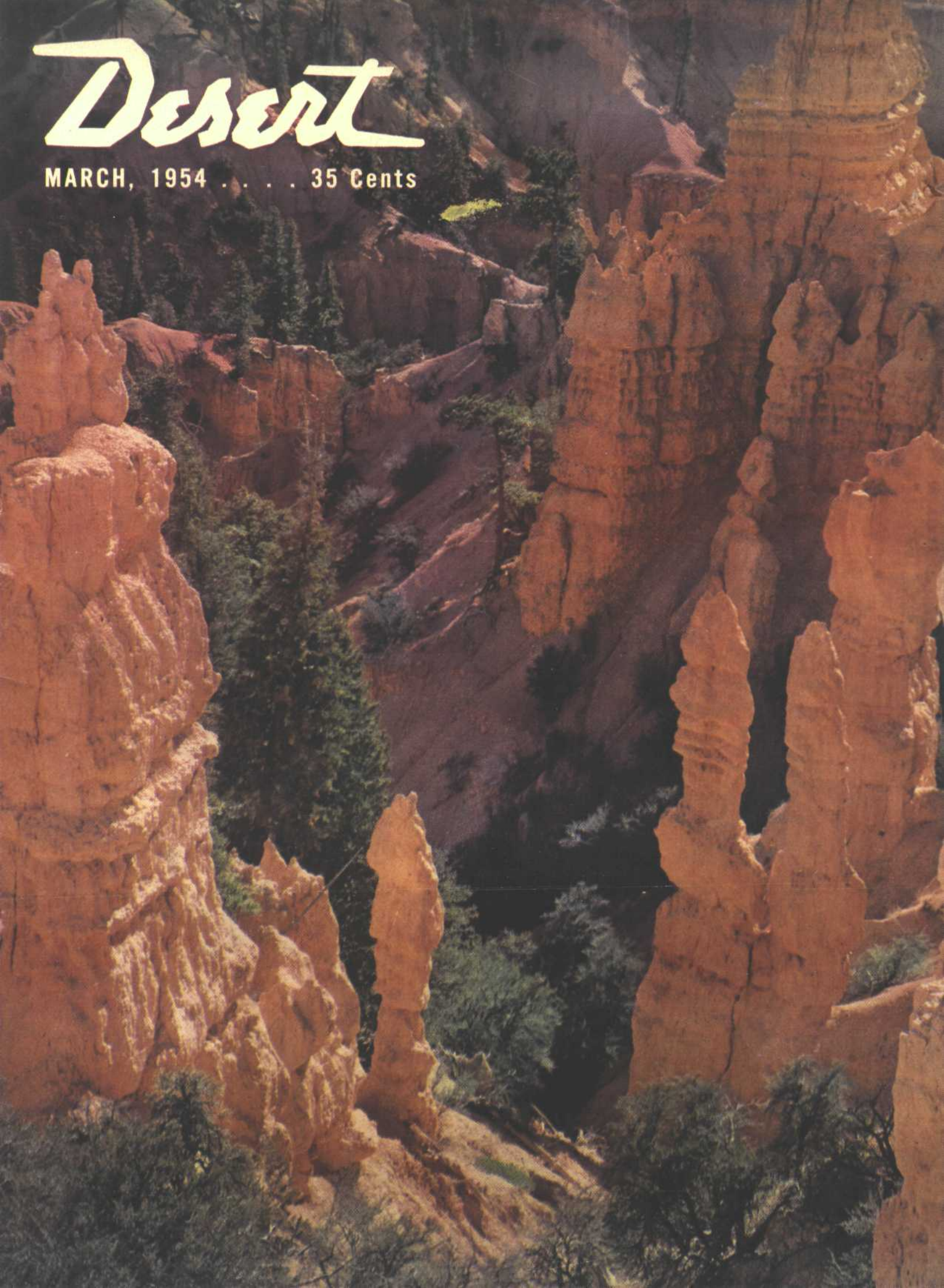


Desert

MARCH, 1954 35 Cents





Desert dandelions on the Mojave Desert. Photo by Mary Beal of Daggett, California.

TRANSPLANTING

By GLENN W. ARMSTRONG
Barstow, California

Oh! Thoughtless person who planted me here
Away from sunshine, warmth and cheer.
Expecting me to grow and thrive.
Not noting I'm but half alive
Because of changing my habitat
From nature's own to where I'm at.

And so in life we sometimes take
Child, or adult, and for his sake
We think; force mold that stubborn clay;
Determined we shall have our way.
Stunting growth; no strength for strife.
Your way, not his, retarding life.

DESERT WIND

By ETHELYN M. KINCHER
Meeker, Colorado

The desert wind is a lonely wind
As it drifts across the dunes
In search of dreams lost long ago,
And it wails and cries and croons.

The canyon walls are tall and old,
And the cactus spines are sharp;
The coyotes cry in the mesa sage,
And a cedar is a harp;

For the desert wind is a roving wind,
And it rides the desert land.
And the lonely song in the cedar tree
Is the wind song of the sand.

LOST GOLD

By BESSIE BERG
Rio Linda, California

Lost in the desert of the years
A golden fortune, goal of all our days;
Lost in the barren hills, directionless, with
bitter tears
We search among dry bones and lacerating
thorn.
Our soul cries out at last for water, not for
gold!
With parching lips, the bitter springs along
the way
Heedlessly we drink in agony to pay;
And travel far, gaze fixed on shifting sands;
grow old
At last, to find the wisdom that has shorn
Glitter from metal, and we find the gleam
Infinitely sweeter in the crystal of a desert
stream!

NEW ENGLAND REALLY ISN'T SO BAD, BUT—

By MARTIN FULLER II
Cambridge, Massachusetts

Well, I'm trapped in Old New England,
where the winter's cold and gray,
But my heart is with the sunshine, on the
desert, far away:
For the tide of Spring is rising all across
that magic land,
And the mystic force of life is welling
through the friendly sand.
If you've never known the desert in the love-
liness of Spring,
Never felt the desert wind and sun, and all
the joy they bring—
Haven't looked in silent awe upon the des-
ert's naked art,
Then you cannot know the hunger and the
longing in the heart
Of one who loves the desert, who has known
it as a friend,
Who has reveled in its vastness and its
wonders without end—
In the freedom of the desert, like the free-
dom of the sky;
In the beauty of the desert, of a scope that
stuns the eye;
In the challenge of the desert, like the chal-
lenge of the sea;
In the firmness of the desert, in its ageless
majesty—
And remembers now the desert, knows it's
very far away,
And is trapped in Old New England, where
the winter's cold and gray.

