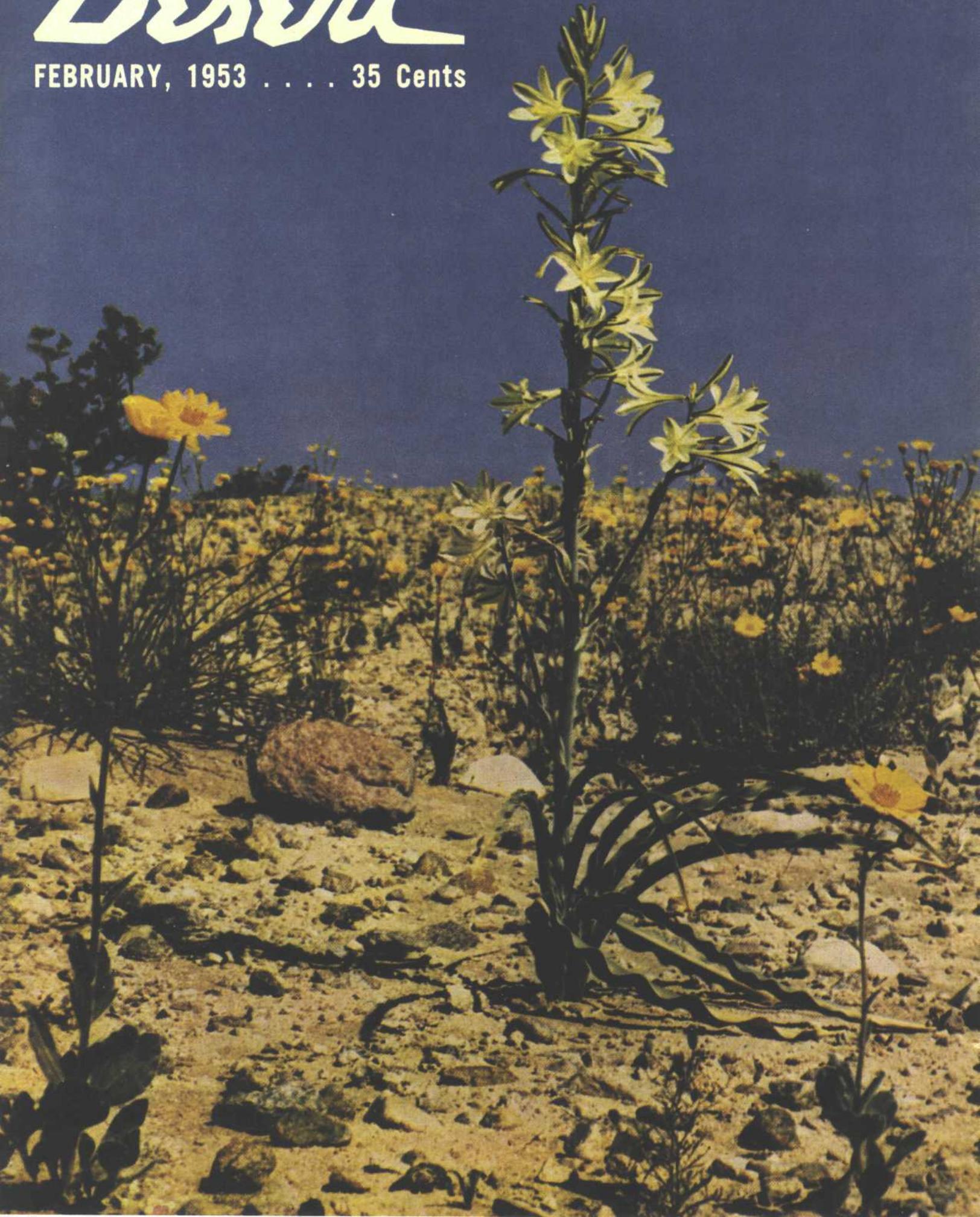


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FEBRUARY, 1953 35 Cents



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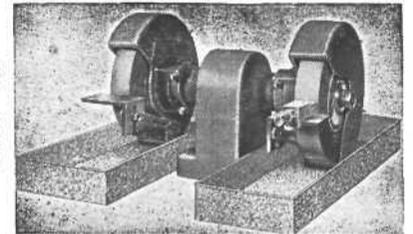
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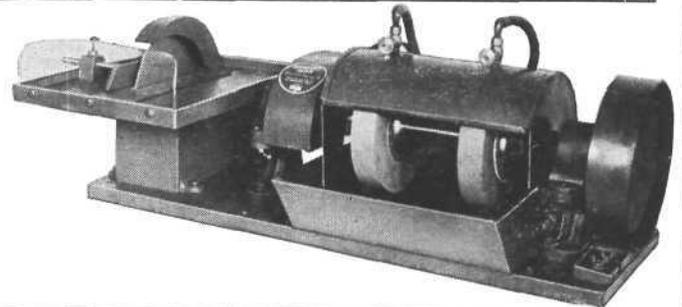
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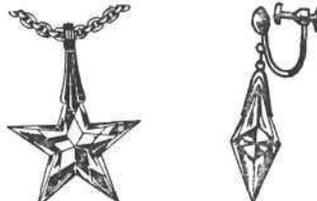
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DESERT CALENDAR

- Feb. 1—Annual Gold Rush Day and Dons Club Trek, Wickenburg, Ariz.
- Feb. 6-7 — Annual Square Dance Festival and Fiddlers Jamboree. Phoenix, Arizona.
- Feb. 6-8 — Imperial Valley Carrot Carnival, Holtville, California.
- Feb. 8 — Dons Club travelcade to Cave Creek, from Phoenix, Ariz.
- Feb. 7—Desert Museum field trip to Thousand Palms Oasis and Willis Palms. From Palm Springs, Calif.
- Feb. 7-8 — Winter Rodeo, Palm Springs, California.
- Feb. 7-8—Desert hiking, Odessa Canyon, Calico Mts. Southern California Chapter, Sierra Club.
- Feb. 8—Annual AH-Western Stampede, Arizona State Fairgrounds, Phoenix.
- Feb. 8—Desert Sun Ranchers Rodeo, Remuda Ranch, Wickenburg, Ariz.
- Feb. 14—Desert Museum field trip to Chuckawalla Mountains, side trip to historic Granite Wells on the old Bradshaw Stage route. From Palm Springs, California.
- Feb. 14-15—Junior Chamber of Commerce Rodeo, Yuma, Arizona.
- Feb. 15—Calf roping, Western Saddle Club, Squaw Peak Arena, Phoenix, Arizona.
- Feb. 15—Dons Club travelcade to Montezuma Castle and Tuzigoot Ruins, from Phoenix, Arizona.
- Feb. 18-23—Hiverside County Fair and National Date Festival, Fairgrounds, Indio, California.
- Feb. 21-22 — Desert Museum overnight trip to Hole-in-the-Rock in Providence Mts. Side trip to photographs in Old Woman Mts. From Palm Springs, California.
- Feb. 21-22 — Desert Peaks section, Southern California Chapter, Sierra Club hike in Whipple Mts., near Parker Dam, California. Joint outing with San Diego Chapter.
- Feb. 21-23—Hike to Bear Palm Oasis, near La Quinta, California. Southern California Chapter, Sierra Club.
- Feb. 22—Desert Sun Ranchers Rodeo, Rancho de Los Caballeros, Wickenburg, Arizona.
- Feb. 22—Bandollero tour to Yuma Test Station, Yuma, Arizona.
- Feb. 22—Dons Club travelcade to St. Johns Mission, from Phoenix, Arizona.
- Feb. 22-March 1—Fifth Annual Cactus Show, Desert Botanical Gardens, Phoenix, Arizona.
- Feb. 23—Annual Miniature Parade in connection with Maricopa County Fair, Mesa, Arizona.
- Feb. 24—Twenty-fifth annual meeting of members of the Museum of Arizona, Flagstaff, Arizona.
- Feb. 28—Gynikhana, Western Saddle Club, Squaw Peak Arena, Phoenix, Arizona.
- Feb. 28—Desert Museum field trip to calcite mine west of Salton Sea in California's Coachella Valley. From Palm Springs, California.
- Feb. 28-March 8—California Mid-Winter Fair, Imperial, California.



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FEBRUARY, 1953

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PICTURES OF THE MONTH

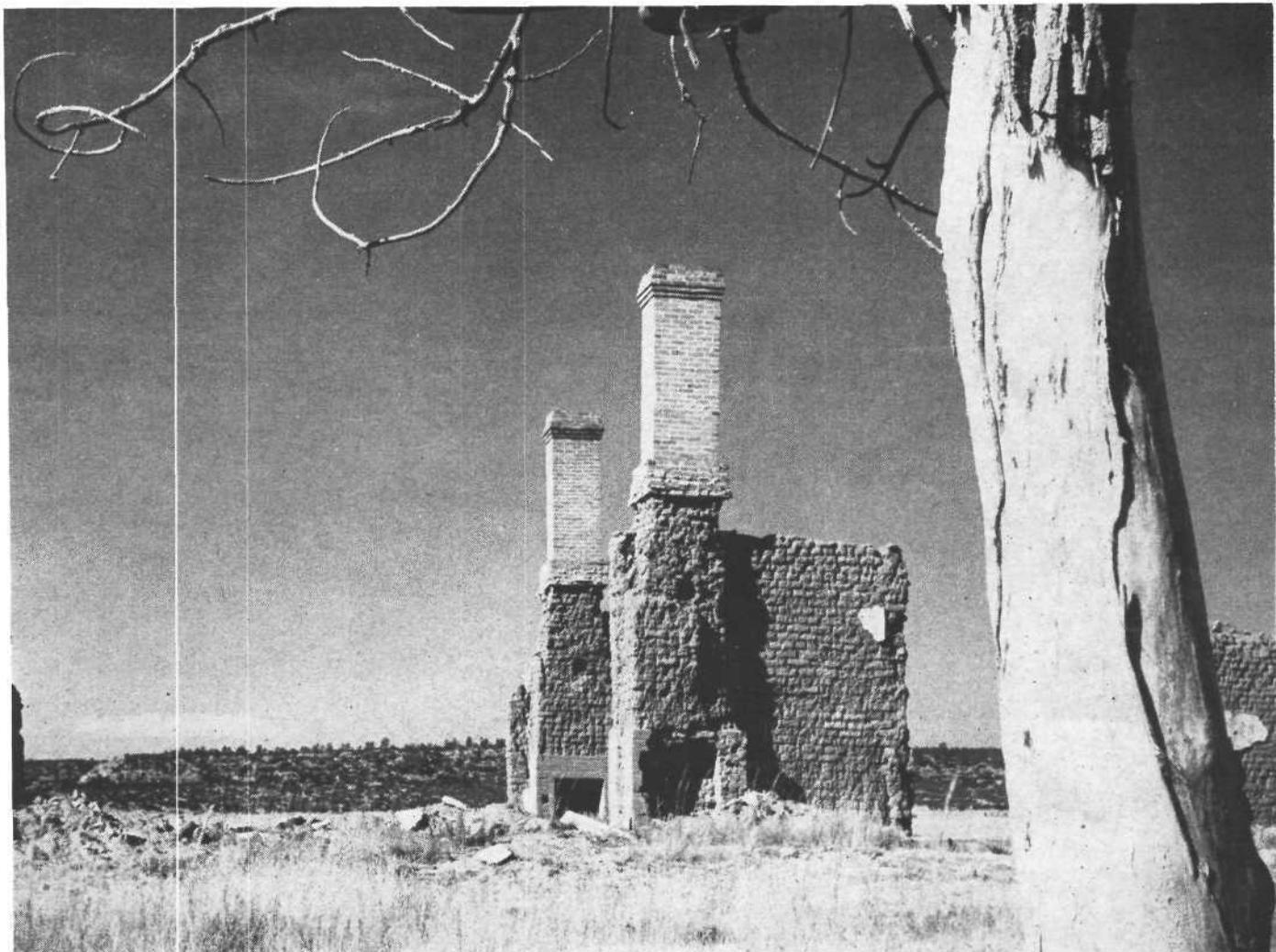
Winter in Walker Pass

Picture was taken November 16 following the first snowfall in the upper reaches of the Mojave Desert, by Warren K. Smith of China Lake, California. Taken with a Rolleicord with X-1 filter on Plus X film, 1/25 second at f.22. This photograph was awarded first place in Desert's Picture-of-the-Month contest for December.

Desert Oasis

This photograph, awarded second place in the December contest, was taken at Sage Memorial Hospital at Ganado, Arizona, by Dr. J. Robert Lindsay, one of the physicians associated with the institution. The women in the foreground are Navajos, this hospital being located on the Navajo reservation. Taken with a Kodak 35 with A filter and Plus X film, 1/50 second at f.8.





*Framed by the bare branches of a dead cottonwood stand two old chimneys—
once serving pre-civil war soldiers.*

Ghost Fortress in New Mexico

Today old Fort Union in northeastern New Mexico is a deserted camp, marked only by crumbling mud walls and ghostly memories. There are no signboards to point the way, and there is little travel on the dirt road which leads to the old fortress. And yet, Fort Union played a key role in the Civil War, and at one time probably was the most important military outpost west of the Mississippi River. In one of the best stories she has written for *Desert Magazine*, Nell Murbarger tells about this ghost fortress—its past and present.

By NELL MURBARGER
Photographs by the author
Map by Norton Allen

DIPPING LOW over the Sangre de Cristo peaks to the west, October's warm sun was spreading tall shadows across the land as we drew to a halt in the old town of Watrous.

With only half a glance we could see that this was a pleasant place of time-weathered adobes, fragrant with pinyon pine smoke and red chili peppers — and peace. Above its single

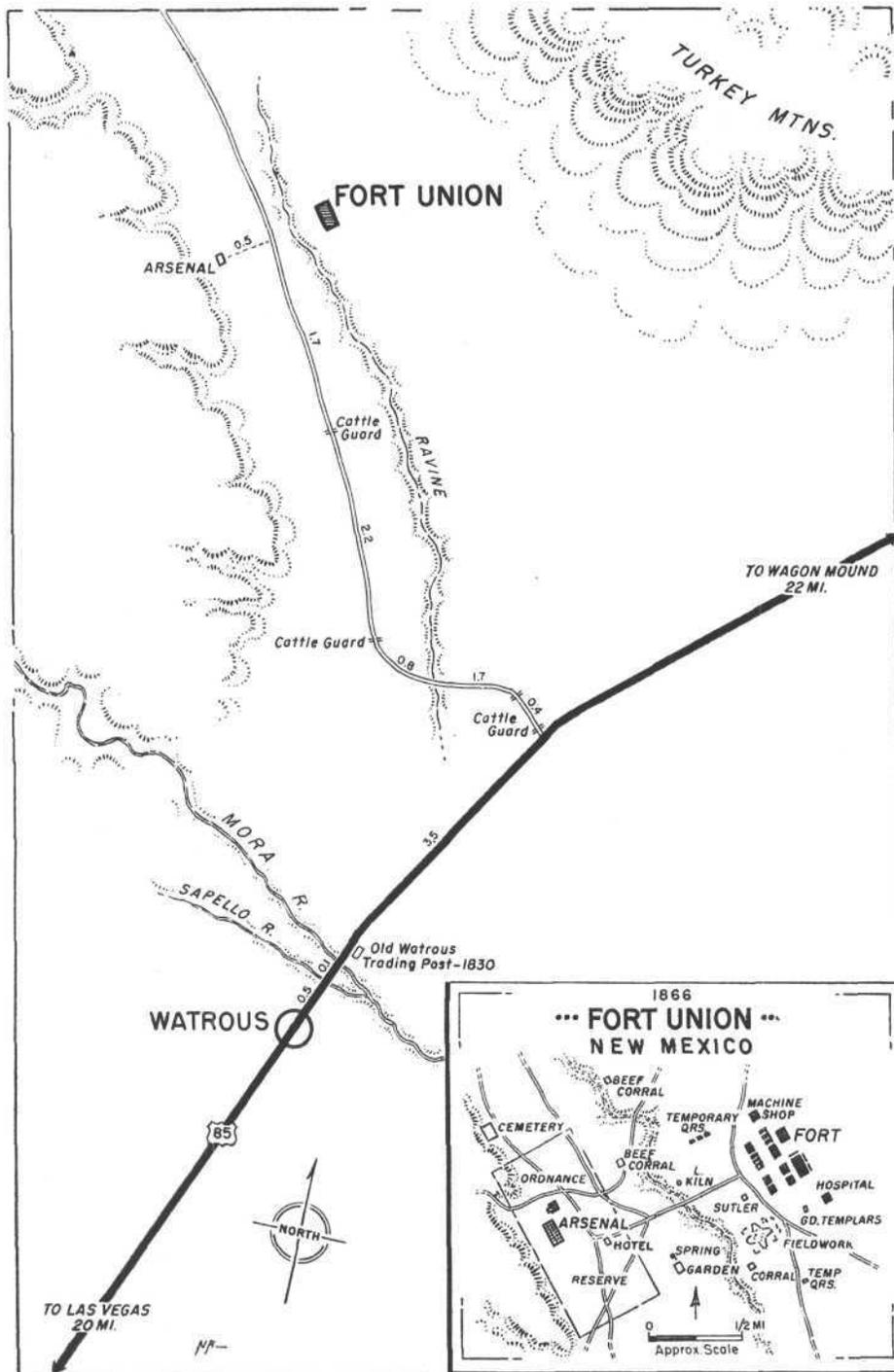
street—like bright feathers in the dark mantle of the mesa — towered frost-gilded cottonwoods; and all around spread the blue sky and wide clean uplands of northern New Mexico.

That such a town should be our last point of supply on this trail to adventure, seemed oddly appropriate. Once our provisioning had been completed at the general store, and our gas tank and water can refilled, we headed

north on the long lonely road toward Wagon Mound — in our hearts that grand full song which comes only from approaching fulfillment of a dream.

Mother and Dad, and I, are devoted students of Southwestern history—all periods of it, and all facets. Virtually any chance remark is sufficient to launch us on some phase of study which we thereupon follow through heat and highwater with all the eager enthusiasm of scientists trailing a microbe.

I've forgotten what it was that first attracted our attention to old Fort Union, but for more than two years we had been studying its history and keenly anticipating that future day when we might at last prowl through its crumbling remains. In the course of our ground-work, we had devoured every account of life at the fort that we had been able to buy or borrow.



We had reveled in war department documents and brittle old maps, and had filled bulging notebooks with information gleaned from yellowed archives in the museum at Santa Fe. And now, as we took our departure from Watrous, that long period of indoctrination was nearing the pay-off!

Across the northeasterly horizon, only a few miles ahead, stretched the low dark range of the Turkey Mountains. On a westerling slope at the base of these mountains lay a tattered adobe ruin—and buried in that ruin were more volumes of unwritten history than a man might read in his normal lifetime!

Obedying instructions given us by the storekeeper at Watrous, we crossed the slow trickles of the Mora and Sapello rivers, and continued on past a rambling adobe ranch house built more than 120 years ago and operated as the first trading post in this section of the country. We had been advised to watch for a cattle guard in the right-of-way fence a few miles out of town. At 3.9 miles such a guard appeared. Leading through it, to cross the plateau beyond, was a dim rutted road wholly unidentified either by highway sign or historical marker. As its general direction seemed favorable, we voted to accept its challenge.

Neither bush nor boulder obstructed our passage as we bumped across the high open plain at more than 6000 feet above sea level. Groups of half-wild cattle halted their feeding to watch our intrusion with up-flung heads and wary eyes; and from the vicinity of small waterholes, the yammering of killdeers came to our ears. Low flat mountains ringed the horizon on every side. Four or five miles to our right lay the Turkeyes, darkly-thatched with pinyons and juniper; and before we had followed the road for any great distance, another pine-topped mesa began taking form on our right.

If we had entertained any misgivings concerning the little road we had chosen to follow, all such were magically dispelled as we suddenly found our way paralleling the century-old ruts of the Santa Fe Trail—that first and mightiest of all Western highroads.

For more than 60 years this great trail had been pounded by the wheels of heavily-laden freight wagons, traveling four, six, and even eight abreast. Heavy steel tires biting through the prairie sod; hooves of mules and oxen grinding the earth to powder; wind and rain and storm carrying it away—and now, these incredible furrows! Spaced closely parallel in a band varying from 50 to 100 feet in width, they extend over plains and deserts, dry hills and rocky arroyos, for a distance of more than 800 miles—a graphic relic of the frontier that shall not be effaced in the memory of men now living.

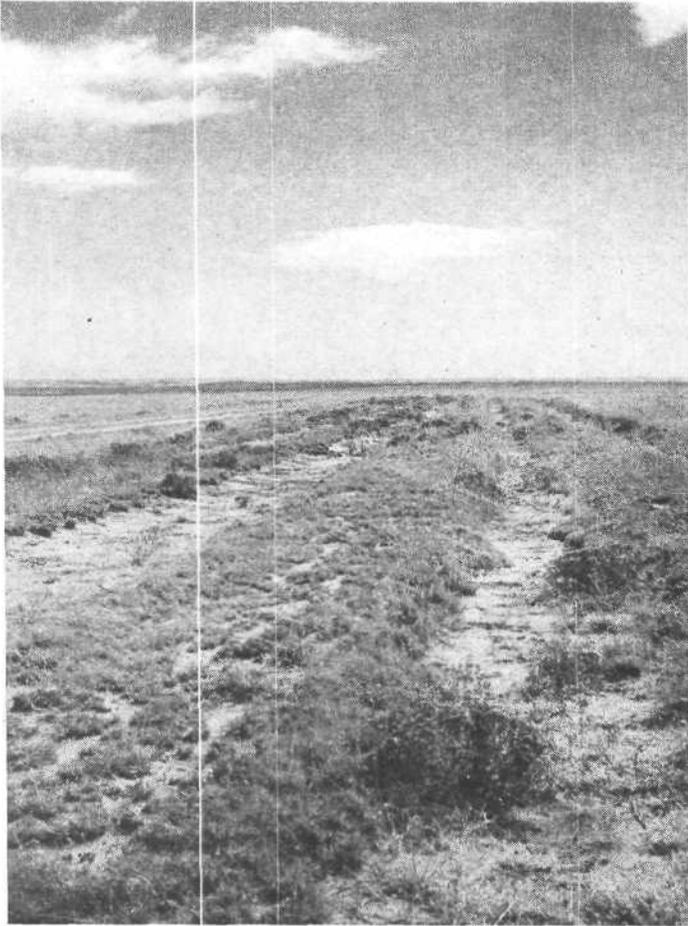
It was seven or eight miles out of Watrous when our searching gaze first fastened upon the ruins of old Fort Union, then still several miles to the northeast.

Bathed in the warm glow of late afternoon, its long low walls shone as richly golden as the ramparts of fabled Cibola; and in the jagged line of its ruins our racing fancy found towers and turrets and broken columns, and all the romantic adjuncts of a medieval city!

