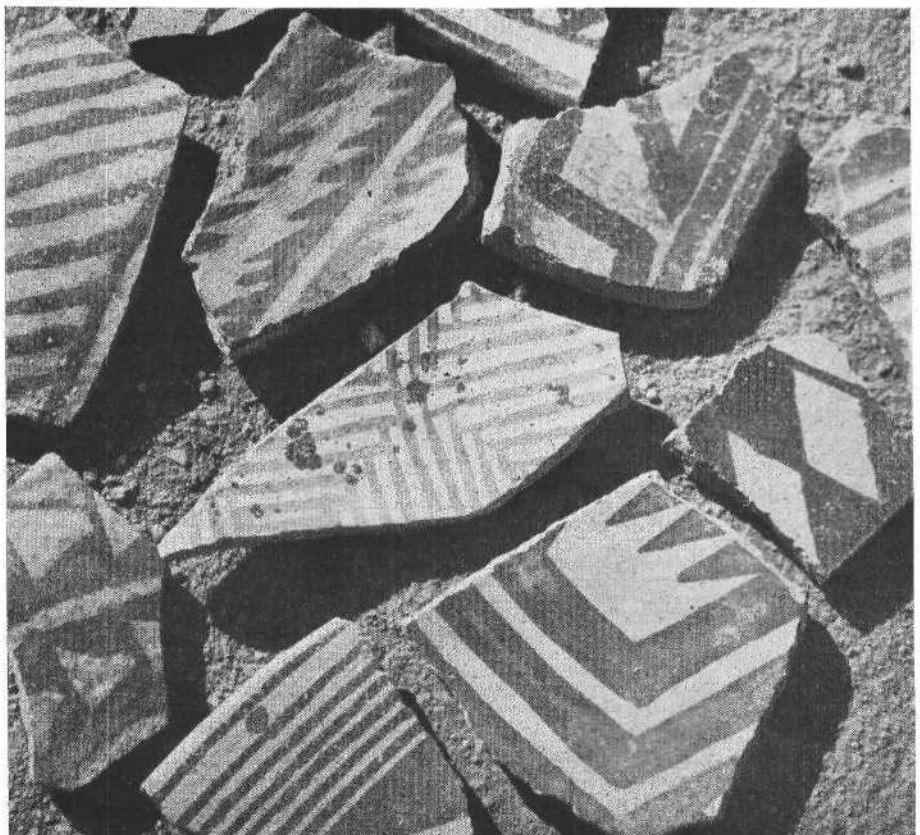
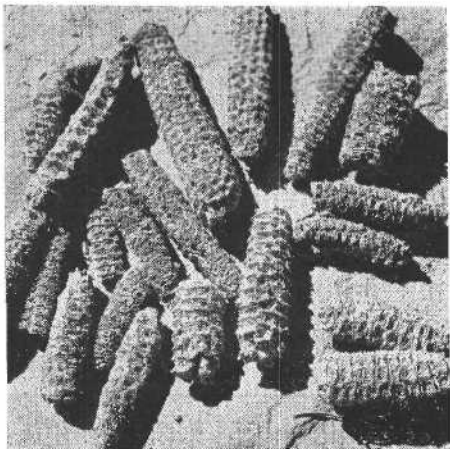




Fern Frost, left, and Becky Beckwith at entrance to the Big Ruin.

Potshards of black-on-white ware. Designs still are sharp and bright despite great age.

Well-preserved corncobs were present in several Big Ruin storage rooms.





Bill Thompson holds stone door slab which fits perfectly in opening of small food storage room.

made our way around the shoulder of the canyon to the ruin.

Virtually all cliff dwellings and pueblos of southeastern Utah were abandoned during the great drouth cycle of the late 13th century, and it seemed safe to assume that the last permanent resident had taken his departure from this communal dwelling prior to 1300 A.D.—possibly as long as 200 years before Columbus discovered America. To look upon the handwork of these people, completely unrestored and unchanged, was one of the greatest thrills I have ever known.

The sandstone cave in which the ruin is situated measures 70 feet across at its mouth, is 50 feet deep, and its 15-foot ceiling slopes down to the floor at the rear.

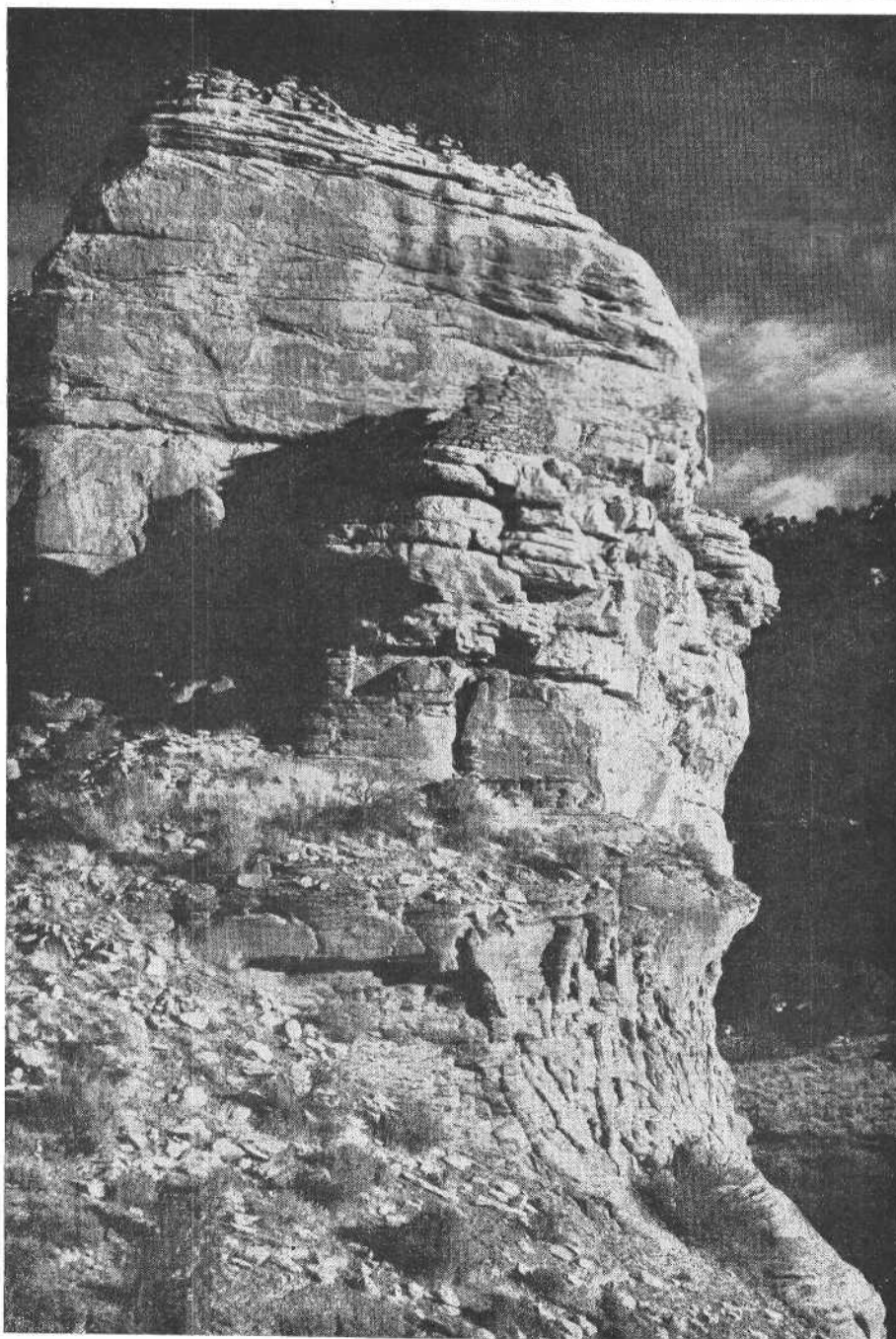
The Dwelling

The cave had contained about a dozen rooms, nine of which were in fair-to-good state of preservation. Eight of these rooms were arranged in two-story formation, while the ninth and largest evidently had been intended as the lower section of another two-floor structure, but had not been completed beyond the first story. It was a nice room, its interior measuring 8x15 feet. In addition to numerous small rectangular windows, it was fitted with a typical T-shaped pueblo doorway, and set into its walls at head height were half-a-dozen pine beams from which the bark had been neatly stripped. These 10-foot beams were practically identical in size, 20 to 22 inches in circumference. Still clearly showing the laborious hacking of the stone axes, the butt of each timber was symmetrically rounded as if the greatest care had been exercised in its cutting. The beams looked to be as stout and sound as they were on the day they were cut by Stone Age men.

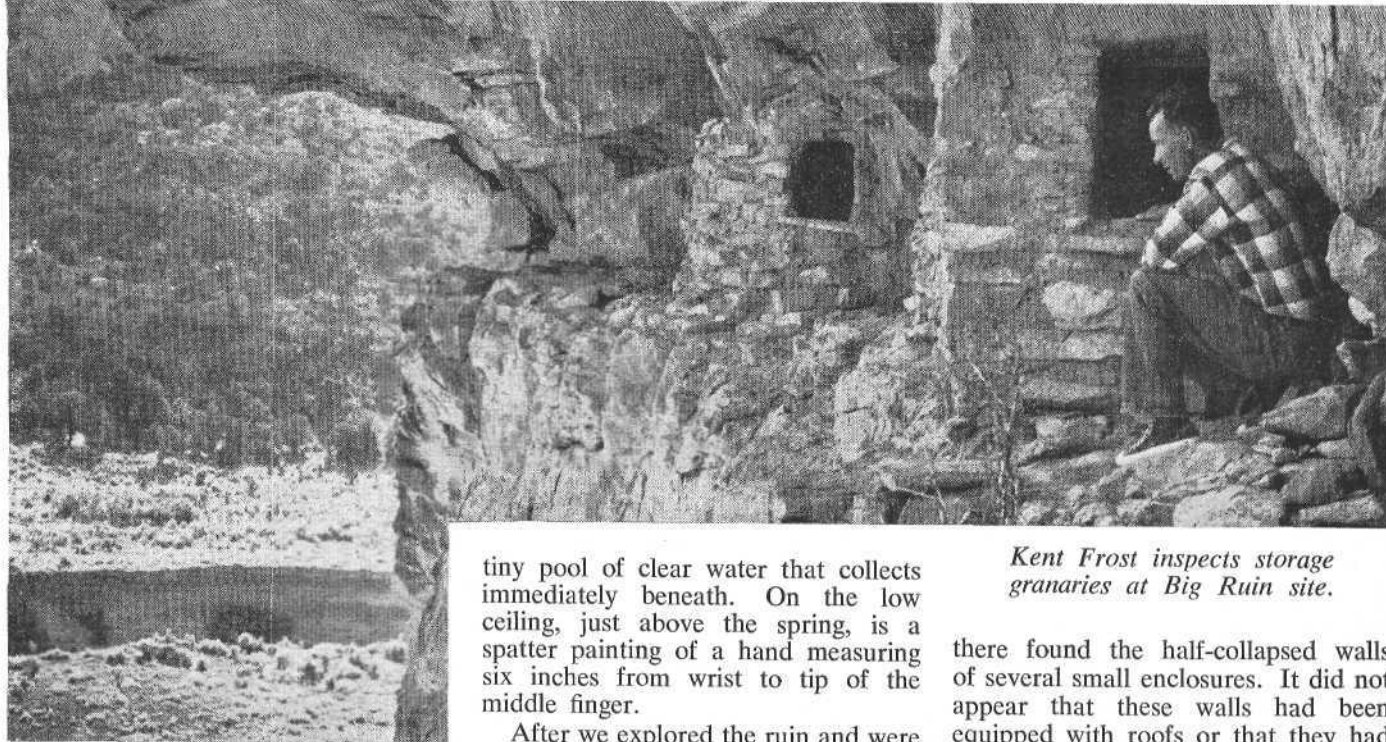
Lintels

Also perfectly preserved in the dry cave were the original lintels. These small juniper sticks, only an inch or two in diameter still were serving their intended purpose at the head of all doorways and windows in the ruin. Thresholds of these door openings each were formed of a single flat stone, some half-polished by the generations of feet that passed over them.

Walls of all the buildings were of random stone, chinked with mud mor-



The first watchtower in Fable Valley that explorers found. Note breastworks on top, and on spur halfway up tower.



Kent Frost inspects storage granaries at Big Ruin site.

tiny pool of clear water that collects immediately beneath. On the low ceiling, just above the spring, is a spatter painting of a hand measuring six inches from wrist to tip of the middle finger.

After we explored the ruin and were collecting our gear to start back down the steep canyonside, we noticed a faint circle on the valley floor 500 feet away. It was not a rock circle; rather, it appeared to be defined by a slight difference in the vegetation. Sagebrush within the circular space was a trifle lighter in color, and the plot was centered by a slight mound of earth.

From the first glimpse we suspected this area was the burial place of another prehistoric ruin. Without excavation it was impossible to determine the exact nature of the structure, except that it was round and measured 110 feet in diameter. An encircling mound of tumbled rocks, supplemented by a small section of visible wall, suggested the general form of a small pueblo; or quite conceivably, the ruin could be that of a great ceremonial Kiva similar to those found at several pueblo sites in New Mexico.

The Day Ends

By the time we finished examining this site the afternoon was drawing to a close; and since we were several miles from camp, we reluctantly called a halt to our explorations.

Next day we traveled down the valley nearly to the point where it pinches into the high sheer walls of Gypsum Canyon, a tributary of Cataract Canyon on the Colorado River.

Our discoveries of this day consisted of half-a-dozen small cliff dwellings and storerooms. One of these was a neat little building having a thin stone slab which fitted its door opening so perfectly that I doubt if even a small mouse could have gained access to the foodstuffs once stored within.

We also found another natural watchtower about a mile down the valley from the one we discovered earlier. Bill, Becky and I climbed to the top of this second promontory and

there found the half-collapsed walls of several small enclosures. It did not appear that these walls had been equipped with roofs or that they had been more than four feet in height, which substantiated our belief that these promontories had served as guard stations and that the structures occupying them had been breastworks rather than dwellings.

That these ancient inhabitants of Fable Valley felt the need to guard their homes and their fields must be taken to mean that even this remote valley was visited by covetous men who sought by conquest what was not theirs by right.

Good Habitat

Except for this human imperfection, Fable Valley must have been a better-than-average place in which to live. The small stream which meanders through the valley must have provided water enough for a considerable number of residents, while the fertile soil of the valley floor, where sagebrush now grows to a height of eight feet and more, would have provided many acres suitable for corn, beans and squash. In addition to domestic crops, there would have been game, pine nuts, juniper berries, acorns, two varieties of yuccas, holly grapes and many smaller herbs and seed-bearing grasses.

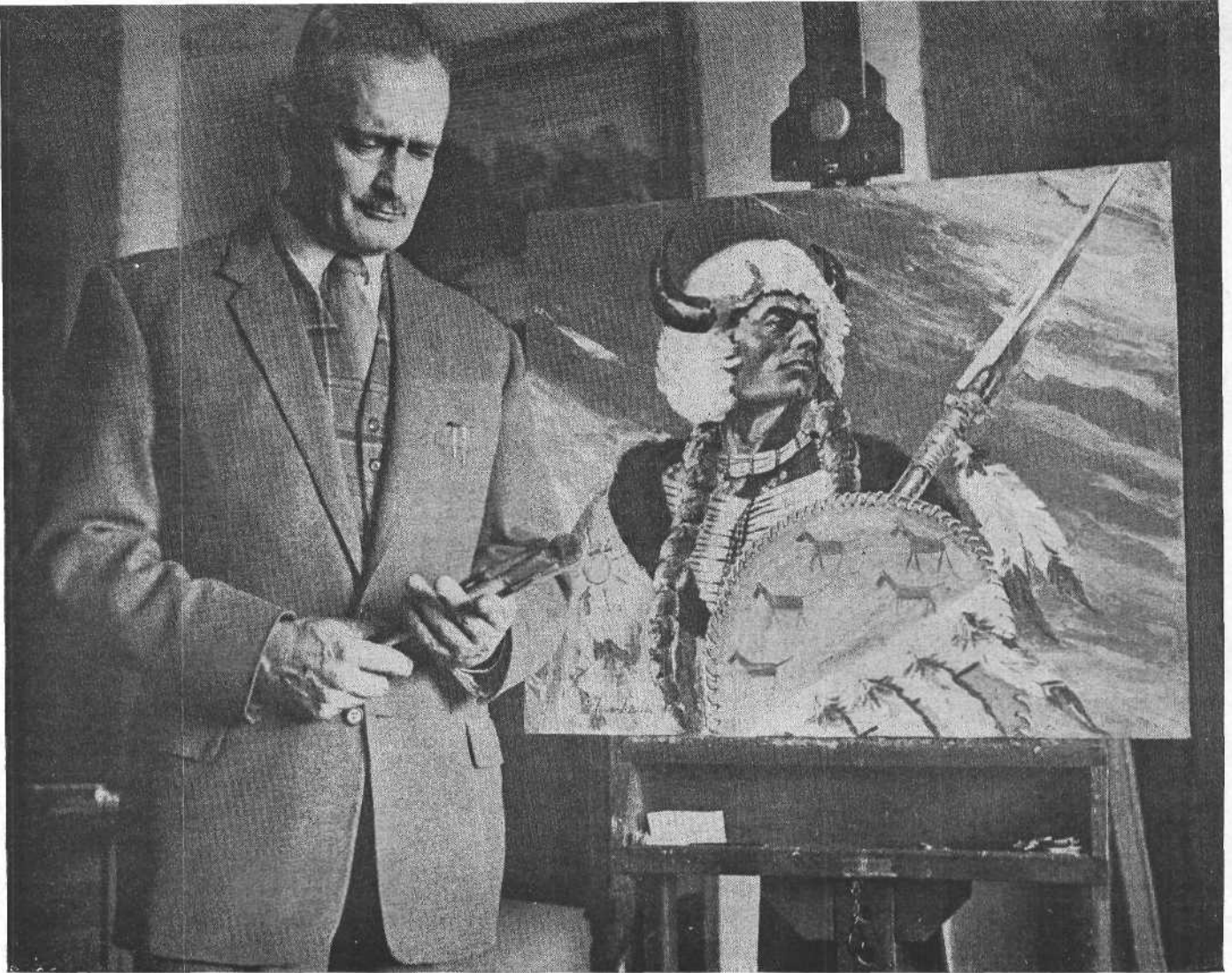
Our exploration of Fable Valley was hurried and unscientific. But, we disturbed nothing, nor did we take away anything but a few sample potshards, a dozen arrowheads collected from the surface, many photographs, and countless memories we will cherish the rest of our lives. The Bureau of Land Management is charged with the protection of ruins in this area, and they employ helicopters in this work. Skilled archeologists soon may excavate the prehistoric sites of Fable Valley, and when that time comes, I hope they will find everything exactly as we found it—and as we left it.—END

tar and partially plastered over with that same mud. Mixed with the plaster-mortar were bits of charcoal and broken pottery, and in several places the mortar had been embedded with tiny rock fragments arranged in neat rows seemingly serving no practical purpose. Possibly they represented some primitive homemaker's attempt to make his premises a little more attractive than those of his neighbors. Perhaps the tiny rocks were pushed into the soft mud by an Indian child who felt he was helping build the home. Several sections of the plastered wall clearly showed the handprints of the ancient masons.

After minutely examining the main rooms, we peered into two small storage rooms at the side. Each contained about a bushel of small corncobs resembling the cobs of popcorn or the hard flint corn grown in Hopi fields today. The cobs were brown and tinder dry, and since they showed no evidence of having been gnawed by rodents, it seemed logical to suppose that the cliff dwellers, in abandoning this home, had shelled the corn to facilitate transportation of this vitally important food and seed material. On a high narrow ledge 100 feet south of the main ruin stood two other storerooms. Built of stone masonry and in almost perfect condition, they also contained a considerable quantity of corncobs.