DOMINION AT HAND

By AMY VIAU
Santa Ana, California

The prospector sat beside his door
And watched the desert stars go by;
Peace filled the night and filled his heart
And with the silence reached the sky.

Tomorrow, perhaps, he would go again
In search of a precious vein of ore,
To follow an urge for gain of wealth,
But tonight he wanted nothing more

Than the unfenced desert's offering
Beneath the crest of star-gemmed sky,
And this sense of dominion deep within,
Which the ore from a mine could never
buy.

Awakening

By GRACE BARKER WILSON
Kirtland, New Mexico

Year after year the brown seeds lie
Unsprouted in the ground;
The barren desert stretched away
Where only sands abound.

Then came the rains; the seeds awoke.
The desert sands were green
With trimmings of a colored cloak
Of flowers to deck the scene.

DESERT SOLILOQUY

By SARAH PHILLIPS SALINGER
Santa Barbara, California

Such beauty as is mine, is strange to man
Who thinks of beauty as a thing apart;
Primordial forces once conceived the plan
Of star-decked sky and naked, sun-seared
land,
A challenge to the heart and mind of man—
Where silence reigns, and sod is sand.

I dare show truth of life and death
Such as must be on desert wilds
Where elements hold sway. But desert sun
That bleaches bones and quickens life
So gently breathes in vernal night
That desert blooms salute the light.

The desert is profound, and brings
To thoughts of man, eternal things;
How Time grinds hills of stone to sand—
How sunsets over-reach the land
In colors flung against the blue
As desert sunsets always knew—

How steel-cut stars their pathways find
While storms and fears confound the mind—
Such storms each life on desert waste
Seeks out a darkened hiding place;
While man finds answer in a prayer,
Proclaiming—"God is everywhere!"

DESERT

By MERLE KELLY

I love the roll of the golden sand,
The sweep of the sky overhead,
The vibrant color of cactus bloom,
Pink or yellow or red.

I love the gray of the sage's leaf,
Ocotillo, so tall and bare,
Tall saguaro with hand upflung,
Gay bloom of the prickly pear.

My path winds in and out through it all,
Open and wide and free—
Free as the wind which comes so soft
Bringing God's peace to me.

Smoother Way

By TANYA SOUTH

The bars are down. There are no
lowly.

Each is as good as all the rest.
With effort for the highest wholly
You'll find your quest.

But bear in mind, as you aspire
For that great Goal that you would
find,
He wins the swifter and climbs higher
Who loves mankind.

DESERT CALENDAR

- March (no fixed date)—Opening of the *acequias* (irrigation ditches) in Rio Grande Indian pueblos, New Mexico. After hundreds of Indians have cleared the canals for spring use, rites of the land are performed, accompanied by chanting and singing.
- March 2—Phoenix Visitors Club desert outing to South Mountain Park, Phoenix, Arizona.
- March 4 — Phoenix Visitors Club desert outing to Granite Reef Dam.
- March 6-7 — Fifth Annual Almond Blossom Festival, Quartz Hill, in southwest corner of Antelope Valley, California.
- March 7—Western Saddle Club gymkhana, Squaw Peak Arena, Phoenix, Arizona.
- March 7 — Don's Club Lost Gold Trek to Superstition Mountains, to hunt for Lost Dutchman Mine. From Phoenix, Arizona. (See page 19.)
- March 7—Desert Sun Ranchers Rodeo, Wickenburg, Arizona.
- March 9 — Phoenix Visitors Club desert outing to Cave Creek, Arizona.
- March 11 — Cattle Rustlers Ball, Wickenburg, Arizona.
- March 11-13 — Jaycees' Rawhide Roundup, Mesa, Arizona.
- March 13-14—Phoenix Visitors Club desert and mountain outing to Southern Arizona.
- March 13-14—Desert Peaks Section, Southern California Sierra Club climb of Martinez Peak in Santa Rosa Range. Hike to start at Nightingale Camp, California.
- March 13-14—Desert Arabian Horse Owners' Association show, Palm Springs, California.
- March 16 — Phoenix Visitors Club desert outing to Ajo, Arizona.
- March 18-21 — Phoenix Jaycees' World Championship Rodeo, Phoenix, Ariz.
- March 19 — Fiesta and ceremonial dance, Laguna Pueblo, New Mexico.
- March 20-21 — Southern California Sierra Club camping trip to Fern Canyon, near Palm Canyon, Palm Springs, California.
- March 21—Don's Club Travelcade to Luke Field, from Phoenix, Arizona.
- March 23 — Phoenix Visitors Club desert outing to Wickenburg dude ranches.
- March 25 — Phoenix Visitors Club desert outing to Superstition Mountains, Arizona.
- March 27-28 — Southern California Sierra Club knapsacking natural science hike down Palm Canyon, near Palm Springs, California.
- March 27-28 — New Mexico Square Dancers Association dance festival, Mesilla Valley, near Las Cruces, New Mexico.
- March 28 — Don's Club Travelcade to San Carlos. From Phoenix, Arizona.
- March 28 — Desert Sun Ranchers Rodeo, Wickenburg, Arizona.
- March 30 — Phoenix Visitors Club desert outing to Nogales, Mexico.



Volume 17

MARCH, 1954

Number 3

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Government Sheep Herder . . .

Until recent years the Desert Bighorn sheep was a vanishing species. Thanks to the protection now given by the federal government and many of the states, this majestic animal of the desert country is on the increase again. Here is the story, written for *Desert Magazine* by a man who has spent 10 years as both guardian and student of these curious denizens of the arid mountains. The author is a Wildlife Management Biologist for the U. S. Fish and Game Service.