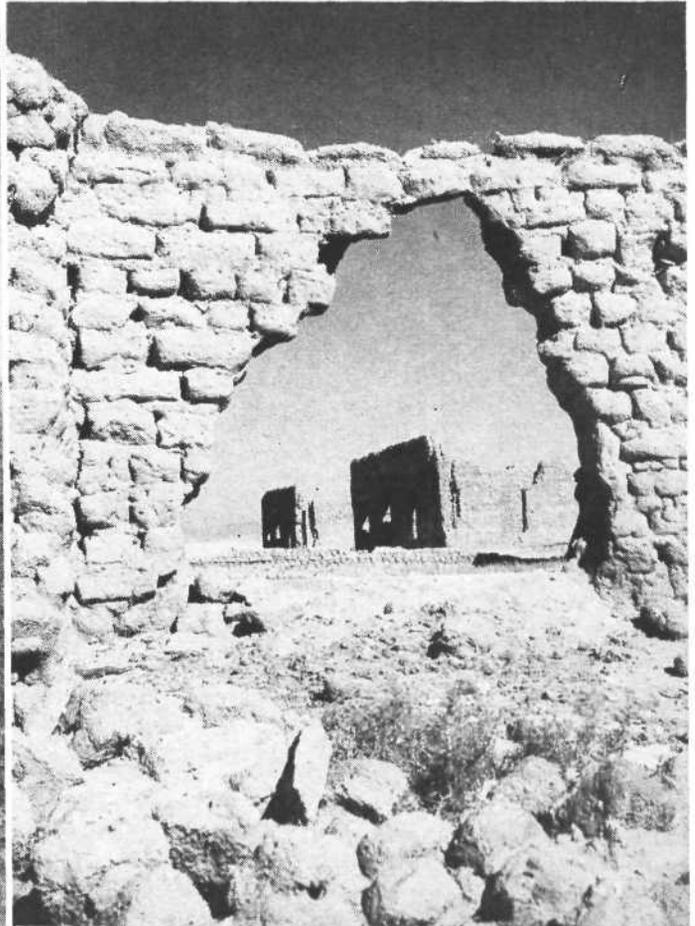
When only three quarters of a mile separated our road from the grand old ruin, we found our way barred by a wide arroyo, badly eroded and definitely not conducive to travel by auto. It would be no great feat to cross the wash afoot, but our plans had definitely included camping in the old fort.

"How about the arsenal?" asked Dad. "Wasn't it on the west side of the ravine?"

The arsenal — of course! In the excitement of the moment we had forgotten that the fort's original buildings, erected in 1851-52 had been situated at the foot of the mesa, on the west. Not until several years later had site of the fort been moved across the



Eroded ruts of the old Santa Fe Trail between Watrous and Ft. Union, a discarded highway of 100 years ago.



Two long abandoned and crumbling adobes of old Ft. Union framed in the disintegrating arch of another.

arroyo, a mile to the east, after which time the original buildings had been utilized for ordnance.

Ranging our eyes across the slope to the west, we soon spotted several large adobe ruins, the gray of their half-fallen walls blending softly with the gray-brown of the arid hillside and the gray-purple shadows of approaching night.

Another five minutes found the car successfully jockeyed across the slope and comfortably parked within the crumbling rectangle of the structure farthest to the north.

Later that evening, as we sat eating by our crackling campfire in the center of that roofless, floorless, century-old building we had appropriated to our use, we found ourselves thinking only of that mighty ruin across the arroyo; of its history and all the stories we had read about it during the two years preceding.

For more than two decades prior to the American occupation of New Mexico in 1846, wagon trains had been traveling the Santa Fe Trail between the American frontier of Missouri and the Mexican cities of Santa Fe and Chihuahua. There had been incidental losses to raiding Indians and other trail hazards, but traders had philo-

sophically accepted these misfortunes as part of the inherent risk in a business that paid fabulous profits.

And then had come the American conquest.

When General Kearney raised the Stars and Stripes over Santa Fe in 1846, and informed the citizens of that city that they should henceforth look to him for protection, he came close to starting something he could not finish.

Every Spanish rancho whose herds were levied upon by rustlers, every trader using the Santa Fe Trail, immediately sought to enlist that promised protection—and little protection was forthcoming. Fort Marcy, at Santa Fe, simply could not spread its troops thinly enough to police all of New Mexico Territory, which then embraced the present state of New Mexico, all of Arizona north of the Gila River, southern Nevada, and part of Colorado.

Commerce on the Santa Fe Trail was mounting rapidly; but the men traveling that trail in 1850 were not of the same high calibre as those who had traveled it 20 years before. There had come to be a trigger-happy element, ready to slaughter anything that moved, including buffalos and Indi-

ans. This, naturally, brought retaliations by the Indians, and losses to freighters were mounting accordingly.

Yielding to incessant demands for increased protection along the trail, Congress eventually authorized the establishing of Fort Union, and construction was begun in September, 1851. Basically, the fort was to serve as headquarters of the Ninth Military Department of the United States Army, and a supply center for 40 or 50 subsidiary forts to be spotted strategically over a radius of 500 miles.

During the first 10 years of Fort Union's history, citizens of New Mexico lived in a degree of isolation almost impossible to conceive in this day of rapid communication.

In a Memorial to the Congress of the United States, adopted in 1853 by New Mexico's territorial legislature, urgent plea was made for more adequate roads and better mail service.

"The road to Missouri (the Santa Fe Trail) is the great business thoroughfare of the Territory," it was set forth. "The distance from Fort Union to Independence is more than 700 miles and on this long and dreary line of road there is but a single military station, a single Indian trading post, and at these two places only can the



Tall brick chimneys rise gaunt and cold along what was officers' row.

traveler receive an assistance in his greatest need."

At that time, still quoting the Memorial, the Territory had mail service only once monthly to Missouri and eastern points, and once each two months to Texas. To receive an answer to a letter addressed to any point east of Independence or San Antonio, it was stated, "requires three months or more."

That a military installation of Fort Union's calibre could have been built and equipped in the face of such difficulties seems almost incredible.

On a reservation eight miles square, at a cost of approximately one-third of a million dollars, there was erected a four-company post, consisting of barracks for enlisted single men, attractive quarters for bachelor officers and for married men with families, residential accommodations for civilian employes; mess halls, kitchens, bakery, a large well-equipped hospital, an impregnable guardhouse, brick kiln, sawmill, stable facilities for 1000 head of mules and horses, and storage warehouses capable of accommodating 2000 tons of hay and 2,000,000 bushels of grain.

During the 1860s, the fort had in constant employ approximately 1000 persons—harness makers, repairmen, wheelwrights, wagon makers, blacksmiths, carpenters, and general laborers, and the sutler's store was doing an average daily business of \$3000.

Married officers brought their wives and children to live at the fort and it soon became a lively place, with weddings, christenings, dances, box

socials, ball games, and celebrations for every slightest cause. A Masonic lodge was organized and a hall built on the grounds. Before it was many years old, this place in the dry plains of northern New Mexico numbered the largest white population of any city between the Mississippi River and the Pacific Coast.

But that other life seemed terribly remote as we sat there that night in the old ordnance building, 100 years—almost to the day—since the first joist had been laid; 60 years and seven months since the last soldier had taken his departure from the fort and the War department had officially closed the books.

Snapping brightly and spreading its warm radiance in the chill October air, our campfire of dry scrub-oak wood sent yellow shadows dancing on the old adobe walls and across the earthen floor. Above our heads winked a million stars in a cold dark sky; but across the arroyo—in a fallen city where gay young people had once whirled in cotillion and schottische—there showed not a pinprick of light; and but for the crackling of our dying fire, not a whisper of sound broke the stillness of our high wide world.

Morning found us out of our sleeping bags at dawn; and quickly as breakfast might be prepared and camp made ship-shape, we were off to our lost city—noon sandwiches tucked in our pockets, and canteens and cameras slung over our shoulders. No Columbus setting forth for his New World could have been fired with greater anticipation.

Temporarily lost to view while we were crossing the arroyo, once we had scrambled up the steep bank beyond, the old ruins reappeared—and with surprising magnitude! From camp we had been able to see only the single row of structures immediately facing us. Now that we were closer, we could see other rows of adobe buildings spreading well to the rear.

Tall and cold amid the line officers' quarters they had served, stood a double row of well-preserved fireplaces and huge brick chimneys, some of the latter leaning far out of plumb as if wearied of bracing themselves against the stinging blizzards that winter sends sweeping across this high land. Interior walls of the old buildings held large irregular sections of their original plaster, still white and smooth despite decades of exposure to the weather.

About midway of officers' row stood one dead cottonwood. Most of its bark had been gnawed away by time and the elements, leaving the sapwood smoothly polished and white as marble. Toward the farther end of the street stood another cottonwood, stunted by drouth, but still clinging to life with the stubborn courage of its kind.

We had hoped to take a census of the buildings, but due to their advanced deterioration it was often impossible to know where one ended and another began. As nearly as we could judge, there appeared to be a hundred or more structures in various stages of collapse. Largest of these is the hospital situated at the southeast corner of the fort, nearly 400 yards from any other building. Bridging the intervening distance is a neat flagstone sidewalk, about three feet wide, and bordered throughout its length by flat rocks set on edge. According to our measurement the building was 100 x 250 feet in area, with numerous wards leading off a central corridor.

Best preserved of all buildings at the fort—and the only one with its roof intact—is the all-rock guardhouse where Geronimo and Billy the Kid both are said to have been temporarily imprisoned. Access to the jail's 10 cells originally was given by 10 ponderous iron doors. All of these have been removed, despite the fact that they were scarcely the sort of trinkets a tourist might carry away in his pocket! Other than this loss, the old jail is so well preserved that it might be reactivated tomorrow. To the credit of human progress it may be said that no civilized nation on earth would today permit the use of such a place. With its cramped stone cells, providing neither light, heating,

nor sanitation facilities, the Fort Union dungeon was a place far better contemplated from the outside.

Prowling through the tall grass and weeds fringing the parade ground, we discovered two concrete markers. One, an obelisk-shaped affair, tapering to a central peak, carried on its face an elevation notice:

6835.493
ABOVE
TIDEWATER

AUG. 1867

The other marker, chipped and faded with age, might have served as a monument to procrastination. On one face of it appeared this engraving:

U.S.
MERIDIAN
and
LATITUDE MARK

*Explorations
West of the
100th Meridian
War Department*

Reverse side of the monument read:

Long. _____
Lat. _____

U.S. ENGINEERS
1871

Evidently the marker had been erected prior to that 80-year-ago survey, and after completion of the survey, the figures had never been added. And now, I doubt if they ever will be!

Dry and weedy, unkempt and lonely, the old parade ground gave little hint of the many stirring scenes it had witnessed. It had seen brave men ride forth to battle and death, their wives and daughters and sweethearts trying to act brave and confident while their hearts were shriveling inside them and the departmental band was making the bare hills ring with the Fort's traditional song of departure—*The Girl I Left Behind Me*. And for 40 years, the old parade ground had seen troops come riding back — sometimes in the rollicking mood of victory, sometimes in fewer number than they had gone forth—but always with the band playing *Out of the Wilderness*.

There had been gory engagements with hostile Indians and border ruffians; and there had been the Civil War.

Marching westward out of Texas in 1862, the gray-clad Army of the Confederacy had rolled over New Mexico like a juggernaut, capturing every town and city in its line of

march. Albuquerque had fallen February 21; Santa Fe, on March 10. With these victories, General H. H. Sibley and his force of 2300 troops had begun their march on Fort Union, the principal objective of the Confederacy in New Mexico.

Unlike Albuquerque and Santa Fe, Fort Union was manned in sufficient strength that she need not wait helplessly for capture. Instead, assembly call had once again sounded in the old parade ground, and when General Sibley's men reached Apache Canyon, on March 26, they found that Fort Union had established a line of defense 45 miles southwest of her base. In the fierce battle that ensued, 32 Confederate soldiers were slain, 43 wounded, and 71 taken prisoners. Fort Union's losses were lighter—but there were losses.

Another battle between the opposing forces occurred two days later at nearby Pigeon's Ranch, and with the subsequent destruction of a Confederate supply train camped at Canoncito, the invaders from Texas were forced to fall back to Santa Fe. Soon afterward, Gen. Sibley withdrew from the capital city and retreated down the Rio Grande.

The author's mother examines some of the old relics found during the exploration of the old fort site.



An elevation marker probably erected here by surveyors in the middle of the last century.



In his failure to capture Fort Union, Confederate plans to conquer the Southwest had been frustrated, and many historians believe that this failure may have been responsible for changing the entire course of the war.

For at least half of its career, Fort Union was one of the most important Army posts in the United States, and on its records appear many illustrious names. Here served Gen. E. R. S. Canby, later to be murdered in north-eastern California while seeking to negotiate peace with a band of renegade Modocs. Others, in some fashion connected with the fort, include Thomas J. "Stonewall" Jackson, John A. Logan, Kit Carson, and Gen. Ulysses S. Grant, who is said to have returned to the post in later years "to feel again the lift of the high mesa, with its illimitable views."

Leaning our backs against the warm adobe wall, letting our eyes range over those tumbled ruins, it was satisfying to remember that life at Fort Union had not been all grim and gory. Wherever men died in the frontier West, there, too, men had lived a full life.

Not until the sun was nearing the pine-topped mesa to the west, and the chill of evening was creeping back into the air, did we turn our steps campward. Even then, we routed our way past the site of the sutler's store,

where the commercial life of Fort Union formerly had its beginning and end. Here, women could purchase sugar for 50 cents a pound, and tomatoes—ox-freighted all the way from St. Louis—for \$1.50 a can.

But no longer did the old store offer anything to please the palate or gladden the eye; nor was it possible for a stranger to know with certainty exactly where the store had stood, although our platted map of the fort gave us fair idea. At the point we had figured for the site of the store, lay a great accumulation of broken bottles, fragments of white crockery dishes, and slivers of purple desert glass.

Scuffing along through the dust on the hill slope, Mother found a badly-worn wooden bung—possibly from a vinegar or molasses barrel—and Dad considered himself one of earth's chosen people when he came upon an old brass button from an Army uniform. Other than these, our mementoes of the day included only a mule shoe, a few harness buckles, and a couple of buried bottles turned iridescent by long exposure to mineral elements in the soil. On the ground, around many of the buildings, we had found fragments of window glass, old and brittle, and rendered half opaque by natural sandblasting.

With morning of the third day, we

reluctantly broke camp, leaving every stick and stone in the old ordnance building exactly as we had found it.

As we turned down the little road, leading back to the main highway and to Watrous, the grand old fort gradually faded from our view. For a little way longer we followed the etched ruts of the Santa Fe Trail; but, at last, they too were swallowed in the bigness of the morning and the immensity of that high, lonely land.

Fort Union is a ruin—stark and desolate and hopeless—but withal, the greatest ruin of its kind in the entire Southwest! Because of this fact, citizens of Mora county, and of Las Vegas (in San Miguel county), have been striving for many years to have the fort set aside for perpetual preservation by the National Park Service, either as a national historical shrine, or as a national monument. Progress in this effort, sad to say, has not been especially encouraging.

One of the major stumbling blocks toward such accomplishment, we were informed by Lewis F. Schiele, manager of Las Vegas Chamber of Commerce, is the fact that the ruins are owned by Union Land Grazing company, an immense ranch bisected for several miles by the access road. Any large volume of tourist travel upon that road, it is feared by the company, would create a serious fire hazard and thereby endanger adjacent rangelands.

Another difficulty that has beset the project thus far, said Mr. Schiele, involves the large outlay of funds needed for purchasing the 860 acres of land on which the buildings are located.

During the 60 years elapsed since decommissioning of the fort in February, 1891, its structures have provided building materials to half a dozen towns and no-one-knows-how-many ranches. All principal woodwork, including roof timbers and floor joists, practically all of the original tin roofing, and a considerable quantity of the choicest building stone, have been pulled from the walls for re-use elsewhere. Some of it was taken by right of proprietorship; some by midnight requisition. In either case, it is gone.

And so it is that the weakened buildings are fast returning to the dry earth whence they sprang. But even though every timber and corner stone be spirited away — even though its walls crumble back to dust and the wild grass and sage move in to cover them —New Mexico's grand old fort shall never die.

Like the deeply-etched ruts of the Santa Fe Trail it was built to guard, so the glory of Fort Union will live forever in the epic saga of the Southwest.

Pictures-of-the-Month..CONTEST

This is the season when it is a delightful experience to roam the desert country as a camera-hunter, searching for unusual subjects and lovely backgrounds and striking cloud patterns for pictures which will bring pleasant memories in future years. And perhaps sharing the enjoyment of them with Desert Magazine readers—for every month the Desert staff offers prizes to those who send in the best prints. Any subject which is essentially of the desert will be acceptable.

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

HERE ARE THE RULES

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

Address All Entries to Photo Editor

The Desert Magazine

PALM DESERT, CALIFORNIA



Devil's Elbow is a rugged country. In the days before Hoover dam the river surged through this canyon with terrific power.

Boat Trip in Mojave Canyon

Boatsman, explorer, rockhound, archeologist, fisherman, photographer—there is something of interest for any or all of these hobbyists in little known Mojave Canyon in the Colorado River below Needles, California. But it is almost necessary to have a boat to gain access to this fascinating region at the headwaters of Lake Havasu.

By CLINTON R. HULL
Photographs by the author
Map by Norton Allen

IN 1857, Lieut. J. C. Ives reported in part to the War Department, "It seems destined by nature that the Colorado River along the greater portion of its majestic course shall remain forever unvisited and unmolested."

Lieut. Ives' dour forecast as to the future of the Colorado River is easily understood. He had spent many weeks pulling and pushing his iron boat, the *Explorer*, from the mouth of the river 400 miles upstream to Black Canyon. He could see little virtue in a stream which had given him such a bad time.

Today the canyons of the Lower Colorado are nearly all accessible. The upper entrance to one of the most colorful and spectacular of them all is at Topock Bay, Arizona, but 15 miles from Needles, California, over U. S. Highway 66.

"The most beautiful little canyon on the river — and the most photogenic," our friend John Booth insisted when telling us about it. "But you'll have to come by water. No roads or trails into Mojave except the river."

So it was in early April when Ethel and I parked our car and trailer at

Shorty's Camp, a level, well kept camp site and boat landing snugged tight into the mesquite sheltered shore of Topock Bay between water and highway, launched our 14 foot plastic boat at the excellent free launching ramp, loaded our cameras and lunch aboard and I pulled the starting rope on the Evenrude motor.

At the lower end of the half mile wide bay we dodged a long tongue of sandbar, cruised slowly through the narrow opening into the river and turned southward beneath the trio of high bridges which carry the Santa Fe Railroad, U. S. Highway 66 and the Texas-to-California "big inch" gas line over the river at Topock.

We'd crossed two of those bridges more than once, but like thousands of others who visit Lake Havasu and Parker Dam or roar along the highway east or west, we had never realized that but a short distance away was one of the most scenic and delightful spots imaginable.

Those bridges are at the portal of a lovely canyon. Against the rock faced railroad embankment the river gathers its straying waters from the

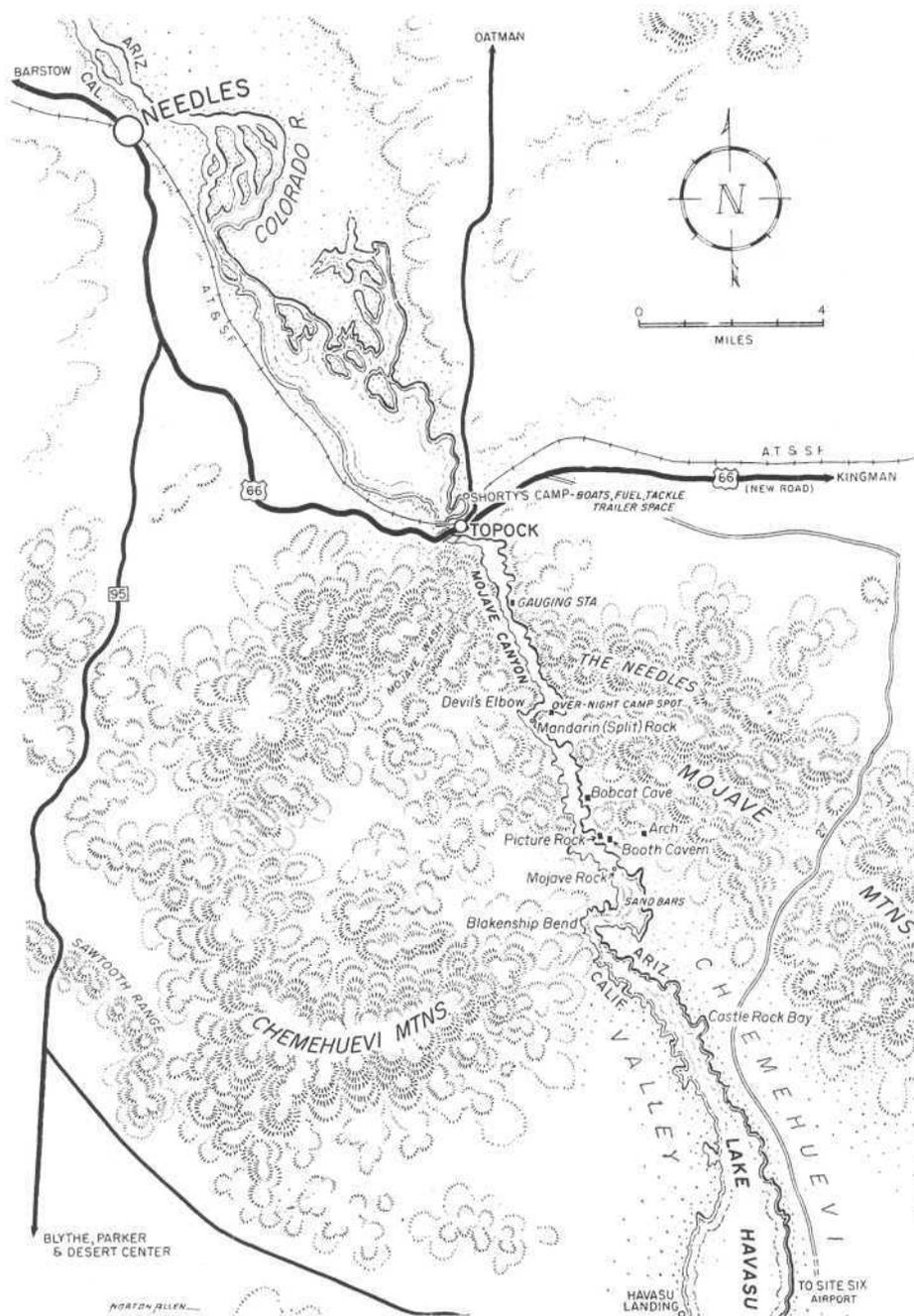
miles of deep, tule lined sloughs and by-passed river beds above Topock and rolls past the bridges into the funneled maw of Mojave Canyon.

"There was a time," John Booth told us, "when the river at its flood stage surged through this canyon with tremendous power. But since Hoover and Davis dams have been completed upstream the flood torrents never reach this point. The current now flows less than two miles an hour." Since the Colorado's heavy load of silt is deposited behind the dams, the water is almost clear.