Running Water

In at least one respect the inhabitants of this ruin had been more fortunate than most of their contemporaries, for their home was equipped with running water. At the extreme back of the cave a small spring trickled from a crevice in the sandstone wall, and we enjoyed drinking from the



Howard Bobbs and
"Cheyenne Warrior"

He Paints Pictures You Can Understand

When Howard Bobbs does an Indian painting, he projects himself back a century into history—"as if," writes Author LeViness, "he were doing on-the-spot coverage of Southwest Indian wars for some graphic journal of the period." It is in this way the artist "captures the glory" that was once the Indians', and preserves it on memorable canvases.

By W. THETFORD LeVINESS

ARTIST HOWARD BOBBS of Santa Fe specializes in portraits, having done some of his best work with Indian subject-matter. But he looks and talks more like a prosperous businessman.

Bobbs' appearance is a part of his life-way. He believes art is as important to a community as medicine, law or engineering. "We spend long years in schools and in practice learning how to be artists," he says. "We must educate the public not to pass us off as a bunch of dreamy crackpots."

An enthusiastic archer, Bobbs hunts with bow and arrow, and participates in archery tournaments throughout the

Southwest. Born in Pennsylvania in 1910, he grew up in New York City. As a child he liked to draw, but flunked several art classes in grade school because he wished to be original. In New York he attended the Art Students League and the National Academy, and then went to the Swain School of Design in Boston. It was after this that he toured the West and became absorbed with Indians. He paints some of them as they are now, but much of his Indian work has a historical flavor.

Bobbs does sweeping desert landscapes, and then places Indians in them as a punctuation. Nevertheless,

he takes such meticulous care in his composition that the finished paintings stand up with the best Indian material being produced today.

Take his "Navajos at Gallup," for instance. It's a huge canvas which Bobbs began as a contemporary New Mexico desert scene. Wagonloads of Navajo families and scouts on horseback were added. The result is far from contemporary—rather, it recalls Navajos of Kit Carson's day, fighting to get their wagons past frontier sentries. Bobbs puts realistic movement into this type of painting; his horses gallop, his wagon trains roll. It's as if he'd projected himself back a century into history, as if he were doing on-the-spot coverage of Southwest Indian wars for some graphic journal of the period.

Bobbs thinks most Indians exist only in history books. "Indians are given a white man's education but the white man doesn't follow this up by accepting them," he says. "When they finish school they are neither fish nor fowl. The whole process is one that disintegrates their tribal life. All we as painters can do is capture the glory

that once was theirs and preserve it on canvas."

Bobbs will spend hours of research to get a turkey plume in just the right place on a Comanche prayer-wand, or picture the proper kind of skin on a Blackfoot's leggings. As a result, paintings such as his "Apache Scouts" and "Navajos in Canyon de Chelly" have won the acclaim of leading ethnologists for their feeling and accuracy.

Indian Models

With his Indian portraits it's a little different. For these he uses models, chiefly to be correct about the features he portrays; but he weaves historical symbolism into many of these paintings, too.

"It depends a good deal upon the tribe," Bobbs explains. "If I'm working on a Taos subject, my model will come to the studio in blanket and braids, since they haven't changed the manner of dress in that pueblo for centuries. But if I use a Plains Indian for a model, he's likely to come in blue jeans and a bola tie. I can only paint his features, and then work feathers, headdress, and other trappings in from old photographs."

His "Taos Drummer" and "Cheyenne Warrior" are good examples. The drummer stands in front of his 1000-year-old pueblo, dressed as his ancestors dressed—and just as Bobbs saw him the day he modeled. The shielded warrior, with feathered spear and headdress of bull's horns, is largely a product of Bobbs' history reading and research.

Bobbs did much of his research on American Indians in England—while competing in archery with British toxophilists. "I was browsing through British Museum catalogs one day and was surprised to find so many good books on Indians," he says. "Many of them were written by Britishers traveling in America in pioneer days. They were impressed by the various tribes they saw and gave detailed accounts of prevailing customs and clothing."

Visited Tribesmen

Bobbs has traveled widely in the Indian country. While still in his twenties, he was a frequent visitor among Plains tribes — especially the Dakotas, Kickapoos and Cheyennes. He settled in Santa Fe and there got to know the Pueblo peoples and their patterns of culture. He visited Navajos and Apaches, and later took a job painting dioramas for Indian exhibits at the Museum of New Mexico.

"Then came the war," he says reminiscently. "There no longer was money for creative effort — all was geared to destruction. I got a few portrait commissions here and there and survived."



"Taos Head"

Today, Bobbs is recognized as one of the best painters of portraits in the Southwest. Portraits are, even in prosperous times, a luxury item—so Bobbs' clientele is necessarily well-to-do. He gets commissions from successful fruit growers, oil well operators and other businessmen—principally from California, Texas, and Oklahoma; these oils are used in private homes or to decorate corporation board rooms. Often an organization, wishing to honor

someone living or dead, will have Bobbs do a "special occasion" portrait. In New York a short while ago an Irish-American group commissioned a portrait of Francis Cardinal Spellman. While in England engaging in archery he did a portrait of Queen Elizabeth II, commissioned by the Royal Toxophilist Society.

Bobbs' Santa Fe studio is in his home, an old adobe dwelling renovated for modern living; it's in the "dirt road

"Apache Scouts"



district"—the ancient city's famous art colony. Bobbs' wife, the former Elspeth Grant, is British and a graduate of Oxford University in international law. They have three young daughters, and Elspeth runs a rare book shop in one wing of the home. Under the shingle, "The Book Specialist," she locates hard-to-come-by editions, and

has one of the region's best collections on the Southwest and Mexico.

Dealers in other cities sell some of Bobbs' work, but he prefers to do his marketing at home. The studio is spacious enough to serve as a gallery. Stirring scenes of Indian wars, peace-pipe ceremonies and tribal pow-wows cover the walls and overflow into the

book shop and other rooms of the house. An unfinished portrait often occupies the studio easel.

Archery trophies dot the gallery shelves. Bobbs has placed first in bow-and-arrow tournaments in America and abroad, and a few of his best-loved bows are on display, too. His pride and joy is one with a 58-pound pull, made by an accomplished Los Alamos bowyer. Bobbs' yen for archery is one reason for his interest in Indians, especially those of the bow and arrow era.

Bobbs paints in a regular meet-the-public business suit; he is always ready to interrupt a landscape or portrait to make a sale. "I'm not a messy artist," he says candidly. "I don't smear paint on my clothes when I work, and I don't wish to wear a spattered smock to make people think I do."

This ties in pretty well with his opinions on art and artists in general. "So-called 'modern' art is a fraud," he says, "—an easy racket for a person too lazy to work. It's popular because it's still new enough to be different. If you're in the woods and see a stream, you think nothing of it; but if you see a stream running uphill you'll rush madly over to look at it."

Bobbs is an arch-conservative academician. In England he spent many hours with the works of old masters, particularly portraitist John Singer Sargent, and says he'll never equal Sargent's technique. But Bobbs' portraits have a quality all their own. His "Taos Head," has been lauded by critics.

With such a fervor for conservatism, Bobbs neither exhibits nor sells at museums—which he thinks have generally gone overboard for the modernists. "At museums the real artist has to compete with all sorts of gewgaws and products of the untrained mind," he says. "This I refuse to do."—END

COCKFIGHTING IS LEGAL RULES NEW MEXICO COURT

Santa Fe—The State Supreme Court ruled that New Mexico's law providing penalties for cruelty to animals does not apply to cockfighting which, the Court said, many believe to be "an honorable sport mellowed (by) time . . . to become an established tradition not unlike calf roping, steer riding, bulldogging and bronco busting." To construe that the cruelty to animals statute was intended to include cockfighting "would open up many other activities to prosecution though they are not within its spirit—for example: using live minnows to bait hooks," the Court added.

FLOWER OUTLOOK IS POOR

The rain gods have been less than generous with much of the desert Southwest this season—and the result will be one of the poorest wildflower displays in many years. Practically no rain has fallen on the Colorado desert of Southern California, and the Mojave desert has not fared much better. As this report is written, early in February, the season is so far advanced that late rains will not radically change the forecast.

Desert Magazine's correspondents have sent in the following reports covering their own vicinities:

Lucile Weight of Twentynine Palms says annual flowers which did start growing in December and early January are stunted, and mild weather forced premature budding. In volcanic areas east of Twentynine Palms, and along Highway 66 north and east of there, rock daisies are vigorous and abundant and should have a fairly good season.

Among the perennials which should show some bloom through March are pepper-grass, creosote, rayless encelia and viguiera. The incense-bush is in very good condition in the southern Mojave area, as are cactus species, Mrs. Weight reports.

Bruce W. Black, park naturalist at Joshua Tree National Monument, says March may see these blossoms along the Twentynine Palms to Highway 60-70 road via Pinto Basin: desert alyssum, blazing star, coreopsis, verbena, mallow, desert-star, gold-poppy, desert dandelion, yellow cups and phacelia. By late March, some Joshua trees may be in bloom, Black said.

Jane Pinheiro of Quartz Hill, Calif., reports that there is little

showing of green growth in the western Mojave Desert, and prospects for flowers in March are very meager. Clyde E. Strickler, supervisor of Anza-Borrego Desert State Park, and Mrs. Mike Chalupnik of Brawley, Calif., have much the same story to tell for the lower Colorado Desert. Strickler holds out hope that March will see a few mallows, ocotillo and chuparosa blooming in Borrego Palm Canyon. The Coachella Valley's March flower outlook is dim.

From Death Valley comes word from Monument Superintendent Fred W. Binnewies that wildflower prospects are poor. However, low elevations in the valley may see these blossoms in March: Mojave aster, bottle-washer, ghost-flower, phacelia, gilia, five-spot, sting bush, brittle-bush, arrow-leaf and beaver-tail cactus.

A. T. Bicknell, superintendent of Casa Grande National Monument near Coolidge, Ariz., does not expect a good March flower showing. Earl Jackson, National Park Service naturalist stationed at Globe, Ariz., predicts only sparse blooming of winter annuals. If February and March days are warm, Naturalist George Olin of Saguaro National Monument, Tucson, predicts ocotillo and probably a few of the early hedgehog cacti will send forth blossoms in late March.

Merdith B. Ingham, naturalist at Lake Mead National Recreation Area, says dry winds and cold weather have killed the few sprouts that were up. It is possible, he adds, that some beavertail cacti will be in bloom at lower elevations toward the end of March.

... a mountain park on the
Arizona-Sonora border—
dedicated to the memory
of a brave commander ...

CORONADO NATIONAL MEMORIAL

By PHYLLIS W. HEALD

THE SUN was setting behind the Sierra de Pinitos of Sonora, Mexico, and the Patagonia Mountains of Southern Arizona as I stood on Coronado Peak in the recently created Coronado National Memorial.

A breath-taking panorama lay before me. Here, at the southern tip of the Huachuca Mountains, at an elevation of 6880 feet—highest point in the Memorial—one can see from east to west for a distance of more than 100 miles; south into Mexico for another 100 miles; and north to the Santa Rita Mountains that fringe the Santa Cruz Valley in which Tucson is situated.

I have never ceased to marvel at this tremendous vista. Its pastoral beauty has an exciting place in history, for it was down the wide Sonoran valley to the south that the opening scene in the dramatic story of our great West took place. Along this route, 81 years before the Pilgrims stepped onto Plymouth Rock, came the first white

men to walk upon the land now known as Arizona.

Together, Southwestern United States and Northern Mexico bask in a fascinating limelight of the past. This story of discovery and development combines the romance of fiction with the realism of fact. During the 300 and more years from 1539, when Fray Marcos de Niza, guided by the Negro, Estevan, came north from Mexico City looking for the Seven Cities of Cibola, to the Gadsden Purchase of 1853, Southwest history was made by Indians, padres, soldiers, explorers, trappers, hunters, settlers, gold seekers and ranchers. But in all these years, no name stands out with more clarity and courage than that of Francisco Vasquez de Coronado.

It is fitting and proper that in honor of this young man (Coronado was only 30 years old when he made his famous exploration) a monument was dedicated in the southeast corner of Arizona — 2745 acres of canyon,

mountain and grazing land along the Mexican border. Established in 1952 by Presidential Proclamation and named Coronado National Memorial, it is one of the newest members of the National Park System dedicated to the "scenic, scientific and historic heritage of the United States for the benefit and enjoyment of its people."

The view from Coronado Peak always has appealed to me for a second reason. I get a thrill from looking into another country. I find it stimulating to realize that less than a mile from where I stand, a foreign world exists—a place where people have a way of life, language and heritage different from mine.

Common Border

The fence on the International Border which cuts its straight course over valleys and hills, is used for mutual protection and not as a barrier to separate Mexico from the United States. As neighbors we respect and share many things. Our border economy is mutually beneficial. We worship the same God. We love the same rolling country and we use the water from rivers that flow back and forth across the border. We enjoy the sun that shines impartially upon us and we are proud of our two lands.

Memorial Superintendent Philip Welles is a natural for his job. Raised in Chihuahua, Mexico, where his father had interests in mining and lumbering, it was a matter of good timing that he is a native of this country. His mother made the long difficult trip from the interior of Mexico to her home in Pennsylvania for this important event. "The revolution had stirred up so much trouble," Philip explained, "Mother wanted me born in a place where there was no lead flying."

When Mrs. Welles returned to San Pedro Madera with the baby, their Mexican friends immediately referred to him as "Felipe," and today Welles answers to either Philip or Felipe with equal alacrity.

Bilingual

Welles, having spent most of his childhood in Mexico, is bilingual. His Spanish has the beautifully soft and liquid quality that makes it such a charming language to hear. And, being Superintendent of a Memorial where 25 to 30 percent of its visitors are of Mexican descent, this is a tremendous advantage both of convenience and diplomacy. Nothing makes foreign visitors feel more at ease than to hear their own tongue spoken with perfection.

The Revolution of 1929 forced Mr. Welles, Sr., to leave Mexico. The



The sweeping view from Coronado Peak south into Sonora, Mexico.

family settled in Tucson where later Philip attended the University of Arizona. He was graduated in the Class of '36 having majored in archeology.

During his years in college and for some time after, Philip was a hunting guide and cattle buyer in Mexico. Twelve years ago he married Elizabeth Green of Michigan. It was a romance that dated from college days and Libby, who came west for four years of University life, has lived here ever since.

Soon after their marriage they moved to Mexico where Felipe worked for the Bureau of Animal Industry as a

biologist. Later he became a livestock inspector. Libby learned the language and to know and understand our Latin neighbors. Ann, their 11 year old daughter, spoke Spanish before she knew a word of English. Eventually the family returned to Arizona, and in 1953 Philip joined the Park Service. He has been at Coronado for a year.

There has not yet been time to build permanent homes for those stationed at the Memorial, so the four

Wellesees (now there is Patricia, age 5) live in a trailer. However, Mission 66 plans call for two residences—one for the superintendent, the second for Ranger Fred Grundeman and his family. The design calls for adobe brick construction of all buildings including the Administration Office and Museum.

Ranger - Historian Grace Sparkes lives on her mining claim in Montezuma Canyon. No story of Coronado Memorial is complete without mention of this remarkable woman. It was due largely to her enthusiasm, hard work and determination that this splendid monument to the "greatest of all Conquistadores" exists.

To know Grace Sparkes is lots of fun, and to talk with her is a fascinating experience. Although Arizona is not her birthplace, she has spent most of her exuberant life encouraging appreciation, development and protection of this state. Grace was head of the Yavapai County Chamber of Commerce for more than 30 years, and has spent much time working her own mining claims. Having lived close to the land, she knows its value and the need to preserve its wonders and perishable beauty.

It is Grace Sparkes' hope that someday the Memorial can be expanded into a Coronado International Monument. First, the Mexican Government will have to allocate a portion of the millions of acres of magnificent grazing land adjacent to the border for their own National Park. Once this is accomplished, Grace feels, it will be a natural and simple step to combine

FRANCISCO CORONADO

1510—Born in Salamanca, Francisco was a younger son of a proud and noble family whose ancestors had come to Spain from France 200 years before.

1520—Coronado's father channels his estate to the eldest son, thus forcing Francisco to seek his own fortune. Coronado chooses the Royal Court where he becomes a favorite of Don Antonio de Mendoza, Viceroy of New Spain (Mexico).

1530—As Mendoza's secretary, doors are opened to the ambitious young man. He makes a brilliant marriage to Beatriz de Estrada, gaining from it lands and an alliance with a powerful family of Mexico.

1536—Coronado wins military laurels by putting down the revolt of Negro slaves against their Spanish masters.

1538—Mendoza makes Coronado governor of New Galicia (a province along the Pacific Coast of Mexico northwest of Mexico City) with authority to seek out the fabled treasure cities of Cibola.

1539—Fray Marcos de Niza sent to



reconnoiter the unknown lands to the north.

1540—Coronado sets off at the head of a military expedition to conquer Cibola. His travels take him to Arizona, the Zuni villages just across the present border in New Mexico, to the Rio Grande pueblos, into western Texas, north across Oklahoma to Kansas.

1542—Coronado returns to Mexico City.

1544—Coronado charged with slackness, misgovernment, favoritism, inhuman treatment of Indians, gambling. He is relieved of his governorship, publicly disgraced. For the next 10 years he continues in the service of the Crown as a minor official.

1554—Coronado dies.

In retrospect, it must be said that Coronado's apparent failures were due largely to the fact that no cities of gold existed in the Southwest. Despite his shortcomings (chiefly laxness in office), he was an authentic hero—a loyal and brave commander, the first of Spain's new breed of official—a builder rather than a destroyer.

these two National areas into a great International unit. Then visitors from the United States can step across into the country from which Coronado started on his famous journey. They can look ahead, as he did over 400 years ago, to the lush valley of the San Pedro which he followed north. The citizens of Mexico can gaze from the Pass or the Peak back upon their own rich beautiful land from whence the great explorer came.

Symbols

Today, cattle and horses graze throughout the Memorial. These are living symbols of Coronado's visit because it was he who first brought livestock into the lands and lives of the Arizona-New Mexico Indians. When the Memorial museum is completed, Superintendent Welles hopes it will house a comprehensive collection of brands, gear, saddles; pictures of famous cattle barons and the different breeds of cows and horses; some original deeds showing the huge Mexican Land Grants; murals and dioramas covering the history of the cattle industry from 1540 to the present. The story of mining also will be depicted—from the early crude implements of the Spaniards to today's big business methods.

A half-hour hike over a wide easy trail commencing at the Montezuma Pass parking area, climbs 280 feet to Coronado Peak then loops back to its starting point. Numbered stakes keyed to the *Coronado Peak Trail Booklet* give botanical names of trees, shrubs and flowers along the route. This booklet can be obtained at Headquarters or from a box located near the start of the walk. Easels containing maps identifying the panorama are placed at strategic points.

Although wildlife is scarce, it is possible for the diligent observer to see deer, cougars, peccaries, coatis and numerous other residents of the land. The Huachuca Mountains abound in birds, some of which, along with mammals and reptiles, are natives of Mexico. They have come north across the border without benefit of passport.

Year-Round Climate

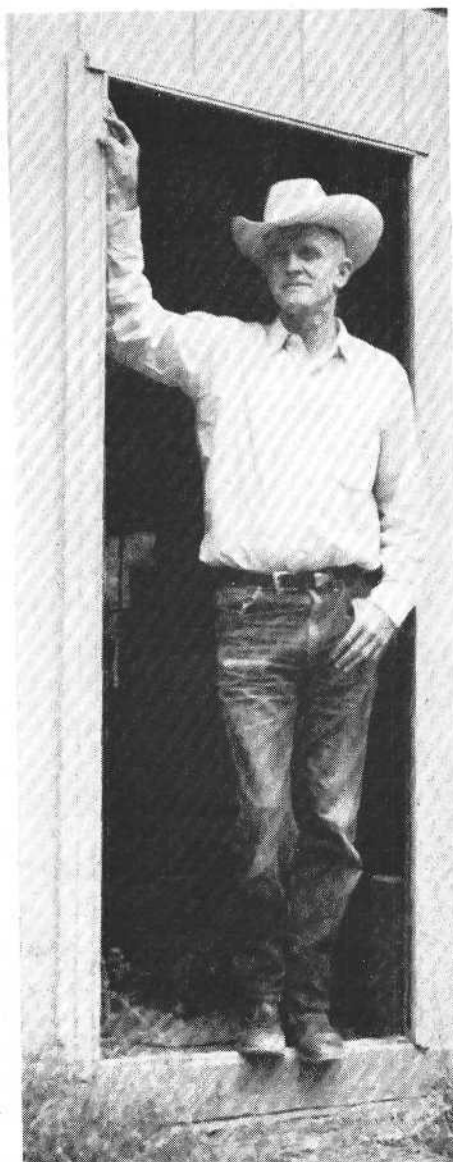
There is no special seasonal choice for visiting this Memorial, for it has a delightful year-round climate. The road into the Canyon sometimes is impassable just after a snowstorm, and in summer, thundershowers can cause flash-floods which delay the traveler. But neither of these incidents of Nature cause any appreciable visitor fluctuation, and Superintendent Welles' records show approximately 1000 persons come here each month.