By OSCAR V. DEMING
Photographs by the author
Map by Norton Allen

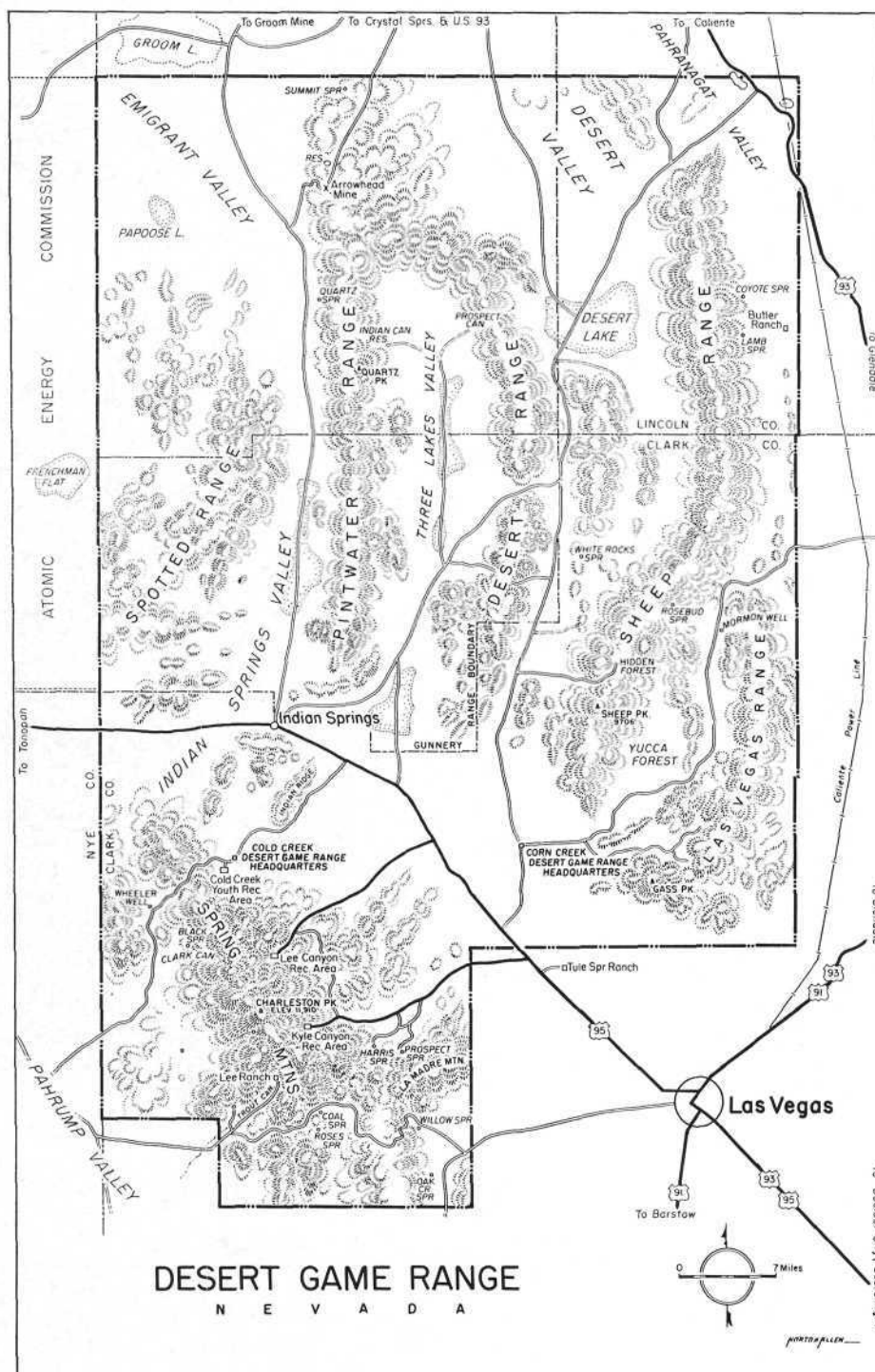
FRANK ALLEN and I had gone to Quail Spring in the summer of 1943 to do some pick and shovel work. We were doing turns at the heavy work, and I was taking a recess while listening to his rambling discourse on bighorn sheep—a conversation punctuated by the clink of the pick and the scrape of the shovel.

I began to sense that uneasy feeling that we were being watched. Looking quickly upward toward the top of a small ledge 15 feet above our heads I was startled to see standing there, watching every movement we made, a young bighorn ram. That was my introduction to the Nelson bighorn sheep on the Desert Game Refuge. It was the beginning of one of the most interesting and stimulating decades in my life.

The Desert Game Range, a national wildlife refuge on the northern border of the Mojave Desert in southern Nevada, was established by executive order in 1936 for the preservation and perpetuation of what was then estimated to be 300 Nelson bighorn sheep. Through protection and management the bighorn have increased to a mobile population of about 1700 animals. As the refuge is not fenced, the sheep are slowly but steadily drifting off the refuge and restocking suitable surrounding desert ranges that once contained the wild sheep or where they existed in only token numbers.

My work as a wildlife management biologist demands that I spend much of my time in bighorn country. From 10 years of this work I have developed a wholesome respect and admiration for these unique desert dwellers and have had the opportunity to watch many habits and mannerisms of the animals that are little known to the general public. I was dubbed a government sheepherder years ago by friends in my home town as a result of my aged father's laconic comment that I was out in Nevada "herding sheep for the government."

The old adage that curiosity killed a cat could well apply to the bighorn sheep. Here is an animal that is curious to the extreme, and is probably equaled in that respect only by the pronghorn antelope. Old time bighorn hunters have told me of riding up a canyon until bighorn were sighted on the surrounding canyon walls. They would then dismount, tie up the horse, drape a gaudy-colored blanket over the back of the animal and while the



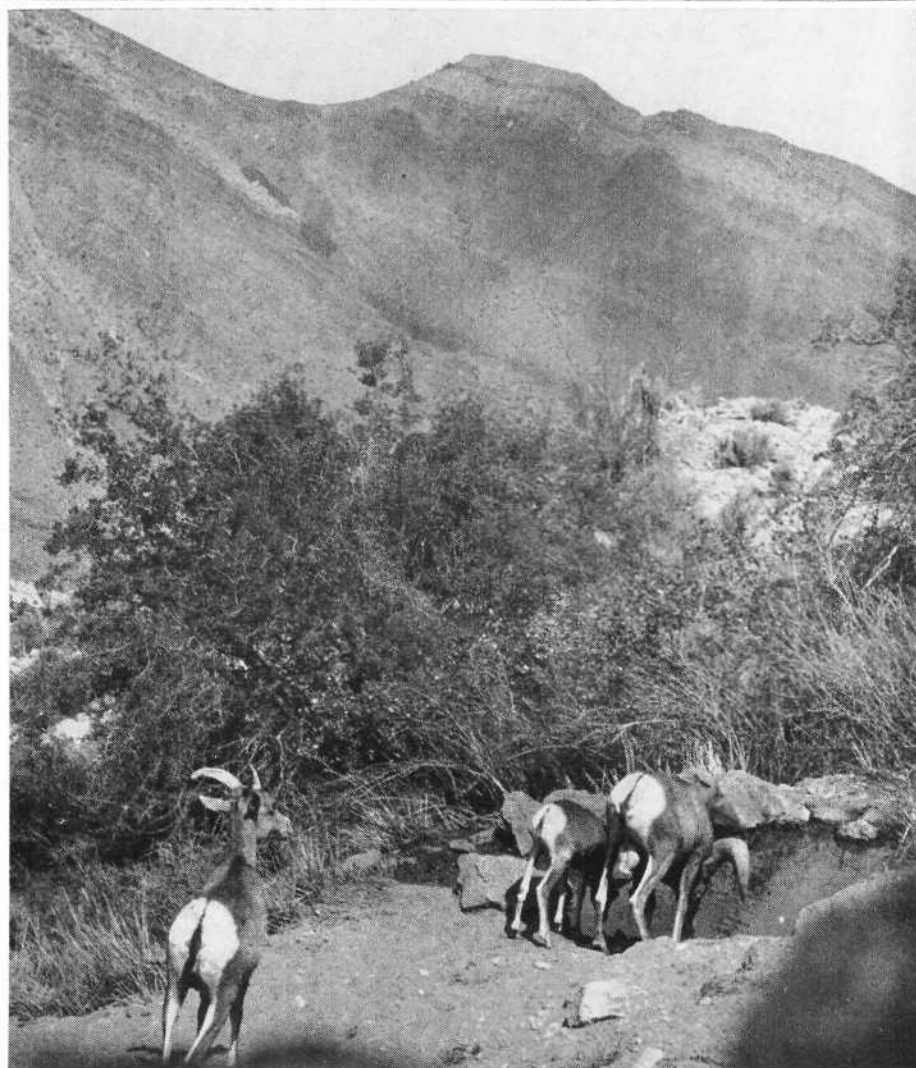
bighorn were intently watching this lurid intrusion in their home territory, the hunter would circle and approach them from the rear. I have been told that bighorn would sometimes watch such a bedecked horse for an hour or more.