Topock Bay is regarded as the upper end of Lake Havasu, that great reservoir formed by the Metropolitan Water district's dam at Parker, Arizona. However, during the years since the dam was completed sediment has built up the floor of the upper lake so much that the water level at Topock actually is five feet higher than the top of Parker dam. There is a noticeable current for a distance of 13 miles below Topock.

The shore above the canyon is lined with cat-tails and wild rice. These gave way as we approached the gorge which the river in prehistoric ages chiseled between Arizona's Mojave range on one side and California's Chemehuevi Mountains on the other.

Even in the upper gorge there are feeder canyons in the solid walls, and in these canyons are sloughs almost hidden by tules. These side canyons, we learned later, are perfect hiding



climb steeply from the river's 450 foot level to 2,000 feet and more. Pinnacles which for thousands of years must have landmarked the river crossing for wandering bands of Indians, and to which the Spanish explorers, Juan de Onate (1604-5), Father Francisco Garces (1775-6) and possibly Hernando de Alarcon (1540) — though this last is doubtful—found their way, as did James Ohio Pattie and Pegleg Smith in 1825-6, Jedediah Smith in 1826-7 and engineers of the Santa Fe Railroad who first bridged the river in 1883. These Pinnacles also gave the Mojave (Three mountain) tribe of Indians and the railroad town of Needles their names. Opposite them, across the river, the jumbled chaos of the even more rugged but somewhat lower Chemehuevis form the west wall of the canyon.

With John aboard as guide, we swung again onto the blue and silver ribbon of the river as it curved away to disappear into the wave-like lava formations along Devil's Elbow, a double-jointed dog-leg jog, whose perpendicular walls glowed molten red in the early morning sun as though still smoldering with the subterranean fires that spawned them.

To the left, beneath an over-hanging ledge whose walls and ceiling were black with centuries of cooking fires, John pointed out the probable stopping-off place for inter-visiting Chemehuevi and Mojave Indians, between whose tribal lands the canyon was the dividing line.

The Chemehuevis, who were members of the Shoshonean and Paiute family and primarily hunters and raiders, held the valley from The Needles southward to the Bill Williams River and what is now lower Lake Havasu and Parker Dam. The Mojaves, of the more stationary Yuman group, farmed the rich river bottoms near the present town of Needles and ranged northward to Black Canyon in which Hoover Dam is now located.

Fierce warriors all of them; the members of the 4000 strong Mojave, or Hamokhara Nation, (Whipple, Pac. R. R. Rep. III, 1856) in particular, were noted for their tribal loyalty, powerful physiques and were rated second only to the Apaches in fighting ability.

Lieut. Ives said in his report to the War Department that the Mojaves were as fine a people physically as he had ever seen.

But so troublesome did they become during the frenzied westward rush of the gold hungry 49ers that two expeditions, one under Capt. Sitgreaves in 1850 and a second under Lieut. Whip-

places for the river's big channel catfish and largemouth bass.

Scattered encelia and creosote bushes climbed high up the talus slopes. Mesquite and tamarisk wedged themselves into the shattered rock and platoons of bisnaga cactus marched down from the highest visible summits to stand but inches above water-line. At intervals flaming beavertail cactus blossoms gleamed like neon lights from the sun-baked shale along the canyon walls.

Three miles down-river from the bridges where the precipitous walls crowded the river into a channel less than 500 feet wide, John's weathered cottage came into view, perched atop a hump-backed shelf above the numbered column and swaying cable car of the U. S. Geodetic Survey's Lake Havasu gauging station.

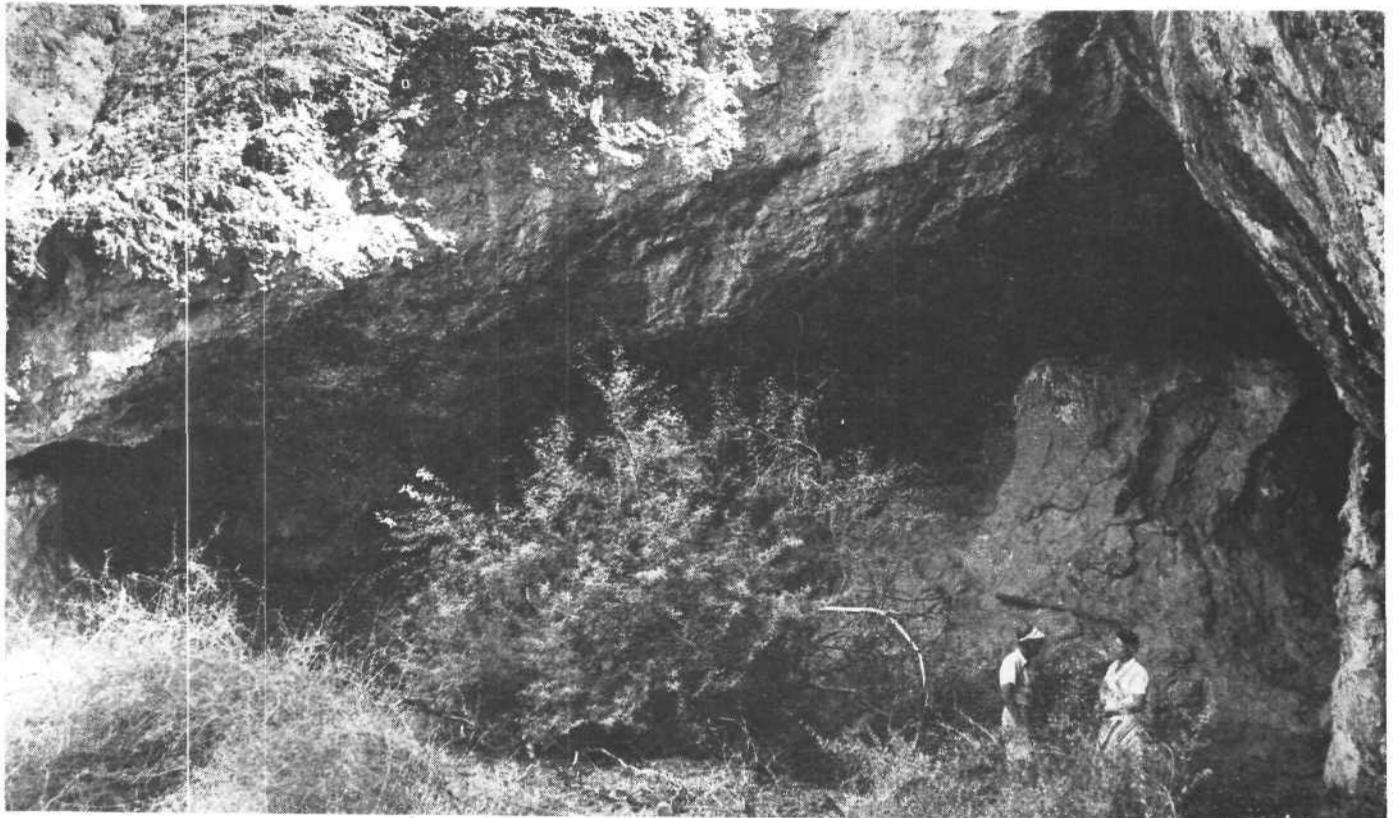
John is the canyon's only inhabitant. A spry young fellow of 75, former mining metallurgist, world traveler, gadgeteer, photographer and outdoorsman, now gauging station attendant, who romps up and down the 45-degree goat trail between cottage and boat landing with surprising agility. His bounty supports a family of friendly kangaroo rats. He bakes the best cherry pie in Arizona.

John has neither road nor telephone and his only means of contact with the outside world are his outboard boat and the short wave radio over which he receives his orders. But few men have more visitors, more real friends, or lead a happier life. "I live," he chuckles, "as thousands of people would like to live if they could."

Directly behind his cottage the red and gold pinnacles of The Needles



John points to the storm symbol among the petroglyphs on Picture Rock.



At the entrance to Booth Cavern. Someone has filed a mining claim on the bat guano in this cave.



The bay and the three bridges at Topock on the Arizona side of the river.

ple in 1854, were sent against them. It required Fort Mojave and a permanently stationed troop of soldiers finally to bring them under control.

At Devil's Elbow the highest peak formations shifted to the Chemehuevis, their broken crests of alternate lava and granite reaching hundreds of feet into the crisp blue sky, their flaming images mirrored deep in the dark blue water of the river. Three miles below the Elbow and approximately a mile from shore on the California side a huge arch, deep-etched into the sheer face of the cliff was reminiscent of Glen Canyon 400 miles to the north.

Here the canyon walls swung wide again to hem the sandy wastes of the Chemehuevi Valley and Lake Havasu, and bald old Mojave Rock crouched

like some prehistoric monster to split the river channel, its flood carved upstream face the nesting place for a great colony of swallows. Below it a million tons of sand lay in long, constantly shifting bars.

Mojave Rock lies at mile 10 from Topock and marks the end of the canyon, but the return trip, with the sun high overhead, was even more spectacular. Everywhere, from waterline to summit, natural arches were visible; some but inches in size, others, whose openings spanned many feet, rode the skylines of the blister-pitted volcanic ridges. Yellow and white sand dunes draped themselves mantle-like about the shoulders of dark peaks and lighter colored masses of broken granite jutted through their eons old burden of over-lying lava.

Oddly enough, no minerals are found in paying quantities but the gravel beds near Mojave Rock proved fair hunting grounds. In half an hour we found jasper, agate, chalcedony, quartz and several chunks of obsidian, all obviously alluvial detritus.

This is cave formation. Two large ones, Both Cavern and Pack-Rat Cave, are but a short distance from the river. The first, which John had discovered several years before, and whose rooms beneath a sheer 75 foot dry waterfall could shelter several dozen persons—and does shelter a huge colony of bats—lies directly below and to the left of a great open arch plainly visible atop a ridge a mile above Mojave Rock on the Arizona side.

The second, also in Arizona, I discovered when I climbed ashore to

Mojave Rock in the middle of the stream at the low end of Mojave Canyon is a historic landmark.



photograph an especially beautiful beavertail cactus. Its nine foot ceiling and 15 by 20 foot room is much more usable and overlooks a tiny bay probably a mile nearer Devil's Elbow. Unquestionably there are others, perhaps much larger, to be found. The place is well worth a week—or a month—of exploration.

But to us the most interesting of all was Picture Rock, a great gray slab lying but a few hundred feet from Booth Cavern, its surface literally covered with dozens of petroglyphs. The figures were very crude but unusually numerous and deeply etched into the hard surface. Predominant among them were the storm signs.

Lava blisters beneath the apparently solid surface drummed hollowly as we walked across the nearly level area in front of the stone, giving an eerie feeling to the place. Over most of the shelf were hundreds of black and pearl colored fragments of quartz, obsidian and flint from the making of arrow heads. Ethel searched diligently while John and I examined the drawing, but was unable to find any undamaged pieces.

Looking out over the broad expanse of the river toward the Chemehuevi Valley it was easy to picture the old arrow-maker seated in the warm sun, perhaps with his camp behind him and his son or grandson busily etching the story of the tribe in stone that will remain unchanged long after our own civilization has crumbled and gone.

Above Picture Rock, on both sides of the river, stone faces and figures stood out in gigantic mold. The Chief's profile and Cockscomb Ridge in the Chemehuevis; Satan's Urn, Heron's View and Mar-darin (Split) Rock in the curve of Devil's Elbow; the latter when seen from a point close to the Arizona cliffs resembles to an astonishing degree a fat old Chinese Mandarin.

Near the Elbow and now covered with water John remembers seeing iron rings set into the rocks, perhaps by Lieut. Ives, or by Capt. Johnson, who pushed *The General Jessup* over the same course in 1885, but more likely by the barge skippers who hauled gold ore from the old Moss mine in Oatman after the civil war.

Behind John's cottage as we pulled up to his landing, the spires of The Needles, dull red in the evening sun, flaunted their battlements high above the river. That was our first trip to Mojave—but not our last. For here truly is one of the Colorado's most intriguing canyons.

Best of all to us, is the quiet, unspoiled beauty of the place. The feeling that here is peace and the



There are always fish enough to eat, and a few to take home.

frenzied rush of the outside world may be forgotten. Half a dozen boats may pass in a day, or none at all. And you're strictly on your own. There are no guided tours or commercialized boat trips. The canyon is too small for that. But if you have no boat of your own you can obtain one at Shorty's Camp, Site Six, or Havasu Landing and park your outfit there.

There are bird sanctuaries at either end of Mojave, and cormorants, ducks and geese sweep up and down the river in flocks of 50 or more. White and blue herons stand like one-legged sentinels along the shifting bars and on the tips of up-thrust rocks overlooking the tule beds where hundreds of noisy coot cluck and squabble. Beaver and muskrats swim boldly across the river and the big brown hawks fly their deadly patrol.

There is no closed fishing season

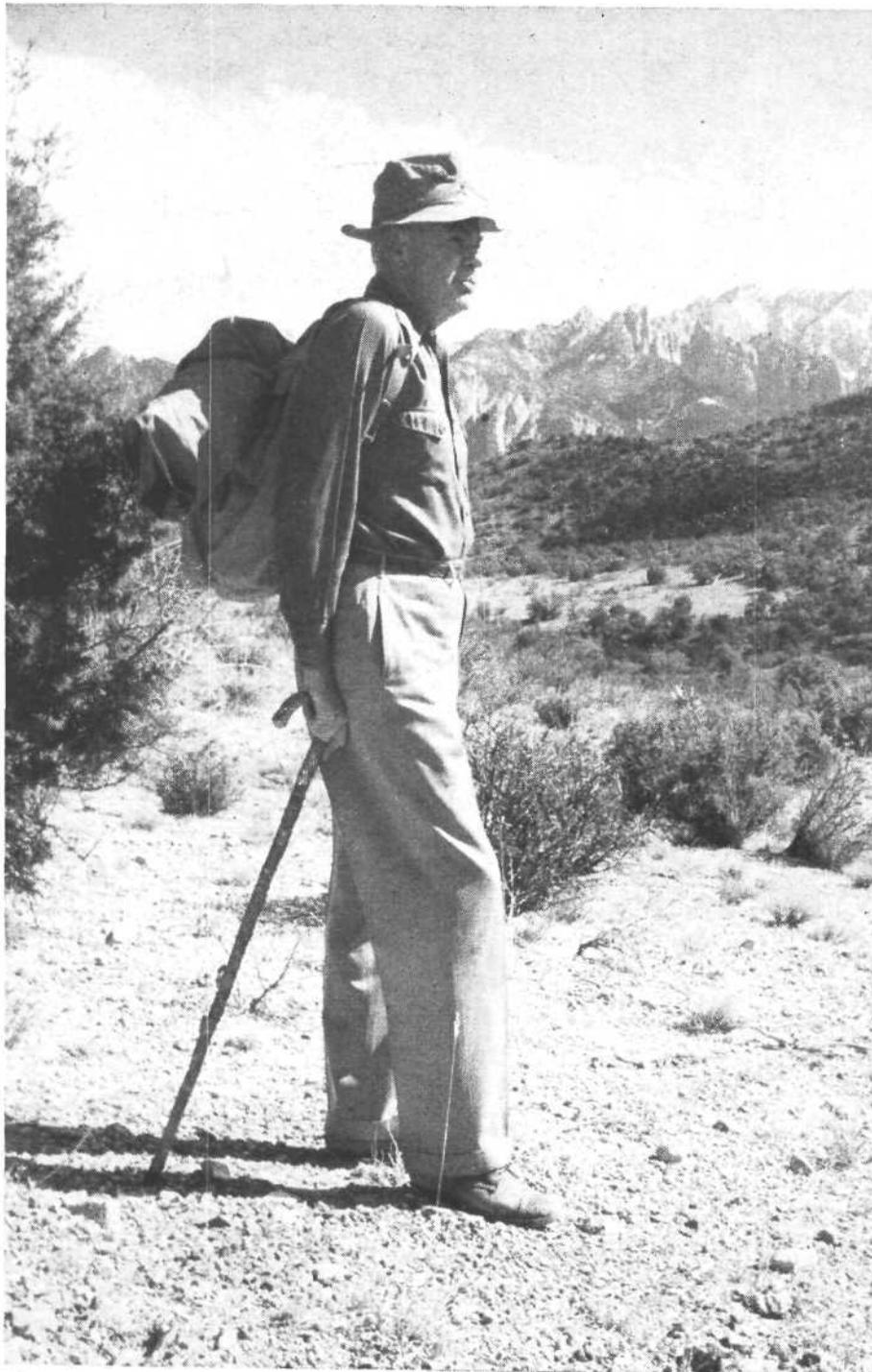
on the Colorado, though for most of us the summer months are much too warm. Spring and fall days are delightful, with balmy evenings, cool nights and snappy mornings. There are few mosquitoes, though there are gnats of an evening and flies around camp during the day.

Perhaps too there is better fishing to be had than is found in the canyon proper and there is little hunting there, but the bay and sloughs around Topock afford plenty of both. Fish or not, to us the grandeur of the crumbling walls, ablaze in the slanting sun, the rich blue of the narrow sky-cap above and the equally blue water of the river are enough. Whether we take our bedrolls for a quiet night in the canyon or return to camp, somehow there are always fish to eat, a few to take home and the feeling that perhaps after all the world is a pretty good place to be.

Bed and Grub in a Knapsack

Members of California's Sierra Club take regularly scheduled back-pack trips into the many beautiful mountain areas of the Southwest. Weldon Heald finds also that there is exhilarating pleasure in going out on two or three-day pack trips alone. With his home on his back he has traveled thousands of miles in the desert wilderness areas of the Southwest. Here he tells what to take and how to organize an overnight knapsack expedition.

The author, his pack on his back, pauses on a several-day trip into one of the remoter regions of the desert Southwest. The cane came from Switzerland 22 years ago, and Heald has hiked thousands of miles with it since then.



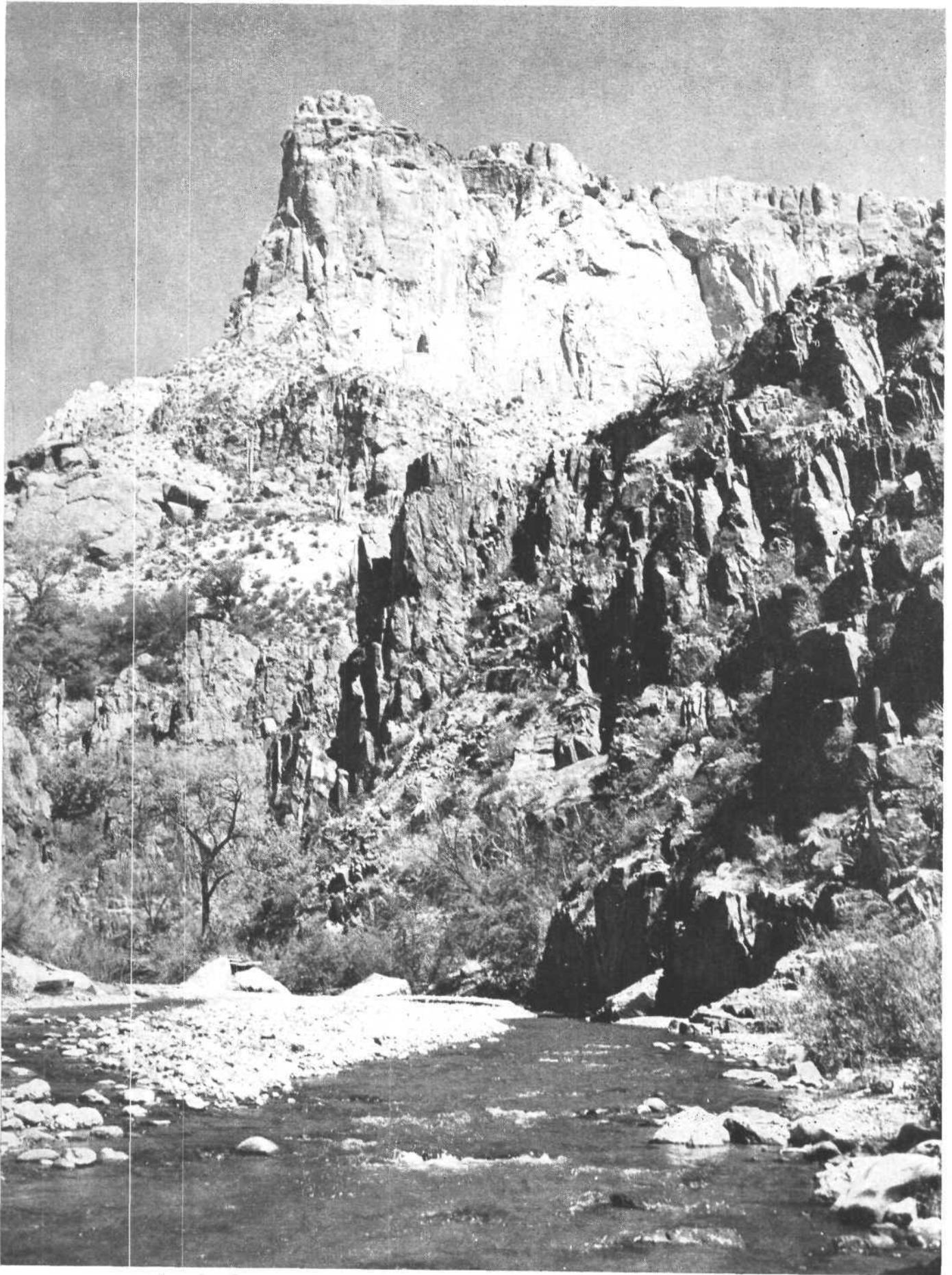
By WELDON F. HEALD
Photographs by the Author

FOR SEVERAL years I have been taking two and three-day knapsack trips into little-known areas of the Southwest. On foot I have visited spectacular hidden canyons, mesas studded with long-forgotten cliff dwellings and skyline oases bristling with pine, spruce and fir. These trips, with my home on my back, have revealed as nothing else could, the vast silent fascination of the desert.

And yet, in all my wanderings in Arizona I have never met another back-packer. Why this simple, inexpensive and thoroughly satisfactory method of travel, so popular elsewhere, has been neglected in the Southwest is a puzzle to me. In fact, with the exception of members of the Sierra Club of California I know of no confirmed knapsackers in the entire region.

I believe that many Southwesterners are missing a stimulating and exhilarating experience. For I have found that it is only when automobiles, horses and gregarious organized parties are left behind that one feels the ultimate, breath-taking impact of this unique land. With a knapsack on my back I am on my own. I have shed the last wrappings of civilized insulation and meet the elusive personality of the desert full-face in the glaring sun of midday and under the velvet, star-filled skies.

However, this form of travel, like most everything else in life, has its drawbacks. A heavy load on a long trail can become a form of punishment akin to the self-imposed lashings of the Flagelantes. On the other hand, the packer may deprive himself of much of the pleasure of the trip by packing too light—by leaving out essential items merely for the sake of making an easy load to carry. So, back-packing resolves itself into a compromise somewhere between taking everything but the kitchen stove, and carrying nothing at all. Nobody has yet found a perfect complete adjustment between these two extremes, but through trial and error I have managed to achieve a reasonable amount of comfort and well being on short knapsack trips without staggering under an unbearable burden. My whole philosophy of knapsacking is based on the theory that any load over 25 pounds is too heavy and that I would rather carry 15 than 20. So my



Aravaipa Canyon in southern Arizona is wilderness country ideal for desert knapsack trips. Pink sandstone walls rise 700 feet above a crystal clear stream.

chief concern has been to pare down what I consider essential equipment to a minimum of lightweight items.