Nearest overnight accommodations



Ranger-Historian Grace Sparkes

Superintendent Philip Welles



are at Bisbee, 30 miles east on Route 92, and Sierra Vista near Fort Huachuca. A visit to the Memorial is an easy one day trip from Tucson, Nogales, Willcox, Benson, Douglas and Patagonia. There are delightful areas for picnicking, although camping is not permitted.

The sun had set when I turned away from the view. The world about me was still—not even a bird sang out its goodnight song.

As I looked into the fading distance, my thoughts were of the past. From the shadows of San Jose Peak rising in impressive stateliness above the vast plains of Sonora, I could see a cavalcade slowly moving toward me. One hundred strong, it wended its way north. There were robed priests, naked Indians and armored soldiers on horseback. And as I thought of their young leader, I wondered if, when passing, he had looked up to my vantage point—a high peak in a noble setting that four centuries later would bear his name in lasting memorial to a magnificent accomplishment.—END

THE *Desert* MAGAZINE CLOSE-UPS

George C. Jordan, author of "Planting A Desert Garden," enjoys "too many things to really settle for any single hobby." Besides keeping up his "sisao," he reads, plays cards, bowls and does "whatever is done in the locality in which I find myself." His "chief hobby" is eating unusual food in unusual places, and his "greatest single passion" is traveling—particularly by auto and especially in the Western states.

Jordan has had a distinguished journalistic career which includes service as a foreign correspondent and chief editorial writer for the *Minneapolis Star-Journal*. It all began in 1926-27 when he was editor of U.S.C.'s *Daily Trojan*; at present he is managing editor of U.S.C.'s *Alumni Review*.

David Lyon, author of "Trailers Meet the Desert" appearing in this issue, was born and raised in Canada. He came to the United States in 1942 and saw service in World War II and during the Korean conflict. Lyon is a journalism graduate of Los Angeles State College and for the past five years has been editor of *Trailer Life Magazine*, official publication of the Trailer Coach Association, in Los Angeles. Previously he was editor of *Western Electronics* and *Electronics Digest*.

Trailers Meet the Desert...



By DAVID F. LYON

7IFTEEN YEARS ago a trailer was a rare sight on the desert; today it is not uncommon to see one parked under a palo verde tree in the remotest retreat, miles from the nearest paved road. On a recent trip across the Mojave Desert from Baker to Tonopah by way of Shoshone, I met 60 cars along the way—and 35 of them were pulling trailers!

This unprecedented growth in the popularity of the travel trailer reflects a significant trend in the recreation habits of Southwesterners: outdoor diversion more and more is becoming a family affair. The trailer provides the conveniences needed for the kids, the wife, grandma and grandpa—and offers a margin of safety against the danger of a breakdown far from help.

Low Cost

Our travel trailer allows us to enjoy week ends and extended holidays at a minimum of cost, and our trailer can go almost anywhere a standard car is able to take us. There are other considerations. We have salvaged more than one desert week end by waiting out a brief and sudden storm in the comfort of our trailer. We are just as comfortable parked in the unprotected heart of a dry lake as we are in a snug cove. Making camp after nightfall presents no problems—there is no need to gather firewood, haul water cans and food boxes from the car, and lay out the sleeping bags.

A travel trailer should not be confused with a mobile home which is a permanent family dwelling. Travel units are 27 feet in length or less. Currently the most popular size with trailerists is the 15-footer, with the

17-footer a close second. Average price range for these models is from \$850 up to \$1200.

Travel trailers—even the small ones—offer much more than is at once apparent. They come completely equipped, including ice box (usually a choice of regular ice, butane or electric), stove (often with oven), dining nook, and lights (butane or electric). Small as the 15-foot size appears, several makes can sleep as many as six adults.

Most companies build models with bathroom facilities, although in some trailers this is considered extra equipment. Floor plans are varied—a good point to remember when shopping for a trailer. Check the models at several lots before you make a final decision. Basic information on all phases of trailers and trailering is given by all reputable dealers.

There's only one way to learn how to tow your trailer—and that's by getting out on the highway and towing it. While dealers are happy to offer advice and preliminary instruction, it

Drive anywhere in the Southwest and you see them—in the cities, in the remotest desert campgrounds, in the most elegant resorts, at raw construction sites, on paved highways and rough back-country trails—trailers! Here is a report on the advantages and enjoyments that come from owning travel trailers and mobile homes.

takes practice to develop the extra motoring skill demanded by trailering.

Towing a trailer is not dangerous. On the contrary, the average trailerist has a better-than-average safe driving record. Some motorists think of trailerists as traffic congestors, but the law in many states stipulates that the trailerist limit his speed to 45 m.p.h. Most trailerists conform to an unwritten code of driving courtesy, and, wherever possible, move over to let fast traveling traffic pass by. Unfortunately, there is a small element among trailerists who do not show this consideration to other motorists.

Hitch Requirements

Only extra equipment the beginning trailerist needs is a good hitch. This either can be attached to the car's frame or bumper. There are certain regulations laid down by the various states regarding the hitch. In California, for instance, a travel trailer weighing over 1500 pounds, unladen, must have auxiliary brakes and an electric breakaway device which insures a quick stop for a trailer disengaged from the towing vehicle. Happily, the hazard of the trailer breaking away from the car is extremely slight.

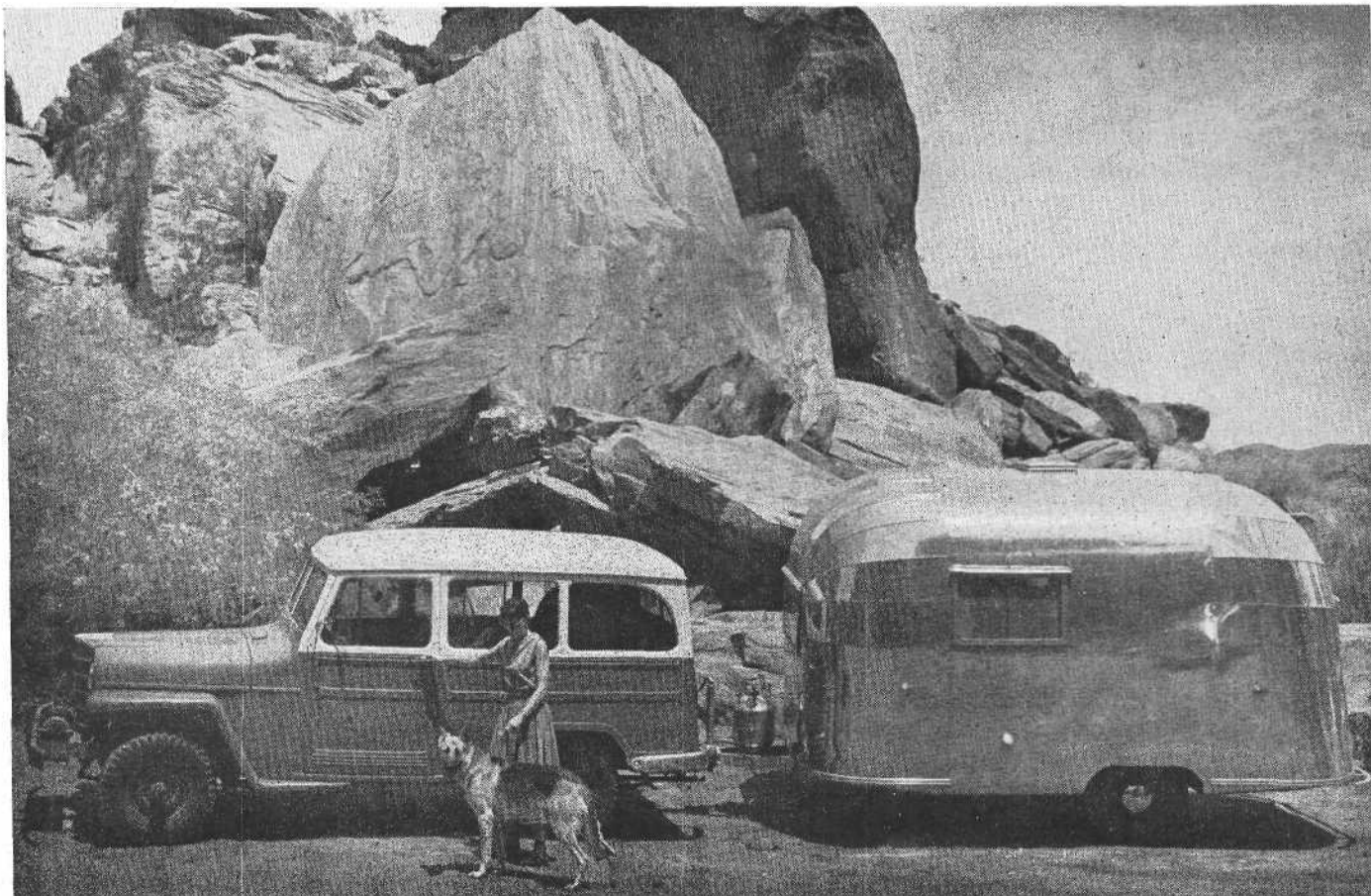
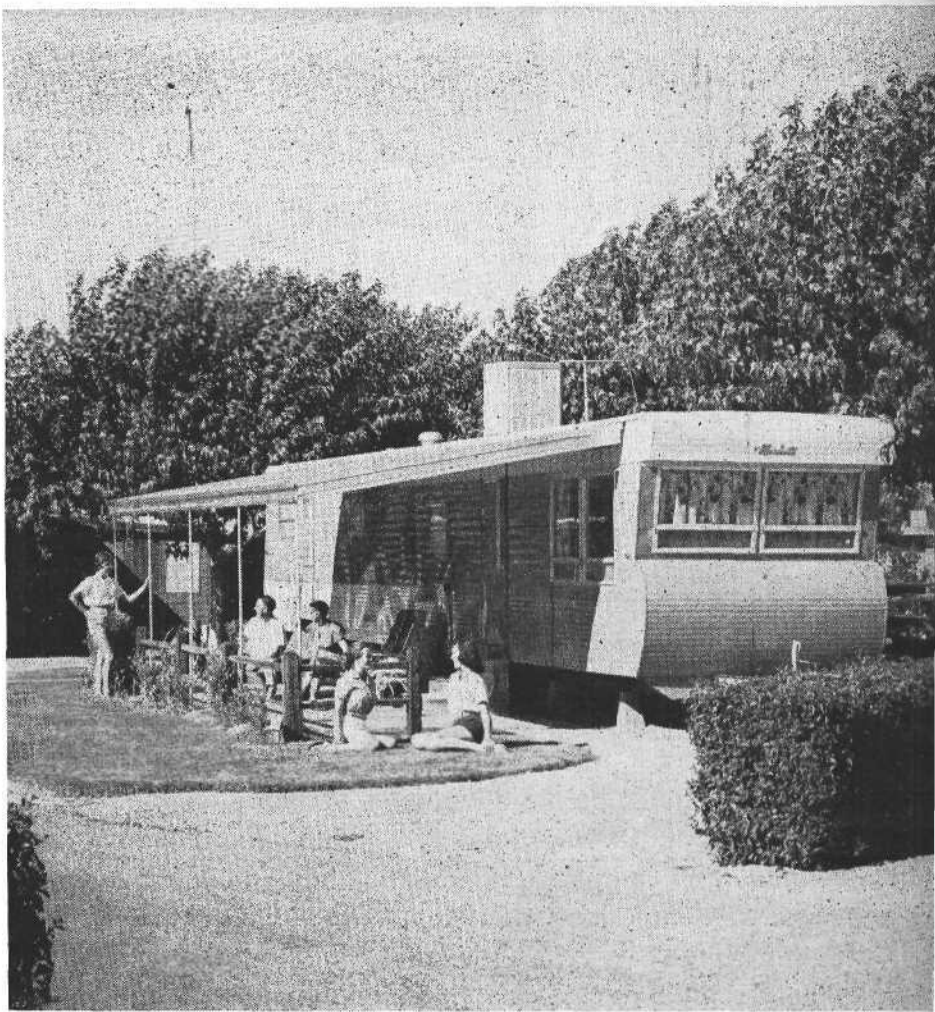
Thousands of Westerners have found that by forming or joining a trailer club, they can derive even more enjoyment from their trailering activities. Club functions usually take place on week ends when members gather at pre-determined recreation areas to enjoy hearty programs of fun and relaxation. Featured around a cheery campfire at these gatherings are community singing, story sessions and pot-luck dinners. Growing numbers of gem and mineral hobbyists own trailers,



Kitchen of this 20-foot trailer is equipped with double sink, cabinets, refrigerator, range and oven, hot and cold water.

Each trailer space at this Tucson park provides ample private yard space and attractive landscaping.

16-foot Airstream "Bubble" offers all-riveted, all-aluminum construction. This one is popular lightweight travel trailer.



... trailers have created a new way of life

and a desert field trip usually finds several travel trailers parked at the base camp.

Trailer caravans, some with more than 200 units participating, are becoming very popular. The larger caravans, usually sponsored by trailer manufacturers, are planned months in advance. One of the best known caravan promoters is Wally Byam, president of the Airstream Trailer Company. He has led caravans to the far corners of America as well as into Canada and Mexico. His most ambitious expedition is the one which leaves the end of June—a trailer tour of Africa and Europe. Special ships will provide the over-water transportation for this trip.

Caravans

For the past two years the Trailer Coach Association has sponsored a Seafair Caravan in August from Los Angeles to Seattle. Last year the Santa Fe Trailer Company held a very successful 100-trailer caravan from Los Angeles to Santa Fe and Albuquerque.

State and National parks and forests have felt the trailer boom. Trailer hook-up facilities at these recreation locales are increasing, but the demand far exceeds present availability, especially during the summer vacationing months. Desert trailerists are not as dependent on these and private overnight facilities as are people in other

sections of the country. There are thousands of turnoffs leading into the public domain along Southwestern highways where it is possible to park for the night.

Transients

Few trailer parks have space available for transients, for usually they are filled with permanent mobile home residents. But an increasing number of park owners are recognizing the travel trailerists' needs, and are setting aside sections in their courts for the exclusive use of overnight guests. Charges for these accommodations, which include use of the park's electrical and sewer hook-up facilities, range from \$1 to \$2.50 per night.

Matching the growing popularity of travel trailers is that of the mobile home. Almost 1,000,000 Westerners now live in mobile homes! It is predicted that by 1970, one out of every 10 Americans will call a trailer coach home.

Why do people live in mobile homes? There are four basic reasons:

1. Mobile home living is a way of life. These people like the feeling of being mobile—they appreciate the fact that they can quickly and easily move to a new location if they so desire.

2. Mobile home living is more suited to those of more mature age. The children have all grown up and left home, and the big house no longer

is needed. At the trailer park there is fellowship and organized recreation—dancing, swimming, dinners, shuffleboard tournaments, horseshoes, sewing circles. For those in poor health, severe extremes in weather can be avoided by making seasonal moves—and a house trailer is much easier to keep tidy than a house.

3. Mobile home living is much less expensive than renting conventional housing.

4. For those whose occupations require much moving, a mobile home provides assurance of adequate housing when they are relocated.

Mobile homes come completely equipped and ready to move in to. All that is required are dishes, sheets, blankets and personal items. Some of the deluxe models even have wall-to-wall carpeting, dishwashers, television, built-in hi-fi sets, and washer-dryer combinations.

Price Factors

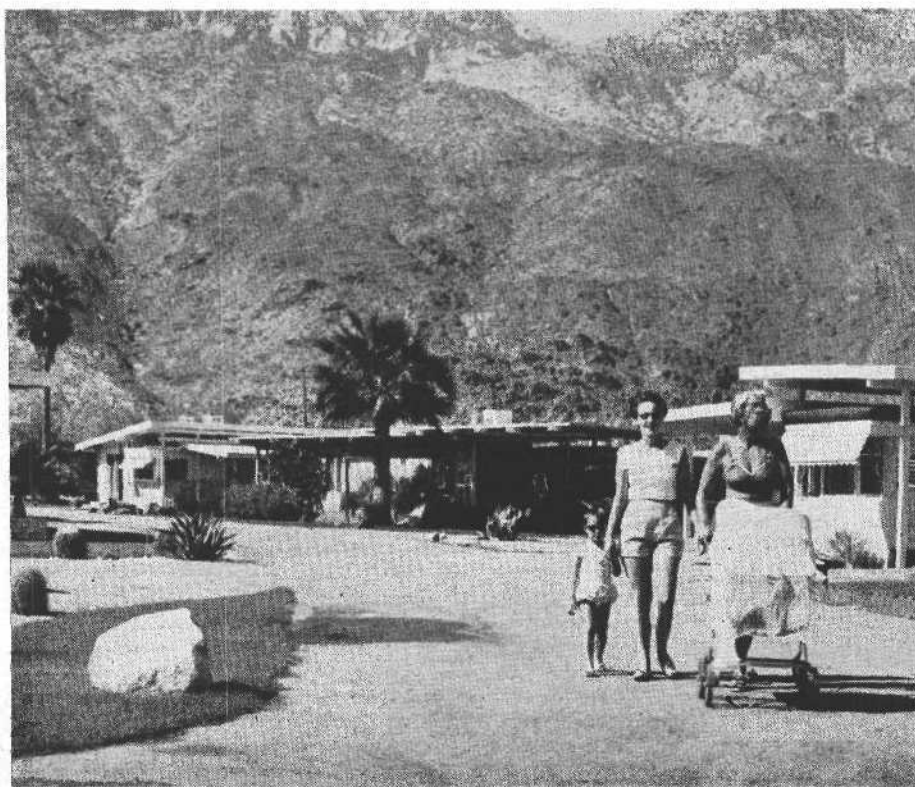
Initial purchase price of a mobile home will vary depending on the length and width of the unit, as well as the interior furnishings and equipment desired. A rough approximation of cost is \$100-\$125 per foot of length—the standard 45-foot coach costing around \$5000.

Until recently, the legal allowable width of a trailer in certain states was eight feet. Most states have relaxed this requirement so that units 10-feet wide can be transported over the public highways, but state-issued permits still are necessary for such moves.

Rental charge for a trailer space varies considerably according to the type of park, location and facilities offered. A general average charge is \$35 monthly. In resort areas it is closer to \$50 or \$60 a month. In some cases, the park pays the cost of utilities, in others the tenants must pay. Some parks insist on six or 12 month leases, others require only week-to-week or month-to-month rental commitments.

A complete listing of mobile home and travel trailer publications can be obtained from the Trail-R-Club of America, Box 1376, Beverly Hills, California. Among the many books available are a directory of State and National park trailer facilities; a compendium of highway information especially written for travel trailerists; and outline of state motor vehicle laws affecting trailer coaches.—END

Street scene in a Palm Springs, California, mobile home village.



Planting a Desert Garden...

The author calls the garden in the back yard of his Altadena, California, home a "Sisao" (oasis spelled backwards). To accentuate its arid land theme, he scattered rusty horseshoes, volcanic rocks and other desertland objects among the thorny plants. Besides being informal and easy to care for, this garden is fun to create.

By GEORGE C. JORDAN

IT ALL started the day Mickey came home from college with the back of his car full of weird desert plants. As I stared in amazement at the gnarled mass of green and yellow vegetation, he explained:

"I'm a little short of money, Dad, and being's this is your birthday I decided to give you the cactus garden you've often said you'd like to have. I dug up these plants on a friend's ranch near college."