Local construction workers who remember the Hoover Dam construction days tell of bighorn sheep that came out on the cliffs overlooking the project every afternoon to watch the daily blasting. The sheep appeared to be aware of the blasting time table and would appear against the skyline a few minutes before the scheduled shots. After the concussion, when smoke and dust had subsided, the sheep would leave—or so the story goes.

Any unexplainable object seems to fascinate a bighorn sheep. I have brought animals up close from a considerable distance by bobbing up and down behind a rock. During lamb census work, bands of ewes and lambs have been brought back into sight for a more accurate count by imitating the bleat of a lamb. As I am no expert in imitating the wildlife calls, it must have been their curiosity rather than their maternal instincts that were aroused.

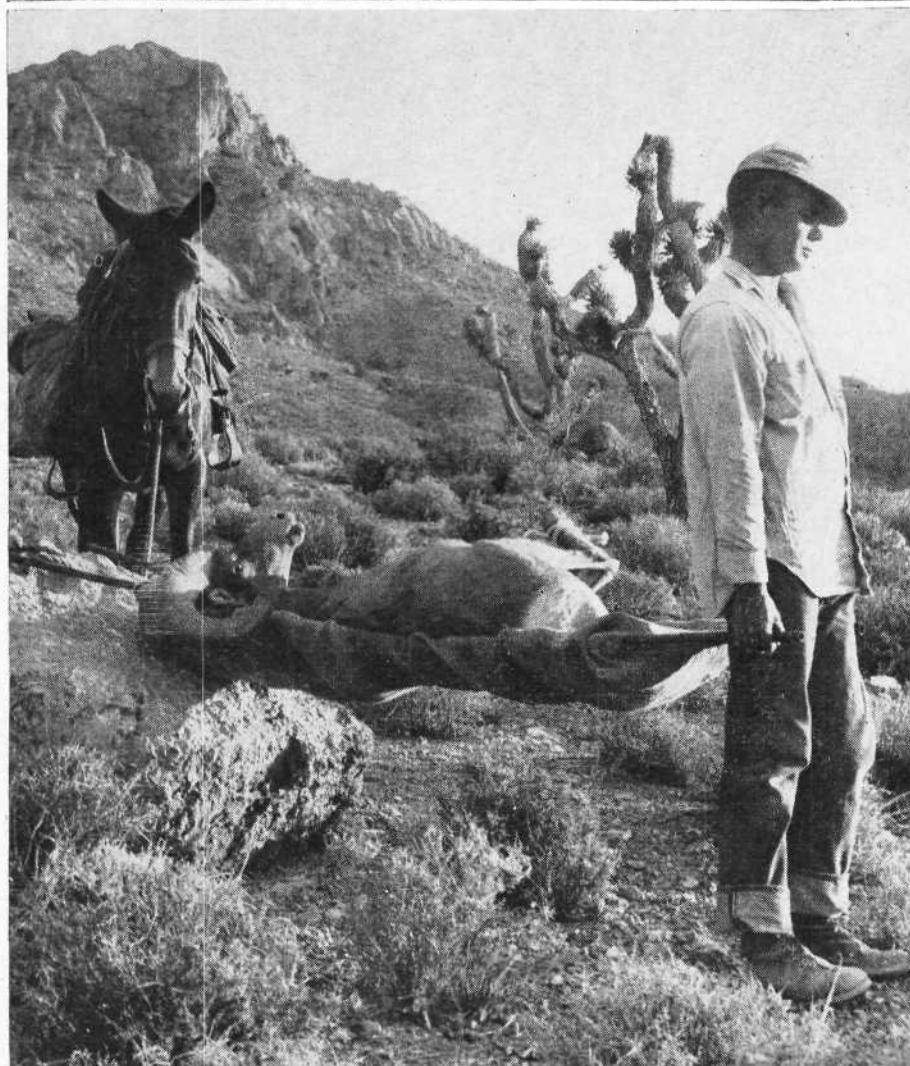
One summer I was photographing bighorn at one of the springs from the concealment of a large elderberry bush. A young ram came in to water and after getting a picture of his posterior anatomy as he drank, I hurriedly turned the exposure so as to be ready for some head-on shots and discovered that I had used the last exposure on the roll. Crouching down in the foliage, I attempted a quick change of film with fingers that suddenly seemed to be all thumbs. I was working frantically and praying for time when a trickle of pebbles rolled to my feet from the slope above. Looking upward, I found the ram, his head cocked quizzically to one side, watching my efforts with unconcealed interest. I could have reached out and touched him with my hand! After satisfying himself that camera nuts are probably as queer and harmless as rockhounds and similar desert prowlers, he turned and nonchalantly began feeding on a nearby snowberry bush.

Call it a tame ram, call it curiosity, or call it the bond of trust and friendship that sometimes appears to exist between wild things and understanding humans, but the experience Edmund C. Jaeger and Lloyd Mason Smith had with a large ram in Hidden Forest Canyon on the refuge is unusual, to say the least. These two well known naturalists from Riverside County, California, were making camp when a ram sauntered in and appar-



Above—The ram plays a very minor role in family life after the lamb is born.

Below—These Bighorn were photographed at one of their waterholes by the construction of a blind—a trench for the photographer, surrounded by rocks.