My basic pack, consisting of the necessities for any trip, long or short, weighs a little over 11½ pounds and includes the following:

ITEMS	LBS.	OZ.
Nylon knapsack	1	0
Detachable metal pack frame	1	0
Blanket sleeping bag and case	5	11
Cooking kit	1	8
10x10" square cooking griddle	1	0
First aid kit (including snake bite kit and waterproof matchbox)	0	5
Toilet kit (comb, steel mirror, tooth brush, tooth paste, hotel-size soap —razor omitted)	0	10
Pencil flashlight & extra batteries	0	4
Paper towelling	0	3
Total	11	9

This weight can be reduced by a pound if you don't mind your pots and

pans becoming smoke-blackened over an open fire. However, I have found the cooking griddle to be one of my happiest discoveries. Made of magnesium — two-thirds the weight of aluminum—the griddle is flat with a slight flaring rim all around. Not only does it serve as a stove-top, keeping cooking equipment clean, but one can fry directly on the griddle, and it makes an excellent toaster as well. The pencil flashlight is a second useful but not essential item which can be omitted.

Another major find was the feather-weight rucksack. Norwegian style, with a detachable magnesium frame, it measures 17 inches high, 47 inches around the base, is waterproof, and is the coolest and most comfortable pack I have ever carried. Two outer zipper pockets provide space for camera

equipment—which with me adds 2¼ pounds:

ITEMS	LBS	OZ.
Miniature camera and case	0	15
Filter and adapter ring	0	2
Automatic self-taker	0	2
Light meter	0	11
Films	0	6
Total	2	4

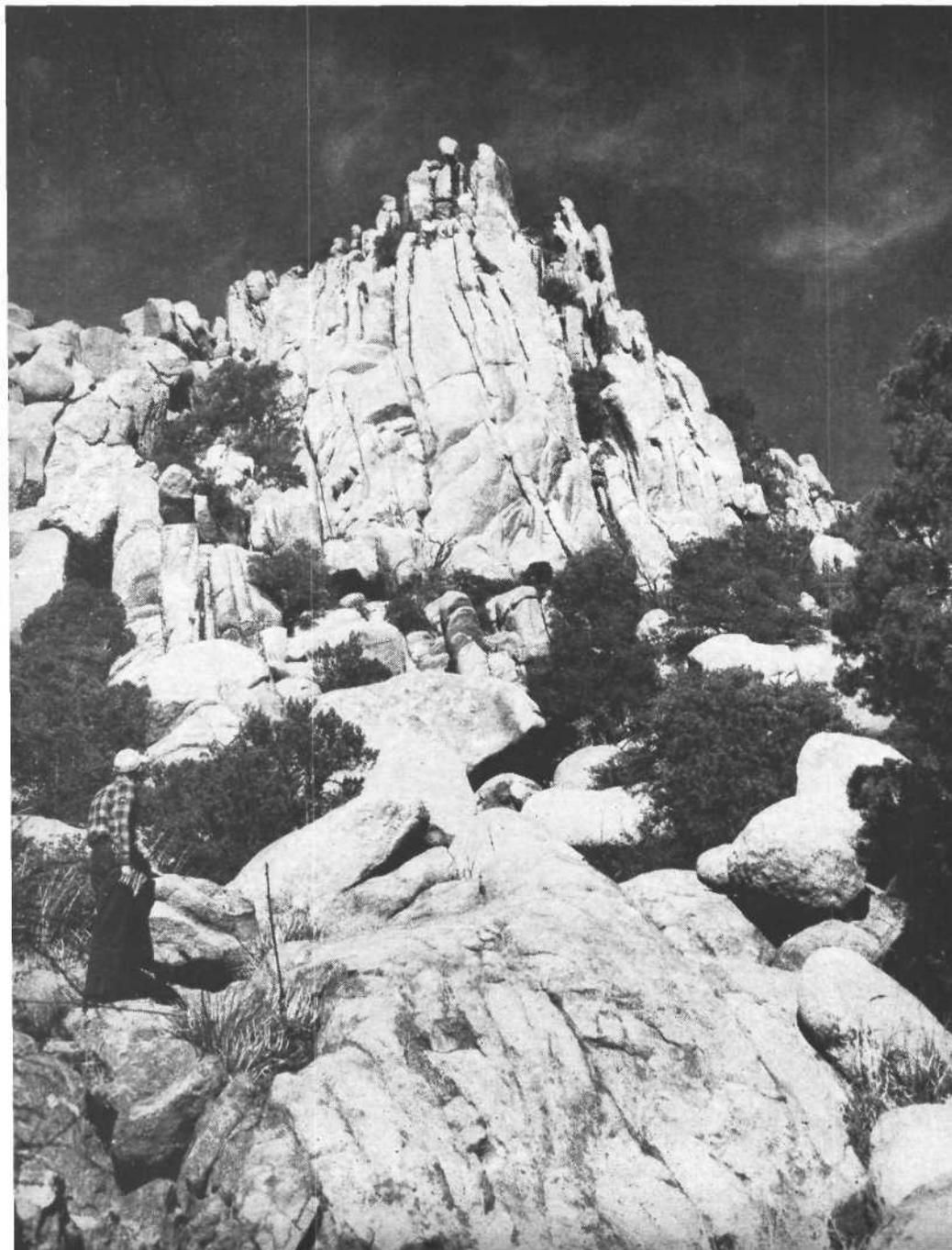
Of course, all this need not be carried in the pack. You can hang the camera from your neck or shoulder and decorate yourself around the belt like an animated Christmas tree with photographic equipment, as well as first aid kit, cup, knife and hand ax. In this way you can delightfully delude yourself, for no true knapsacker ever considers that articles carried outside the pack have any weight whatsoever.

On these energetic expeditions it is highly important that you have a good night's rest, and your bed is usually the heaviest single item. I will put up no strenuous argument that my mummy-type experimental army blanket bag and case are the lightest and most efficient made. And I do know from painful experience that they are just borderline for comfortable sleeping when the temperature drops below 45° F. On the other hand, bag and case roll into a much less bulky bundle than a down bag of the same weight, and I can tie it to the back ends of my rucksack shoulder straps with two webbing straps, where it rides easily and is well balanced. When I expect cold nights I substitute a larger down bag with light ground sheet, but this weighs more and, in general, is much less satisfactory for knapsack trips.

Another substitution for cold weather is warmer extra clothing. My ancient and much-traveled suede jacket, almost equalling my hat in disreputability, is sufficient for spring, summer and fall, but in winter or when camping at high altitudes I switch to a sweater and windbreaker. They add welcome insulation and outweigh the jacket by only 5 ounces. Also during the summer rainy season in the mountains of Arizona and New Mexico a light 15-ounce poncho often pays its freight.

Every knapsacker has his favorite gadget, and perhaps I gloat most over my cooking kit. A neater job I never saw and the man who designed it deserves a medal. Nested in a strong, light cloth case, 7 inches in diameter and 3 inches deep, are 11 aluminum pieces weighing but a pound and a half — frying pan with detachable handle, pot with bale, pot cover, deep-rimmed plate or pan, cup, knife, fork and spoon, bottle and can opener. I bought this kit several years ago and

This rocky peak in Cochise Stronghold, Arizona, is but one of the endless remote and little-known areas to explore on back pack trips.





Weldon Heald's basic pack is the same for overnight or a week-long knapsack trip. It weighs a little more than 11½ pounds. Food carried will bring the load up to from five to 10 pounds more, depending on the length of time on the trail.

I believe it is, or was, official Boy Scout equipment.

I have never had difficulty scraping together enough fuel for cooking even on the desert, so do not tote along a portable stove. Nor have I needed my small belt ax which weighs 1 pound, 6 ounces. However, a good knife is indispensable. Huge and warlike hunting knives look impressive, but are only in the way; all you need is a sturdy pocket knife with several blades in a 4-inch handle, weighing about 3 ounces. Then, a couple of bandanas are useful and can serve many purposes from a handkerchief to a pot holder. I always keep one in my hip pocket where the loose end protrudes as a sort of official expedition flag.

One of the pleasures of knapsacking is that camp chores can be reduced to a minimum. My method of doing them the easy way is to take 25 or 30 sheets of paper towelling in lieu of dish cloths and towels. Pots, pans and plates can be scrubbed reasonably clean with warm water and a couple of sheets of the paper; you can dry yourself with it after washing; and it is easily disposed of or used to get the

fire started in the morning. I hasten to add, for the benefit of fastidious campers, that your cooking equipment can be thoroughly sterilized in boiling water upon your return to civilization—so that no bit of egg need adhere to the frying pan to mar your next trip. But, fastidious or not, I believe it is a maxim that an honest-to-goodness knapsacker never shaves while on the trail.

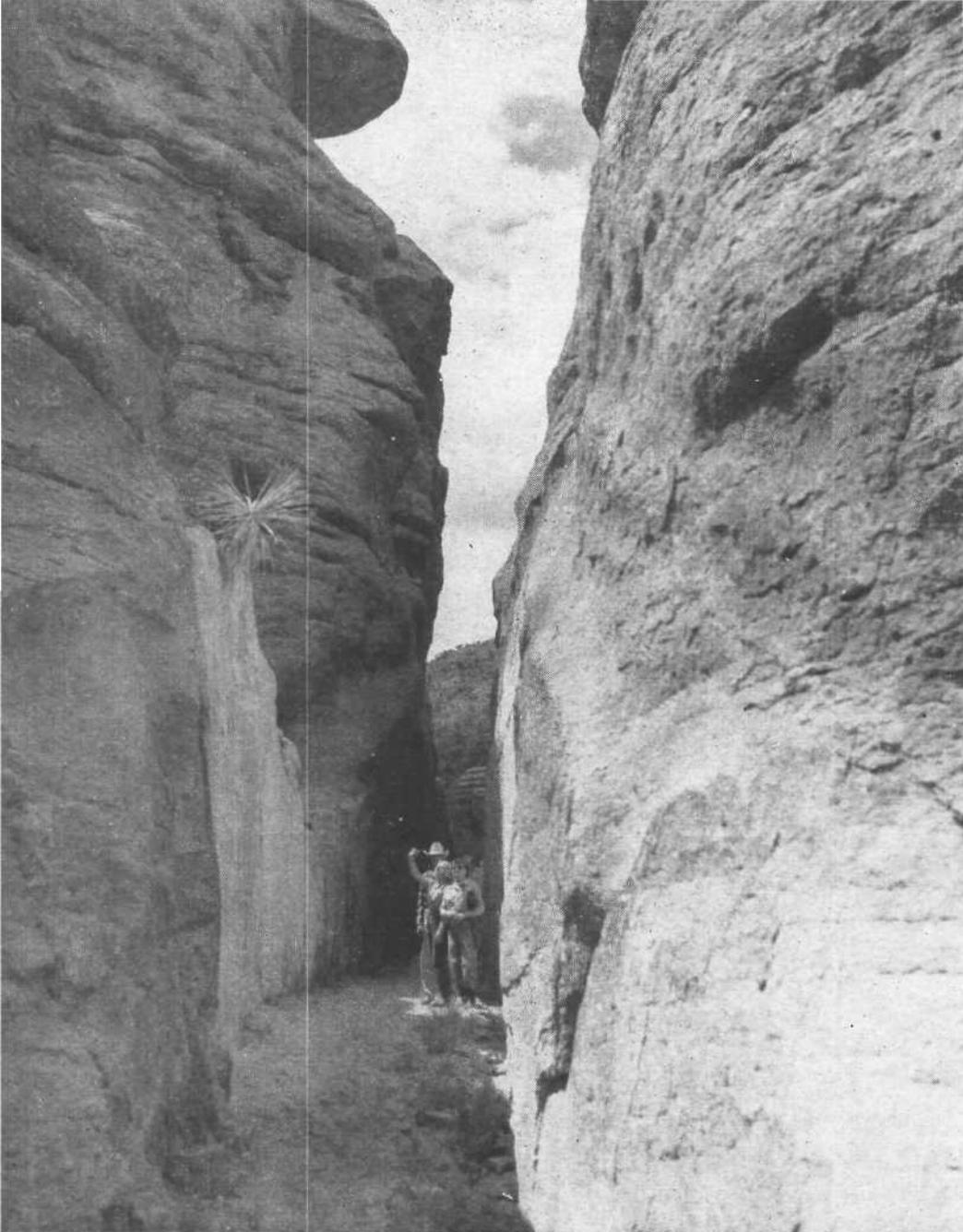
As I said before, there is nothing scientific about my methods. That goes for food too. The fact that the daily U. S. army ration contains 3500 large calories and nearly 100 grams of protein leaves me cold. I have simply worked out various combination of light-weight foods, high in caloric content, which have proved to be sufficient fuel to propel me there and back without pangs of gnawing hunger. Here are a few food items with weights for a three-day trip:

ITEMS	LBS.	OZ.
½ dz. eggs & cardboard container (I've never broken one yet!)	0	13
12 half slices bacon	0	4
6 slices bread	0	7
Butter	0	8
Dehydrated soup (about 4 oz. ea.)	0	8
Bouillon cubes (chicken and beef) and/or tea bags	0	2

Instant coffee (2 oz. equals about 1 pound regular coffee)	0	2
Sugar	0	8
Cheese	0	8
Small can evaporated milk	0	8
Salt, pepper	0	½
Nuts, raisins, dried fruit	0	8
12 sugar cookies (my particular favorite dessert)	0	9

Other foods near the top in nourishment are peanut butter, with 2740 calories to the pound, and chocolate, 2770 calories. Packaged macaroni products, prepared in seven minutes make a good evening dish, and I often carry hamburger or canned roast beef. Cans, however, weigh from a pound to a pound and a half, making them a luxury to be indulged in only on shorter trips.

But combinations are endless and, of course, dehydrated and powdered foods as well as balanced army, Boy Scout and commercial rations are available. One advertised ration consists of precooked, dehydrated, packaged meals averaging about 2500 calories and over 90 grams protein per day. These include such civilized fare as chicken or beef and gravy, but each meal weighs from a pound to nearly two pounds and I have found them to



Thousand of miles of trail in the great Southwest lie open and waiting for hikers to visit for a day, a week or a month. Here a group passes through one of the many narrow canyons in Chiricahua National Monument.

load up my rucksack more than foods of my own selection. Furthermore, I am apt not to want to eat a particular meal at the time I'm supposed to have it. That is my main objection to definite daily rations planned beforehand. But if you prefer a ration system, even if you make it up yourself, a handy method is to pack each meal in a tough, thin, waterproof plastic bag about 4x4x8 inches and seal it with scotch tape.

But no matter how much advice old hands can give you, satisfactory food for knapsacking trips can be worked out only through experience by each individual. People's tastes and requirements differ greatly, and even the weather and length of daily hikes will alter your appetite. But in every case, the food lists prepared by so-called experts prescribe far greater amounts

than I have ever needed. On a check-up of several authoritative knapsack and camping manuals, I find that the food considered necessary for one man for three days varies from 8 pounds, 4 ounces to over 12 pounds. Although I weigh 175 pounds and make no claims to a bird-like appetite, my own three-day food supply checks in at from 5½ to 7 pounds, and even then there is always something left over.

Another knack that comes with experience is getting the most out of your food. Here are two out of many dodges that add pleasure to my trips. I always carry a couple of one-ounce packages of concentrated fruit flavoring powder. Nothing is more refreshing on the trail than a cool drink of lemonade or orangeade, and the sugar added gives you a needed boost of quick energy. Then an appetizing

delicacy can be made by cooking powdered cheese with powdered eggs for a tasty Welch rarebit poured over a slice of toast. Inventing ingenious concoctions is a knapsacker's prerogative, and he is inordinately pleased with himself over his culinary discoveries. I am no exception, but some of my most remarkable stodges over the fire seem to bring joy to me alone.

Some knapsackers chew gum and suck hard candy to allay thirst on the trail. This ever-present thirst which sometimes will pursue one for hours up hill and down, brings us finally to the delicate question of water. With gruesome tales of horrible deaths from thirst a part of the folk-lore of the Southwest, I hardly have the temerity to advise knapsackers to leave their canteens behind unless they are absolutely necessary. However, a filled quart-and-a-half canteen weighs four pounds, eight ounces, and that is only a drop in the bucket, figuratively speaking, to your daily need.

I took part in army desert tests during World War II which showed that in a temperature of 80-85° F. an active man lost over a gallon of water every 24 hours. Sooner or later he must make up this dehydration. But toting 10 to 12 pounds of drinking water doesn't seem to me the wise way to do it. Better, I think, is my rule: Never take a knapsack trip into an area which has no water. Learn before you start the exact location of all springs, streams, pools or tanks, then be sure that drouth hasn't dried them up and that it is the right season for them to be filled. It has always been a surprise to me how many sources of water there are in this arid land, and in all my wanderings with a pack on my back I have never yet made a dry camp. If you are not sure of a good source of water for your night stops—don't go!

With a 16 to 18 pound pack on your back and two good legs to carry you, thousands of square miles of the great Southwest lie open and waiting for you. There are endless possibilities to explore and enjoy remote and little-known areas from Coachella Valley's Santa Rosa Mountains to Boquillas Canyon in the Big Bend country of Texas.

Maybe you and I will chance to meet some day deep in Aravaipa Canyon, by the Gila cliff dwellings in New Mexico, or even high on Nevada's Wheeler Peak. Then you can tell me about your experiences with your home on your back, and that evening we'll sit beside the glowing campfire and compare notes on this fascinating business of knapsacking.

LIFE ON THE DESERT

By LOUISE SWITZER THOMPSON

Writes the author: "This really happened to me when I taught school in the Upper Verde Valley in Arizona in 1904." This was one of the winning stories in Desert Magazine's Life-on-the-Desert contest.

THE PACK RAT and I kept school in a typical little country school house 50 years ago. It would be incorrect to say it was a "little red school house" for actually it had no trace of paint of any color.

Six staring windows, two outhouses, and a hitching rack for ponies identified it for what it was. It shimmered in the heat of a flat barren mesa. Beyond and below was the Verde river bottom, lush with cottonwoods and willows.

Mr. Jordan was chairman of the board of trustees, and he contributed six children to the school's enrollment. Soon after I arrived he took me over to show me the school where I was to begin my initial teaching the following Monday. Just out of normal school I was very earnest, and a little frightened at the prospect.

When the door screeched back on its rusty hinges I saw that the inside of the building was as devoid of paint as the outside. Probably the two rows of desks had once been new and varnished, but now they were carved with initials and cattle brands.

There was a water bucket with a tin dipper on a bench beside the door. Teacher's desk and a cottage organ were on a slightly raised platform at one end of the room, backed by a blackboard. A rusty pot-bellied stove suggested that the weather would not always be so hot. The room was ceiled with dirty gray cheesecloth that once probably was white. Mr. Jordan, a transplanted New England Yankee was visibly straining to get back to his truck farm and apple orchards but I timidly called his attention to an ominous bulge in the ceiling over the organ. He walked over and squinted up at it.

"Pack rat," he announced laconically. "Rascal's been down here too. There's a hole in the cloth. Likely come up under the eaves from outside. Wonder if that last teacher left anything out fer him to get at."

He walked briskly over to a shallow cupboard behind teacher's desk. Presently he rumbled:

"Looks like ever'thing's here. Twelve new erasers last year. She was always wantin' something. Here's the register. Plenty of pencils and chalk fer a start. Likely be a box from the county superintendent with supplies by the time I get up to Jerome again. Well I got to be goin'. We're loadin' garden truck to take to town in the mornin'. I'll

send Stelly over to help you dust things off a bit. Goodbye now."

"But the rat! What will we do about him?"

"Shucks, he won't hurt you. Likely you'll never see him. Have to get a new ceilin' in here next vacation. I'll take it up with the school board."

He shut the door firmly and went off, leaving me alone in the middle of Arizona with a pack rat, whatever that was.

Mr. Jordan was right. I never saw the pack rat although there was evidence that he occupied the school room after school was dismissed. The children were entranced with our mascot and I often saw them gazing at the corner of the ceiling that bulged lower as the months went by. There was no sign from him even when the old organ groaned and squeaked out songs and marches under Stella Jordan's efforts.

But the pack rat—Jake we called him—plied his trade. He made off with two of the new erasers within a month, carried off pencils and pens left on desks, a forgotten spoon, and he had an obsession for colored chalk. I wondered if he ate it. And always he left payment for all he took in rat coinage: sticks and stones, pine cones washed down the river bed from forests miles away. Small red apples left on desks by the children for him were sometimes ignored and pencils rooted out from behind the books in the desks.

The climax came the day the old clock on the wall gave up and died. I put my new Ingersol special, small size for ladies, on the desk to check the time as the day wore on. The river bed was a riot of autumn color and after I dismissed the pupils I walked down to gather leaves, leaving my watch on the desk. When I returned there lay in its place a very dry cow chip. I looked up at the ceiling.

"All right, Jake. This is adding insult to injury and I am going to do something about you." I locked up and went in search of Mr. Jordan. I found him in his cave-like apple cellar, packing fruit. I stormed about the pack rat, then felt like a school child myself as I awaited his reaction, if any.

"Tell you what," he said finally. "This is Friday, no school tomorrow. I'll give you some poisoned grain I used in here to get rid of some of the rascals."

He walked over to a corner and reached high on a rafter for a can.

"Here's six grains, scatter 'em about on the desks. Mark where you put 'em and gather up any that are left in the mornin'!"

"Do you think he will eat them?" I stammered, beginning to wish I had not been so vehement. "I didn't want to kill him. I want the ceiling fixed."

"Sartinly he'll eat 'em. No time to fix the ceilin' now. We are all too busy gettin' the apples to market."

"You won't tell the children? They like Jacob."

Mr. Jordan's eyes twinkled in the dim light. "I won't tell 'em but country kids take things like that in their stride. A man's got to save his crops, you know."

I retraced my way to the school house and gingerly placed the poisoned pellets on six separate desks, then locked up and hurried home to dinner.

I was not hungry. Mr. Jordan's look of inquiry made me feel like a cross between the hangman and the next applicant for a lot in Boothill cemetery. I nodded briefly and retired to spend a restless night, wondering for the first time if Jake had a family up there in the ceiling. Maybe he would take them this special treat of wheat grains and kill them all. I crept downstairs at the break of day and hurried over to the schoolhouse. It took moral courage to open the door. No grain on the desk near the door, nor on the next. My heart felt like lead as I walked slowly about. But there! On the smallest desk near mine lay all six grains in a neat little pile.

"You win, Jake," I said looking up at the bulge in the corner, "You even have a sense of humor. Keep the watch for a Christmas present."

I burned the grain and got up nerve enough to ask for a new supply of pencils and for repairs to the ancient clock.

Toward spring Jake made fewer depredations and in the last month of school none at all. Possibly he had moved out to greener pastures. When I returned the following fall to teach my second year the schoolhouse had a proper wood ceiling that looked glaringly new against the old weather stained walls. Mr. Jordan handed me my Ingersol with twinkling eyes.