Since Mickey had not violated the law by collecting the native flora from the public domain or from private property without permission of the owner—and since I could not throw away so thoughtful a gift, there was nothing to do but stick the plants in the ground.

Fortunately, there was an ideal place for the plants right in the middle of our back yard. An oval-shaped 18x25-foot flower garden was long overdue for some spade work. As a site for a cactus garden, this weedy blight was a natural.

That evening the family held a landscape conference and mentally plotted a scheme into which the cacti and other plants Mickey had brought would fit. It was decided that our first planting would take the shape of a half-circle around one side of the oval.

Patch Is Cleared

The following week end I was out early with hoe and rake. Ruthlessly I cleaned out both weeds and flowers, except for a circle of carnations around the sun dial in the center of the patch. These flowers Mrs. Jordan refused to have uprooted. They are still there, and while they hardly belong in a desert garden, they provide a welcome splash of color and I have gotten over being technical about their presence. Besides, one of the most pleasant features of my garden is that it is strictly informal. Anyone can develop a similar plot according to his own likes and



The author and his son, Mickey.

tastes, and there are as yet no conventionalized standards by which it can be stated that it is wrong to plant this or do that. You put in whatever desert plants and related articles (wagon wheels, Mexican pottery, bleached cow skulls, rocks) that please you and your family, who have to live with it.

This type of garden I call a sisao (oasis spelled backwards). From the beginning, it was clear that what we had launched was not a cactus garden, strictly speaking. Included in the first planting were century plants, *agave americana* of the amaryllis family; Spanish bayonet, a yucca related to the lilies; and other thorny non-cacti species.

The whole development took some weird turns right from the start. Among the friends who contributed to my hobby is an engineer. One of his most prized gifts was a pair of rusty mule shoes he had found near an abandoned camp in Arizona.

The word sisao is corny, but it stuck. Our friends who enjoy roaming the deserts remember it easily, and have brought me everything from a pair of antelope horns to purple sun-darkened bottles. The project has become an expanding one leading into avenues never dreamed of at the start.

More plants we had to have, and the third week end after Mickey's

birthday surprise, Mrs. Jordan and I began making the rounds of the nurseries. Although we got a beautiful red Arizona barrel cactus (*ferocactus acanthodes*) from one nurseryman, our search quickly narrowed to several places within easy driving distance of our home that specialize in cacti and succulents. Any roadside cactus sign is enough to stop our car and head it off in search of adventure. Every nursery is a potential "attic," to be rummaged through for treasure. Altogether, we now have more than 40 kinds of cacti and almost as many non-cacti desert plants.

Cacti Research

One of the most rewarding and stimulating aspects of our garden is the research we have done on our backyard plants. What makes a cactus a cactus? How many kinds of cactus are there, and how do you tell one from another? How do you plant and transplant? How often should the plants be watered? How did cacti evolve? How can a beginner learn the correct names of the thousands of varieties of these plants?

These were some of the questions which sent us scurrying, first to the public library, then to bookstores to

purchase our own reference books for the further enjoyment of our sisao.

The background story of cacti enhances the gardener's appreciation of these unique plants. Eons ago, where the deserts now are, there were seas and moist shore regions covered with lush vegetation. Gradually the seas dried and fertile plains became regions of hellish heat and drouth. The fish became fossils, the animals left their bones to disintegrate or petrify. The plant life, except for those unbelievably hardy specimens which could adapt to the changing conditions, disappeared.

To me, the savagely defensive and hideously beautiful cacti are a link between our modern times and the misty past beyond the memory or even the instincts of the most primitive man. I am fascinated by the indomitable tenacity with which cacti have stood up to Nature's mightiest blows.

As for their names, I was surprised to find how simple it is to learn them. It may seem like showing off to walk

with friends in the garden and rattle off the complete scientific names of dozens of plants, yet the very guests who think this is a wonderful feat are not in the least amazed at someone learning the full names of perhaps hundreds of totally unrelated people in a service club or church congregation. Learning the names of cacti is much easier, once you get the idea of the general relationships.

All cacti have been classified into three tribes, one of which has been subdivided into eight sub-tribes, further divided into 124 genera. It is when you get into the species and varieties that the number of names may become confusing, but a small collector easily can learn the tribes, sub-tribes and even most of the 124 genera. At the very least, he can know the genera represented in his own garden. From there on it is merely a matter of learning the first names of a relatively few plants. It is like moving to a new community: in a few

months you learn the family names of your new acquaintances and soon you are putting first names in front of family names and identifying this person as William Smith and that one as his cousin, Mary Smith.

The names system provides a challenge to anyone susceptible to the bite of the collecting bug. With thousands of kinds of cacti already classified, the cactus collector finds himself in much the same quandary as the stamp collector. He can scarcely even hope to see all the kinds of cacti there are, much less own them.

Specialties

Like the stamp collector, the sisao enthusiast can lay out his own individual project. He may try, for instance, to gather all the native California cacti catalogued by E. M. Baxter in his book, *California Cactus*. He may go in for orchid cacti (*epiphyllums*), which produce what I consider the most beautiful flowers in the world. Or he may try for unusual landscaping effects. Since almost any cactus can be grafted onto almost any other kind of cactus, he may set about developing odd results in that line. One garden I know has an old-man-of-the-desert grafted onto a giant saguaro with a result that looks like a monkey squatting on top of a telephone pole.

My garden has become a potpourri to which almost anything pertaining to the desert is pertinent. One recent week end Mickey and I took a trailer out onto the Mojave Desert where we collected suitable rocks for the garden. We brought back many pieces of red and black lava which provide a striking setting for the plants. Now every time we take a trip we pick up unusual rocks.

Garden Sand

We also have made trips to nearby dry riverbeds for white river sand, which we bring back in empty sugar bags donated by our grocer. The sand not only dresses up the garden, it is a great ally in keeping down weeds.

My latest acquisition is a Hopi Katchina doll representing Sho-yo-ko, the black bear which punishes the naughty Hopi children. He seemed an ideal figure to stand guard over the sisao. We have cut a niche in the stump of a tree in which we stand him when we are entertaining out-of-doors.

You can spend as much or as little time and money on a desert garden as you wish. Many attractive plants are available for the asking. And as an incentive to get out on the desert itself, there is the certainty that every trip will turn up something new for your collection—a rock, a bit of desert glass, some bleached bones or perhaps the petrified track of a dinosaur.—END

Hard Rock Shorty of Death Valley



Heat waves were shimmering out across the floor of Death Valley, and the salesman who called twice a year at the Inferno store was sitting in the shade of the leanto porch mopping perspiration. "This is awful," he was saying. "I don't know how you fellows stand these summers out here."

"Aw, this ain't nothin'," Hard Rock Shorty assured him. "Yu outta come out here some day when it really is warm. I remember one summer when it melted the anvil at Pishah Bill's mine up Eight Ball Crick, an' the sheet-iron roof on his cabin melted an' ran down the sides o' the house."

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

"We all wear asbestos clothes," Shorty answered.

"What a dreadful place to live," exclaimed the visitor.

"It ain't so bad when yu git useta it," Hard Rock reassured him. "I remember that summer back in '18 when it really got

hot. Come the middle o' July an' the lizards got blisters on their feet and a lotta the jackrabbits died o' sunstroke.

"That was the summer Pishah Bill learned to eat with chopsticks like a Chinaman. Happened this way. Bill an' me wuz drivin' a tunnel in that lead mine o' his, an livin' mostly on beans an' sowbelly. But one day it wuz so hot he burned his tongue eatin' his beans with his knife. He wuz so disgusted he threw all his metal eatin' tools out the window and whittled himself a pair o' chopsticks out of mesquite, an' he's been eatin' with 'em ever since.

"Got so hot one day we had to keep a wet blanket over the cookstove to keep it from meltin' an' runnin' through the cracks in the floor.

"Then one day a big storm blew in over the Panamints an' the thermometer dropped down to 96 degrees. An' if we hadn't had a big pile o' wood and kept stokin' the fire all day we'd all froze to death."

Date Palms

By ANNE VANDER KAM
Monrovia, California

No queen has ever worn
A lovelier crown,
Than the diadem of fronds,
High on thy brow.

The hand of man has made
For Grecian temple old,
No lovelier colonade—
Than tall trunks rising bold.

No weary traveler has—
In vain by thee sought ease.
Nor failed to find thy loveliness,
An oasis of peace.

THE DESERT PRAYS!

By GRACE PARSONS HARMON
Desert Hot Springs, California

Lord, dear Lord, I make this plea for all
who flee from strife:

Help them, day by day, to mould a freer
way of Life;

Give eyes depth for seeing, and a heart to
understand

Life is theirs for asking, in my great, un-
trammelled land.

Let them see the miracles of mountains
marching tall;

Let them feel the presence of that Peace
You spread for all;

Let them know the brightness of the sun—
that shimmering heat—

Makes the night seem gentler, makes its
restfulness complete!

Let that deep contentment, that my land
can wake again,

Touch them with its healing! Grant my
plea, dear Lord!

Amen.

PETITION

By MILDRED BREEDLOVE
Las Vegas, Nevada

Touch lightly, Wind, the holly and mesquite,
Do not disturb this quiet desert sand—

Let only winter know your harsh command
To drive these pebbles with the force of
sleet.

When summer sun has parched the vegeta-
tion,

Made desert bushes dry as bone—or glass,
Then you may rip the barren mountain pass
And blur the hills with sandy desolation.

But when the spring is sweet upon the
canyon—

When Joshuas and yuccas are in bloom—
Withhold your force, and lay aside your
broom

And let the spring subdue oblivion.

The times of desert blossoming are rare,
For plants find desert living stern and hard;
And when you leave their blossoms bruised
and scarred

You teach my heart the meaning of despair.

DESERT BLOOM

By NELL GRIFFITH WILSON
Kenwood, California

A multi-colored carpet spread
In lavish, flowered-design of spring,
From canyon wall to mesa's brim,
A wall-to-wall rich carpeting.



TRADERS

By LILYAN JOHNSON LEVY
Downey, California

Where the pack rat traded pebbles
For a bit of purple glass,
A man led his shaggy burro
Up the grade through Paiute Pass;
He unpacked his beans and bedding,
Set up camp beneath the stars,
And enjoyed his first adventure
Since released from prison bars.

While the soft-eyed rodent listened,
He heard rhythmic snores that night;
With the dawn and man's first stirring,
The rat dropped his glass in fright.
Picking up the shining fragment,
The man watched the light glint through
Contemplating lost years traded
For this chance to start anew.

SUPERHIGHWAY

By MAURICE J. RONAYNE
Meriden, Connecticut

A corner of my heart holds fast
Arid warmly to this place,
Where endless traffic now pursues
Its headlong steeplechase.
And never will sudden scream of brake,
And never the sounding horn,
Cry down the creak of wagon-wheels
Across a desert morn.

And never will sleekly proud machines
For all their speed and style,
Close out a tow-haired lad in jeans
Trudging his country mile.
For all the cars that pass me by
And all the noise they make,
A lumbering trail-herd's lifting dust
Slow settles in their wake.

THE TRAVELER

By JOHN E. HODSON
Palm Springs, California

The traveler gazed with weary eyes
At the mountains, far away.
The lofty crags that seemed to leap
To the top of the sunlit skies.
He knew that in some dark canyon
His quest would surely end—
And he would find his fortune
Around some gully's bend.
So wearily he staggered on
And his mind was in a dream
For the fortune that he needed
Was the water from a stream.

DESERT NIGHT

By BETTY RICHARDS
Phoenix, Arizona

As twilight deepens into dusk,
And a distant star appears,
With a soft, warm breeze upon one's cheek,
And the beauty of the hills—
The scent of desert flowers, and
The song of birds in flight,
This is the crowning splendor
Of a desert night.

DESERT CLOUDS

By L. STANLEY CHENEY
Yuma, Arizona

Ominous is your stand . . .
As you steal upon the land;
To shade the depths of blue,
With a deceptive hue.

Yet I see realms of grace
Within a shifting face;
As your transient stand
Does quench the thirsty sand.

SPRING DESERT SHOWER

By GEORGIA JORDAN
San Diego, California

Rain waves her hand,
And sprinkles drops, with sunshine,
To flower the sand.

ON DESERT TRAILS WITH A NATURALIST

Names of Desert Things and Places...

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

ONE OF THE most rewarding things about camping is the opportunity it gives for the discussion of a wide range of topics, especially in the evening around the glow of the ever-changing and companionable campfire. On my desert trips my companions usually are older high school lads and young college men whose mental cares are light, and who are always eager to ask at such times many questions about the things we see during daytime wanderings.

On a recent evening we discussed the origin of a number of unusual words especially applied to desert animals, plants, geology and geography; among them such musical words as *bajada*, *barranca*, *tinaja* and *coyote*—all terms the average traveler is certain to hear sooner or later.

Steve Peterson of Pacific High School in San Bernardino brought up the first question: "What's a *bajada* (bah-HAH-da)?"

Bajada is a Spanish word familiar enough to Mexicans, I explained. It has been adopted into the English language, particularly in the Southwestern United States where the Mexican influence is most strongly felt and where *bajada* land features are very evident. On Mexican road signs the word warns one of an approaching steep grade, while in our country the word generally is used to signify the common slope of a group of joining delta-like rocky fans emerging from the mouths of adjacent canyons where water at times of floods has spewed out great quantities of boulders as well as less coarse materials such as sands and gravels. Among the most impressive of these alluvial aprons are those found on the east side of Death Valley. They are not only very large and steep, but very fresh-looking. On their sloping surfaces are found numerous boulders of startlingly enormous size, testifying to the large streams caused by summer cloudbursts and the enormous carrying power of such flash-floods. Some of the larger Death Valley *bajadas* are so steep that roads going down the length of them, such as the ones leading out of Titus and Mosaic

canyons, call for very careful low-gear driving.

Vada is another Spanish-Mexican word gradually coming into use. It originally came from the Latin word, *vadum*, meaning the ford or crossing of a stream. In desert Mexico *vada* on a road sign merely indicates a sharp dip in the road ahead, often over a small dry stream bed.

A Stalled Auto

The word was forcibly brought to my attention recently in northern Baja California when Stanley Phair and I came upon a poorly dressed but decidedly sunny-faced Mexican whose ancient auto had come to a sudden halt at the bottom of a *vada*. How it had gotten that far was hard to imagine. It was the most ramshackle piece of machinery we'd ever seen.

The Mexican thought his battery was dead, and if we would push his car to the top of the slope he then could coast to a start, he indicated.

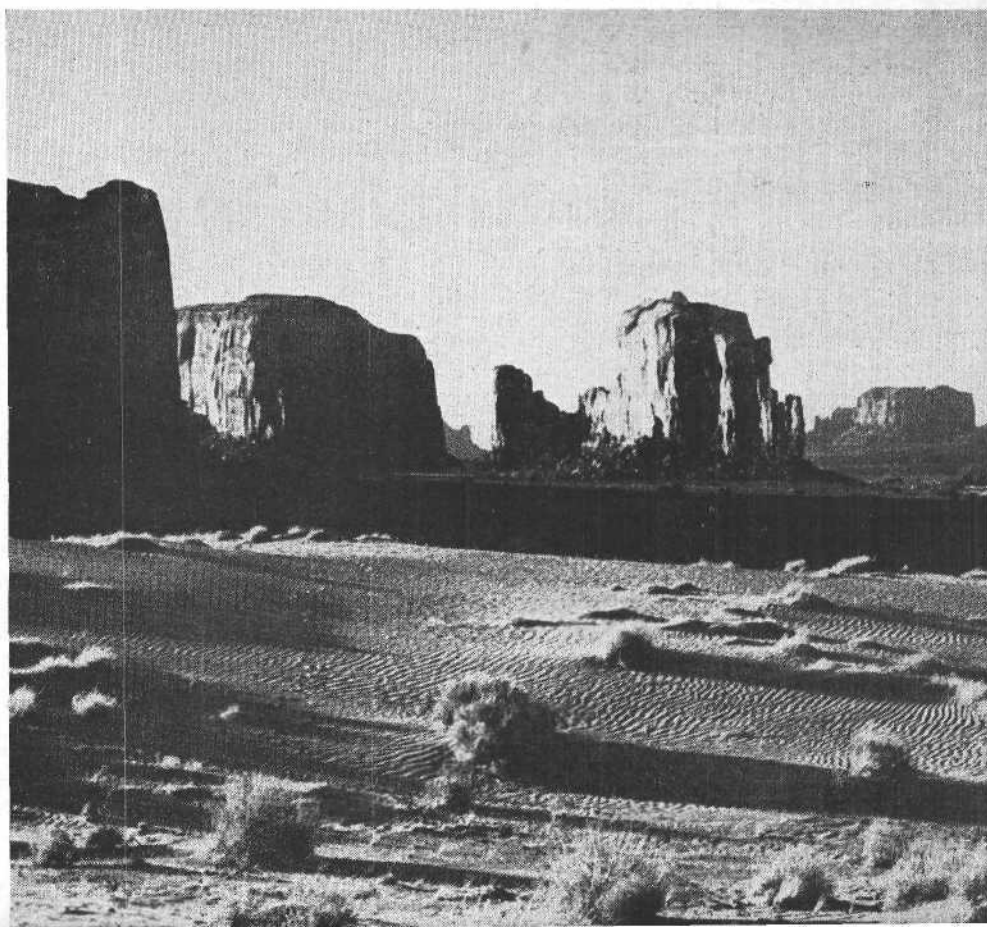
We shoved the creaking car out of the stream bed to the top of the next rise, from where it went by gravity down the hill to the bottom of the next *vada*, but it still refused to start.

"*Vadas malditas* (accursed dips)," Jose said again and again as we pushed the auto up the next slope. After a second failure, Jose repeated his oath: "*Vada malditas!*"—as if the dips were the cause of all his troubles. Stanley got our friend on his way by re-connecting a loose battery cable—the *vadas* could be blamed no more.

The euphonic word, *barranca*, frequently is used by writers on South American, Mexican and Southwestern United States geography. It is another Spanish word we have inherited, sometimes used to indicate a cliff or precipice, but more often refers to a ravine or gorge of large proportions such as the scenic Barranca de Cobra, the famous "Grand Canyon in Green" of northwestern Mexico.

The Spanish conquistadores brought with them the apt name *mesa* (from the Latin *mensa*, "table") which they

The classic buttes of Monument Valley.



gave to the picturesque flat often lava-capped tablelands or plateaus they so often came upon in their wide travels in the New World. A mesa generally is flat-topped because of its being covered by a horizontally-lying capping of hard rock or by a hardened lava flow which prevented erosion of the underlying weaker rock.

Some mesas were formed when lava flows invaded valleys or a series of connecting valleys, and then the forces of erosion carried away the soft sediments of the hills on either side, leaving the hard-topped tableland more or less isolated.

Hard Rock Caps

Other mesas owe their origin to hard layers of weather-resistant sandstone or lava flows which spread far out and formed broad horizontal sheets of hard rock cover over weaker rock layers of shale, soft sandstone or clay. As time passed, the flat-topped areas were isolated by the vigorous cutting action of streams. When long persistent erosion reduced the mesas to mere detached flat-topped hills, they became known as *buttes*. Famous *buttes* of the arid western United States and Mexico are those of Monument Valley, the Three-Buttes of Oregon, long a landmark for immigrants, and Montaña de Estrella Temprana (Mountain of the Morning Star) in northern Chihuahua, Mexico, a most impressive block of white limestone with almost vertical sides.

The word *butte* is a relic of French

This month Dr. Jaeger investigates the background story of borrowed desert names . . . vada . . . tinaja . . . barranca . . . bajada . . . mesa . . . butte . . . coyote

occupancy of the American Northwest. The Hudson Bay employees, many of them French, distributed the word still farther. Later, immigrants took it into the arid West. Some of these early travelers were too free with this term, even calling the high and noble cone of Mount Shasta a *butte* (Shasta Butte) which, of course, it is not.

"I've been told," said Daryl Henley, also of San Bernardino's Pacific High School, "that where there are areas of volcanic activity, there are almost certain to be mesas and buttes. Is that why there are so many beautiful mesas in northern Arizona and in middle Baja California's Viscaino Desert?"