Above—The rams are quite promiscuous during the mating season in September and October.

Below—When Bighorn are to be transplanted from one range to another, or to the zoos, they are given a harmless drug to lessen their fright or shock. Photo by Frank Groves.

ently made himself at home. When the men decided to take a hike up the canyon, the ram made the party a trio, strolling along with the astounded naturalists. When the men returned to camp the ram returned with them. That evening the ram left them for the more rugged ridges, but when the men awoke the next morning the ram was again in camp, browsing amid their personal effects. With the poise of a Hollywood star, the ram would obligingly pose for movies, stills, black and white, or color film. When the two men returned to our Corn Creek Headquarters they glowingly related how much they had enjoyed the company of our "tame ram." It took several minutes of argument on my part to convince those astute gentlemen that we had no tame ram!

Bighorn sheep are rather rugged individualists, and in time of danger are apt to bolt and run without giving any evidence of alarm to the others in the vicinity. An outstanding exception of this general rule was seen by Dr. Ross Hardy of Long Beach State College when he was engaged in field work on the refuge the summer of 1945. Dr. Hardy and his co-workers were capturing bighorn with the aid of padded steel traps on a desert spring and marking the sheep so that their individual movements could be followed after they were released. The newly-buried traps were easily detected by the sharp noses of the sheep, who warily avoided them, but one ram mounted guard by straddling a trap and brusquely butting away any other sheep that came close!

Lambing begins in southern Nevada in January along the Colorado River and terminates about the end of May in the high mountains on the refuge. This long lambing season is probably due to the mild climate that favors the survival of the early and late lambs. The lambs are born in rough, broken country that offers protection from the elements and natural enemies during that critical first week or two of life when they are comparatively helpless. The ewe usually lambs alone, and this isolation from the rest of the bighorn may assist the new-born lamb in becoming acquainted with its mother. Young lambs do not know fear and will follow anything that moves the first days of life.

Like children often do, a young lamb may pal up with another and they become buddies. These two lambs will remain close together for considerable periods of time and even follow the same ewe. This companionship might make the casual observer believe that twin lambs are common, but come meal time the two lambs nurse their respective mothers.



The human race was recording the presence of Bighorn sheep long before the white men came.

During the past decade no positive evidence of twin lambs has been seen on the refuge.

Baby sitting was old stuff among the bighorn ewes long before it became a fashionable source of income for teenagers of the human race. As lambing progresses and the lamb numbers increase, the mothers often leave them in the care of one or two other ewes while they go out to feed in country too dangerous for the lambs. Often two ewes will be found high above the feeding ewes with as many as 15 or 20 lambs in their care. The lambs are surprisingly obedient to these nursery tenders, and the ewes, if inclined, could write a book on the care and training of infants that would be a classic in its field. Ewes will also leave their unweaned lambs in care of other ewes while they go to water or if no other ewes are handy, will often cache their lambs before going to drink. Waterhole observers sometimes gain the impression that there are very few lambs because so many ewes come to water without them. As the summer progresses and more lambs are weaned, they appear at the waterholes in increasing numbers.

During July, the rams that have been leading a tranquil bachelor's existence since the previous breeding season, begin again to feel the age-old urge to procreate their kind. Bands of rams that have lived together for months in comparative harmony begin to butt trees and bushes. Preliminary scuffles increase in intensity until the rams move in with the ewe bands. It is then that the unforgettable

spectacle of two majestic rams colliding head-on is witnessed. The shock of such encounters sometimes leaves one or both of the contestants dazed and unsteady, but a code of ethics seems to prevail and seldom does a ram take advantage of an opponent unable or unwilling to continue the joust. When a band of rams start milling among themselves, this etiquette is often overlooked or forgotten and a knock-down-drag-out battle royal is the result.

The rams have been provided by Nature with a large cartilaginous cushion directly behind the horns that protects the thin-walled skull, but even with this padding, some of the old rams, in the terminology of the prize ring, appear "punch drunk." The ewes are likewise endowed with a pugnacious streak that may break to the surface at any season of the year. These ewe bouts, however, are mild at best when compared with the robust encounters of the rams.

Contrary to general opinion, the bighorn sheep are not polygamous in their breeding habits to the extent of the rams forming harems of ewes and defending the honor of their multiple wives against all comers. Rather, the rams are promiscuous rakes that travel from ewe band to ewe band seeking out those individuals that are ready and willing to mate. During hot dry summers the rams will often take their ease around waterholes and critically examine every ewe that comes to drink. After the summer rains start, the sheep scatter widely, seeking out the new

green growth of plants that follow the showers. At this time there must be sufficient rams to comb the country and find the coy ewe in need of a mate as she shows no inclination to get out and rustle herself a husband. Just an old fashioned girl, no doubt.

There are today more people interested in shooting bighorn sheep with a camera than with a rifle, and wild sheep pictures, taken in the rugged grandeur of the desert ranges, have a fitting and welcome place in the home of any desert devotee. Surprisingly enough, the bighorn are not too difficult to photograph at close range and with the aid of a telephoto lens can be made to appear ready to walk out of the picture. I will never forget my first bighorn picture, as it is representative of the evolution of a wildlife photographer. The picture was taken at long range, and even when enlarged it required the aid of a reading glass to detect any semblance of a bighorn sheep in the inconspicuous spot in the center of the print. Since then, and roll upon roll of films later, I have taken pictures with an ordinary camera from as close as 35 feet.

The best time of the year to obtain good pictures of bighorn is during the summer when the bighorn are coming to the waterholes to drink. During that season of the year a single weekend at a desert spring may yield priceless prints. If you are the artistic type, select a spot along a bighorn trail leading to water that has the appropriate background, conceal yourself near the trail and sweat it out until the bighorn sheep come along. This requires pa-

Simplicity and ease of construction were the main advantages of another blind built 35 feet away from another spring. This blind consisted of nothing but a shallow trench lined around the edge with large rocks. Lying down flat on my back until I heard the sheep come in to water, I would then slowly rise up to a sitting position, take a picture, then drop back to rewind and make ready for the next shot.

There is also that rare and unforgettable moment when you are walking along and suddenly come face to face with an equally surprised sheep. In preparation for any such sudden meeting with your objective it is wise to have a camera that will operate swiftly and accurately. A 35 mm. camera is good for slides, but I prefer a larger negative for enlargements. As a last parting tip, the bighorn will water anytime from daylight to dark and even at night, so do not give up your vigil as long as there is light to take pictures.