"When we tore down the rat nest we never saw hide nor hair of your pack rat but he left this for you. Runs as good as ever."



"I am Conchas," the Indian introduced himself, "and it has been a long time since I have seen this place."

Quest for the Peralta Gold

More than 100 years have passed since the Peralta family of Mexico is said to have worked a rich gold ledge in the Superstition Mountains of Arizona—and the search still goes on for the long lost treasure. Here is the story of one of the many men who have sought the fabulous Peralta ledge.

By ROBERT L. GARMAN
Art sketch by Bill Edwards

7 HERE ARE many stories of lost gold in the Superstition Mountains of Arizona, and almost without exception these stories begin in the middle of the last century when members of the Peralta family of Mexico are reputed to have worked a rich deposit which they abandoned finally

after repeated attacks by marauding Apache Indians.

Just when the Peralta gold ledge was discovered, and the identity of those who made the original location, are questions upon which there is a wide divergence of report. But the Peraltas are said to have gone into the Superstitions about 1847, and to have taken out a fortune in high grade ore during the following three years.

They are said to have decided to abandon the mine in 1850, and at this time Pedro Peralta loaded the best of the ore including some rich placer sand on a burro train and started on the final trip to Mexico.

Then Apache Indians, who had been watching the operation from the cover of nearby crags, swooped down on the pack train and wiped out the entire cavalcade. The Indians were interested primarily in the tools and clothing and

weapons. They had no use for the gold ore, or for the pack animals. They cut the pack saddle harness and let the ore lie where it fell, salvaging for themselves only the food, utensils and clothing they desired.

Many years later, one of those who heard the Peralta story as it had been passed along through devious channels, was a cowboy named C. H. Silverlock.

He had been told that there were places in the Superstitions where rich gold ore lay on the surface of the ground, requiring no labor except to pick it up. Since he was a cowman, and not a miner, this manner of acquiring gold appealed to him, and he started a search which continued for years. Part of the time he was accompanied by a partner named Kimball, and it was by Kimball's son, who occasionally accompanied his father, that



Northwestern face of the Superstitions. It is believed that the last attack of the Apaches which wiped out the Peralta pack train took place on the slope in the foreground. It is said that in later years the bones of humans and mules were found here. Here Silverlock is said to have found some of his gold ore, and a 20-ft. shaft hidden by cholla in this picture is believed to have been dug by him.



Weavers Needle in the Superstitions. An old Indian trail follows the arroyo toward the Needle and crosses the mountain divide to the left of the pinnacle.

the story was told many years later.

In the early months of 1914, Silverlock obtained employment on a ranch near the west end of the mountains. As he went about his work on the range, and during his off-duty days he made a systematic search of the canyons in the vicinity.

He panned the sand in the arroyos and occasionally found a trace of gold, but never in large quantities.

Then one day as he was riding on the northeast side of the Superstitions he stopped to rest on a hillside covered with saguaro cactus, ocotillo and palo verde trees. It was a lovely natural garden and on the slope above he could see prospect holes where miners had gouged out rock in search for stringers of gold.

Just ahead of him there appeared to be an outcrop of quartz, partly hidden in desert vegetation and the rhyolite rubble of the mountainside. He dismounted and picked up a piece of the ore, and to his amazement found it was rich with gold. There was a quantity of the quartz lying loose on the ground. He gathered it into a pile, and then hurried back to the ranch to get pick and shovel with which to mine the ledge from which it came.

But he could find no ore ledge. He dug a shallow trench up the slope in the hope of cross-cutting the ore vein, but found no trace of it. However, he did find another scattered pile of rich ore on the surface.

It was a puzzling situation. Surely the ledge from which this ore had come was located somewhere on the slope above. For weeks and months he returned at every opportunity to dig beneath the surface in quest of the mother lode.

His quest gradually extended over a wide area, and he found more of the rich ore scattered on the surface. He carefully sacked up this ore and cached it for the day when he could transport it to a market.

He became convinced that there were many rich ledges in the vicinity, and that if he could but get his pick into the quartz as it occurred in place, he would have fabulous wealth.

He staked out numerous claims so that when the vein was found he would have a right to the ore, wherever it might be. He brought in a partner to help with the search, and one day as they were walking down the mountainside they came upon a place where the sand under their feet glittered with tiny specks of yellow gold. They scooped up the sandy loam and packed it to the nearest water where many pounds of fine gold were recovered by panning. But the placer area extended only over a small plot. Beyond that they could find no trace of yellow metal.

When summer came Silverlock's partner took his share of the gold they had reclaimed, and announced that he was going to the city to enjoy his

riches. He would not work through the heat.

But Silverlock continued his search. He had quit his ranch job, and was devoting every daylight hour to his quest for the source of the rich ore. He was determined to solve the mystery. He could have no peace of mind until he located the mother lode.

One day as he was swinging his pick, he stopped for a moment and as he glanced toward the plain below he saw a lone rider making his way up the mountainside. When the horseman drew near, he greeted him, and judged that the visitor was in his eighties, although he sat erect on a well-groomed horse.

A friendly smile was on the face of the stranger, and he spoke excellent English.

"Are you Silverlock?" he asked.

The cowboy nodded, and wondered how the visitor, who obviously was an Indian, knew his name.

"I am Conchas," the Indian introduced himself, "and it has been a long time since I have been to this place. I had heard you were digging for gold and I came to see."

The Indian then urged his pony forward and rode slowly from place to place where Silverlock had been digging. Sometimes he would stop and glance toward the almost perpendicular pinnacles above. Silverlock watched him with increasing curiosity.

Within an hour the Indian returned to where Silverlock was sitting, and dismounted. He took a pipe from his pocket and began smoking.

"Many years ago," he began, "when I was young, I lived in the far north where the winters are long and cold and the snow came to the belly of my horse. One year many of my people died from a strange illness, and I did not like the place.

"Every year I saw the birds and the buffalo go south with the sun, and when summer came and brought warm winds they returned. I told myself that if it was good for the birds and buffalo to follow the sun, it would be good for an Indian also.

"When I became 19 I bade my people goodbye and mounted my pony and followed the sun to the south. After a long journey I came to this country where the four peaks are located, and he pointed toward the pinacles a few miles away.

"There in a little valley where there was good water and plenty of grass was an Apache Indian village. It was there I found a home. I liked this country where the sun comes in the wintertime. The Apaches became my friends. I hunted with their young men and became one of them.

"One day when I was a young warrior we saw smoke signals coming from the low hills near the salt river to the south. The signals said, 'Warriors come, help make big fight.'

"With 22 other young men from the tribe I rode my pony all night. We crossed a river and came to a trail being used by the Mexicans to bring ore from their arrastres near the stream. There we hid in a canyon and waited until the sun had passed nearly half its course. Then a mule train came along the trail loaded with ore followed by many Mexican people.

"We liked to fight Mexicans for we knew the land better than they. When they heard our war cries they left the trail and fled toward the mountains. We chased them, and many were killed. We wanted only the mules, the guns, ponies, knives and food they had. When we found a mule loaded with rocks we dumped it on the ground—and that is the ore you have been finding. There are no gold ledges in this place.

"Would you like to dig where there is gold?" the Indian asked.

For the moment Silverlock was disappointed, and angry. He thought of the many months of hard labor he had been doing on this mountainside, and he realized now that all this work had been for naught. He felt resentful toward the man who had disillusioned him.

"Here are my tools," he said. "You can go dig for yourself."

Slowly, the Indian turned and rode away. When he had departed, the prospector sat for a long time. He could think only of the weary months he had put in digging for gold where there was no ledge of ore. Then as he became more calm, he recalled the question the Indian had asked.

He was sorry he had been so discourteous. Perhaps the Indian knew the secret location of the Peralta mine. He mounted his horse and rode after the visitor. But it was too late. The Indian had disappeared, and though he continued far into the night he

never was able to catch up with him.

But Silverlock had a fortune in gold already cached away—the ore and the placer metal he had recovered. Feeling that a further search for the Peralta mine was futile, he departed from the Superstitions.

But the story of Silverlock, added to the many other clues, serves to give added credence to the report that the Peraltas did have a rich mine in the Superstitions — and that the ledge which they concealed so well before their final departure, still awaits re-discovery somewhere in Arizona's rugged mountain range.

TRUE OR FALSE

Answers to these True or False questions have all appeared in *Desert Magazine* at some time

in the past. They are not trick questions, but reflect the authentic history, geography, botany, mineralogy, Indian life and lore of the desert country. Twelve to 14 correct answers is fair, 15 to 17 is good, 18 or over is an exceptionally high score. The answers are on page 35.

- 1—Navajo rugs generally are woven by the men in the tribe. True ____ . False ____ .
- 2—Dinosaur National Monument is in Monument Valley. True ____ . False ____ .
- 3—Pauline Weaver was famous as a woman stage driver on the old Butterfield Trail. True ____ . False ____ .
- 4—Pinyon nuts come from an evergreen tree. True ____ . False ____ .
- 5—The Desert Lily grows from a bulb. True ____ . False ____ .
- 6—As far as is known there were no human beings living in Death Valley before the Jayhawker party reached there in 1849. True ____ . False ____ .
- 7—Lake Calahuilla once inundated most of the area now known as Imperial Valley in California. True ____ . False ____ .
- 8—The Smoki clan is one of the most powerful of the Hopi Indian clans in northern Arizona. True ____ . False ____ .
- 9—The Calico Mountains where California's old Calico mining camp was located, are visible from Highway 66. True ____ . False ____ .
- 10—The desert's Kangaroo rats are most often seen in the middle of the day. True ____ . False ____ .
- 11—Brigham Young personally accompanied the Mormon settlers on their trek to found a new settlement in what is now Utah. True ____ . False ____ .
- 12—The dunes in the White Sands National Monument in New Mexico are composed largely of gypsum. True ____ . False ____ .
- 13—Canyon del Muerto is one of the scenic gorges along the Camino del Diablo, or Devil's Highway in southern Arizona. True ____ . False ____ .
- 14—Morro Rock National Monument is located in New Mexico. True ____ . False ____ .
- 15—Fray Marcos de Niza found the fabled Seven Cities of Cibola. True ____ . False ____ .
- 16—The Rio Grande River discharges more water into the Gulf of Mexico than does the Colorado River into the Gulf of California. True ____ . False ____ .
- 17—The reservoir known as Lake Havasu is in the Colorado River. True ____ . False ____ .
- 18—Navajo Mountain is within the reservation of the Apache Indians. True ____ . False ____ .
- 19—The fruit of the Saguaro cactus was an important item of diet for the Papago Indians in the pre-reservation period. True ____ . False ____ .
- 20—The grave of Kit Carson is in Taos, New Mexico. True ____ . False ____ .



Shiprock in New Mexico—on the right. Photo by John Stewart MacClary.

HIGH DESERT

By GRACE PARSONS HARMON
Desert Hot Springs, California

High desert—
A little closer to the sky!
High desert—
Where cleaner winds go drifting by!
High desert—
An altar lifting to the sun,
Where Twilight lays its golden peace
When day is done!

QUEST

By JOHN VICTOR SPEIRS
Camarillo, California

The gates to Heaven denied him
The entry that he sought,
And his burro drowsed beside him
Lost in a burro thought.

St. Peter eyed with mild concern
The miner's pick and pack
That covered, shoulders to his stern,
The burro's patient back.

Then gently spoke, "I greet thee, friend;
"But hast thee not been told?
"Thy lifetime quest is at an end—
"Ye need not search for gold."

The lips moved in the bearded mask,
A wistful smile shone through.
"It's not to search for gold we ask
"Permission, sir, of you.

"Could we prospect the hills unmined,
"And roam the Golden Land,
"My burro friend and I might find
"A bit of desert sand."

St. Peter swung the gates that bar
The kingdom of the blest.
For wise St. Peter knew there are
Some souls ordained to quest.

The Ship Rock

By JEANNETTE HELM SAND
Santa Ana, California

The desert lies before her.
The desert lies behind;
Her anchor's deep in rockbed
But she doesn't seem to mind.

Fast her keel and forefoot
In a sea with ne'er a roll,
She hasn't got a captain
And she hasn't got a goal.

Like an old tramp freighter
A' lumpin' through the foam,
Forty miles from nowhere
And forty miles from home.

She's purple in the sunset
Rust red at dawn's first light;
There is nothing there but cactus,
And sand and dried mesquite;

Yet, somehow, I've got the notion
One day she'll pull her freight
And sail the desert ocean
Plumb towards the Golden Gate.

Man's State

By TANYA SOUTH

Herein I dwell. My Kingdom still
Is vested in my soul and will.
None other do I have, nor can.

This is the state of Man:
That as he in his heart remains,
So he attains.

RETURN AT DESERT TWILIGHT

By ELSIE W. CISLER
San Diego, California

The gentle evening blow brings sighs
From swaying limbs of Smoketree ghosts:
I search the moonlit wash for fuel
To light dark hours 'mid hidden hosts.

The mistletoe's dark secret swings:
It 'folds the linnets' purple breast;
Oh, trusting head thrust 'neath your wing,
What cares can trouble now your rest?

What creatures sleep in yon saltbush,
That gives protection 'til the dawn;
Each little beating heart held close
To Nature's breast of sand still warm?

Oh, may the morning star's faint light
Renew the faith of quail and hare:
Glad symphony of daybreak song
Find busy morning gleanings there!

WHAT THE RAINDROPS LENT

By PAUL WILHELM

Thousand Palms, California
Upon the roof the dark night through
The raindrops beat a soft tattoo,
In every room a liquid note,
Beneath each eave a castle moat.

All through the murmurous desert night
Into the depths of cobalt dawn—
O glorious, exotic light!
We who had lain so sound in sleep.

Now woke to scurrying sounds of feet
On redwood rafters, woke to hear
A rainy autumn drip and beat
Crisp summer leaves in heavy grass.

And still the raindrops soft tattoo—
A wisp of sound—and then there grew—
Nothing at first—but one faint scent
Of sweet sage that the raindrops lent!

Mines and Mining

Tonopah, Nevada . . .

Exhaustive exploration work is now being conducted jointly by Summit King Mines, Ltd., and the Homestake Mining Company, to determine the depth of a vein discovered several months ago at the end of a 900 foot crosscut. This work, at the Summit King mine just north of Tonopah, is going ahead with confidence of the operators that they will be able to block out a considerable body of good grade ore.—*Tonopah Times-Bonanza*.

Santa Fe, New Mexico . . .

A recent decision of the Office of Defense Mobilization will result in the opening of a big mica mining industry in New Mexico according to Allen White of the Petaca Minerals corporation. Until recently the mica used in electronic devices came almost entirely from India, White said, on the theory that domestic mica was of inferior quality. Under a reversal of this decision New Mexico's great reserve of this mineral may open the way for a million dollar mining industry. Mica, along with columbite, tantalite, beryl, monazite and samarskite, which are found with it, are needed in the production of steel for jet motors, it was stated.—*The New Mexican*.

Hiko, Nevada . . .

Employing 158 men, the Black Rock Mining company is handling 650 tons of low grade tungsten daily, according to Eddie Woods. The company recently applied to the Nevada Colorado River commission for 15,000,000 kilowatt hours of electrical energy annually from Hoover dam. With this power, Woods said operations could be stepped up to 2150 tons a day. The commission advised Woods that no firm power is available from the dam within Nevada's allotment.—*Pioche Record*.

Denver, Colorado . . .

Many of the lead and zinc mines in the Rocky Mountain region are closing down because they cannot compete with the importations of metal from foreign countries, according to Robert S. Palmer, executive director of the Colorado Mining association. Palmer declared that 62 percent of the zinc and lead mines in the United States cannot produce at the current prices, which are 13½ cents for lead and 12½ cents for zinc.—*Salt Lake Tribune*.

Blanding, Utah . . .

Plans are being made by the Vanadium Corporation of America to invest \$1,500,000 in a uranium mill at Hite, according to an unconfirmed report given by an official of the company.—*Salt Lake Tribune*.

Yerington, Nevada . . .

According to the report of A. E. Millar, general manager of Anaconda, about one-fourth of the 10-million tons of overburden has been removed at the Yerington copper site. It is estimated that when the company reaches full production it will mine 11,000 tons of ore daily, with a yield of 60 million pounds of metal annually.—*The Humboldt Star*.

Gabbs, Nevada . . .

One of the richest tungsten strikes in recent years is reported to have been made by J. H. (Hank) Baxter. He found the outcrop while prospecting with a black lamp at night. Projecting his light from a distance of 30 feet, the protrusion gleamed like a solid white sheet. The ore assayed 15 percent tungsten, and a wheelbarrow load is worth \$175. It is estimated there is between \$70,000 and \$75,000 worth of ore in sight, and if the deposit should have depth it could be worth a huge fortune. Baxter is an electrician who turned to prospecting because he liked it.—*The Humboldt Star*.

Goldfield, Nevada . . .

After a search which continued over 12 years, Harry Wiley and Jack Whitaker have located substantial deposits of tungsten in the Goldpoint district. Nineteen veins have been brought in with an average width of 16 feet, according to Whitaker. Organized as the Nevada Mining company, Whitaker and Wiley are negotiating for the purchase of State Line mill. — *Pioche Record*.

Salt Lake City, Utah . . .

Search for germanium, the \$350-a-pound metallic element which is used in electronics, has now been extended to the coal fields as a result of the disclosure that it often occurs in small quantities in the bottom three inches of coal seams. Previously it had been known to be associated only with zinc and copper ores.—*Salt Lake Tribune*.

Monticello, Utah . . .

Through the efforts of the Atomic Energy Commission a plan has been perfected which makes it possible for uranium prospectors and miners to operate on public lands which are covered by oil and gas leases. Under the program announced in December by Sheldon P. Wimpfen, manager of operations for the AEC at Grand Junction, Colorado, prospectors desiring to go on oil-lease lands may do so after entering into a lease agreement with the AEC representing the federal government. Solution of the conflict between oil lessees and uranium miners is expected to encourage the search for and production of uranium.—*The San Juan Record*.

San Francisco, California . . .

Two new bulletins recently have been issued by the California Division of Mines, located in the Ferry building here. One is Bulletin 163 titled *Gypsum in California*. It is the first treatise covering the entire history of the industry in the state, its geologic occurrence, mining, processing and marketing. The 150-page book with 50 plates and maps may be purchased for \$1.85 plus tax. The other bulletin, No. 162, deals with the *Geology of the Sebastopol Quadrangle in California*.

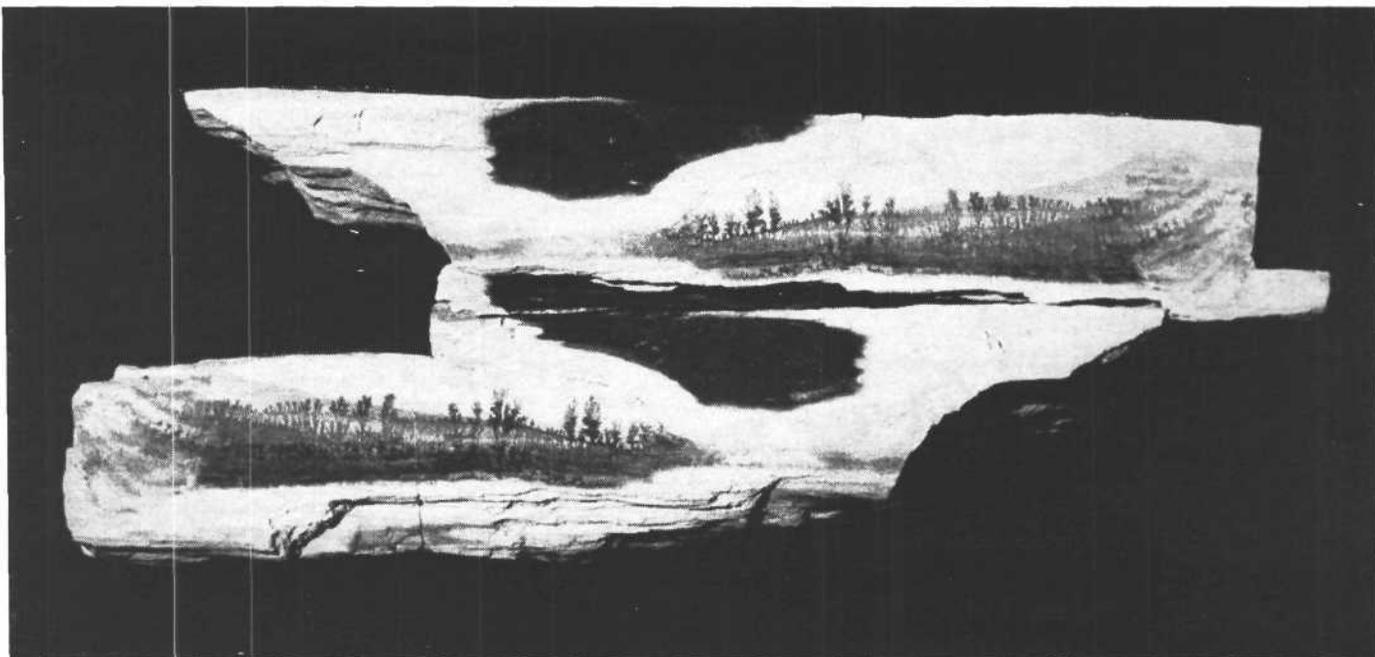
Tonopah, Nevada . . .

One of the richest gold-silver ore strikes in recent years is being developed at the Mohawk mine in the Silver Peak district, according to Mervin J. Gallagher, Nevada mine inspector. The vein has been exposed several hundred feet by drifts.—*The Mining Record*.

Dr. Franz Pick, publisher of Pick's World Currency reports, is reported to have predicted that the official price of gold will be increased by 50 percent during 1953. "Gold mining will again become profitable," he said.

Max J. Kennard, former chief operating engineer for Combined Metals Production company, has been appointed general manager of Pioche Manganese operations at Pioche, Nevada, it was announced in December. K. K. Hood took Kennard's place with Combined Metals.

Venture capital is needed by the mining industry, former President Herbert Hoover told the recent Northwest Engineering Centennial in Portland, Oregon. During 20 years, he pointed out, the 3000 operating non-ferrous metal mines in the Rocky Mountain states have been reduced to only a little over 1000.



Petrified landscape found in Colorado by Harley S. Maybury.

Letters

He Follows Ghost Town Trails . . .
Genoa, Nevada

Desert:

I was very interested in Edna Price's "Life on the Desert" story in the December issue of *Desert Magazine*. I met Bill and Edna Price at Lake Tahoe many years ago and spent several hours with them one night when camping under four large cottonwood trees about one mile south of Genoa, Nevada. I will never forget them—such wonderful hospitality and friendly conversation. They were leaving the Lake Tahoe area at the time, headed for Death Valley.

In that same issue is the wonderful story on Bodie by E. Louise Sartor. What a beautiful picture of the old town! I have been there many times. The first time was in 1924, and much of the remains of the old Bodie and Mono Mills narrow gauge railroad were standing.