Famous Buttes

"Indeed," I said, "and some day you must visit with me the beautifully colored sandstone mesas of southern Utah, the juniper-covered tablelands of the Navajos in northern Arizona, the famed Round Mesa 15 miles southeast of Snowflake, Arizona, and the Mesa Encantada or Enchanted Mesa of New Mexico which majestically rises 430 feet above the valley floor, and on top of which once stood the original Indian pueblo of Acoma."

The Mexican *derrumbadero* is a noble and grand sounding word. It connotes a large cliff or precipice. Equally euphonious is its modification, *derrumbamierito*, indicating a landslide. As travel increases over Mexico's desert roads, these Spanish words will be used more and more.

To many the West is a strange land. Rivers may only occasionally have water flowing in them, and so-called *dry lakes* have water in their beds only on rarest occasions. Stream beds carrying little if any water except during periods of heavy rainfall are called *washes*.

Great Washes

If the drainage area above a wash is of considerable size, the rock-covered stream bed may be very wide and with many alternate beds, each in turn consisting of many communicating dry channels. Such is the great Mammoth Wash carrying storm waters from the west slope of the Chocolate Mountains of the Colorado Desert, or the enormously broad Milpitas Wash (Arroyo Seco) draining the eastern slope of these mountains. Mammoth Wash presented one of the major engineering problems of the Southern Pacific Railroad in the 1860s and 1870s because of the vagaries of its numerous channels, and the great volume of water

which it was capable of carrying. During most of the year it is a miles-wide glaring waterless rocky waste. In a few noisy hours a flash flood can wash out or bury hundreds of yards of track. I saw this happen in the winter of 1916. In December, 1924, I was caught camping in just such a situation and experienced several very anxious hours, knowing that at any moment my auto, my camp and I might be gobbled up by the surging noisy streams.

In my early days in Palm Springs I often had the pleasure of talking to Francisco Patencio, chief of the Cahuilla Indians. One day as we sat on the bench in front of a small slab-board store, I asked him about the spelling and pronunciation of the word *chuckawalla*.

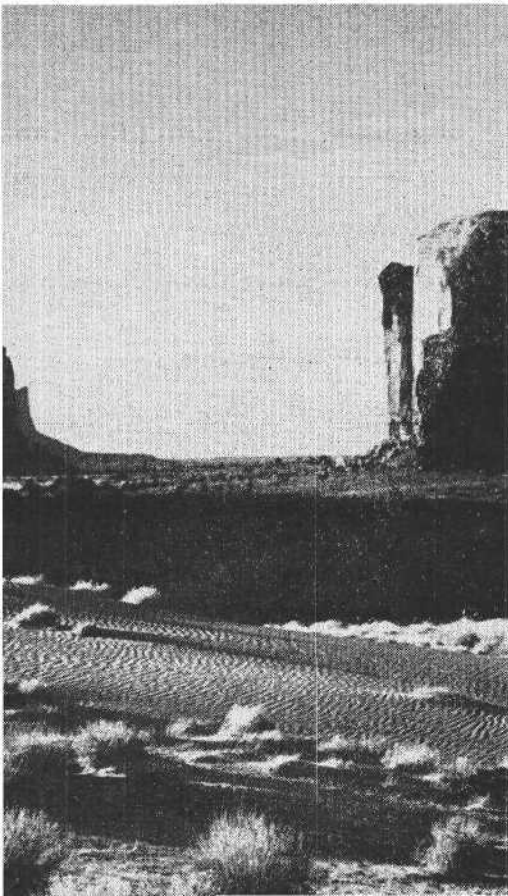
"At first it didn't mean a kind of lizard," he said. "It was a tall slender cactus. It is an Indian name and we Indians say 'chuck - AH - walla' not 'chuck-walla' as some White Men do."

Proper Spelling

On all of the older maps the word is spelled with an *a* in the middle as Francisco indicated. The rock-dwelling lizard's name thus is properly spelled, as is the name of the mountain range in southeastern California—not *chuckwalla* as in *Webster's International Dictionary*.

Mohave is not a Spanish, but an Indian name, and there was no very good reason for changing it into a word with Spanish spelling by rendering it with a *j* instead of an *h*. As long as Dr. Joseph Grinnell was alive, the long-time Director of the Museum of Vertebrate Anatomy at Berkeley, California, ordered that in museum publications *Mohave* should be spelled with an *h*. "I don't care what anybody says, I stick by the old *h* spelling," he used to say, "for it is nearest the phonetic rendition of the Indians who used the name." He had good historical background to warrant this view, for almost all the early travelers so spelled it, and so it appeared on the early maps. The name had its origin in the Mohave words *hamak*, "three," and *have*, "mountains."

Two other oft-used desert words which have suffered mispronunciation from the original are *coyote*, rightly pronounced *ki-YO-tay*, not *KI-oat*. *Mesquite* has had the final *e* dropped by most Americans. *Mes-KEE-tay*, as the Mexicans say, is much nearer the original *Nahuatl*.—END



For Boys With Problems . . .



Ralph and Pearl Johnson of Twin Pines Ranch.

In a secluded mountain ranch on the rim of the desert, Ralph Johnson is proving that there is a way to bring out the best in every boy.

By RANDALL HENDERSON

IN A PINE-FRINGED valley in the San Jacinto Mountains which form the western rim of the Southern California desert is the 1100-acre Twin Pines ranch. This is no ordinary ranch, although it does have horses and pigs and chickens and gardens. But these things are of secondary importance. The main harvest here is boys—boys who might have become human weeds in the garden of society had it not been for the patience and skill of a boss man who has great understanding of human nature and an abiding faith that in every boy there are the genes of truth and honor and usefulness.

The boss at the Twin Pines Ranch is Ralph Johnson who served with the U.S. Bureau of Indian Affairs for 21 years, and then 10 years ago left his position as vocational instructor at the Sherman Indian School to become superintendent of the newly acquired ranch home for the re-

habilitation of 15 to 18 year old boys who made a wrong turn and became entangled with the law.

Recently I revisited the Twin Pines Ranch and spent a day with the Johnsons, Ralph and Pearl, who occupy a modest ranch home near the school and workshops where 70 boys are studying and working under the coaching of four instructors and 12 counsellors.

While I was there, Bert Van Horn, Riverside County's probation officer, arrived with three more boys who had been sent there by the probation department. In accordance with the tradition at Twin Pines a team of well-matched horses was hitched to an old-fashioned surrey and Boss Johnson drove out to meet the newcomers.

Over the gate to the ranch is the greeting, "Howdy Pahdner," and the warmth and informality of that legend is symbolic of the atmosphere which prevails in this corrective institution. The superintendent gave each of the boys a warm handclasp that immediately dispelled any fear or distrust these lads may have had as to treatment they would receive at Twin Pines.

"If you boys will climb in the surrey, we'll ride down the road together," the Boss told them. And as the horses jogged along with Johnson in the driver's seat, he said to them: "This is to be your home for awhile. You can't break any rules here because we do not have any to break; only a few traditions. You won't be punished for anything you do here. There are no high walls or locks or guards. If you want to run away there'll be no one to stop you. But if you leave that way you will never have the opportunity to come back."

When they reach the ranch headquarters each boy is assigned a "brand," perhaps a Straight Arrow or a Double O or a Circle 8. Seven other boys on the ranch will have the same brand, a sort of clan organization with a brand leader who has won that title by proven qualities of leadership. The lad is also assigned a counsellor.

The brand leader then takes the newcomer on a trip of inspection—to the dormitory where he is assigned a bunk, to the school, the swimming pool, the workshops and the athletic field, and introduces him to the other members of his brand group.

Then he is told that he will start learning a trade, and is given his choice of the following: carpentry, masonry, plumbing, agriculture, painting, auto shop, electricity, welding, cooking and baking, laundering, landscaping and heavy equipment operation. He will spend half of each day in the classrooms continuing his high school studies, and the other half as a trade apprentice.

Ralph Johnson likes to think of the ranch as a school for boys who have problems. Although a dossier containing the record of each boy is sent to the ranch, Johnson never looks at these records. Nor do the boys discuss the reasons why they are there. "This is a new start for these lads," says the superintendent, "and we do not want any of them handicapped by prejudices, either because of the mistake they have made, or because of race, color or creed."

When Johnson accepted the position as superintendent 10 years ago he did so with the understanding there would be no politics in the selection of his staff, and that he was to have a free hand. The county officials of Riverside have kept their part of the agreement, and Johnson's manage-

ment of the ranch has more than justified the confidence placed in him.

Generally the boys spend from 10 to 12 months at Twin Pines, and when the school staff feels they are ready to leave, an impressive parting ceremonial is staged and the Boss drives them out to the gate in the same surrey in which they came. He bids them goodbye with a firm handclasp and a word of confidence. Eighty-five percent of these boys are never in trouble with the law again, Johnson reports. It is seldom that a boy runs away, and this generally happens during the first two or three days when the lad is homesick.

The boys are up at 6:15 in the morning and have two hours for breakfast, housekeeping and clean-up work. The morning school session is from 8:20 to 12, and the afternoon from 12:45 to four o'clock. After that they have free time for athletics, riding, hiking, bull sessions and study. The ranch has an excellent library of books largely donated by friends of the Johnsons.

Most of the building construction work at the ranch has been done by the boys themselves. Under the coaching of their instructors they have erected a spacious dormitory, class rooms, swimming pool and athletic field. New school buildings are now under construction. The boys also do their own electrical work, shop repairs, plumbing, painting, laundering and much of the kitchen and dining service.

Twin Pines is an accredited high school, and athletic teams from the ranch compete in football, baseball and basketball with other teams in the county. Their studies include history, mathematics, grammar, English, science, civics, journalism and social studies. The boys taking journalism publish a weekly newspaper, *The Wrangler*, printed on a duplicating machine.

Johnson feels that much of the success of his program is due to the fine cooperation he has received both from county authorities, and from individuals and service organizations interested in his work. The Fox Theater at Banning contributes a free Saturday afternoon matinee for the boys, and again on Monday for the brand group which wins the weekly bunk inspection honors. Banning Kiwanis club donated cement for a basketball court. Several Rotary clubs supplied the materials for the swimming pool, and the Rotary organization at Palm Desert stages an annual Christmas party for the lads, held at a private home where there is a swimming pool, entertainment and gifts for each of the boys.

I asked Ralph Johnson about the reasons these boys get into trouble. Based on his own observations he men-

tioned six of the conditions which most often lead to delinquency:

- 1—Breakdown in home life and family traditions.
- 2—Parents too busy or too interested in other things to assume the responsibility for creating a healthful home life.
- 3—Automobiles. They create a distorted sense of values.
- 4—Liquor and dope too easy to obtain.
- 5—Laws against youth labor too stringent.
- 6—Too much general prosperity.

"Youth needs four basic things," Johnson went on. "These are love, attention, recognition and adventure. Every boy has the potential for both good and evil. Some are stronger than others, but in an environment which brings out the best in the nature of a boy he will become a worthy and useful citizen. We seek here to discover the best in these lads, and to strengthen the moral fiber which will keep them from making wrong turns. We don't preach to them. We put them on their honor and treat them as if we expected them to make right decisions. Generally they do. More than 85 percent of the boys who leave Twin Pines are never again in trouble with the law."

He cited the case of a boy who came from an alcoholic home and finally was committed for auto theft. He was tough and proud of it, and had the typical gang vernacular. The odds appeared all against him. But when he had finished at Twin Pines he took a job mowing lawns, and then enlisted in the army and eventually became a technical sergeant. He came out of the service with a good record and was married. Today he is a policeman with a family of which he is very proud. He returns to the ranch periodically with his wife to express his appreciation to Ralph and Pearl Johnson for putting him on the right road. Mrs. Johnson plays an important role in helping to create a wholesome environment for the boys who come to Twin Pines.

I talked with some of the boys working on the construction of the new school building. "I'm lucky to be here," one of them said to me. "Nobody gets pushed around in this place and it is the first real chance I ever had. Nobody but a jerk would run away from here, and when I get through the cops will not be looking for me again.—END

"You cannot break any rules because there are none to break," the Boss tells his new recruits as they ride along the ranch road.



Desert Quiz

If you have an eager mind—eager to learn all you can about Southwestern United States—its history, geography, botany, geology, Indians and lore you'll have a lot of fun with this quiz. You'll not know all the answers, but that is no disgrace. Twelve to 14 is a fair score; 15 to 17 is good; 18 or over is super. The answers are on page 30.

- 1—The most important tool to have with you when driving sandy trails is a — Pair of pliers____. Shovel____. Tire wrench____. Crowbar____.
- 2—The Spanish term *agua caliente* so often used in the Southwest means — Good road____. Cactus garden____. Hot water____. Extreme heat____.
- 3—The tree most commonly used for windbreaks in the desert Southwest is—Mesquite____. Palo Verde____. Cottonwood____. Tamarisk____.
- 4—Largest Indian reservation in the Southwest is — Navajo____. Apache____. Papago____. Mojave____.
- 5—A piton is one of the tools used by a—Blacksmith____. Miner____. Surveyor____. Mountain-climber____.
- 6—Roosevelt dam is in the—Salt River____. Gila River____. Verde River____. Colorado River____.
- 7—The desert town which publicizes itself as "The Dude Capital of the World" is — Tucson____. Prescott____. Wickenburg____. Las Vegas____.
- 8—Crystals which most commonly occur in geodes are—Calcite____. Quartz____. Gypsum____. Tourmaline____.
- 9—Desert mistletoe never grows on one of the following trees—Mesquite____. Catsclaw____. Ironwood____. Joshua tree____.
- 10—Highest peak visible from the Colorado Desert of Southern California is—Mt. Whitney____. San Jacinto____. San Geronio____. Telescope____.
- 11—The book *The Saga of Billy the Kid* was written about a—Famous stage driver____. Notorious outlaw____. Trapper and Scout____. Discoverer of the Comstock Lode____.
- 12—The Gila River enters the Colorado—Above Lake Mead____. Below the Mexican boundary____. Near Yuma, Arizona____. At Parker, Arizona____.
- 13—Material generally used by the Hopi Indians in making Kachina dolls is—Pinyon____. Clay____. Cedar____. Cottonwood____.
- 14—Center of the Chimayo weaving industry in the Southwest is in Arizona____. New Mexico____. California____. Sonora, Mexico____.
- 15—If you wanted to take a picture of the Great White Throne you would go to — The South Rim of Grand Canyon____. Zion National Park____. Death Valley____. Monument Valley____.
- 16—The material used by Navajo women in weaving their rugs generally is—Yarn from the trading post____. Wool from their own sheep____. Yarn furnished by the Bureau of Indian Affairs____.
- 17—Mexican Hat is the name of a small community in — Utah____. Arizona____. New Mexico____. Nevada____.
- 18—The species of cactus from which the Papago Indians harvest fruit is—Saguaro____. Cholla____. Beavertail____. Pincushion____.
- 19—The late Ernest Seton Thompson of New Mexico was a—Mining engineer____. U. S. Senator____. Indian Trader____. Writer-naturalist____.
- 20—Evaporation losses in Salton Sea are mainly offset by water coming from—Rain storms in the surrounding drainage basin____. Seepage from the Gulf of California____. Drainage water from the Imperial Irrigation system____. Underground springs____.

LETTERS

Don't Change a Thing . . .

Desert:

I recently purchased the January *Desert* at the newsstand, as I have been doing for 20 years, and I am writing to register a loud scream of protest.

I refer to the announcement that you contemplate a Desert Kitchen section—and a Desert Primer for junior readers—and a section on outstanding Southwestern architecture!

May the good Lord deliver us! There is plenty on western cookery of all types, especially barbecuing, etc., in *Sunset*. Also *Sunset* features the outstanding Southwestern architecture in some of the horrible examples of Frank Lloyd Wright—and there are plenty of books for the junior readers.

Why can't you leave *Desert* alone? It was all right—everybody likes it fine the way it is. It will end up just like some breakfast cereals—improved so much that they aren't fit to eat any more.

MARY DeARMOND
Grants Pass, Oregon

Silver Bar Discovery . . .

Desert:

Last August while on a prospecting trip in the country just east of the Twentynine Palms to Amboy road, I made an interesting discovery. In an old partially caved-in mine hole I found some old hand tools and seven bars of silver weighing one and three-quarter pounds each.

I sent these bars to the U.S. Mint which verified my find. Later I sold them for \$180.30.

There weren't any roads into the mine area that I could see, nor were there any remains of housing nearby. I figure whoever worked the mine lived in it also. I think that it caved in on him, because I don't think anyone would go off and leave the silver.

W. H. CHILDRESS
2708 N. Loma Ave.
El Monte, California

Jaeger's Alumni . . .

Desert:

As I read the January issue on a cool moonlit evening here in San Francisco, tears came to my eyes when I finished Dr. Edmund C. Jaeger's account of the annual outdoor reunions of his former students and campmates. I wept, not because I am one of them, but because I'm not!

As a long-time desert camper myself, and an avid reader of Dr. Jaeger's

articles in *Desert*, I'm wondering whether he might consider having such a palaver occasionally for those of us who have never had the honor and the pleasure of studying under him.

JIM BARBOUR
San Francisco

Four-Corner Road Information . . . Desert:

I'd like to pass along this information to your readers regarding the road to Four Corners (where Arizona, New Mexico, Colorado and Utah meet):

The best place to get local directions is at the Trading Post on the main trail near Beclahbeto, New Mexico. The people who run this post told us we could drive our '57 Ford station wagon to Four Corners monument, and we did. It is a good desert road, ungraded, but solid.

At the Post we were advised against taking the road from Beclahbeto westward to Kayenta, Arizona. Again the trader knew what he was talking about for we had trouble on this road, although we got through. A jeep or pickup truck would have no difficulty.

CHUCK BEHAN
El Monte, Calif.

Live and Let Live . . . Desert:

My grandson would like to have a desert tortoise as a pet. Can you tell me the best place on the desert to find one—or, if necessary I would be willing to buy one if you know anyone who has them for sale.

HARLO HUMPHREY
Pasadena, California

To HH: *Not only is there a law against taking the tortoise from its native habitat on the desert, but we desert folks are very strongly opposed to robbing the desert of any of its native wildlife and plants. Any form of life with the courage and tenacity to survive in this arid land deserves all the protection we can give it.—R.H.*

"El Camino Es Bueno" . . . Desert:

My companion Kerry Townsend and I recently made a trip into Baja California, and we found the road to be good. We went as far south as the blue palms at Santa Catavina, 320 miles below Tijuana, and didn't encounter anything worse than the road to Hite Ferry in Utah.

Gasoline was no problem. There are gas stations every 50 miles or so to Rosario, and from that point on an extra five gallons supplied our needs.

JACK HARRIS
Riverside, California

Doves Would Starve . . . Desert:

In a recent editorial regarding the advisability of adding the mourning dove to the list of song birds, you mention the beneficial effect of the dove

in the control of harmful insects. This is a fallacy.

A dove would starve to death in the midst of a bountiful supply of insects. Doves just don't touch the stuff!

L. S. MOONEY, JR.
Altadena, California

DESERT PRIMER

RATTLESNAKES how dangerous are they?

It is unfortunate, indeed, that thousands of people stay away from the desert because of their fear of rattlesnakes—despite the fact that more Americans are killed by lightning each year than perish from the bite of rattlers.

About 1000 people are bitten annually—of these about 33 die. When you consider, in addition, that the great majority of these 1000 bites are the result of pure carelessness (handling snakes, not watching where you step or place your hand), then it must be concluded that the rattlesnake "menace" is slight.

Rattlesnakes do tend to be more prevalent in arid areas because of the more favorable conditions of their rodent and lizard food supply. The best way to control rattlers in a given area is to introduce and protect food competitors. Thus, every harmless snake you kill makes life for the rattlesnake that much easier.

Because snakes are cold blooded, no generalities regarding when or where a rattler is most likely to be encountered is valid without taking temperature into consideration. Rattlers cannot stand extremes of hot or cold. Spring is the time of their greatest activity, for they are hungry after the long winter hibernation, and, too, spring is usually their mating season. Activity slackens during the summer, and then there is a slight period of increased activity in the fall when most of the young rattlers are born (the birth peak is reached around mid-September). Winter is the period of greatest inactivity.

What should you do if you are bitten? There are hundreds of "sure-fire" cures—from the application of a split chicken to spitting

tobacco juice on the bite—that are all worthless.