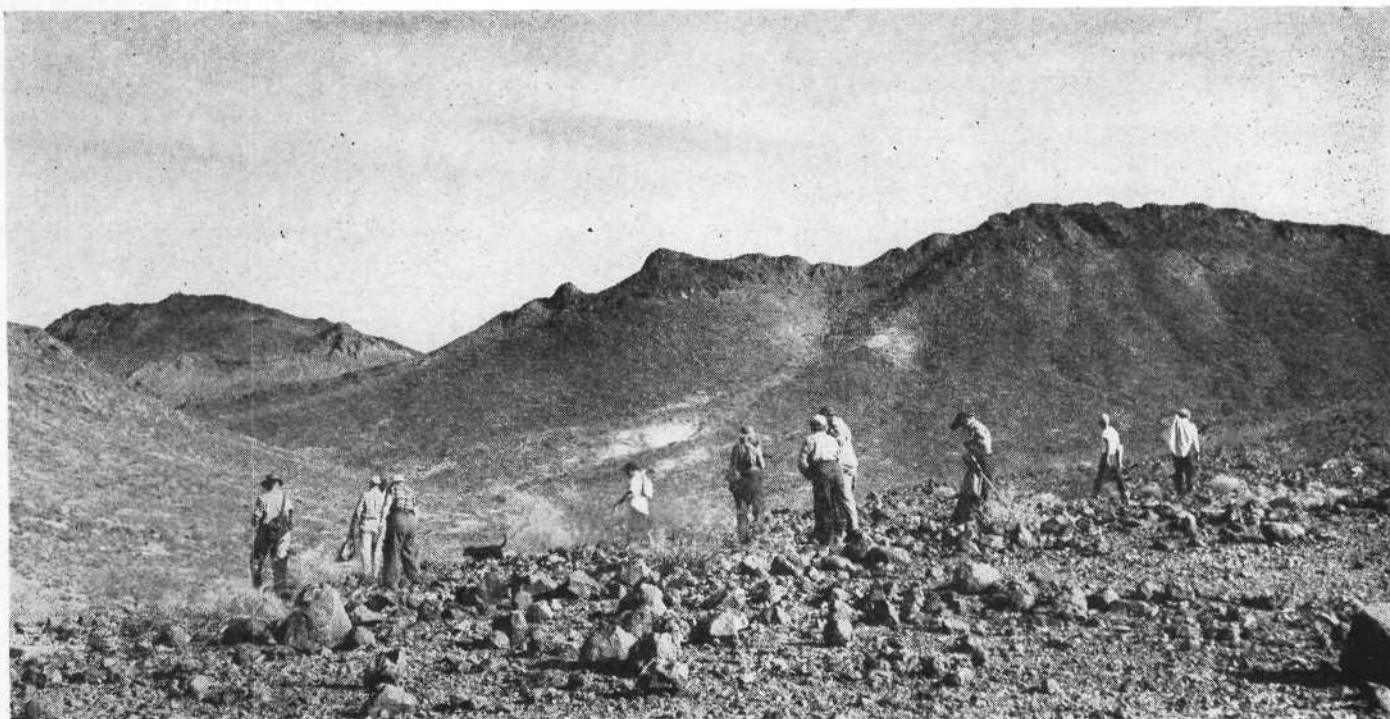
because I am a big game hunter as well as an amateur camera nut.

would have taken days to deliver by back packing on foot.

So now you have had a brief look at the life of a wildlife management biologist—a government shepherd. The hours are long, the work is hard and the monetary remuneration is average. Family life is intermittent at best and the results of my research sometimes arouse the ire of Mr. John Q. Public because they do not agree with what he thinks. Still, when I look back at the many perfect nights under the desert stars, my intimate contacts with the wild things of the bleak desert ranges and the more tolerant understanding I have gained of Nature and her scheme of life and living, I would not trade jobs with the President. To which my outdoor-loving wife and children breathe a soft but fervent amen.

some of the highest scores are made by men and women who have spent very little time in the Southwest. But they have done considerable reading. The questions cover a wide range of subjects—history, geography, botany, Indians, Nature, and the general lore of the desert country. A score of 12 to 14 is fair, 15 to 17 is good, 18 or over is excellent. The answers are on page 40.

- DESERT MAGAZINE



Just a drab desert landscape—but on and beneath the surface of the Coon Hollow mineral field are some of the loveliest semi-precious gem stones to be found anywhere.

Field Day at Coon Hollow...

When the California Federation of Mineralogical Societies holds its annual convention at Indio March 26, 27 and 28 this year the desert hosts are planning a series of field collecting trips to some of the most productive deposits of semi-precious gem stones in the Southwest—and here is a glimpse of some of the things the visiting rockhounds may expect to find.

By RANDALL HENDERSON
Map by Norton Allen

ONE NIGHT LAST December I camped at Wiley's Well on the Chuckawalla desert of Southern California with members of the Coachella Valley Mineral Society.

The Coachella Society is to be co-host with the San Geronio Mineral and Gem Society of Banning, California, for the annual convention of the California Federation of Mineralogical Societies at Indio, March 26-28 this year. The convention program is to include several field trips into mineralized areas of California and Arizona, and the December excursion which I was invited to join was in the nature of a scouting trip as a preliminary to the convention.

My motor companion on the trip was Charles E. Faulhaber, Coachella Valley rancher whose hobby is collecting the rough but colorful stones which Nature has distributed lavishly over the arid mountains and mesas of the desert country.

Wiley's Well is a historic waterhole

which has served prospectors, cattlemen, outlaws, wetback Mexicans, Patton's army, and explorers for nearly half a century. More recently it has become the base camp for hundreds of rock collectors who go into the Chuckawalla country every month during the winter season to search for the many varieties of semi-precious stones found over a wide area.

The well was dug by A. P. Wiley, owner of a little outpost store and postmaster at Palo Verde during the early days of this century when homesteaders were trekking into the mesquite jungles of the Palo Verde Valley to file claims on the lands which had not already been acquired by Thomas Blythe.

When Charles and I arrived at the well at noon on Saturday several members of the Coachella Society already were busy cleaning up the campground and putting the well in order. Charlene Carney, chairman of publicity for the convention and a committee of

women were gathering up tin cans and burying them in the bottom of a nearby wash. Glenn Vargas, president of the Coachella group, was down in the well which operates with a bucket, rope and pulley, seining the bugs and accumulated debris out of the water at the bottom of the 40-foot hole. It is an open well with no custodian, and not a very sanitary source of water. Vargas assured me that the water supply would be purified before the convention field trips are held. "If the Riverside County supervisors do not cooperate, we will do the job ourselves," Glenn said.

Within a radius of 30 miles of Wiley's Well, the rock collectors have found a score of deposits which yield good cutting material for their lapidaries, and have given highly descriptive names to the various localities.