Bodie has a caretaker now. Everything is being watched and cared for, and several people still live there. It is quite different from Aurora, another old camp, which is sadly neglected. I have never seen a soul there. The graveyard is badly desecrated, and tombstones of historical interest have been removed. Also abandoned are the old camps of Fairfield and Olcott.

Three families still live in Rawhide, Nevada. Quite a number of buildings still stand and are very interesting.

WALTER S. YOUNG

Petrified Landscape . . .

Lakewood, Colorado

Desert:

Rockhound readers of *Desert Magazine* will be interested in this photograph of a piece of petrified wood I found by chance one rockhunting afternoon last March. The scenic picture, naturally formed, is one of the most beautiful I have ever seen.

I found it in one of the petrified wood areas of Colorado. The top of the rock was barely sticking out from a sandstone formation. I used a piece of petrified wood to dig it out, then gathered up all I could carry and started back to the car. It was a good three-quarters of a mile hike to the highway.

It wasn't until I had returned home and was washing the specimen that I noticed the picture. The entire panorama was on one rock and half of it, in reverse, on another. I drove back to the spot and, with luck, found the other half to complete the second picture.

The rock fragments fit together perfectly. It is a mystery how I managed not to damage the pieces, as I took no particular care in their handling until after I had discovered my find.

HARLEY S. MAYBURY

Roadside Picnic Stops . . .

Palm Springs, California

Desert:

More power to you in your campaign to reform the litterbugs and keep our desert roadsides clean!

It seems to me that part of the problem would be solved if parks or resting places were established at suitable intervals along our heavily traveled desert and mountain highways.

This has been proposed to the California State Division of Beaches and Parks, but so far nothing has been done about it.

Frequent stopping places (well equipped with trash bins) would offer motorists the chance to dump trash and would start many litterbugs on the road to reform.

WARD S. PITKIN

More Clean-Up Ideas . . .

Temple City, California

Desert:

I would like to add some ideas of my own on the ever growing litter problem. We might as well realize that so long as we are being sold on the merits of "one-blow" hankies, "no-deposit" beer bottles and cans, "disposable" diapers, "throw-away" milk cartons, etc., one of the prices is going to be an increasing disposal problem. We certainly want it made clear that we're tired of burying the last fellow's junk when we use a campsite, but we don't think that any one group is to blame.

Here are two possible solutions to the mess: First, tax throw-away items proportionately to the extent to which they contribute to the litter—or, more properly, to the relative cost necessary to clean up their part of the mess. This would pay for roadside clean-up. It wouldn't be cheap!

Second, perhaps each car should have a trash container. This would lead to one more service on the part of our gas stations—bless 'em!—disposing of our trash. But it would certainly help keep our desert landscapes beautiful.

J. W. GILMAN

Portable Trash Sacks . . .

Sierra Madre, California

Desert:

In past months, *Desert Magazine* has carried numerous letters from nature lovers condemning the litterbugs who clutter our beautiful deserts with beer cans, kleenex and other trash. Property owners with highway frontage, motorists, hikers, campers and just plain desert lovers like myself have waxed indignant over the problem. There have been a few suggestions for cleaning up the highway-side mess, but no one seems to have given much thought to stopping the litterbugging before it begins—keeping the

apple cores, milk cartons and candy wrappers from sailing out of the car window and directing them instead to the trash cans where they belong.

Litter naturally accumulates during a long motor trip, and disposal presents a very definite problem. We have four young children and what with candy and drinks from paper cups and kleenex, bananas, oranges, pop and all the other items with throw-away wrappings, ten miles of desert driving can produce quite a pile of trash. The natural inclination is to toss it, piece by piece, out a handy open window.

We have solved our disposal problem as handily, yet we need suffer no

pangs of conscience that we are mar-
ring the beauty of the landscape. Our
solution? The lowly paper sack. We
always have several large ones in the
car, stock more when a long trip looms.
Kept on the floor this sack is inoffen-
sive, handy and easily thrown away
at the next service station stop. A
clean one immediately takes its place
for the next leg of the journey.

I think we might have less roadside
trash to worry about and fewer litter-
bugs to chide if more travelers ac-
quired the "trash sack" habit.

AMANDA JAHNS

Pity the Patient Burro . . .

Rio Linda, California

Desert:

In connection with the plight of the
inoffensive little burro, why not utilize
the emotional appeal of Gladys L.
Savage's unforgettable poem, "Pal,"
published in the June issue of *Desert
Magazine*? I have found that poetry
has an amazing power to move other-
wise unaffected persons.

We must use every means to pro-
tect this picturesque desert animal from
man's attempt to encroach upon the
few remaining strongholds of Nature
which remain to some extent unspoiled
by him.

MRS. WILLIAM BERG

*For Desert readers who missed
Gladys Savage's poem—*

PAL

*Patient little donkey,
Plodding through the sand,
Looking for tomorrow
And the promised land.
Land of golden nuggets
Or twisted wire gold,
Or maybe square cut emeralds
In a mountain's fold.*

*Keeper of the meal sack,
The coffee pot and pan,
The pick ax and the shovel
And the dreams of man.*

For the Desert Library . . .

Salinas, California

Desert:

In the January issue of *Desert*,
Gertrude K. Brown's letter extolling
Fitzgerald's "Rubaiyat of Omar Khy-
yam" was marred by a misprint in the
quatrain quoted. The last syllable of
"Worldly" was dropped, altering the
meaning of the verse. There is a
"world" of difference between "The
World Hope" and the "Worldly Hope
that men set their Hearts upon."

Another fine poem, rich in desert
imagery, is Sir Richard Burton's "Ka-
sidah of Haji Abdu." These two thin
books, "The Rubaiyat" and "The
Kasidah," should be in the glove com-
partment, saddle bag or pack sack of
every lover of the desert.

PAUL MINTON

The Rockhound Buyers Guide

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THE LAPIDARY JOURNAL

PALM DESERT, CALIFORNIA

Wildflower Shoots Bear Promise Of Brilliant Early Spring Display

It looks like another good wildflower year, according to early reports from *Desert Magazine* correspondents throughout the Southwest. All areas have had heavy fall and winter precipitation, and, barring unexpected frosts, the tiny green plants which appeared in December should bloom early and profusely.

"We have never seen the desert more green at Christmas time," wrote Julian M. King of Apache Junction, Arizona, late in December.

A. T. Bicknell, superintendent of Casa Grande National Monument, reports the highest precipitation in years in the Coolidge, Arizona, region. Rains were also above normal in Tucson, and Saguaro National Monument

promises another good display of annuals this year. "New leaves already have appeared on the pentstemons, tobacco and brittle bush," writes Superintendent Samuel A. King, "and alfilarie is in evidence everywhere."

Maurice Morgan, chief ranger at Borrego State Park, California, and Frank R. Givens, superintendent of Joshua Tree National Park, also predict excellent flowering seasons in their areas. Givens expected flowers to appear in February at lower elevations, particularly along the monument road through Pinto Basin and below Cottonwood Spring.

Early annuals had appeared on Death Valley dunes, but cold December nights were retarding growth, Ed-

ward E. Ogston reported January 1. Desert holly was in full bloom and promised to quite showy through January.

Tiny green shoots have sprouted everywhere on the dunes around *Desert Magazine's* pueblo in Palm Desert, and a good display of verbena and primrose in the Coachella Valley and excellent desert lily flowering around Mecca are indicated.

THE *Desert* MAGAZINE CLOSE-UPS

Prospecting is a hobby with Robert L. Garman, who wrote "Quest for the Peralta Gold" for this issue of *Desert Magazine*. His first mineral forays were made many years ago with an uncle, a pioneer mine operator in Colorado. Since then he has prospected in almost every state west of the Rockies.

Garman was born and raised on a Nebraska farm. As a small boy he would watch covered wagon trains pass on the road along his parents' place, on their way to settle in the West. Garman himself decided to stay in Nebraska and took up a homestead in the western part of the state, a scant mile from the old Oregon Trail and not far from historic Scotts Bluff.

In 1936 he retired from active work and began tramping the western trails in search of gold and minerals.

Exploring — in boats, on bicycle and afoot—has been a lifelong hobby of Clinton R. Hull, who relates one of his adventures in "Boat Trip in Mojave Canyon" on page 11 of this issue of *Desert Magazine*.

One of his first long treks was made in 1916, while he was living in Idaho. With a 50-pound pack, a .22 rifle and his fishing rod, he bicycled across Galena Summit of the Sawtooth Mountains—through what is now Sun Valley—to the headwaters of the Salmon River. He has been rambling over the country ever since.

An electrician by trade, Hull has always wanted to write, but he didn't find time for it until his family was grown. He began writing as a hobby 16 years ago, took up photography in 1937 to illustrate his articles. He was boating editor for *Outdoorsman* magazine for 12 years.

Hull now lives near the beach—in Costa Mesa, California. His chief hobbies are boats, photography, fishing, traveling by car and trailer through the West—and running the white water rivers.

Hard Rock Shorty OF DEATH VALLEY



"Yep, lots o' ducks come in here in winter," Hard Rock Shorty was telling the sportsmen who had stopped at the Inferno store to get their gas tank filled.

"Usta be good huntin' down at Badwater in the ol' days. But of course the park rangers stopped all that when Uncle Sam made a national monument outa this place.

"My old partner, Pisgah Bill, tried to start a duck farm one winter. He had a smart idea the way he told it. He would ketch a lot o' them mallards, clip their wings, and put 'em on the little pond below the spring up Eight Ball crick. An' that way he would have fresh meat all winter when he wuz workin' his lead mine.

"Bill planned everything in advance. He had the freighter bring in a couple o' sacks of grain, an' a pair o' snow shoes. Then when October came and the ducks started flyin' south Bill packed his outfit on a couple o' burros and headed fer Badwater. There's a big bar o' quicksand near the pond down there, and Bill spread grain all over the sand—enough to feed a whole army o' ducks.

"An sure enough, along late in the afternoon the ducks began comin' in, and when they found grain along the edge o' the water they waddled out on the bar lookin' fer more of it. But when they hit that quicksand their feet went down. Soon there wuz a whole flock of 'em mired down in that sand. Couldn't walk an' they couldn't fly.

"Then Bill put on his snowshoes and walked out there an' began rescuin' them ducks. He wuz too busy harvestin' ducks to clip their wings. He'd gather up as many as he could carry, tie a string on their legs, and bring 'em back an' tie 'em to the pack-saddle on the burro.

"Bill wuz bringin' in ducks by the dozen, and figgerin' what a fine lot of fresh meat he would have that winter. But he got too many ducks. He went out after the last armload—an' when he turned around to come back the burro wuz jest takin' off—an' the last Bill saw of that beast it wuz sailin' over the Panamint range—towed by more'n a hundred mallards.

"Bill? Yep he ate jerky and canned sausage that winter — jest as he had been doin' all the other winters."

GUIDE MAPS TO

For 15 years the Desert Magazine staff has been mapping the desert areas. Over 300 of these maps have appeared in past issues of Desert, and most of these maps are still available for those who plan to travel the desert country. They are the most accurate

• Lost Treasure Areas • Ghost Towns • Gem and Mineral Fields • Historical Landmarks—to forgotten trails and the newest roads

guides obtainable to a thousand interesting places.

Here is a listing of back issues now available, carrying the maps indicated, and also many other maps not mentioned in this list, which has been classified for easy reference:

FOR THE LOST TREASURE HUNTER . . .

(3 of these stories include maps)

- Aug. '46—John D. Lee's lost gold mine, Ariz.
- Sep. '47—His Compass Was a Burro's Tail, Ariz. MAP
- Feb. '48—He Guards the Secret of Turquoise Shrine
- Sep. '48—Haunted Silver in Arizona. MAP
- Jan. '49—Lost Squaw Hollow Gold Ledge, Ariz.
- Jun. '49—There's Placer Gold in the Desert Bajadas.
- May '50—Swamper's Gold.
- Jul. '50—Lost Mine of Coconino.
- Sep. '50—Silver Mine of the Old Opatia Indians.
- Oct. '50—Gold Pockets in the Santa Rosas.
- Nov. '50—Lost Silver Mine of the Jesuits.
- Dec. '50—Lost Silver in Monument Valley.
- Feb. '51—Black Nuggets in Phantom Buttes.
- Mar. '51—Where Slave Miners Toiled for Silver. MAP
- Apr. '51—Pedro's Lost Mine.
- Jul. '51—Lost Loma Gold.
- Aug. '51—Cave of the Golden Sands.
- Sep. '51—Lost Treasure of the Irish Cavalier.

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- Jun. '46—Hopi Trek to the Land of Big Water. MAP
- Jul. '46—Palm Hunters in the Inkopah Wastelands. MAP
- Freak Rocks in Nature's Wonderland.
- Aug. '46—We Camped at Cantu Palms. MAP
- Sep. '46—We Found the Hidden Shrine of Old Makai. MAP
- Aug. '47—Mastodons of Moab. MAP
- Sep. '47—Oasis on Bear Creek. MAP
- Oct. '47—Don't Knock at a Hogan Door. MAP
- Sep. '48—Haunted Silver. MAP
- May '49—Great Salt Lake. MAP
- Jun. '49—Ancient Artists Lived on Rattlesnake Peak. MAP
- Jul. '49—On Hassayampa Trails. MAP
- Aug. '49—Indian Country Trek. MAP
- Sep. '49—They Left Their Story in the Desert Sands. Map
- Oct. '49—19 Days on Utah Trails. MAP
- Nov. '49—19 Days on Utah Trails. (Cont.) MAP
- Dec. '49—Valley of the Cathedrals. MAP
- Apr. '50—Painted Canyon in Mecca Hills. MAP
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- Oct. '50—Forgotten Trails of the Old West. MAP
- Nov. '50—Sacred Mountain of the Tribesmen. MAP
- Dec. '50—Gold and Roses on Garces Trail. MAP
- Mar. '51—On the Trail to Picacho del Diablo. MAP
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- Jul. '46—Minerals at Calico. MAP
- Aug. '46—Fossils While You Wait. MAP
- Sep. '46—Gem onyx field, near Las Vegas, Nev. MAP
- Aug. '47—Agate, chalcedony, Fossil sprs., Arizona. MAP
- Oct. '47—Collecting crystals, Topaz mt., Utah. MAP
- May '49—Geodes, Chalcedony, Southern Arizona. MAP
- Jun. '49—Jasper along Highway 60. MAP
- Jul. '49—Sandspikes on the border. MAP
- Aug. '49—Uranium Strike in Petrified Wood. MAP
- Sep. '49—Agate, jasper, on Devil's Highway. MAP
- Oct. '49—Fossils in Coyote Mountain. MAP
- Nov. '49—Apache Tears at Bagdad. MAP
- Dec. '49—"Lakeview Diamonds" in Oregon. MAP
- Mar. '50—Fossil Wood in Utah. MAP
- Apr. '50—Dinosaur Bones in Colorado. MAP
- May '50—Wonderstones in Nevada. MAP
- Jul. '50—Agate Hill in Utah. MAP
- Aug. '50—Gem Field Near 29 Palms. MAP
- Sep. '50—Apache Tears in Nevada. MAP
- Oct. '50—Crystal Calcite in California. MAP
- Nov. '50—Agate Hunters in California. MAP
- Dec. '50—Gold on Garces Trail. MAP
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- Feb. '51—Fossil Wood in Nevada. MAP
- Mar. '51—Gem Fields on the Mojave. MAP
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THE *Desert* MAGAZINE

Palm Desert, California

Here and There on the Desert

ARIZONA

Historic Monument Moved . . .

WICKENBURG—The rerouting of U. S. Highways 60-70 west of this city made necessary the moving of the historic stage coach monument which was dedicated in April, 1937, in memory of stage passengers massacred in an Indian attack near the spot. In moving the monument it was discovered that water had damaged or destroyed historic cornerstone documents placed in it at the time of its erection. These were replaced by officers of the Round Up Club.—*Wickenburg Sun*.

More Cloud-Seeding Planned . . .

CASA GRANDE — Increase in the use of rain-making generators in this area is indicated by the decision recently of the San Carlos Irrigation and Drainage district to install three of the plants, at Coolidge dam, Seventh Circle, and Arsenic Tubs. The latter site is on the San Carlos-Apache Indian reservation, but the installation was approved by the Indians. While the use of generators to seed the clouds with silver iodide is still in the experimental stage, it is being practiced by the Salt River project and will be continued until a decision is reached as to its value.

Yucca Provides New Industry . . .

SAFFORD—Ray Crandall, an enterprising Boy Scout executive in Arizona has developed a new source of income—the sale of yucca sticks and slabs for use in starting a fire without matches. It has been found that the soft fibrous yucca stalk is about the best known wood for starting a fire by the friction method, and since every Boy Scout must be able to start such a fire to earn a merit badge, the demand is nation-wide. Recently one shipment of sticks and slabs amounted to 20,000 pieces.—*Arizona Republic*.

May Fill Arizona Reservoirs . . .

PHOENIX—Weather bureau forecasts that rainfall in Arizona would continue above normal through much of January, have indicated the possibility that for the first time in 12 years the irrigation storage reservoirs in the state would be overflowing, according to Louis R. Jurwitz, U. S. meteorologist at Phoenix. On December 18 the water in storage on the Salt and Verde rivers amounted to 1,360,000 acre feet. Their maximum capacity is 2,000,000.—*Arizona Republic*.

Hopis Protest Candy "Bombs" . . .

WINSLOW — "Operation Navajo" conducted just before Christmas by the Civil Air Patrol in northern Arizona brought gratitude from the Navajo Indians, but a protest from the Hopis. As a test of their efficiency in flying emergency missions 37 planes working out of this city dropped 600 small parachutes on the Navajo reservation, distributing candy, toys, tobacco and other gifts. The operation was intended to include the Hopi pueblos which are surrounded by Navajo lands. In a letter protest, the Hopi leaders wrote: "If this project (Operation Navajo) includes the Hopi land, we wish to protest the use of our sacred homeland without our consent for such practices by the Civil Air Patrol because of our traditional and religious stand. Although we appreciate the generosity of the good people of Arizona and other states to help the Indians, and perhaps the good intentions of the Civil Air Patrol, yet we will not allow this bombing of our sacred homeland and villages with candy, toys, food, clothing, etc. We want to continue to provide our children with such things in our own way."—*Tombstone Epitaph*.

Says Noxious Weeds Are Gaining

LITCHFIELD PARK — Declaring that the Arizona ranges are carrying 50 percent fewer livestock than they

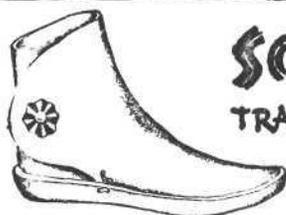
did 26 years ago, Frank Gyberg told a gathering of soil conservationists here recently that the preservation of the range is one of the most important economic problems confronting the Southwest. "Noxious weeds and plants are moving in on soil that formerly supported edible grasses," he pointed out, "and drouth and over-grazing have speeded up the process of destruction."

To Have State Indian Commission

PHOENIX—Since the federal government has announced a policy which involves gradually turning the affairs of the Federal Indian Bureau over to the states, Gov. Pyle of Arizona has promised the Indian Tribal Council in his state that he will name a state commission on Indian affairs. Such a commission is needed, Gov. Pyle said, to provide liaison between the various tribes and the state government. Arizona now has a suit pending against the federal government to determine whether the state or Uncle Sam is to finance the cost of including Indians in the state's welfare program. The estimated cost to the state is \$800,000.—*Arizona Republic*.

Townsite Is Abandoned . . .

CHANDLER — Established 24 years ago, the little town of Higley on the Chandler-Williams Air Force base road has ceased to exist. The action abandoning the 18-acre townsite was taken by the county board of supervisors on petition of M. J. Dougherty who owns the land. Residents, who operate a grocery store and service station protested the action, but were over-ruled.



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CALIFORNIA

Reservations to Be Abolished . . .

INDIO—Mission Indians on three small reservations in Coachella Valley are in the process of acquiring private title to the lands which they have held previously as communal property. Under Public Law 728, passed by Congress in 1950, the Indian Bureau was directed to allot no more than 40 acres each to the Indians, and to those classified as capable of handling their own affairs a clear title will be issued. "We are in the process of putting the Indian Bureau out of business in California," said C. H. Perdew, district agent for the Mission Indians, "and putting the Indians in business for themselves." The tribes affected are the Torres-Martinez, Cabazon and Augustine groups. — *Date Palm*.

More Salton Sea Damages Claimed

COACHELLA—A third claim for damages against the Imperial Irrigation District and the Coachella Valley County Water district due to rising waters in Salton Sea has been filed by Roy Hunter of Desert Beach. Hunter's claims now total \$360,000. According to the complaints the rising water level in the sea has been caused by the dumping of surplus water from the irrigation systems in the two valleys. The level of the sea on December 1 stood at minus 237.91 feet. Officials of the Imperial Irrigation district have been quoted as stating that the water level may continue to rise until it reaches the minus 220-foot level—approximately 18 feet higher than the present level.

Fossil Birds Found Near Barstow . . .

BARSTOW — Fossil remains of prehistoric birds said to have resembled the flamingo have been collected in this area by Richard Tedford and Robert Shultz, paleontologists of the University of California at Los Angeles. They came from Upper Miocene beds known as the Barstow Syncline. The fossil collection also included species of wild ducks, quail, hawks and gulls. The material found was well petrified but very fragmentary. The collection was turned over to Dr. Loyce Miller of the biology department at UCLA for identification. — *Inyo Independent*.

ALPINE: 30 miles east of San Diego on Hwy. 80: 185 acres of subdivision or dude ranch view land. Abundant water source, \$85,000. 5 acres view with elaborate improvements, setting for a rest home \$28,000. Ocotillo Desert Resort: 26 miles west of El Centro on Hwy. 80: 2 acres motel site, \$2,000. Residence lots 100x100 ft., \$225. Business lots from \$400 up. Mutual water right \$50.00. Send for circular, John C. Chalupnik, Alpine, California.

Cement Plant Fight Flares Again . . .

PALM SPRINGS — Renewed efforts to block the erection of a cement plant on the slope of the San Jacinto mountains near this city were made recently when the Riverside County Planning commission, acting on the petition of local residents, recommended to the county board of supervisors that 1600 acres of land at the site of the proposed cement works be placed under zone control. This action follows long and bitter controversy between owners of resort property in this desert town and Samuel Guiberson, said to be a Texas millionaire, who acquired right to the land several years ago and announced that a cement plant would be erected. The contention of local property owners is that the dust and smoke from a cement mill would seriously affect property values here.—*Riverside Enterprise*.

Anza Park Is Popular . . .

BORREGO SPRINGS — Increasing popularity of the Anza Desert State Park was indicated when Chief Ranger Maurice Morgan announced the visitor list for 1952 totalled 76,540 persons compared with 50,764 on the same date in 1951. Kenneth Stanley, assistant ranger, and Orville Short, deputy ranger, have been assigned to permanent duty in the park.—*Borrego Sun*.

Pegleg Hunter Is Honored . . .

WILLITS—Henry E. W. Wilson, now a resident of this community, has been elected president of the Treasure Trove Club of New York for 1953, it was announced recently. Wilson began looking for the Lost Pegleg Gold mine in 1901 and has continued his search intermittently since then. The Treasure Trove Club elected J. Frank Dobie, writer and professor of history in the University of Texas at Austin as Mr. Treasure Hunter for 1953, succeeding Lowell Thomas who held that honor during 1952.