The most important thing to do is to keep calm, and get to a doctor as soon as possible. He will have antivenom serum. But, if you can't get to a doctor, or if it will take longer than 15-minutes to get there, do this:

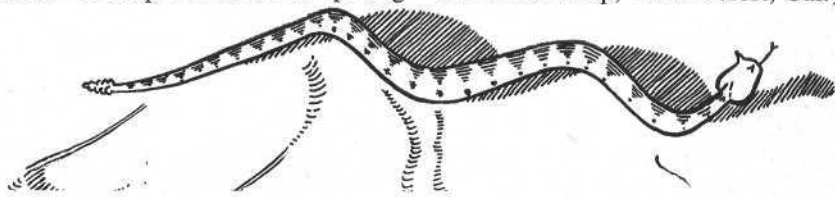
Apply a tourniquet about two-inches above the bite (make sure the tourniquet is not too tight, and



loosen it for a half-minute every 15 minutes); lance the wound; and suck out the venom. If swelling proceeds up the limb (more than 98 percent of all snake bites are suffered on the arms or legs), move the tourniquet above it, make some additional lengthwise cuts in the swollen areas, and apply suction. Remember: even with no first aid, authorities estimate that only one person in 10 would die from snake bite.

Snake bite is more serious in children. The body's ability to absorb the venom without fatal results varies with the person's weight. It is well to teach children a healthy respect for rattlesnakes.

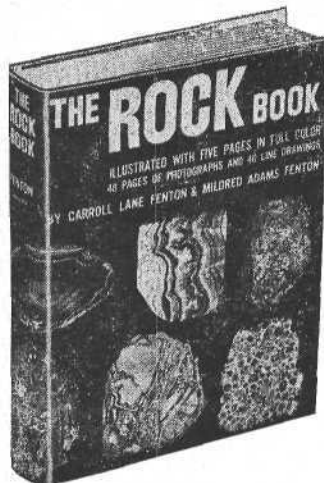
By far the best book on rattlesnakes is the two-volume work written in 1957 by Laurence M. Klauber of San Diego, California: *Rattlesnakes*; 1476 pages, illustrations, graphs, charts, maps, bibliography and index. Published by University of California Press; \$17.50 (can be ordered from *Desert Magazine Book Shop*, Palm Desert, Cal.)



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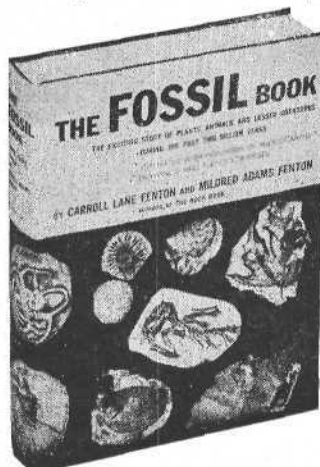
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BOOKS of the SOUTHWEST

Books reviewed on this page are selected as being worthy of your consideration. They can be purchased by mail from Desert Magazine Book Shop, Palm Desert, California. Please add four percent sales tax on orders to be sent to California. Write for complete catalog of Southwestern books.

RISE, FALL AND STRUGGLE BACK OF THE MESCALEROS

After 340 years of hit-and-run warfare against the White Man (300 years against the Spaniards, 40 against the Americans), the Mescalero Apaches were crushed. Roots of the struggle need little review: a people who regarded plundering as legitimate occupation could not exist alongside the new breed of Southwestern invaders, white men who, although they often breached the code of honor of their own race in dealing with the Indians, nevertheless regarded the Apaches as revengeful savages.

C. L. Sonnichsen, English professor at Texas Western College, El Paso, traces the rise, fall and painful struggle back now being attempted by the tribesmen, in a new book, *The Mescalero Apaches*. Prof. Sonnichsen is a long-time friend of the American Indian, and he writes about the New Mexico or Eastern Apaches from their point of view—but his picture is not a distorted one, and the Apaches' enemies get a fair hearing. The Mescaleros, as free as the roaming game bands they hunted, made up their rules of warfare as they went along. Make no mistake, they were cruel and barbarous fighters.

Sonnichsen devotes many pages to the Mescaleros' current problems. While economically they are better off than they were 30 years ago, they still are in a precarious position and in many ways have not bridged the gap between yesterday and today. However, the situation is hopeful.

Published by University of Oklahoma Press; illustrated; index; 303 pages; \$5.75.

BETTY LINDSAY WRITES DESERT GARDENING GUIDE

When Betty Lindsay moved to the high desert country of Joshua Tree, California, from the low desert Coachella Valley, it soon became apparent

to her that she would have to alter her gardening techniques. The climate and soil conditions were unique to her wide experience, and there was little available information from which she could learn. Thus, she literally started from scratch — and in order that future newcomers would have someone to turn to for gardening information, she kept careful notes.

So well received were Mrs. Lindsay's tips and hints on her gardening successes and failures, she decided to put the information in book form. The result is *A Practical Guide to Desert Gardening* — a check list of plants suitable for high desert growing which should contribute, in time, to the beautification of many Mojave homes.

Despite the cold print, Mrs. Lindsay's narrative remains a warm neighborly chat.

Printed by Desert Printers, Inc., Palm Desert, Calif.; paper cover; 28 pages; \$1.

BLACK CANYON HIGHWAY SUBJECT OF NEW GUIDE

A new guide book that reveals little known beauty spots in Arizona recently has been compiled by Benjamin J. Kimbler, engineer and journalist who has spent many of his years in the Land of the Saguaro.

This guide is devoted mainly to the comparatively new Black Canyon highway from Phoenix to Flagstaff. Titled *Highway of Canyons*, the well illustrated booklet describes the scenic route north by way of Montezuma Castle and Oak Creek Canyon to Flagstaff, and thence north past Sunset Crater and Marble Canyon to the North Rim of Grand Canyon.

There are many interesting side-trips along the route—some of them to ghost towns and Indian ruins. All this part of Arizona is "Indian Country" although the highway described in the book does not actually enter an Indian reservation until it crosses into the domain of the Navajo northeast of Flagstaff.

Published by The Roadrunner Publishing Co., Modesto, California. Paperbound, 48 pages, lithographed. \$1.00, or by mail \$1.25.

"DESERT GARDENING"

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native plants, etc. Also, advice on land-
scaping a desert cabin.

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Fontana, California . . .

Kaiser Steel has put the largest blast furnace on the West Coast in operation. The new furnace, fourth at the plant, is designed to produce 1750 tons of molten pig iron per day. This increases Kaiser's annual pig iron (hot metal) capacity from 1,314,000 tons to 1,912,000 tons. The new furnace is a key facility in the company's \$214,000,000 expansion program now nearing completion.

Lovelock, Nevada . . .

Outlook for the iron mining operations in southern Pershing and northern Churchill counties was reported to be good, with ore shipping continuing at about 500 carloads a month. Most of the ore is going to Japan, reports the *Lovelock Review-Miner*, but increasing amounts are being taken by the Kaiser steel mill at Fontana, Calif. Other domestic users also are being served.

Grants, New Mexico . . .

The nation's largest sulfuric acid plant went into operation at Kermac Nuclear Fuels' uranium processing mill north of Grants. The \$1,500,000 acid plant, part of Kermac's uranium mill at Ambrosia Lake, is designed to produce in excess of 450 tons of sulfuric acid per day. The acid is used to process uranium ore.

"OVERLOOKED FORTUNES"

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TRUTH OR CONSEQUENCES, NEW MEXICO

Window Rock, Arizona . . .

Standard Oil Co. of California offered the highest per-acre bid in the history of the Navajo Indian oil land lease sales program — \$5,505.55 per acre for 160 acres in the Aneth area. The bid totaled \$880,888, the *Phoenix Gazette* reported. In its latest offering to the oil industry, the Tribe received bids totaling \$3,603,900 for leases in San Juan County, N.M., and the Aneth field of Utah.

Boulder City, Nevada . . .

Manganese Incorporated announced discovery of a high grade body of 30 percent manganese ore. Exploration work by Manganese Incorporated and the Isbell Construction Company has been going on at the Three Kids Mine for some time, and the new find is expected to keep the manganese producer in operation for several months. Previously mined ore at the mine had averaged between 18 and 30 percent manganese.

Signal, Arizona . . .

An open pit mining operation is underway by the Air-Vada Mining Company at the old McCracken Mine. The company also plans to operate a 150-ton flotation mill at Signal for the recovery of the lead and silver ores it will mine at McCracken.

Grants, New Mexico . . .

A field pilot plan for use of the Brady process of ore extraction soon will be constructed in the Grants area, the American Milling Corporation announced. In the patented Brady process, first field tested on a body of uranium ore on the San Mateo Dome north of Grants last summer, chemicals are pumped underground to dissolve the uranium ore—or whatever other mineral is being sought—and then pumped back to the surface. Results of the San Mateo Dome test were "extremely encouraging" and "gratifying enough to indicate further testing of this unique method of ore handling should definitely be pursued," an American Milling Corp. spokesman said.

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SOUTHWEST NEWS BRIEFS

Canyon Park Proposed . . .

Taos, N.M.—The state Legislature will consider a long range proposal aimed at lessening some of northern New Mexico's chronic economic woes. The scheme calls for development of the area's outdoor vacation potential, and it centers around the conversion of 50 miles of rugged Rio Grande Gorge into a vast camping, fishing, recreation and wilderness trail area, the *Santa Fe New Mexican* reports. Most of the land along the gorge is in the public domain and could be purchased from the Federal government at one-third the appraised value, the plan's sponsors say. Almost all of the remaining acreage already is owned by the state.

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Wild Horse Fate Studied . . .

Marietta, Nev.—Fate of the wild horses in the Jack Spring area above the old camp of Marietta now rests with the new board of Mineral County commissioners. Much controversy arose over an application by Ray Maier to capture the mustangs. W. J. "Pegleg" Ford of Tonopah Junction Rock House spearheaded the opposition to the granting of a permit to Maier, the *Mineral County Independent* said. Earlier Ford was successful in blocking the application by a group of Hawthorne men who sought to capture wild burros and horses. "I have been in this country since '92 and no Johnnies-come-lately are going to stop me from fighting something that is wrong. I'll take this to Carson City," Ford said. The supervisors tabled the application pending further study.

Study Yuma Seaport . . .

Phoenix — Governor Paul Fannin has urged the State Legislature to determine the feasibility of an ocean port in the vicinity of Yuma. The *Yuma Sun* reports that State Senate floor leader Harold Giss (D-Yuma) has backed Fannin's proposal. The Yuma seaport idea has been discussed for a long time, and Giss is pressing for a study which will determine once and for all if the project can be accomplished.

Old Bridge Sold . . .

Cameron, Ariz. — A suspension bridge built in 1911 over the Little Colorado River on U.S. 88 near Cameron will be used as support for the Four Corners Pipe Line. The State Highway Department sold the bridge for \$70,000 following erection nearby of a new highway bridge. The old 660-foot bridge has served 4,300,000 vehicles since it was erected.

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Secession Talks Revived . . .

Victorville, Calif. — Mojave and Colorado desert citizens again are talking secession from their respective San Bernardino and Riverside county seat urban centers. Judge Ed Volk of Victorville said there is a "real solid movement afoot" to have the eastern Mojave secede from San Bernardino County. He told the *Victor Press* he personally knows of "important people" in Needles, Barstow, Trona and Yermo who are working on this problem. Twenty-five business leaders of the Colorado desert portion of Riverside County recently met in Palm Springs to outline a course of action which they hope will lead to severance from the non-desert portion of the county. They blamed "mounting inequities and skyrocketing property taxes" for their stand.

Glen Bridge Opened . . .

Page, Ariz.—The spectacular 700-foot-high bridge at the Glen Canyon damsite (*Desert*, Feb. '59), the world's highest steel arch bridge, is now open for public use. The \$4,100,000 bridge connects newly constructed highways for an alternate route of U.S. Highway 89—a new north-south link between Utah and Arizona. The new bridge will greatly facilitate the building of Glen Canyon Dam.

Nine Million Cross Border . . .

Calexico, Calif.—Nearly 9,000,000 persons crossed the International Border at Calexico during the past 12-month period, the Immigration Service said. The total represented an eight percent increase over the prior 12-month period. Most important factor in the marked border traffic increase is Mexicali's population boom, officials believe. Some 75,000 residents of the sprawling Mexican city hold border crossing permits at present time.

ANSWERS TO DESERT QUIZ

Questions are on page 26

- 1—Shovel.
- 2—Hot water.
- 3—Tamarisk.
- 4—Navajo reservation.
- 5—Mountain-climber.
- 6—Salt River.
- 7—Wickenburg.
- 8—Quartz.
- 9—Joshua Tree.
- 10—San Geronio.
- 11—Notorious outlaw.
- 12—Near Yuma, Arizona.
- 13—Cottonwood.
- 14—New Mexico.
- 15—Zion National Park.
- 16—Wool from their own sheep.
- 17—Utah.
- 18—Saguaro.
- 19—Writer-Naturalist.
- 20—Drainage from Imperial Irrigation system.

Indian Herds Get Grain . . .

Window Rock, Ariz.—The departments of Interior and Agriculture have initiated a program by which free grain will be distributed to Navajo Indians for the maintenance of subsistence livestock. To be eligible, a Navajo must own not more than 20 "animal units" (one cow, one bull or steer, two heifers, three calves, five sheep or goats, or seven lambs or kids) of livestock, and must be found by the Tribe to be in need of such assistance.

Desalting Device . . .

Socorro, N. M.—A New Mexico Institute of Mining and Technology scientist has developed a compact electro-dialysis cell device which will produce about 100 gallons of drinking and household water every 24 hours from saline or brackish water. Constructed with the idea of devising a desalting device for use by small Southwestern farmers and ranches, the cell's electric power operating cost is \$1.20 per 1000 gallons of water converted. The cell itself can be made at "about the cost of a color television set," according to its inventor, Dr. J. A. Schuffe. Mass production, he adds, would reduce this unit cost considerably.

Shrimp Problem . . .

Great Salt Lake—The microscopic leaf-footed brine shrimp is making big problems for the builders of the railroad causeway that will replace the 54-year-old trestle across Great Salt Lake. Billions of the shrimp have lived and died in the lake for untold centuries. Their remains have created a deep mush on the lake floor—a condition which is producing serious problems for the constructors of the 30-mile-long earth-fill road bed.

Land Restored to Entry . . .

Reno—The Bureau of Land Management has restored 52,721 acres of land to entry under the public land laws. The lands vary from rough and rolling to generally desert in character and are scattered throughout most of Nevada. Those interested in a detailed description of these lands should contact the BLM, 50 Ryland Street, Reno.



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Papagos Use Colored Ballots . . .

Sells, Ariz.—Papago Indians of the San Xavier and Gila Bend reservations voted for tribal representatives this winter—but instead of being voted for by name, each candidate was given a color. This is because most of the older tribal members cannot read English and the Papagos have no written language of their own, explained the *Phoenix Gazette*. The ballots bore squares, each of a separate color, and the candidates used posters in their electioneering to identify themselves with one of 12 colors. Color-blind voters exercised their choice by memorizing the position of the colored squares.

Wheeler Scenic Area Asked . . .

Salt Lake City—The Utah Tourist and Publicity Council has come out in favor of the creation of a 100,000-acre scenic area in the Mt. Wheeler-Lehman Caves section of the Utah-Nevada border. The area under surveillance would include Lehman Caves National Monument, a 640-acre tract which includes limestone caves and other features, and 13,000-foot Mt. Wheeler. A move is underway, spearheaded by Nevada interests, for the elevation of the Wheeler-Lehman area as the Silver State's first national park.



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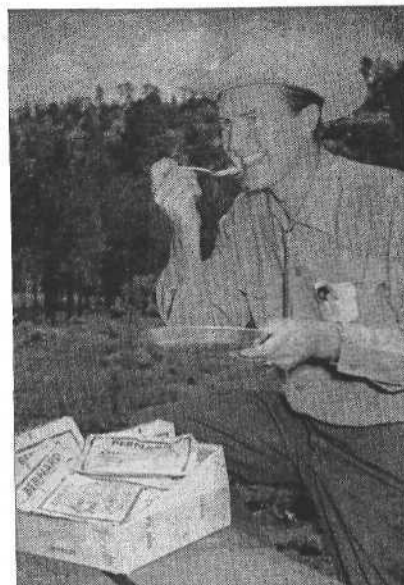
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BOLA AND jewelry finding price list. Compare our prices before you buy. Please include 10c to cover cost of mailing. Dealers send resale number for wholesale list. The Hobby Shop, Dept. DM, P.O. Box 753, 619 North 10th Avenue (Hiway 30), Caldwell, Idaho.

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CAVE CREEK jasper \$1.50 pound or 4 pounds for \$5 postpaid. Sadler, 719 E. Moreland, Phoenix, Arizona.

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● GEMS, DEALERS

ROCKS—OPPOSITE West End Air Base, agate, woods, minerals, books, local information. No mail orders please. Ironwood Rock Shop, Highway 60-70 west of Blythe, California.

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SHAMROCK ROCK Shop, 1115 La Cadena Drive, Riverside, California. Phone Overland 6-3956. Specimens, minerals, slabs, findings, etc.

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THREE FINE prehistoric Indian war arrowheads \$1. Flint scalping knife \$1. Rare flint thunderbird \$3. All for only \$4. Catalog free. Arrowhead, Glenwood, Arkansas.

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● MAPS

SECTIONIZED COUNTY maps — San Bernardino \$1.50; Riverside \$1; Imperial, small \$1, large \$2; San Diego 50c; Inyo, western half \$1.25, eastern half, \$1.25; Kern \$1.25; other California counties \$1.25 each. Nevada counties \$1 each. Topographic maps of all mapped western areas. Westwide Maps Co., 114 W. Third St., Los Angeles, California.

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WILL SELL or lease or trade highly mineralized patented section 13, township 5 north, range 15 east, SBB&M, Calif., about 10 miles south Essex in the Old Woman Mts. Mining District. Carries: beryl, rare earths, molybdenite, gold, silver, platinum. Lease \$1 a year per acre plus 5% royalty apply on purchase price \$15,000. Will trade land or properties equal values. Reports on minerals are available. Write Bill Yim, Amboy, California.

FOR SALE: Sample ore bags 5 1/2"x12", heavy ducking, 25c each. Other sizes made to order. Mrs. Julia Edwards, 1398 West 5th North, Provo, Utah.

WANT TO buy small placer claim in Southern California. Contact M. Brown, 12517 Sherman Way, North Hollywood, California.

BAT GUANO: If you know of a deposit which is not being developed we would like to contact you. EHCO Properties, 1539 Santa Monica Avenue, San Jose 24, California.

● REAL ESTATE

80 ACRES near Lockhart, level, \$125 acre, 25% down. 20 acres Highway 395, level, north of Adelanto, \$150 acre, 10% down. 2 1/2 acres west of Adelanto, level, \$1495, 10% down. 2 1/2 acres Lancaster on paved highway, shallow water, level, \$2495, 10% down. Dr. Dodge, 1804 Lincoln Blvd., Venice, Calif.

\$100 DOWN buys 1 acre to 2 acres. Choice parcels. Utilities available. Adjoining fully developed subdivision. P.O. Box 115, Morongo Valley, California.

FOR SALE by owner. Small cinder block cabin. 2 acres. 400 feet from paved road. 3400 feet elevation. No smog. 20 miles west of Victorville. Write 154 Poinsettia, Monrovia, Calif.

GOOD DESERT land, 140 acres or less, near Yucca Village on Pipes Canyon Road four miles from Victorville Road. Elevation 3400'. Will give clear title. Florence Hess, 700 Sunrise Blvd., Long Beach, California.

ARIZONA \$25 down, \$10 per month, beautiful large city lots, 50 foot by 100 foot, water, power, sewer, natural gas available. \$395 full price. Hunting and fishing, boating, ghost towns, rock hunting near by. Write to Box 3314, North Las Vegas, Nevada.

● TRAVEL, RECREATION

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1959 EUROPEAN summer Grand Tour. 61 days in Europe, leaving Quebec June 28. Visiting England, Scotland, Norway, Sweden, Denmark, Germany, Holland, Austria, Italy and France. Cultural and historical points of interest. Limited to 25. \$1592, all expenses, from Quebec. Write for six-page brochure. Professor Erwin Ruff, University of Redlands, Redlands, Calif.