There are the Hauser Beds, where so much excavating has been done in quest of geodes that the hillsides and ravines have the appearance of an old California placer field; the Potato Patch which derives its name from the shape of the geodes found there, the Twin Buttes where the collecting material includes banded agate, red and white fortification vein agate, chalcedony roses, black and smoky chalcedony and also crystalline and drusy chalcedony. Some of the chalcedony is fluorescent.



Above—Members of the society take turns preparing and serving the meals when they are on field trips.

Below—The chuckwagon, built by the Coachellans, to provide a cooperative commissary on their field trips—at a cost of \$1 a day for each person.

The main goal of this December scouting trip was Coon Hollow—a name, the origin of which seems to have become lost in a haze of conflicting stories. Someone, tramping over the hills of Chuckawalla country, found a tiny specimen of fire agate near the top of one of the buttes—and fire agate is something that every rockhound covets. Hence this has become a popular hunting ground in recent months. There is a wide range of agate and chalcedony in this area—most of it up on the hillsides. The “Hollow” is where the rockhounds park their trailers, near the end of the Coon Hollow road.

Saturday afternoon our party spread out over the hills above Coon Hollow picking up pretty pieces of chalcedony and agate on the surface. Then up near the top of a butte marked by two conspicuous rock cairns, a quarter of a mile from the end of the road, one of the party gouged beneath the gravelly surface and brought up a small specimen of fire agate. Further excavation at this point revealed many more pieces of agate showing red, yellow and green fire—opalized agate it is sometimes called. This is still a virgin field, and no one yet knows the extent of the deposit or the depth to which this prize agate may be found.

Four or five claims have been staked out in the Coon Hollow area, but most of the field is wide open for the amateur collector. All the members of our party brought back a few choice specimens.

That evening our dinner was served buffet style at the Coachella Society's famous chuck wagon. This cooperative commissary is the most efficient and economical idea I have ever encountered for group camping.

The Coachellans worked out the plan themselves. They secured a light two-wheel trailer, and then built on the chassis a low compact carry-all which includes two 2-burner gas cooking stoves, a portable grid on legs for hotcakes, hamburgers, etc., two tanks for rock gas, a big ice box with adjoining cooler compartments, 12 drawers for food and utensils, a generator for night lighting, a compartment for two collapsible tables, another for cooking gear—and to make it complete they added a clothesline, a towel rack and a dinner gong. It is amazing how so much gear can be packed in a unit so small.

The Coachella members also have perfected the art of assigning the camp chores. Previous to a field trip a committee plans the menus and prepares a “blacklist” which is a duty roster of those assigned to commissary work.

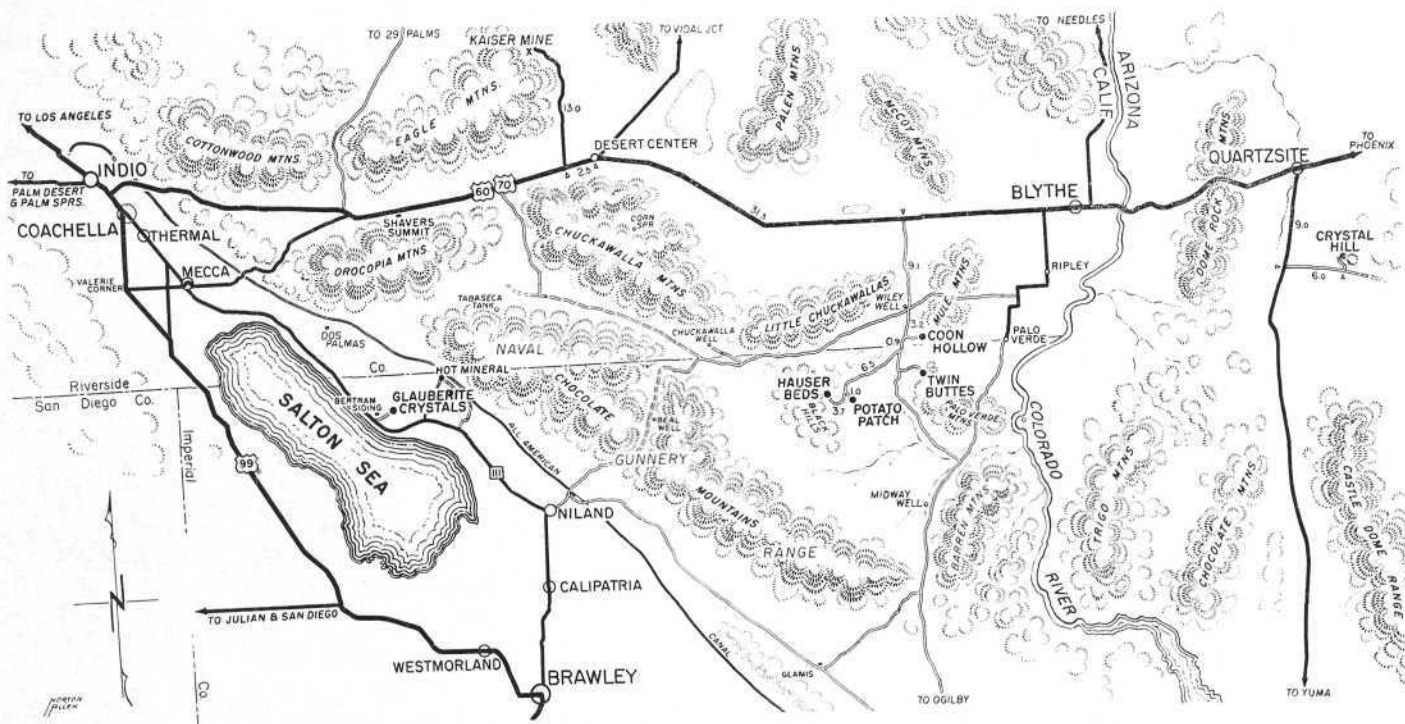
One mimeographed blacklist form is prepared for each of the scheduled meals and includes the menu for the meal, the names of the chef and his or her two helpers, and also the clean-up crew to wash the dishes and bury the garbage.

All members of the field trip party have definite duties assigned to them, and when their turns come they don the chef's hats and white aprons—furnished by the Society—and have a lot of fun doing their tasks.

From the chuckwagon the Coachellans have fed as many as 43 persons at a meal—but they say 36 is the maximum they can serve conveniently. They have found it possible to provide adequate meals on a trip at \$1.00 a day for each person.

Much of the material and labor in the trailer chuckwagon was donated and it represents an investment of only about \$300—paid from the club dues of \$2.00 a year. Several of the members have trailer hitches on the backs of their cars, so there is always someone available to tow the big grub box.