Refuge Established for Condors . . .

LOS PADRES NATIONAL FOREST—This area in the High Sierras recently has been established as a refuge for the surviving members of North America's biggest bird — the Condor. According to the estimate of Game Biologist Don McLean of the California Fish and Game commission there are only about 150 of these birds living. Once plentiful in California, they were slaughtered during the many years when they had no legal protection. They mate and produce one egg every two years. Hence their comeback under the law passed in 1913 to protect them is very slow.

Elk Herd Increasing . . .

BISHOP—There are now 220 Tule elk in the Owens Valley according to a count recently made by airplane by the California Fish and Game department. The figures represent an increase of 23 elk during the past year. The census showed 40 bulls, 92 cows and 28 calves, the remainder being unclassified. Biggest segment of the herd was seen in the area from Division north to Red Mountain.

NEVADA

Settlers File Placer Claims . . .

TONOPAH — Squatters in Fish Lake Valley who were served with eviction notices several months ago, after the federal government had granted a 10-year grazing lease on their land to nearby Circle L ranch, have now, on the advice of their attorney, William J. Crowell, filed placer claims on the land which they have brought under cultivation. A test case is now pending in the U. S. District Court of Colorado to determine whether or not the rights granted under mining law can be extended to unrelated activities such as grazing and agriculture. The decision in this case will have important bearing on the status of the settlers involved in the Fish Lake Valley controversy.—*Tonopah Times-Bonanza*.

Blackbirds Classed as Predators . . .

CARSON CITY—According to a new ruling issued by the Nevada Fish and Game commission, blackbirds are no longer to be protected. They've been doing too much damage to agricultural crops. On December 8 the commission served notice that blackbirds are removed from the list of non-game birds and added to the list of predators. Henceforth they may be killed throughout the year.—*Fallon Standard*.

Cattle Prefer the Highways . . .

RENO—Nevada Public Service officials in the division of safety are concerned over the increasing hazard of stray cattle on the highways. Numerous reports of accidents in which motor cars collided with range cattle which had chosen the roadway as a place to bed down for the night, have caused the division to issue a warning to all motorists.—*Pioche Record*.

Churchill county board of commissioners have asked that the Nevada State Highway department make a survey of a proposed 34-mile cutoff route between Fallon and Lovelock. It was estimated in 1933 that the road, including three bridge structures, would require \$519,000.

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Nevada in Columbia Compact . . .

CARSON CITY—By action of the Columbia Interstate Compact commission in December, the state of Nevada was admitted as a member state. The action is not final, however, as both Nevada and Utah were omitted in the federal legislation which authorized the creation of the Columbia commission, which was set up originally to negotiate an agreement for division of the water resources of the Columbia. Before becoming qualified to act with the commission Nevada's participation must be approved by congress.—*Salt Lake Tribune*.

Davis Dam Is Dedicated . . .

SEARCHLIGHT — Mrs. Arthur Powell Davis, wife of the engineer for whom the project was named, was an honored guest in December when state and federal officials dedicated the \$119,000,000 Davis dam in the Colorado River. Construction of the dam was started in 1942 at a site midway between Hoover and Parker dams. After wartime delays it was completed in 1950 and the first generator put into operation in January, 1951. The dam forms a lake 67 miles long, backing water almost to the tailrace below Hoover dam. Michael Straus, commissioner of reclamation, was present

at the dedication, and among the 1000 visitors were Governors Pyle of Arizona, Warren of California and Russell of Nevada. Introducing Mrs. Davis, Commissioner Straus said: "It is a great pleasure to me to inform you that Secretary of Interior Oscar Chapman has decreed that, with your husband's vision having now become a reality, this project shall be known henceforth as Davis Dam. I hope the name remains as long as water flows downhill."

RENO—Seventy-six private collections of relics of pioneer Nevada, including 1612 separate items, have been presented to the Nevada state historical museum in 1952. They are housed in the state building in this city.

Forestry officials this season banned the cutting of Christmas trees on Mt. Charleston, asserting that the supply of trees in accessible areas had been exhausted, and that such trees as remained were needed to preserve the beauty of the mountain landscape.

NEW MEXICO

Treaty Rights Surrendered . . .

ESPANOLA—Indians in the San Juan Pueblo made an important concession to the white man's form of government recently when they passed a resolution granting state and county police officers the right to enter their reservation for all types of law enforcement, and giving the municipal judge in Espanola the right to handle their trials. In taking this action the Indians surrendered certain rights which originally had been reserved to them by treaty, that is, the right to handle certain types of law enforcement themselves in accordance with tribal custom.—*Aztec Independent*.

Disagree on Indian Release . . .

ALBUQUERQUE—There is widespread agreement among officers in the southwestern states that the U. S. Bureau of Indian Affairs eventually should be abolished, but there is considerable difference of opinion as to when and how this should be brought about. At the December conference of western governors at Phoenix, Gov. Lee of Utah and Gov. Thornton of Colorado expressed the opinion that the Bureau could be retired in 10 years. Gov. Pyle of Arizona estimated 25 years. Commissioner Dillon S. Myer of the Indian Bureau, speaking at the conference, agreed that his agency should be eliminated, but pointed out that many problems are involved. He cited the problems of roads, schools and economic security which are yet to be solved and asserted

that "the federal government dare not step out until it can leave with honor." The federal government is spending millions for the education of the Indians, it was stated, and this obligation cannot be relinquished until the states themselves are ready to take it over. Gov. Pyle was very emphatic in his assertion that the states were not ready yet to assume this obligation.

Projects Are Recommended . . .

WASHINGTON — Among the 10 projects recommended by Secretary of Interior Oscar Chapman for development in the upper basin of the Colorado, three are in New Mexico and the largest of these is Navajo dam in the upper San Juan near the Colorado line. The estimated cost of this project is \$63,000,000 and it would provide storage of 1,200,000 acres of water to be used for irrigation in the Shiprock and South San Juan projects. The other two projects which would affect both New Mexico and Colorado are the Pine River dam to provide water for 15,000 acres and the Hammond project. — *Farmington Daily Times*.

Many Seek Federal Job . . .

GALLUP — Various groups are seeking to bring what pressure they can to secure the appointment of a favored candidate as Indian Commissioner under the Republican administration. The advisory council of the Navajo Indians has endorsed Glenn L. Emmons, 57, a banker of Gallup. At a meeting in Phoenix the representatives of Arizona tribes cast five of their nine votes present for the endorsement of Ernest L. Wilkinson, president of Brigham Young University in Utah. Two votes were cast for Tom Dodge, Navajo Indian superintendent of the Apache agency at San Carlos, and two votes for Felix S. Cohen, Washington attorney for several Indian tribes.

UTAH

Jeep Posse Is Formed . . .

VERNAL — Formation was completed here recently of the Vernal Jeep Posse, a group of jeep owners who have banded themselves together for emergency service to the community. They will be available for fire-fighting, rescue work, sabotage control, search for lost persons and observation duties —any emergency task on behalf of the community which requires quick, vigorous action. Officers have been elected and a badge chosen to identify the members. The organization calls for a driver and a rider in each member jeep.—*Vernal Express*.

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New Secretary Will Decide . . .

VERNAL — One of the subjects which will be dumped into the lap of the incoming Secretary of Interior, Douglas McKay, is the highly controversial question of building the Echo Park dam in the Colorado River near the Utah-Colorado state line. In the budget which he submitted for the billion-dollar storage projects in the upper Colorado basin, Secretary Oscar Chapman included 10 dams, but for the Echo Park project he is reported to have recommended only that a further study be made. Opposition to the Echo Park project came from the Park Service and from conservation groups all other the West who protested against the construction of a dam within the Dinosaur National Monument.

To Cast 76-Foot Dinosaur . . .

VERNAL—A project which will require two years for completion is the casting of a huge dinosaur figure to be mounted on the east lawn of the Utah Field House of Natural History in this city. As a gift from the Carnegie Museum, the Field House has received the plaster molds of a 76-foot sauropod dinosaur, known as a *Diplodocus*, and the cast is to be made in this mold. Several months' time

will be required to prepare the molds and complete the cast, and as the Field House staff spends its summers in the field, the work is expected to occupy two winters.—*Vernal Express*.

Utah Makes Voting Record . . .

SALT LAKE CITY—Utah led all the states in the union last November in the percentage of votes cast at the presidential election. Of its eligible citizens 86 percent went to the polls. The national average was a little over 81 percent. Mississippi was low with 23 percent.—*Salt Lake Tribune*.

New Basic Policy Wanted . . .

SALT LAKE CITY—At their December convention in Chicago, the National Wool Growers' association went on record as opposing any move to reorganize the department of agriculture along lines proposed by the Hoover commission, until a new basic federal policy governing public lands is formed. Among other items of business the sheepmen asked that the Bureau of Land Management be more diligent in the prevention of livestock trespass on public lands. — *Battle Mountain Scout*.

Two Vernal women were among the 25 persons awarded permits to hunt elk in the Brown's Park area this season, and both of them, Isla King and Edytha Johnson, were successful in getting 500-pound bulls. The hunt was held under the supervision of game wardens.

Squatters on School Lands . . .

SALT LAKE CITY—Regents of the University of Utah recently discovered that lands at Ft. Douglas which were acquired from the government several years ago are being occupied by squatters who have planted gardens and installed tennis courts and parking lots. The regents expressed no objection to the land being put to beneficial use, but in order that there be no cloud on the school's title to the property it was proposed that a nominal rental be charged. — *Salt Lake Tribune*.

High Water Level Reported . . .

Ground-water levels in Northern Utah reached a record high stage in December, according to the U. S. Geological Survey. Levels were above normal in all parts of the state except the southwest area. Level of Great Salt Lake dropped some, but was still above average.—*Salt Lake Tribune*.

BLANDING — Publishers of the San Juan Record and the Dove Creek Press at Dove Creek, Colorado, recently have announced the consolidation of the two weekly newspapers.

Keep Those Maps!

The maps published monthly in *Desert Magazine* — maps to ghost towns, gem and mineral fields, historic landmarks and interesting people and places—are a treasure house of information for those who like to follow the motor roads to out-of-the-way places.

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PALM DESERT, CALIFORNIA

TRUE OR FALSE ANSWERS

Questions are on page 24

- 1—False. The Navajo women do most of the weaving.
- 2—False. Dinosaur National Monument is in northeastern Utah.
- 3—False. Pauline Weaver was a man—a Mountain Man.
- 4—True. 5—True.
- 6—False. Shoshone Indians were living in Death Valley before the Jayhawker party came that way.
- 7—True.
- 8—False. The Smoki clan is composed of business men in Prescott, Arizona.
- 9—True.
- 10—False. The Kangaroo rats normally come out only at dusk or after dark.
- 11—True. 12—True.
- 13—False. Canyon del Muerto is a tributary of Canyon de Chelly in northeastern Arizona.
- 14—True.
- 15—False. Marcos de Niza's quest for the Seven Cities of Cibola failed.
- 16—False. The Colorado discharges much the larger annual flow.
- 17—True.
- 18—False. Navajo Mountain is on the Navajo reservation.
- 19—True. 20—True.

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Amateur Gem Cutter

By LELANDE QUICK, Editor of The Lapidary Journal

Within the last month there seems to have occurred an intense interest in how to make baroque gems. At least a dozen letters have come to us asking how this form of the lapidary art is achieved. We confess that we do not know exactly how the gems are polished except that they are tumbled. The idea has caught on so much that a manufacturer in the east has brought out a tumbling machine for sale for about \$100. A postage paid and self addressed envelope will bring the name and address of the manufacturer to any interested reader.

The term baroque (pronounced bah-roke) is generally accepted in the gem trade as a description for pearls of uneven contour. We have not noticed the use of the term in gem literature until about a year ago when baroque gems came into the trade. Today these gems are very popular indeed and we noticed that all the stores featured them in holiday gift advertising. They even appealed to our Helpspend and so we sallied forth in the local marts to look for some and we were just about to settle for a nice bracelet of baroque tourmalines for the unbelievable price of only \$2.95 when our natural skepticism at such a small price for so much caused us to examine the “gems” more thoroughly. They were evidently glass simulations because so many faces were suspiciously alike. The feathers that would naturally be present in any tourmaline used for the purpose were probably achieved by heating the finished beads and plunging them in cold water. The sales person couldn’t help us however because she had never heard the terms baroque or tourmaline and we had no wish to bore her.

As we recall the situation, the first baroque jewelry was offered less than two years ago in the form of pieces of amethyst and aquamarine that an importer had left over from Brazilian shipments that were so feathered and fractured they could not be used for cut gems or even poor quality mineral specimens. A quantity of these were placed in a tumbler and the rough edges were thus ground away so that the result was a batch of gemstones with the appearance of having been tumbled on the beach by the ocean waves for centuries. When these were polished, drilled and strung into bracelets and necklaces they were most attractive indeed and they met with instant favor in the stores in Los Angeles.

At this writing we are unable to tell how the process is achieved for the commercial people aren’t telling of course and we have not uncovered any amateur with sufficient experience to offer any method we can publish. We are having correspondence with several persons who are playing with the baroque idea and we will publish what appears to be the best method in the near future. If any reader has any successful experience we would appreciate hearing of it. We recently had a call from Los Angeles from a man who is introducing a new idea—not tumbling at all but simply stirring them in an arrangement attached to the kitchen mixmaster. It’s so simple that all you have to do is set a batch and go to bed and when you awaken in the morning there is a fine lot of baroque gems. Hmmm!

Last year in February our local gem and mineral society sponsored the first Desert Midwinter Rockhounds Fair with great success indeed. In two days 7017 people came to our *Desert Magazine* Pueblo and we closed the exhibits at six o’clock. This year we are unable to hold the affair in the Pueblo because in the meantime a bank is making temporary use of the extra space in the building and this has necessitated looking elsewhere for a show room. We have made arrangements with the Riverside County Fair and Date Festival people to rent two large buildings at the Fair grounds in Indio, 11 miles away, where we can present a much larger show and have room for many more commercial exhibits than we had last year. The date has been advanced almost a month so that a trip to the show coincides with what promises to be the greatest wildflower display the desert has seen for many years because we are having so much rain. It looks from here as if our annual rainfall will be more than three times the normal amount and that will bring forth such a profusion of flowers that the tourist travel will be unusual.

Dropping the term Midwinter then, we are having our second annual Desert Rockhounds Fair on the 14th and 15th of March. While it will be sponsored by the Shadow Mountain Gem & Mineral Society of Palm Desert we are hoping to enlist the cooperation of all eight societies in our desert or at its borders. As chairman, commercial exhibitors should direct inquiries to us and advise how much space they wish so that we can effect a complete plan by February 15. More space has already been tentatively reserved than we had last year but we believe there will be plenty of room.

This exhibit will open a long series of gem and mineral shows in 1953 that gives every indication of being the biggest year the hobby has enjoyed. The National Federation of gem and mineral clubs will combine with the California Federation in the biggest show of all at San Diego on July 17, 18 and 19. This will be sponsored by the San Diego Mineral & Gem Society. Then on August 14, 15 and 16 the new Lapidary Association will present its first annual lapidary show in the big auditorium at Long Beach. The members of the Association drew lots for three years to come to see which of the member societies would sponsor the program. In 1953 the following societies drew the first place—Gem Cutters Guild of Los Angeles, Long Beach Mineral & Gem Society, San Pedro Lapidary Society and the Old Baldy Lapidary Society. This show will be managed commercially by the American Gem & Mineral Suppliers Association, who will also handle the commercial exhibits of the Northwest Federation show at Portland over the Labor Day week end. With the vast know-how of the San Diego society for the first mentioned show, and the dealers’ own organization for the latter two, all of these shows are assured of huge success. ’53 looks like the biggest year yet for America’s fastest growing hobby.

Gems and Minerals

FAMOUS SUTRO COLLECTION IS DISPLAYED NEAR INDIO

Motorists traveling on Highway 99 between Indio and Oasis, California, have the opportunity to see the famous Sutro mineral collection, now housed in the former John Hilton gem and art shop. The Hilton shop was purchased several months ago by Charles J. Hansen who refurbished the place and installed the Sutro collection which he now owns.

For three quarters of a century the Sutro collection of minerals and gems was one of San Francisco's sightseeing attractions. The collection was started by Adolph Sutro, world famous engineer and mayor of San Francisco during the gold rush days.

Sutro was the builder of the Sutro tunnel that drained water from under the Comstock Lode and other diggings in and around Virginia City, Nevada, and it was during the construction of this great project that Sutro started his collection of mineral specimens that he continued through the years. His own ships would pick up and exchange stones and gems in many foreign lands.

In 1935 Charles J. Hansen bought the collection and has since acquired many outstanding specimens from the private collection of Sam Livingstone, San Francisco mining engineer and merchant, rocks from the personal collection of the late Walter Bradley, well known California state mineralogist, as well as stones and gems personally collected by Charles Hansen.

These include the second largest single crystal amethyst in the United States, recently acquired from Uruguay, smoky quartz of pure gem quality from St. Gothard, Switzerland, and some beautiful jade carvings from China.

HUGE RUBY PURCHASED BY LOS ANGELES DEALER

Returning in November from a trip around the world in quest of unusual gem stones, Harry Kazanjian of Los Angeles brought back from London a gigantic uncut ruby weighing 1151 carats. Referring to his trip, Kazanjian said:

"I had set out on my trip with the idea of acquiring unusually large gem stones, in which we specialize, but I was disappointed by my experiences for the first 35,000 miles. In all the Orient there is so much tension, fear and economic uncertainty that no one wishes to part with gem stones, which now form the only really secure form of wealth. I found that money of any kind — even American dollars—is of virtually no value in comparison with gems. It is possible, of course, to buy all sorts of junk jewels but the really good stones are simply not for sale."

After the disappointments of his trip through the orient Kazanjian and his wife reached London and there, unexpectedly, they learned about the huge ruby. The stone is a deep crimson, faintly translucent and surprisingly free of the imperfections which so often characterize rubies.

Harry Kazanjian and his brother James are Los Angeles importers and cutters of diamonds and other precious gems.

NEW INSTRUMENT WOULD HELP FORECAST EARTHQUAKES

Speaker at the December meeting of the Mineralogical Society of Southern California at Pasadena was Dr. Hugo Benioff of the California Institute of Technology's seismological laboratory. Slides were thrown on the screen as Dr. Benioff described the different types of earth movements and the stresses which cause quakes.

Dr. Benioff is developing a new instrument designed to measure the stress on the earth's crust preceding an earth movement. The instrument will consist of a fused quartz tube approximately 100 feet long and suspended between two concrete piers firmly embedded in the earth. The tube will be attached to only one of the piers and any movement of the tube due to stress on the earth's crust will be recorded by highly sensitive instruments.

Dr. Benioff believes that by keeping a constant record of this measured stress it may be possible in the future to predict with some degree of accuracy the approximate time of an earthquake.

NEW BULLETIN COVERS CALIFORNIA MINERALS

A new supplement to Division of Mines Bulletin 136, *Minerals of California*, has just been released by the Division of Mines. The supplement, which brings up-to-date the listing of minerals found in California, was written by Joseph Murdoch and Robert W. Webb, authors of Bulletin 136.

The supplement lists minerals alphabetically and gives the localities in which they have been found. A bibliography included with the report lists references that discuss California mineral localities. It embodies all information in the first supplement—issued in the California Journal of Mines and Geology, October, 1949—and should be of interest to miners, prospectors, geologists, and mineral collectors alike.

Bound in red paper, the supplement consists of 46 pages and is priced at 35c, plus 3 percent tax for residents of California. May be obtained from California Division of Mines, Ferry Building, San Francisco.

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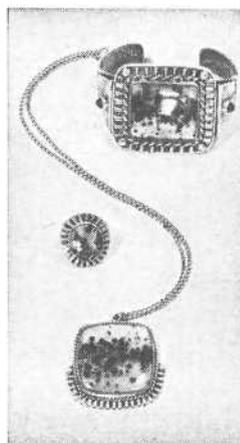
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GEMS AND MINERALS, collecting, gem-cutting. Illustrated magazine tells how, where to collect and buy, many dealer advertisements. Completely covers the hobby. The rockhound's own magazine for only \$2.00 year (12 full issues) or write for brochure and booklist. Mineral Notes and News, Box 716A, Palmdale, California.

GENUINE TURQUOISE: Natural color, blue and bluish green, cut and polished cabochons—25 carats to 10 stones according to size) \$3.50 including tax, postpaid in U.S.A. Package 50 carats (10 to 20 cabochons) \$6.15 including tax, postpaid in U.S.A. Elliott Gem & Mineral Shop, 235 E. Seaside Blvd., Long Beach 2, California.

McSHAN'S GEM SHOP—open part time, or find us by directions on door. Cholla Cactus Wood a specialty, write for prices. 1 mile west on U. S. 66. Needles, California, Box 22.

ROCKHOUNDS, ARCHEOLOGISTS and collectors of Indian relics are discovering that Southern Utah is a rewarding section to visit. Write for a free folder. Ranch Lodge Motel, Kanab, Utah.

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RADIOACTIVE ORE Collection: 6 wonderful different specimens in neat Redwood chest, \$2.00. Pretty Gold nugget, \$1.00, four nuggets, \$2.00, choice collection 12 nuggets, \$5.00. Uranium Prospector, Box 604, Stockton, Calif.

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

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CABOCHONS: genuine imported Agates, Carnelians, Rose Quartz, Lapis Lazuli, Tiger Eye, etc., beautifully cut and polished. Oval stones in sizes from 10 mm. to 16 mm. 25c each. Minimum order \$1.00. Pacific Gem Cutters, 424 So. Broadway, Los Angeles, California.

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In November the Rock and Gem Club of Fallon, Nevada, was field trip host to the Eldorado Mineral Society of Placerville, California. The joint groups traveling in a caravan visited Brady Springs where they found geodes, and Fernly where specimens of petrified wood were secured.

Officers elected by the Wasatch Gem Society in Utah are: Henry Fisher, Murray, president; Kenneth R. Tanner, Salt Lake City, vice president; Mrs. Elliott Bird, 1413 Emerson Avenue, Salt Lake City, secretary and treasurer; W. H. Saylor, Dr. B. D. Bennion, K. O. Stewart and Howard Hanks, directors.

Dr. Hugh D. Miser of the U. S. Geological Survey recently described to the Oklahoma Mineral and Gem Society in Oklahoma City the procedure in the making of a new geological map of the state. It required four years of work by 80 geologists and 40 draftsmen.

Subject of the talks scheduled for the December meeting of the Minnesota Mineral Club at Minneapolis was "How to Get Rich Prospecting for Uranium on the Colorado Plateau." Speaker was to be Dr. John W. Gruner.

Scheduled for the January program of the Nebraska Mineral and Gem Club of Omaha is a colored picture program to be shown by Sharpe Osmundson and Carl Hutchens, featuring their trip through old Mexico.