● WESTERN MERCHANDISE

GHOST TOWN items: Sun-colored glass, amethyst to royal purple; ghost railroads materials, tickets; limited odd items from camps of the '60s. Write your interest—Box 64-D, Smith, Nevada.

OLD RELICS, ox shoes, limited items of early Nevada. Plus color slides. Over 20 different rocks and minerals. Write now for new list and prices to: E. W. Darrah, Box 606, Winnemucca, Nevada.

● MISCELLANEOUS

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DESERT RAT wanted. Ranch house, rent free, in exchange for maintenance of same, located 15 miles east of Julian in San Diego County. Please write or phone Jack Napierkie, 640 Pepper Drive, El Cajon, Calif. HICKORY 4-0550.

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CLOUD SEEDING URGED FOR WESTERN STATES

Salt Lake City — Water experts George Lof and Edward Ackerman estimate in a study financed by the Ford Foundation, that the 11 western states might produce 40,000,000 acre-feet of added moisture annually if a permanent cloud seeding program is adopted. This amount of water is equal to Lake Mead's volume.

According to the *Salt Lake Tribune*, the scientists believe cloud seeding in high mountain regions tends to increase rain or snowfall consistently from 10 to 15 percent. They estimated that moisture bearing air currents from the Pacific Ocean move across the United States, and under natural conditions three-fourths of the moisture they carry inland is still with them when they reach the Atlantic. Rainfall comes when rising air currents carry moist air high up into zones where it cools down and water vapor precipitates out as rain or snow.

But, rain drops must have something to cling to so they can form. Cloud seeding increasing the substance water can cling to.

BILLBOARD STANDARDS SET FOR U.S. SUPERHIGHWAYS

Washington, D. C.—Final Federal standards governing billboard use along the nation's interstate highway network were announced by the Department of Commerce. Outdoor advertisements will be allowed within 12 miles of restaurants, motels, filling stations and other businesses, but these signs will be smaller than present standard sizes, and their number will be limited in any one area.

Also authorized was construction of information sites along the roadways. Businesses will be allowed to advertise at these turn-outs on directory-type billboards screened from the highway.

Individual states will decide whether to adopt the billboard standards. States that agree to do so will receive a bonus of one-half of one percent of the cost of the new roads on top of the 90 percent the Federal government already has agreed to pay. About 25 percent of the 41,000-mile superhighway system — that portion running through incorporated municipalities, commercial and industrial zones and along old routes—will be exempt from the regulations.

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Box 514 Westwood 80, New Jersey



We welcome your contributions to this column. For recipes accepted for publication, we will pay \$2. Please limit to Mexican, barbecue or camp-out dishes. Send recipes and return postage to Recipes, Desert Magazine, Palm Desert, California.

STEAK IN FOIL (serves 1)

- ¾ to 1 lb. steak
- ½ onion (sliced)
- 1 potato (sliced)
- 1 carrot (sliced)
- salt and pepper to taste

Surround steak with vegetables on double sheet of aluminum foil; wrap securely and place flat-side-down on hot coals; turn once halfway through cooking period: 30 minutes: rare; 40 minutes: medium; 50 minutes: well done.

WEST TEXAS BARBECUE SAUCE (yields 2 cups sauce)

- ½ cup margarine
- 2 tablespoons chopped onions
- 1 green pepper or chili, chopped fine
- 4 slices lemon
- 2 tablespoons chili powder
- 2 tablespoons Worcestershire sauce
- 1 teaspoon brown sugar
- 1 cup vinegar
- 1 sour pickle, chopped fine

Mix all ingredients then place in saucepan and simmer, stirring constantly, until margarine melts. Warm on top of double boiler until ready to use on all meats to be braised or barbecued.

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BUNCO SQUAD INVESTIGATES DESERT LAND SWINDLES

Los Angeles — The Los Angeles Better Business Bureau and the Los Angeles Police Department are investigating what has been termed a "giant

land swindle" involving 320-acre Desert Land Act tracts (see *Desert's* Feb. '59 editorial). Most of these applications were created by licensed real estate brokers, operating as engineering firms, who have sold the public on the idea that Government land could be had in large tracts at \$1.25 an acre.

The Desert Land Act only applies to agricultural land, and water has to be developed and a crop raised before the land can be had at \$1.25 an acre. An estimated \$20,000 to \$30,000 expenditure is required to prove up on an average 320-acre Desert Land entry.

Government officials believe 95 percent of the 5000 applications now on file in the Los Angeles Land Office will be rejected.

The L.A. Police estimate the public has been duped out of \$2,000,000 in application and filing fees by certain unscrupulous real estate brokers. People who have fallen prey to this high pressure scheme should contact Sgt. S. W. Johnson, Bunco Squad, Room 300, Police Administration Bldg., 150 No. Los Angeles Street, Los Angeles, California.

Saguaros Endangered . . .

Tucson—Insects, rodents and disease are teaming up to wear down saguaro numbers in many areas of the Arizona cactus forest. This is the opinion of University of Arizona research scientists who have been conducting a coordinated study of the giant cacti for the past two years. The scientists found that even when the saguaro seeds, which need light to germinate, do begin to grow, rodents destroy nearly all of the seedlings. The university plans to continue the studies.

PHOTO CONTEST

You are invited to enter desert-subject photographs (black and white, 5x7 or larger) in *Desert's* monthly photo contest.

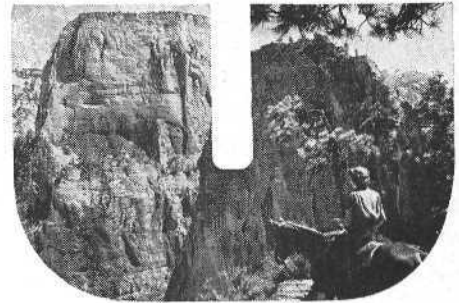
One entry will be selected each month, and a \$10 cash prize awarded to the photographer. All other entries will be returned—provided postage is enclosed.

For non-winning pictures accepted for publication, \$3 each will be paid. The contest is open to all, and time and place of photograph are immaterial—except that the photo must be of a Desert Southwest subject.

Address all entries to:

**PHOTO CONTEST
DESERT MAGAZINE
PALM DESERT, CALIFORNIA**

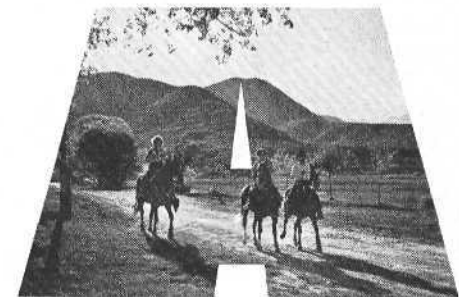
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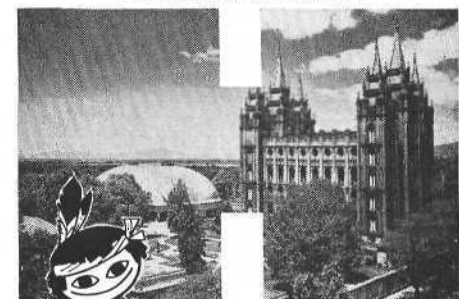
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Salt Lake City, Utah

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GEMS AND MINERALS



Earl Napier holds 20-pound jasper.

For untold millions of years the Colorado River has been cutting its way from the Rockies to the sea. In this process many layers of agates, jaspers and other gem materials have been broken up and carried down the river—tumbled smooth and semi-polished in the process. One of the largest deposits of river debris containing good gem specimens is near the mouth of narrow Boulder Canyon where Lake Mead's high water levels are carving new terraces in the ancient gravels.

By EUGENE L. CONROTTO

"WHEN ALL the desert's gem fields are worked out and forgotten, there'll still be enough agate and jasper in the gravel beds of the Colorado River to hang 10-pound bola ties around the necks of every rockhound on earth," said Earl Napier.

I can concur in this estimate following my recent prospecting trip along the shoreline of Lake Mead in southern Nevada. Earl (*Desert*, Jan., '58), who was my guide on this outing, is fast becoming recognized in the hobby as the outstanding authority on rockhounding by boat.

The lake is one of his great loves—and so is the dawn. In 60 years, Earl has not missed a sunrise. We pushed off from Las Vegas Bay in the pre-dawn blackness of a warm winter

Gem Banks on the Shores of Lake Mead

morning. Earl's speedboat, the *Early Bird*, a 25-horse-power craft, is well-named. It's not a fancy or very powerful boat, but it suits Earl fine. As a disabled veteran with plenty of time on his hands, he has driven the *Early Bird* along as much of Mead's continually-changing shoreline as possible.

A few hundred yards from shore, he cut the power and we waited. Only the gently lapping water against the *Early Bird's* sides filled the tremendous void. Then, as softly as a sleeping child's breathing—and as unceasing as the passing of time itself—delicate waves of rose-tinted light came from nowhere to outline Arizona's massive Fortification Hill across the way. The light spread north and south along the craggy far range, it filtered over the rugged features of the many islands in our bay. We now could see we were not alone on the calm ink-black sea: hundreds of ducks floated by, completely ignoring us.

Day Begins

The stillness was broken by the low whine of an outboard motor coming toward us from Boulder Beach, south of the Las Vegas Bay landing. The marina at Boulder was dotted with a hundred white boats peacefully riding

at anchor. It was light enough now. Earl started up, and headed northward upstream.

The lake was at a near record high level this past winter which meant we were cruising over jutting land arms and islands which will re-emerge from the water when the lake recedes. Snows that fall in the Rockies, melt and then enter the main stream of the Colorado are the determining factors of this timetable. So variable is Southwestern weather, no one can predict what this great reservoir behind Hoover Dam will look like next summer or next month.

Ideal Level

For our purposes, the high water was a blessing. We penetrated to the very heart of the gravel beds piled up by the Ancient Colorado. Here is accumulation of debris brought down by waters seeking outlet to the sea over a period of many thousands of years. The mass of this material in the Lake Mead area is found south and west of the mouth of Boulder Canyon on the Nevada side of the lakeshore, from Callville Bay to Las Vegas Bay. Boulder Canyon, the first narrows upstream from the dam in Black Canyon, was the originally planned site of Hoover

Dam—which explains the name Boulder Dam so long used for this massive structure.

These gravel mountains hold material from all the geologic ages exposed in the great cuts of Grand Canyon and other upstream plains. It ranges from sand-grain to boulder sizes. Earl even has collected a few pieces of water-worn Montana agate in this area.

Vast Deposit

Of course, the percentage of gem quality material in relation to the whole deposit is small, and yet by the very size of the area, the amount of gem material here is tremendous.

During the remainder of that week end we pulled into two dozen landings on the gravel beaches. The action of the fluctuating water level works in favor of the rockhound, for each new level makes its own terrace in the material — contours that follow the brown hills around points and down long shorelines. Besides forming these highways of gravel, the water also washes the material clean and, at water's edge, brings out the brilliant colors of the gem-quality rocks. There is no need for the familiar rockhound practice of licking stones to see what the specimens will look like when polished. But, the person who takes a rock home for his garden is apt to

be disappointed—unless he keeps the specimen under water. A bright rock on Lake Mead's shoreline may be very dull out of its element. A polishing wheel or a tumbler will restore its luster.

The water action has yet another benefit for rockhounds: it wears off the rough edges of the stones, crumbles and carries away the weathered material which is of no use to the lapidary. The 20-pound jasper boulders we handled that week end were solid rock.

We followed the curving shoreline on foot for hours. I spent the most time at water's edge, where a new terrace was being formed. Here, under the clear water, the rock colors come through in beautiful reds, browns, dull greens and tans. Some specimens are clearly banded, which enhances their value to the rock polisher, especially if the color bands are markedly contrasting as they are in some Mead specimens.

A Few Steps

The narrow beaches had only a few terraced steps at the time of our visit—a 20-yard band from water level to the high water mark. As the lake level recedes, this agate-jasper area will widen.

In nearly every baylet we entered that week end, we saw people having

fun. Some were fishing, others were camping, picnicking or soaking up some winter sun. A few days prior to my visit there had been a big storm over most of the Nevada-Arizona-California desert, and the whole outdoors had been washed clean.

The main object of the National Park Service is to preserve the lake's natural scene. How then can rock-hounding—an activity strictly forbidden in National Parks and most National Monuments — be sanctioned here?

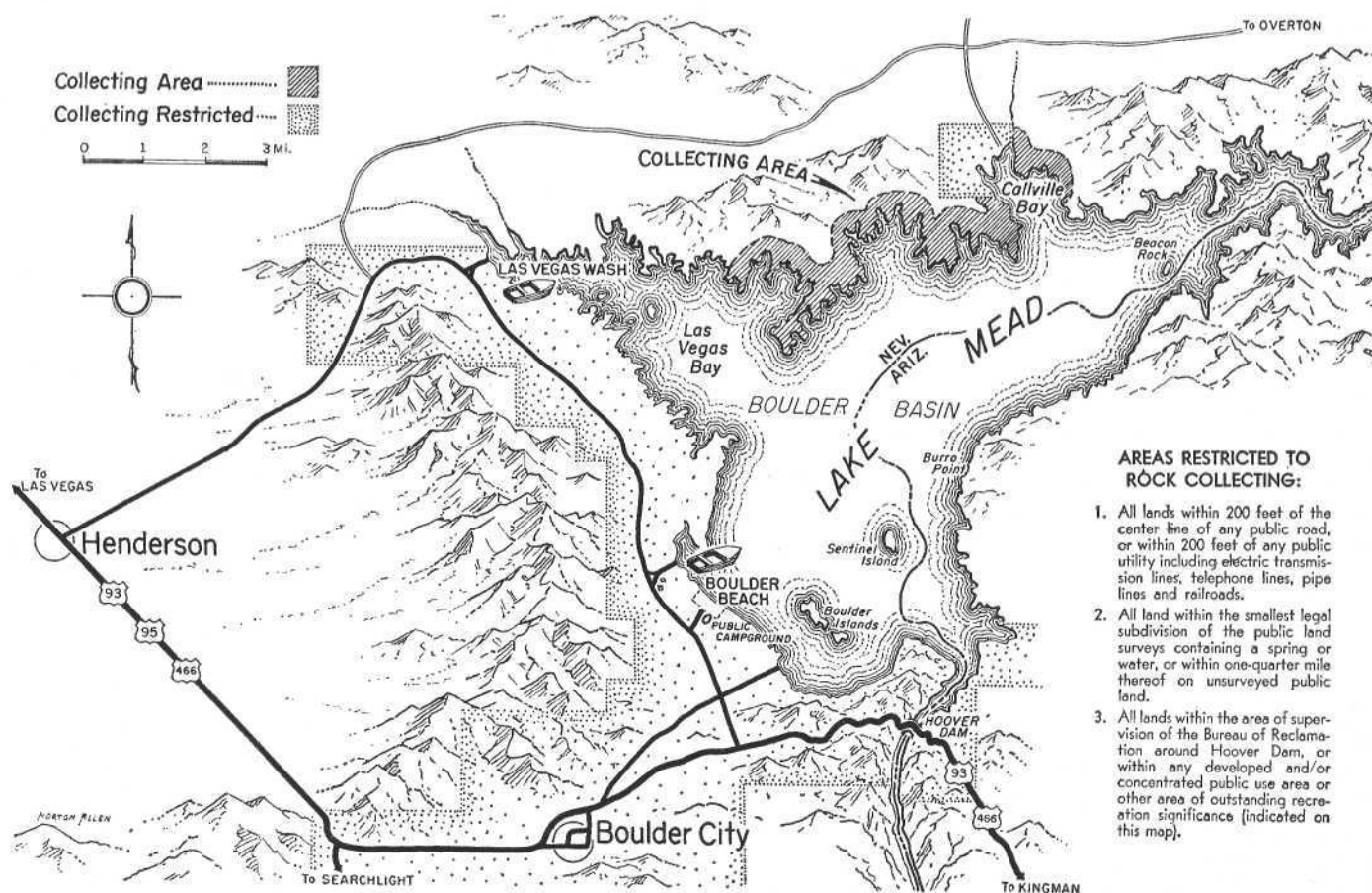
Restrictions

The answer was supplied to me by Jerry House, acting superintendent of the Lake Mead National Recreation Area.

"The manner by which the Lake Mead Recreation Area was established does allow some rock collecting," House said. "We have some restricted areas (see map accompanying this story), but outside of them rocks may be gathered from the surface."

There can be no digging or other marring of the landscape unless a regular mineral lease is obtained.

The National Park Service promised that they will crack down on commercial rockhound operations (those conducted without mining permits) or



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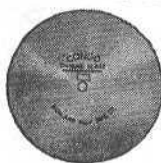


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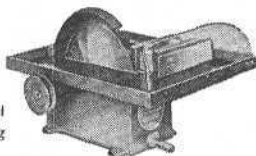
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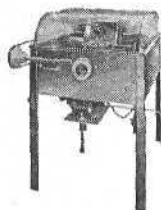
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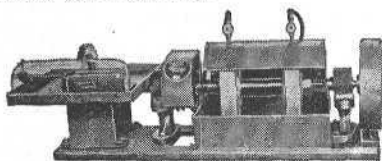
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*The "Early Bird" is beached on a
gravel terrace sprinkled with gem
material deposited by the river.*

rockhounding which tends to deface
the land.

While there is a road to the Call-
ville Bay area (closed to collecting),
by far the easiest way to reach the gem
material is by boat. A healthy respect
for the lake is the most important
piece of equipment the nautical rock-
hound should bring with him. The
wind has a tendency to come up sud-
denly in this area, and Earl has seen
days on this body of water when a
destroyer would have a rough time of
it.

It is wise to have a few blankets or
a sleeping bag and some extra food in
the boat. A sudden storm may cause
you to put into a sheltered cove, and
you may be forced to stay there over-
night or even several days.

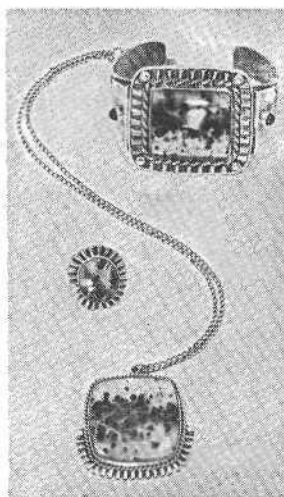
Here is a list of accommodations at
Lake Mead:

Boulder Beach — this is the main
Lake Mead recreation development,
six miles from Boulder City. Free fa-

cilities include swimming beach (life-
guards are on duty during the sum-
mer), picnic area, launching ramps,
boat dock, information and ranger
station. The campground is equipped
with modern comfort stations, tables,
fireplaces and water. Concession fa-
cilities are trailer spaces, store, refresh-
ments, showers, change rooms, bathing
suit rentals, boat and motor rentals,
gasoline and oil, water-skiing equip-
ment and instruction, fishing licenses,
tackle, bait and daily cruises on the
lake.

Echo Bay—this new boat landing
can be reached by taking a paved road
for 15 miles south of Overton boat
dock. Boats can be launched here and
boat rentals should soon be available.
Types of fishing: bass, catfish and
crappie.

Overton, Nevada — this town is



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Overton Boat Dock—located at the end of a paved road 12 miles from Overton, Nevada. Facilities include cabins, boats and motors, cafe and tackle stores, guide service, live bait, trailer space and fishing licenses. Types of fishing: bass, catfish and crappie.

Las Vegas Bay—this boat dock is reached by taking a paved road from Henderson or by continuing north from Boulder Beach Marina. Facilities include boats and motors, fishing tackle, live bait, picnic area, sandwich stand and fishing licenses. Types of fishing: bass, crappie and some catfish.

Temple Bar Landing—this boat dock is reached by taking a 26-mile paved road from the Hoover Dam-Kingman Highway. Facilities are boats and motors, fishing tackle, live bait, cabins, groceries, restaurants, trailer space, fishing licenses and an air strip. Fish available: bass, crappie and some catfish.