Ye Old Timers' Mineral Club of Vista, California, is to take a vote on lowering its minimum age limit to 50 years. Heretofore only the 60-year-olds have been eligible, but President Earl M. Van Deventer favors the lowering of the age restriction.

Oscar Branso, gemologist of Albuquerque, entertained the Gem and Mineral Society of Santa Fe, New Mexico, with an illustrated lecture on mineral collecting in old Mexico in November.

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MOJAVE DESERT GEMSTONE — Send for price list and description of beautiful Gemstones from many parts of world. Sold with satisfaction or money back guarantee. We sell Highland Park Lapidary machinery, Congo reversible blades and supplies. Write for literature. San Fernando Valley Rock Shop, 6319 Lindley Ave., Reseda, California.

LAPIDARY GROUP TO HOLD ANNUAL SHOW MARCH 7-8

Mazicopa Lapidary Society of Arizona plans to hold its 4th annual Gem Show and Exhibit Saturday and Sunday, March 7-8 at the Arizona state fair grounds in Phoenix. The show will be open from 10 a.m. to 10 p.m.

In addition to gem and mineral exhibits there will be demonstrations in the use of all equipment used in lapidary work, including faceting. Silver work also is to be demonstrated.

No admission is to be charged. For information write to W. N. Moore, publicity chairman, 1816 E. Whitton avenue, Phoenix.

Supplies of jade are becoming scarce, according to the report of Martin S. Rosenblatt, oriental art dealer in San Francisco, who was speaker at the meeting of the Gem and Mineral Society of San Mateo County, California. It is almost impossible now to get good jadeite out of Burma, and New Zealand has prohibited the exportation of its "green stone."

Tacoma Agate Club at Tacoma, Washington, celebrated its 12th birthday anniversary in November when 96 members were present. Feature of the evening's program was the discussion of earthquakes by J. W. Jones of the University of Washington.

Northern California Mineral Society in San Francisco collected jadeite at Clear Creek for its November field trip. Camping at an elevation of 3200 feet, the collectors found many dolomite rosettes. A huge jadeite boulder was found—too hard to be broken by an ordinary sledge hammer. Guide for the trip was Buck Bleifus.

The November meeting of the Dona Ana County Rockhounds, Las Cruces, New Mexico, included a lesson on quartz gem stones by Mildred Sanders, Bill Smith and Bernice Sandell. A special treat for this meeting was a talk by Dr. W. Andrew Archer who had spent eight months in Ethiopia in charge of plant exploration for our Department of Agriculture. A lesson on turquoise by Lois Olinger, Frank Olinger and Mr. and Mrs. N. Neut Jones was scheduled for the December meeting. It was reported that field trips to Picacho Peak by two groups totaling 19 members yielded much good cutting material.

New officers of the San Fernando Valley Mineral and Gem Society are: Henry Hasbach, president; E. G. Lilleberg, vice-president; Mrs. Laura C. Tuteur, secretary; Miss Eleanore Lilleberg, treasurer.

Exchange of rocks among members at their December meeting was planned to usher in the Christmas season for the Colorado Mineral Society. Mitchell E. Gunnell was scheduled to speak on "A Mineral Collector's Potpourri."

MINERAL SOCIETIES EXCHANGE ROCKS AS CHRISTMAS GIFTS

Almost without exception, the gem and mineral and lapidary societies throughout the United States held Christmas parties some time during December. One of the most popular items on the Christmas programs was the giving of rocks as gifts, and many novel variations entered into this feature.

Some of the societies, which operate on the calendar year, made the election of officers for 1953 a feature of the Christmas program. Others staged pot luck dinners, followed by programs in which Christmas music was featured.

At their November meeting, the Southwest Mineralogists held an auction netting \$101.67 for their trust fund. Gordon Bailey accepted the chairmanship for their April Show.

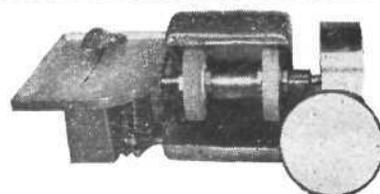
Officers elected for 1953 by the San Diego Lapidary Society are: Lee Weatherbie, president; Fred Grunner, first vice-president; John C. White, second vice-president; Ruth Weatherbie, secretary; Ada Harrison, treasurer; Helen Pegram, historian. Last field trip of the year for the San Diego Society was planned for December 7 in the Pinto Wash area. Honorary member, Donal Hord, famous as a sculptor, was given a scroll from the San Diego Chamber of Commerce in recognition of talent "Inspiring to Succeeding Generation."

The Monterey Bay Mineral Society, under the general chairmanship of immediate Past President Roscoe Russell, is planning its Sixth Annual Mineral and Gem Show to be held at the Y.M.C.A. Bldg. Salinas, California, March 7 and 8.

The annual banquet of the Everett Rock and Gem Club will be held on January 12 with Dr. Osborne, Curator of the Dept. of Archeology, University of Washington as the speakers.

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 Castle Dome, hard natural shape nuggets. Price per ounce \$1.00.
 Lost Mountain nuggets, bright blue. Price per ounce \$1.00.
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 Castle Dome chunk material. Price per ounce \$1.00. All of the above materials are impregnated to improve hardness. None are dyed. A majority will cut to advantage.
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Long Beach Mineral & Gem Society reports that one of their representatives, Jessie Hardman, was elected show chairman of the Lapidary Association show to be held in the Long Beach municipal auditorium in August, 1953. Long Beach will be co-host in charge of all individual and special exhibits for the show.

A field trip to the Chuckawallas for iris agate January 3 and 4 has been scheduled by the Compton Gem & Mineral Club. Bob Benefiel has resigned as two year delegate to the Lapidary Association because of heavy responsibilities.

Shark Tooth Hill, 10 miles northeast of Bakersfield was the location chosen for the December field trip of the Delvers Gem & Mineral Society, Downey. This deposit, while now on the side of a hill, was once the bottom of the great inland sea which covered what is now the Sacramento and San Joaquin Valleys.

Dr. Robert W. Karpinski, an engineering geologist of France, was scheduled to address the December meeting of the Chicago Rocks and Minerals Society on his "Experiences in Exploring for Minerals in French Indo-China." It was to be an illustrated lecture. Dr. Karpinski is now head of the geology department of the undergraduate division at the University of Illinois.

"Formation of Gem Materials" was the subject of George Merrill Roy's lecture at the November meeting of the Shadow Mountain Gem and Mineral Society. Roy is conducting an afternoon class of 40 on Rockology every Wednesday at the Palm Springs Evening High School, in addition to the evening classes twice a week. Richard Mitchell of Los Angeles and one of the top faceters of America answered questions at a faceting forum following a pot luck dinner of the club at its December meeting. He also showed his professional motion picture *Colored Film on Gem Cutting*.

One of the most distinguished members of the San Diego Mineral and Gem Society is Kenneth Parkinson, noted gemologist of Hull, England. He specializes in hard-to-get gem minerals, and makes an annual trip to Ceylon and other gem centers for rare and unusual stones.

Thirty members of the Mineralogical Society of Arizona at Phoenix took part in a November field trip to the Woodpecker mine. The management at the mine had provided 50 tons of fresh ore on the dump for the rockhounds to pick over. The January field trip was scheduled to be in the Vulture mine area.

RECOMPENSE

By RUTH GRANTHAM
Omaha, Nebraska

I hunted through the fields and woods,
I searched the secret valley;
I looked by every roadside ledge
And in the downtown alley.

I roamed on all the prairies wide,
I hiked high on the mountain;
I tramped through farm and ranch land
And near the city fountain.

But never have I found the thing,
My fondest hopes have faded;
No gemstone prize have I turned up
That could be highly graded.

And yet I found a treasure which
All other gems transcended;
I made a hundred rockhound friends
Before the search was ended.

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In the Rough:
Blue—small chunks—\$15.00 per lb.
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All above rough turquoise has matrix—more or less suitable for making cabs or nuggets.
Polished Spider-web cabs:
Fine quality oval or rectangular—Average 5 to 10 carats each—\$2.50 each
Minimum order—\$5.00, cash with order—sent postpaid.
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Etiquette

for the Rockhound
By DOMER L. HOWARD
Editor, the *Sooner Rockologist*
Oklahoma City, Oklahoma

Here are a few simple rules which, if followed, are guaranteed to make you about as popular as a cow that has been eating wild onions:

(1) If your host does faceting and has a collection of cut gems in Riker Mount boxes, be sure to leave a generous collection of your finger prints on each glass cover. A coy way of doing this is to exclaim, "Oh, isn't this one beautiful?" and then jab the glass vigorously with your index finger. It only takes about 15 minutes to clean one of these smears off a glass cover, so be generous with your finger prints.

(2) Another wonderful way to make your host grind his teeth in agony is to shake the Riker Mount vigorously to see if it really does hold gems satisfactorily. Of course, you may fracture a gem that he spent several hours cutting, but there is no reason why the guy should be finicky about his stuff, is there?

(3) If your host hands you a gem for inspection, do not cup it safely in the palm of your hand but grasp it nervously by the edges as though you were about to drop it any moment.

(4) When you approach your host's specimen shelves or cabinets, don't wait until he offers to hand you some specimen that you admire, but grab it. If it is a nice, crystal specimen, run your fingers up and down the smooth, highly polished terminations. Of course, dust is highly abrasive and you may do irreparable damage—but what the heck—it's only a rock, isn't it?

(5) When your host finally brings out his treasure of treasures and fondly offers it to you for your approval, nonchalantly reach into your pocket and bring out one of your bragging rocks and talk so much about it that you will be unable to hear your host's remarks about his favored piece.

(6) Never miss an opportunity to say, "Yeah, that's nice, but you ought to see the one that I have!"

The Hollywood Lapidary Society had the rare privilege at their November meeting of hearing their first president, Dr. Ronald W. MacCorkell, discuss the history of books devoted to gems. Dr. MacCorkell has in his collection about 400 books and pamphlets on gems and jewelry and with reference to starting a collection, remarked, "The books of today are the rare books of tomorrow." He traced the history of gem books still extant, beginning with the first written record, a poem entitled "Lithica," and continuing on through Theophrastus' "History of Stones" about 315 B.C.; the 37th book of Pliny's "History of the World," first century A.D.; two 12th century books by Arabian mineralogists; the "Book of Nature," the first gem book to be printed with movable type, in 1485; Tavernier's "Travels in India," 1670; Max Bauer's "Edelsteinkunde," from which practically all modern gem books stem; the writings of George Kunz; and G. F. Herbert Smith's "Gemstones."

At the November meeting of the San Jose Lapidary Society, Dr. Wayne E. Kartchner gave an instructive talk on how various colors are formed in gem stones.

Happy New Year to You

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Specimens with Fire, each..... .50
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PRECIOUS ROUGH FACET MATERIAL

1/2-lb. Precious Topaz, mine run..... 3.00
1/2-lb. Amethyst (Good Rich Color), mine run (Contains both faceting & cab material)..... 6.00
1/2-lb. Kunzite, mine run—facet & cab material..... 4.00
1/2-lb. Peridot, mine run—facet & cab material..... 8.00
1/2-lb. Sunstone, chatoyant copper tones..... 6.00
(Big % faceting, makes beautiful cabs.)

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1 lb. Chunk material..... \$6.00
Slabs—per sq. inch..... .50
18x25 mm. polished cabs..... 2.50

(Dealers write for prices on letterhead)
Please add postage to all orders, 20% Fed tax to slabs, rough facet material & cut stones, 3% California sales tax

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TEST IS SUGGESTED FOR THE CALCITE FAMILY

From the SMS Matrix, official bulletin of the Sacramento Mineral Society of California comes this formula for differentiating calcite from dolomite:

"Put a couple of drops of cold dilute hydrochloric acid on the bare mineral. If it contains calcite it will effervesce at once. If it does not effervesce freely, then scrape a little of the mineral into powder and try the acid again. If it is dolomite, the powder will effervesce.

"If neither solid nor powder effervesces, you do not have limestone, chalk, calcite, aragonite, dolomite, dolomitic limestone, and probably none of the other simple carbonate crystals. Better check a little closer for gypsum, barite, weathered chert, hornfels, or an altered igneous rock."

Officers of the Hemet-San Jacinto Rockhounds in California re-elected for the ensuing year were: Mrs. C. J. Nichols, president; John Fett, vice president; Mrs. Ethel Harwell, secretary-treasurer and federation director; Thomas Harwell, field trip chairman; C. J. Nichols, assistant field trip chairman; Mrs. Ruth Wagner, publicist.

The Midwest Federation of Mineralogical and Geological Societies is planning its 13th annual convention to be held next summer in St. Louis, Missouri. Theme of the convention will be "Meet Me in St. Louis." Unusual exhibits, a convention banquet, field trips and an address by the well known geologist, Dr. Albert J. Frank of St. Louis University, will be featured attractions. Convention chairman is K. E. Gibbons, 6421 Hobart Ave., St. Louis.

Pasadena Lapidary Society planned a field trip to Baron Wood in January, arrangements having been made by Al Stoltz, field trip chairman.

Fresno Gem and Mineral Society in California, is making plans for a show to be held at the fairgrounds cafeteria April 18 and 19.

The Lapidary Association met on November 19 at the Eleda Cafe in Los Angeles. Regrouping of the gem and mineral clubs which put on the annual shows in Long Beach was felt necessary for geographical reasons. The new system evolved consists of the harbor group, Long Beach, San Pedro, Compton and the Delvers; the bay group, Santa Monica, Gem Cutters Guild, Hollywood and Los Angeles; the foothill group, Glendale, San Gabriel, Pasadena and the Old Baldy Club. The harbor group will sponsor the first show next year, dates August 14, 15, 16, 1953.

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SANTA ROSA TO HAVE MARCH MINERAL SHOW

Spring show of the Redwood Gem and Mineral Society of Santa Rosa, California, has been announced for March 14 and 15 at the Barnett Motors building. More detailed announcement is to be made later.

The Santa Rosa society now meets on the second and fourth Wednesdays of each month in Room 12 of the Junior College, Pioneer Hall.

Coachella Valley Mineral Society has announced that it will put on another show at the Riverside County fair grounds in Indio, California. Glenn Vargas will be show chairman. The society's chuck wagon project has proven most popular. Donations recently included a big pressure cooker, two stoves and boxes for food and utensils which slip into the shelves in lieu of drawers. Since crystal hunters discovered Crystal Hill, this location has been so popular that another trip was scheduled for December 13-14.



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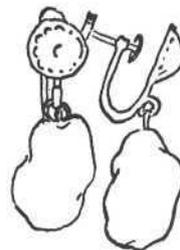
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By RANDALL HENDERSON

FROM THE office of Horace M. Albright, former director of the national park system and now president of a new organization known as Resources for the Future, Inc., comes the announcement that in March a conference will be held in Washington for the conservation and development of our natural resources.

Both the out-going president and the new president have joined in the call for this conference, the first to be held with White House cooperation since 1908.

The need for such a conference was disclosed in recent federal reports showing that the United States, formerly a raw materials surplus nation, has now become a raw materials deficit nation. We have been consuming our renewable resources—soil, minerals, forests and water faster than Nature can replace them.

Resources of the Future is a non-profit corporation sponsored by the Ford Foundation. The task they have undertaken is of interest to all Americans—the task of conserving or restoring resources which are essential to the economic welfare of future generations of Americans.

* * *

Far down in the southeast corner of Arizona, along the Mexican border, is Cochise County. I have a special regard for Cochise County for three reasons.

Historically, it is one of the most interesting counties in the Southwest—the ancient home of the Apache Indians, and more recently of some of the liveliest mining camps in the West, including Tombstone, Bisbee and Douglas.

Geographically, Cochise County, with its Coronado National Forest and its Chiricahua and Swisshelm Mountains has some of the most delightful scenic landscapes in the Southwest.

And the third reason is Weldon Heald. Portal, in Cochise County, is his home. Weldon is a long-time friend who writes occasionally for *Desert Magazine* and battles incessantly to keep the commercial interests from taking over all the beauty spots in the Southwest. Weldon is a conservationist—and I wish there were more like him.

Probably Weldon shared the concern I felt a few days ago when I picked up an Arizona newspaper and read about a conference in Douglas "to trailblaze a long range plan for new industry."

Seeking new industry is a very proper activity for a chamber of commerce. More industry brings more payroll money, more business for the merchants, and higher real estate values.

But in seeking new industry, I hope the Arizona folks in Cochise County will not make the mistake other chambers of commerce have made in years past—and for which they are now paying a tragic penalty.

Los Angeles County in California got the "new industry" bug also, more than half a century ago. And

with typical California zeal, the Angelenos went all out for their goal. They appointed committees to bring in tourists, and more committees to bring in factories. And all the committees did their jobs well, too well, in fact.

They promoted so many factories they had to plow under their gardens and uproot their groves and orchards to provide housing space for the workers. And now they have to have policemen on every corner to keep the channels open so the folks can get home from work in the evening. They breathe air that is poisoned with gas fumes, and while there are still many beauty spots left in Southern California the atmosphere often is so clouded with smog the folks who dwell there get only an occasional glimpse of them.

Tourists don't care for traffic jams and police restrictions and smog—and more and more of them are avoiding Los Angeles and making their winter reservations in Palm Springs and Tucson and Las Vegas.

Tourists are big industry, and Cochise County, Arizona, is one of the most delightful winter tourist areas in the United States. I hope the folks there will keep it that way. But they must face the proposition that tourists and smokestacks won't mix for long. If they want tourists, they must do as Palm Springs is doing—keep the smokestacks out. If they want smokestacks, then they might as well discharge the committee on tourist industry.

I am confident that a more enlightened generation of Americans at some future time will find a way to keep the poison fumes from flues and exhaust pipes and chimneys out of the air we breathe. But that will not come as long as we permit the powerful lobbies of commercial interests to have a voice in the halls where the laws are made.

I hope my Arizona friends will pardon my breach of good diplomacy—a Californian trying to tell an Arizonan how to manage his affairs. But in this big desert which is my home, state lines do not mean much. I want the air of the desert country kept clean and pure—and while it seems that smokestacks are an essential part of civilization at this stage, I am quite content to let the city dwellers have them, while out here we can still look across our valley and see the distant horizon.

* * *

As this is written, early in January, the sand dunes in Coachella Valley carry the most luxurious carpet of green sprouts I have ever seen on the desert. Those trillions of little wildlings of the plant world carry the promise of a colorful flowering season on the desert in another 30 to 60 days—if the weather gods are favorable. There is always the possibility that a night of freezing temperatures or a blasting sand storm will nip the buds which come early in January—but barring this possibility, visitors to the desert in February and March and April this year will see a more colorful wildflower display even than last year's exhibition.

Books of the Southwest

PLIGHT OF THE NAVAJO IS SUBJECT OF STORY

Earl Haley, author of *Revolt on the Painted Desert*, is deeply aware of the problems faced by our American Indians and the necessity of arousing widespread interest in those problems so that proper solutions may be worked out cooperatively by whites and the Indians themselves. He chose to present in story form his knowledge and a passionate appeal for better understanding between the two races.

His Navajo hero, James Carling, had been raised and educated by a missionary who had adopted him and taken the small Indian lad to Indiana. He became a great college football player and served his country with honors during the war in the Pacific. The return to his people dramatizes the helplessness which has been the tragedy of educated young Indians who find they are lost in a "No Man's Land" between the ways and lot of their own on the reservations and the world of the white race. Carling, steeling himself against discouragement, and deriving inspiration from the loyalty of two fine women, one an Indian and the other a member of the white race, leads a successful cooperative effort by his people to modernize their economy.

The story is a dramatic summation of the present day dilemma of the Navajo Indian, and is a simple and readable expression of the viewpoint of those who would make some immediate and drastic effort to solve the problem.

Obviously, Haley is an understanding student of Navajo life and thinking, and his book will be a revealing story to those who have not had the opportunity to become well acquainted with America's largest tribe of Indians.

Published by House-Warven, Hollywood. 376 pp. \$5.00.

FAMOUS SANTA FE TRAIL EARLY FEDERAL PROJECT

On March 3, 1825, as one of his last acts in office, President James Monroe affixed his signature to a bill authorizing the surveying, marking and building of a road from the Missouri frontier to the settlements of New Mexico.

"A highway between nations," Senator Thomas Hart Benton called it.

Benton had conceived the original idea of the road, and it was largely the result of his senatorial oratory that the government allocated \$10,000 for its construction and \$20,000 for treating the Indians for a right-of-way.

George Champlin Sibley was the field executive—the man on the job—who brought the Santa Fe route into existence. Several years ago, Sibley's journal, lost for more than a hundred years, came to light in a Senate committee room. Kate L. Gregg obtained a photostatic copy for publication, edited it and the diaries of Sibley's associates, studied the *Missouri Intelligencer's* stories of the Santa Fe trade, and checked Congressional records of the period. She was rewarded with an absorbing story of pioneer roadbuilding—*The Road to Santa Fe*.

Fictioneers have so embellished fact with legend that the Santa Fe Trail has become unrecognizable as a sober trade route. Readers believing that it "just grew" will learn with surprise that it was duly surveyed and, like many of today's arterials, was a federal project.

Published by the University of New Mexico Press, 280 pages, endmaps. \$4.50.

GHOST TOWNS LISTED ON NEW SOUTHWEST MAP

Printed on parchment paper in four colors is an attractive map just issued by Marvel Maps of Los Angeles showing the location of 86 of the ghost mining camps of the Southwest.

John D. Lawrence, the artist who prepared the map, did a great deal of research before going to his drawing board to design the decorations which make this something more than an ordinary guide.

The map shows 34 California ghost towns, 25 in Nevada and 27 in Arizona, and each town is indexed with a descriptive paragraph giving a hint of its importance.

Published by Marvel Maps, Los Angeles. \$1.00 mailed in tube.

Pictorial Guide to Nevada . . .

A pictorial guide to many of the interesting places in Nevada recently has been published by Hamilton A. and An L. Higbie in paper covered format.

The table of contents shows the classification of the pictures and accompanying text under the following titles: History & Prehistory, Pioneers, The Comstock, Geology and Legend, Early Roads and the Horse, Around the Silver State, and Along the Line of the Virginia and Truckee.

Obviously, the original photography of the book was very fine, although the lithographing process did not always reproduce the black and white pictures to best advantage. 48 pp. \$1.50.

There'll be Wildflowers

By the first of March, wildflowers will be blooming in many places on the desert—and if you are one of those fortunate enough to live within motoring distance you'll want to see the desert in blossom.

And if you know their names, you'll appreciate them more.

Desert Crafts Shop recommends the following books for those who would like to become better acquainted with the wildflower family:

FLOWERS OF THE SOUTHWEST DESERTS. By Natt N. Dodge, A 112-page paper covered handbook giving the names of the more common species of flowers seen on the desert landscape, mailed postpaid\$1.00

DESERT WILD FLOWERS. By Edmund C. Jaeger. A revised edition of one of the most popular wildflower books, written by a man who knows them all. Includes 764 species, illustrated with photos or pen sketches. Indexed. Postpaid.....\$5.00

FIELD BOOK OF WESTERN WILDFLOWERS. By Margaret Armstrong. An authoritative book popular with those who love wildflowers. Many pen sketches and a number of color plates. Postpaid. \$5.00

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