Last year over three million Americans visited the Lake Mead National Recreation area—the greatest visitor total of any Western unit in the National Park System.—END

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INDIANS MADE JEWELRY FROM FLUORSPAR SPECIMENS

Long before Columbus came to America, the Mound Builders were using fluor spar as their most precious jewel. Birds and animals, and less frequently turtles, were carved from the highly colored pieces of this mineral. Sometimes the carvings were set in silver.

Fluor spar usually occurs in a gangue (metallic vein) of varying quantities of limestone, calcite and quartz with minor amounts of sphalerite, galena, pyrite and chalcopryrite. It is generally found in roughly vertical veins in beds of limestone or sandstone, and in blanket deposits interspersed with clay; also as incrustations in vugs or caves.

It is a fairly-heavy medium-hard brittle glassy mineral chiefly composed of calcium fluoride. Colors range from delicate tints to deep shades of green, yellow, blue, and lavender; rather rare are the rose, orange, brown and black specimens. Massive varieties may be white or colorless.

HOW TO CARVE AN ONYX FIGURINE

Onyx carving can be very simple if the hobbyist keeps in mind the fact that the steps used in making a three-dimensional figure are practically the same as those used in making a cabochon.

First step is to cut a slab on a diamond saw to the desired dimensions. Then a pattern is lain on the slab and outlined with a marking pencil. As much excess material as possible is sawed away, and in this operation the marking pencil will be in constant use for the outline will have to be redrawn many times.

After the figure has been roughed out, further preforming takes place with a silicon carbide separating disk mounted on a mandrel and chucked into the hand-piece of a flexible shaft tool. A slight stream of water must be handy nearby to keep the work clean. The disk is used almost as a knife is in whittling. These disks are very brittle and wear quickly.

Next step is to round the figure into shape with a mounted grinding wheel on the flexible shaft tool. The piece is finished with a small file which some hobbyists find easier to use than dental burrs, especially for the fine detail work. Holes for eyes can be drilled with dental burrs, a small cone-shaped grinding wheel or even a hand drill.

The onyx figurine is sanded wet—by hand—with 220, 320 and 600 grit papers. Polishing is done with tin oxide or cerium on a small felt buff, but the speed of the flexible shaft tool must be slowed down by means of a rheostat to avoid fracturing the stone.

Eyes for the figurine—small cabochons, faceted stones, beads or glass eyes available from a taxidermist—are glued in with any clear household cement.—Betty Riberdy in the Michigan Lapidary Society's *Bulletin*

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Otoliths, the pearl-like calcareous concretions that are part of a fish's organ of balance comparable to the inner ear of humans, are being polished and used for ear drops and other jewelry pieces by amateur lapidarists. These hard nodules, known as ear stones, are found in the skull back of the eyes of deep sea bass and other species.

Otoliths show lines of growth very much like the rings in trees, and are used by scientists to determine the age of the fish from which they are taken. — Pomona, Calif., *Convair Rockhounds Club*

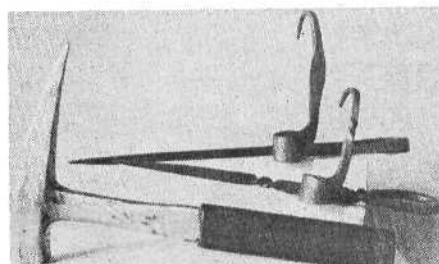
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FINEST MOONSTONES COME FROM CEYLON

Moonstone, either albite or peristerite, is perhaps the best known of the feldspar gems. The finest moonstones are those from Ceylon, which are nearly transparent and have a strong blue sheen. Those showing a silver sheen are classed as the next best grade. Unfortunately, most Ceylon moonstones are quite small.

Indian moonstone is currently the most common variety available. It comes in several colors and, when properly oriented, will show a catseye, a strong sheen, or even a star. At one time exceptionally fine

unflawed pieces of silver moonstone came from the Amelia Courthouse district of Virginia, and a fine variety formerly came from Switzerland. Other sources were Georgia, New Mexico and Ontario, Canada. —Contra Costa Mineral and Gem Society's *Bulletin*

SINGLE CRYSTALS ARE RARE IN NATURE

Just as lawn is made up of many blades of grass, so also are rocks made of many crystals. Single crystals of any mineral are comparatively rare.

Sedimentary rocks usually are composed of crystals of one or more minerals cemented together in solid form, and rarely showing individual crystal forms. In metamorphic rocks, the whole structure is made of crystals deformed or altered by heat or pressure. Crystals of igneous rocks are so crowded together that they show no crystal faces, but, with few exceptions, the entire rock is composed of crystals in their original form.

Even when conditions are right for crystal growth, they commonly grow as groups rather than as individual crystals. Most often when complete crystals are formed, they do so at random—no one crystal bearing a definite relation to any other. —George E. Smith in the *Sooner Rockologist*

A little graphite mixed with chrome oxide and applied to ordinary muslin buffs makes a wonderful jade polishing agent. It also works well on some hard to polish agate materials. —*Auburn Gem News*

AN EASY WAY TO POLISH TURQUOISE

Turquoise often tries the patience of the beginning lapidary, but it need not. It is an easy stone to polish if the stone cutter begins with good material, and if great care not to overheat the stone is exercised.

First mistake most beginners make is to buy bargain-priced turquoise. Usually, cheap turquoise is soft and chalky, and even if the lapidary succeeds in getting a good polish, skin oils usually will discolor the stone in a short time. Good turquoise sells from \$4 and up an ounce.

When sawing turquoise use plain water as a coolant. Oil may discolor the material. Turquoise is a soft stone and should be ground to shape on a 220 grit wheel, using plenty of water. Turquoise streaks and blackens if it becomes overheated.

To sand and semi-polish turquoise in one operation use a wet cork disk upon which a generous amount of pumice has been rubbed. Run the disk at the lowest possible speed, keeping the cork well-dampened to prevent heating. Add more pumice if necessary.

The soft turquoise is quickly smoothed and semi-polished by the much harder pumice grains, and by using the cork disk the sanding operation is eliminated. Sanding tends to cut facets on soft stones.

Final polishing takes place on a well-dampened leather buff impregnated with cerium oxide. Run the buff slowly, and keep it wet. —*Albuquerque Rocky Dukes*

HOW TO MAKE MATCHED CABS THE SAME SIZE

A successful way to cut cabochons to the same size as required for matched sets, is to dop the two pieces of material together after they have been trimmed. Treating the united pieces as one stone, shape and sand to desired size, and then separate the stones for the polishing stage.

Even if the cabs need not be uniform in size, you will save sanding time by dopping stones in this manner. — *Santa Barbara, Calif., Mineral Society*

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AMATEUR GEM CUTTER

By Dr. H. C. DAKE, Editor of The Mineralogist

The Gem Dross

At time one may wish to separate a quantity of colored glass stones from a mixture of other gems. The most simple way to make the separation is by optical testing, with the hand polariscope, or two sheets of inexpensive Polaroid, held in the dark or "crossed" position.

All types of glass as well as all natural gem stones crystallizing in the cubical system remain dark when examined toward a light between the crossed Polaroids. All other transparent gem materials pass light when examined in this manner.

Here we have a simple means of separating glass gem materials, regardless of the type of glass or its color, so long as it is transparent or reasonably translucent. Once in a while a piece of glass may be encountered that is under "strain." In this case it may show a pseudo-anisotropic crystal structure, but the pattern of the light passing through under the crossed Polaroids will not be uniform like that seen in anisotropic stones. With a little practice these stones easily can be noted.

In making a separation of this kind it must be remembered that cubical crystal system gems like garnet and diamond would be separated with the dross glass; they would show similar optical properties between the crossed Polaroid.

However, we are not likely to find many large diamonds in odd junk lots of cast glass stones. Spinel, both natural and synthetic, is also cubical. These are the only gems in this crystal system of any importance. Garnet and spinel, being considerably harder than glass, and of a higher specific gravity, present no difficulty in separating them from glass.

Optical tests of this kind are positive and reliable, and more certain than physical testing, like scratching with a file at the girdle, long a common practice in the gem trades. It is hard for us to understand why wider use is not made of Polaroid. Perhaps it is due to the fact that the file test has been standard practice in the gem trades for many decades while Polaroid is a recent invention and innovation. Simple as it is, many still do not understand it.

A dollar or so will buy two suitable size sheets of Polaroid, stocked by most supply houses. The loose sheets may be used as is or they may be mounted in a manner to comprise a hand polariscope.

Polaroid also may be used to detect dichroic colors in gems, but this method is not as convenient as that of the dichroscope. With the polariscope we see the twin colors separately, one at a time, and each shade must be remembered. While in the dichroscope we see the twin colors, matched, side by side, usually as two small squares in most instruments.

With only the polariscope and the dichroscope, plus some knowledge of gem stones,

one can handle about 95 percent of the gems that come to hand. The remaining five percent must be handled by special methods, including the refractometer, a good microscope or binocular magnifier, and specific gravity liquids.

The most difficult of all common problems in gem identification is the separation of the synthetics from the naturals, especially in the sapphires. Here the physical and optical properties are so identical that these tests will not suffice to make accurate separation in all cases. Then it becomes a matter of examining the structure of the sample, and this means long and careful scrutiny under the microscope by a trained eye. Since the synthetic sapphires and spinels are manufactured by fusion, we look for fused structures, which differ from the inclusions seen in natural gems.

When synthetic sapphires were first manufactured the technique was not so refined hence the first stones were filled with bubbles and similar inclusions to render their identification comparatively easy. Now this gem material is manufactured with a high degree of skill and perfection to a point where certain identification may require expert skill and study. It is in the various synthetics that much of our difficulties are encountered.

Cerium Oxide Color

Attention is called to the fact that the cerium oxide polishing powders widely used in lapidary work are marketed in different grades and purities.

Cerium oxide polishing powder of approximately 90 percent purity is a light flesh color. Another polishing powder sold under the trade name, Barnesite, is of a reddish-brown color. Barnesite contains all of the rare earths and includes about 45 percent cerium oxide.

Cerium oxide of a higher purity than 90 percent also is available. This powder either may be snow-white or slightly yellow,

depending upon how finely it is ground and the method of preparation. This high purity powder is used in special optical polishing work and is higher in price and not needed in ordinary lapidary work.

This should clear up the confusion in this field and also the difference in prices of the various types of cerium polishing powders offered. The 90 percent cerium oxide is sold under the trade name, Cerrox.

B. C. Gem Discovery

New gem deposit discoveries are being made in British Columbia. A new rhodonite find is of a gem grade as good, if not better, than any found in the States.

Recently we received samples of small water-worn pebbles of a colored banded agate from British Columbia.

Curiously enough, this agate is almost identical to the long and widely known colored banded agate from Mexico, also found in water-worn pieces, usually not large but of most excellent gem grade.

Covington DIAMOND BLADES

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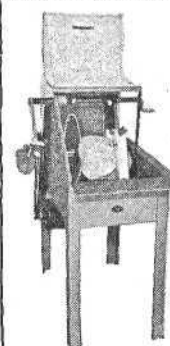


| | Heavy-Duty Sup.-Chgd. | Stand. Super Chgd. |
|-----|--------------------------|-----------------------|
| 6" | \$ 17.90 | \$12.35 |
| 8" | 19.75 | 16.40 |
| 10" | 22.00 | 19.90 |
| 12" | 31.90 | 28.30 |
| 14" | 42.60 | 36.50 |
| 16" | 49.20 | 43.45 |
| 18" | 69.75 | 59.65 |
| 20" | 78.10 | 65.70 |
| 24" | 92.20 | 82.90 |
| 30" | 179.10 | |
| 36" | 267.60 | |

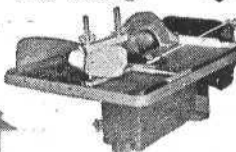
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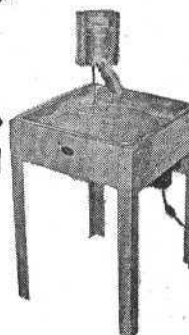
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HANSEN HANDICRAFTS
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By RANDALL HENDERSON

LAST EVENING I read in the January issue of *Harper's Magazine* an article which gave me a tremendous lift. It was Senator Hubert Humphrey's outline of a measure he has introduced in Congress for the establishment of a Youth Conservation Corps, patterned somewhat after the CCC of the Franklin D. Roosevelt days. Congressman John Blatnik has introduced a similar measure in the House.

The measure is designed for a twofold purpose: (1) to combat the rising tide of juvenile delinquency in the United States, and (2) to halt the tragic dissipation of our natural resources of soil and water—a form of waste that in another generation or two may seriously affect the American standard of living if we do not do something about it very soon.

Senator Humphrey proposes to establish camps which will differ from the old CCC in that they will be under civilian rather than military control. Under the direction of the Department of Health, Education and Welfare they would provide both schooling and useful work for the boys. Millions of acres of cut-over forest lands have been abandoned to brush, wind, fire and insects—ugly and unproductive at a time when need for wood products is rising beyond the expected forest yields of the future. Soil is being eroded away and water supply polluted.

These boys would be engaged in a vast program of restoration and conservation. But while they would be rendering a great service to the nation, the benefits to themselves would be infinitely more important.

Unless a way can be found to check the spiral of inflation, unemployment probably will be increasing in the years ahead, and the problem of work for the large numbers of lads who leave high school with no thought of going to college could in a large measure be solved by the proposed Youth Conservation Corps.

While Senator Humphrey did not contemplate corrective camps for delinquent lads, I feel that the YCC program readily could be expanded to include a nationwide chain of installations such as Ralph Johnson's Twin Pines Ranch, described on another page of this *Desert Magazine*.

Youth needs work and adventure and goals, and the YCC program could be planned to provide these character-building essentials in an environment far removed from the sordid conditions found in many American towns and cities today.

* * *

I hope the readers of this page will accept in good spirit a suggestion I am making in behalf of the writers who contribute to *Desert Magazine*. Nearly every mail

brings to our office requests for the addresses of our writers. We are always glad to comply with these requests because we assume the inquiries are from folks who either want to write a note of commendation, or ask for additional information. Fan mail is always appreciated, but when it comes from people who want more information, it also can be very time-consuming and rather expensive. My suggestion simply is this: That when inquiries are sent to writers or others whom you do not know, and who are under no obligation to you, enclose a 4-cent stamp or a stamped return envelope. That is a little courtesy which is often overlooked. Four cents isn't much, but when a writer receives 50 or 60 mail requests that require answers in one month—as has happened—it is quite an item. After they have given their time generously in answering the letters it is a bit of an imposition to ask them to go to the postoffice and buy the stamps to mail them with. Most people recognize this obligation. The others do not mean to be discourteous—they are merely thoughtless.

* * *

May I call the class together for a little lesson in economics? For this page last month I wrote a bit of fantasy about a community where a cooperative approach to the local problems had created a remarkable degree of goodwill and unity.

One of *Desert's* readers took issue, accusing me of a "blatant plea for socialism." In these days when there is so much ideological confusion it is important that we keep our definitions clear. Socialism is an economy in which collectivism is enforced by the police power of the state. A cooperative economy, at the other extreme, is a democracy in which progress is made by voluntary cooperation on the part of its members. There is no compulsion. The chamber of commerce and the Parent Teachers' Association are cooperative organizations. In United States, especially in the middle west, there are producer cooperatives and consumer cooperatives. If it were not for an electric cooperative of which I am a member I would not have electricity in my mountain cabin. But it is purely voluntary. I can go back to kerosene lamps tomorrow if I want to.

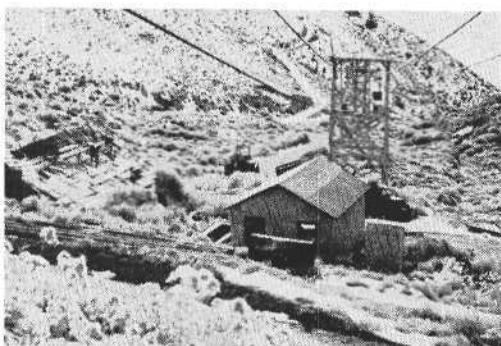
* * *

From my scrapbook: William Penn wrote: "The country life is to be preferred, for there we seek the works of God; but in the cities, little else but the works of men; and the one makes a better subject for our contemplation than the other . . . The country is both the philosopher's garden and library, in which he reads and contemplates the power, the wisdom and the goodness of God."

The Desert In March

The arid desert provides an inspirational Biblical setting for Easter Sunrise services. Outstanding programs are a tradition at Grand Canyon and Wickenburg (services on horseback), Ariz.; Death Valley, Palm Springs, Red Rock Canyon and Juniper Hills, Calif.; and Taos, N.M.

March finds major and minor league baseball teams training where the sun shines. Clubs which will make their winter headquarters in Arizona in-



Terro Gordo Mine ruins. Owens River Valley is setting for celebration scheduled for late March.

clude: Boston Red Sox, Scottsdale; Chicago Cubs, Mesa; Cleveland Indians, Tucson; San Francisco Giants, Phoenix; Denver Bears, Chandler; Vancouver Mounties, Yuma. The San Diego Padres will train at Indio, Calif.

ARIZONA

- March 1—Annual Indian Festival, St. John's Mission, Komatke.
- March 1—Dons Club Trek for Lost Gold in Superstition Mountains, from Phoenix.
- March 6-7—Arizona-Sonora International Conference on Regional and Community Development, University of Arizona, Tucson.
- March 8-9—Superstition Kennel Club Dog Show, Mesa.
- March 8 and 22—Desert Sun Ranchers Rodeo, Wickenburg.
- March 12—Cattle Rustlers Ball, Wickenburg.
- March 12-15—Northern Yuma County Fair, Parker.
- March 12-15—World's Championship Rodeo, Phoenix.
- March 21-22—Valley Garden Center Flower Show, Phoenix.
- March 21-22—Dons Club Travelcade to Grand Canyon National Park, from Phoenix.
- March 21-22—Arizona Palomino Exhibitors Annual Horse Show, Phoenix.

CALIFORNIA

- Feb. 21-March 3 — North American Ski Championships, Squaw Valley.
- Feb. 28-March 8 — California Mid-Winter Fair and International Festival of Nations. Rodeo on Feb. 28 and March 1; Horse Show, March 2-6; Auto Racing, March 7-8. Imperial.
- March 7-8—Antelope Valley Almond Blossom Festival, Quartz Hill.
- March 7-8—Sierra Club camping trip to Stein's Rest Oasis near Traver-tine Point, Salton Sea.
- March 14-15—Sierra Club hike to Big Maria Mountains. Base camp 17 miles north of Blythe on Midland Road.
- March 14-15 — 11th Annual De Anza Jeep Cavalcade, from Hemet.
- March 15-22—24th Annual Men's Invitational Golf Championship, Palm Springs.
- March 20-29 — Narrow Gauge Railroad Celebration. Ghost town tours; scenic railroad and stage coach rides; rockhound field trips; camp-fire programs; square dancing; old-time dramas; and other events. Owens River Valley.
- Month of March—R. Brownell McGrew Exhibit, Desert Magazine Art Gallery, Palm Desert.

NEW MEXICO

- March 7-8—Junior National Downhill Slalom Tryouts, Taos Ski Valley.
- March 10 — Malpi - Angus Breeders Show and Sale, Clayton.



Jeep Cavalcade will retrace De Anza trail from Hemet, California, south to the desert on March 14-15 week end.

- March 19—Annual Fiesta, ceremonial dances, bazaars, Laguna Pueblo.
- March 22-24 — New Mexico Cattle Growers Convention, Albuquerque.
- March 27 — Penitente Passion Play, Talpa Chapel, Taos.
- March 29-April 1 — Spring Corn Dances on Easter Sunday and three days following at San Felipe, Cochiti and Santo Domingo Pueblos.
- Late March — Opening of *Acequias* (irrigation ditches) with colorful ceremonies at various New Mexico pueblos.

UTAH

- March 26-28—Days of '49, Helper.
- March or Early April — Ute Bear Dances. For exact dates, set few days before dance, contact Roosevelt Chamber of Commerce.



1959

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Photo of the Month



On The Mojave

"Never felt better in my life," says Mingus Martin, 83, who lives with his daughter at Mountain Springs near Essex, in the heart of California's Mojave Desert. Paiute Mountains are in the background. Photographer Wanda Davis of Maywood, belongs to the Huntington Park Camera Club.