I have been camping with Sierra Club groups for 20 years, and the Sierrans have the art of group camping down to a fine art—but these rockhounds from Coachella Valley



have about the slickest thing I have ever seen for the purpose.

Wiley's Well is on the bank of a wide sandy arroyo—upper Milpitas Wash. Across the wash is a forest of palo verde and ironwood trees. There is always an ample supply of deadwood in the area for campfires.

The next day we visited the Hauser Geode Beds, the Potato Patch and some of the other mineral deposits. At some of them there is much accumulated debris. Probably the rockhound fraternity represents an average cross-section of humanity. There are some who bury their tin cans and garbage—but unfortunately there are also some who haven't yet learned good camping manners. Generally speaking, the members of organized societies maintain cleaner camps than the unorganized collectors.

The Chuckawalla mineralized area, which includes the Chuckawalla Mountains, Mule Mountains, Palo Verde Mountains, and Black Hills, has been a favorite hunting ground for collectors for more than 10 years, and yet the surface of this vast desert jewel box is still yielding good stones to those who hike beyond the known areas. Undoubtedly there is untold wealth beneath the surface for future generations of collectors. At one place in the area are geodes weighing several hundred pounds—so big that no one has yet found what is inside of them. They are too big for an ordinary lapidary saw.

In addition to the field trips scheduled to the Chuckawalla country, the hosts for the Federation convention

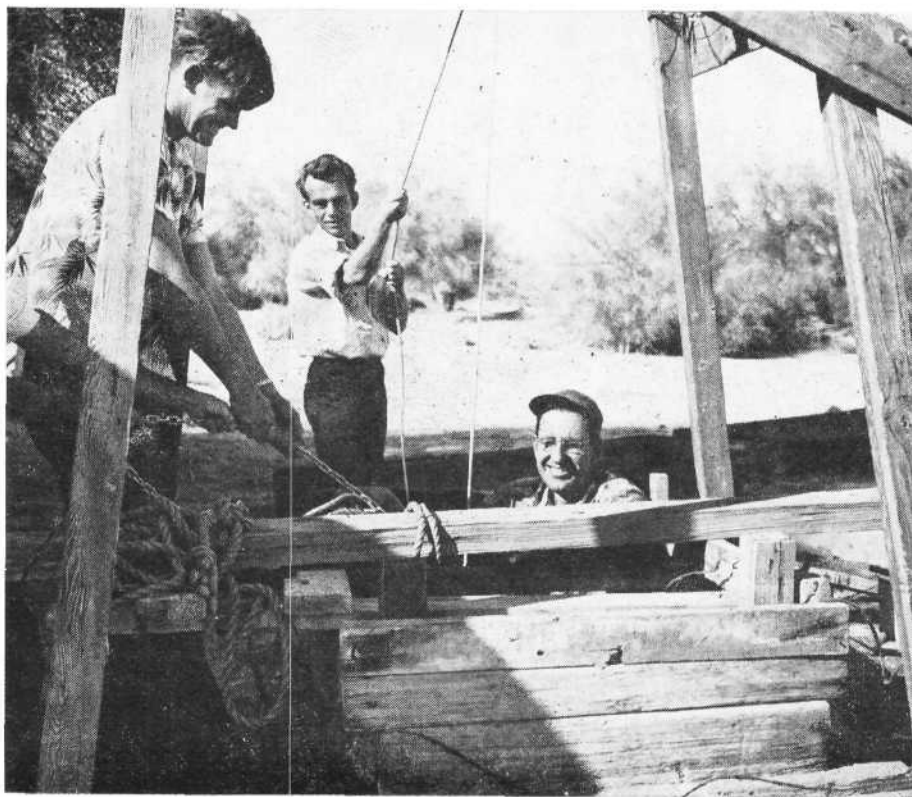
also are planning excursions to Crystal Hill, south of Quartzsite in Arizona, and to deposits of glauberite crystals near the north shore of Salton Sea.

Plans are being made at Indio for the greatest gathering of rockhounds ever held in California, and special provision is being made for large numbers of persons who will be camping out during the three-day show. Nor-

mally, March weather in Coachella Valley is just right for outdoor living—neither too hot nor too cold.

This is the first California Federation convention ever scheduled for a desert location, and the desert folks who will be hosts for the event are sparing no effort to make it an outstanding mineral show in every respect.

Glenn Vargas, president of the Coachella Valley Mineral Society was lowered 40 feet on ropes to clean out the debris in historic Wiley's Well.



"Oil" on the Amargosa

Overnight, the desolate Amargosa Desert became a beehive of activity, excited get-rich-quickers scurrying about locating claims for oil which didn't exist. When the sad truth was finally known that the Amargosa oil boom was a bust before begun, no one was more surprised than the original "discoverers" who innocently issued the famous false alarm.

By CLINTON C. BALL

I DIDN'T JOIN the Amargosa oil rush of 1918. But, already there on a prospecting assignment, I was a fascinated onlooker to one of the biggest bonanza false alarms in the history of mining.

During the fall and winter of 1917-18, I was testing a number of claims on 14,000 acres of land on the Amargosa desert. With me were two well diggers who had a portable prospecting rig. We were camped along the widened bed of the Amargosa where it makes a turn westward toward Ash Meadows, our tent lying about half way between Amargosa Station, Nevada, and Death Valley Junction, California. It was lonely, desolate desert country.

For the first three months we had no visitors and, except for an occasional junket down to Las Vegas, no human contacts other than the railroad personnel at Amargosa. A five-mile stretch of the highway from the north could be seen plainly from camp, but there was almost no traffic day after day. So we were surprised one night in January, 1918, to see a steady stream of headlights coming south. "A convention in 'Vegas,'" we guessed.

When we arose early next morning, dust spirals where the lights had been told us the cars were still coming. We could see them pass Amargosa Station and turn off onto a logging road into the raw desert south of the Johnnie Mine. After breakfast, I drove over to Amargosa to find out what was going on.

I found the station agent. "Tom, what's happened to the metropolitan area of Amargosa?" I asked.

His answer bowled me over. "We've had an oil strike," he said, "and everybody is getting excited."

Tom didn't know all the facts. "Someone said asphaltum chunks were found on the surface in a draw which comes down from the Johnnie. The discovery was made a week or more ago and kept secret until now."

I joined the passing cars pushing their way along the road eastward and followed when they turned south where the logging road had been hewn through the mesquite. Where the trees

and bushes thinned out on the flat, cars had turned out on both sides to make camp.

Everywhere over the usually deserted Amargosa Desert were people, confusion and noise. Nothing was organized. No one seemed to know much about what was going on, and many seemed not to know what they were doing. But everyone was excited, certain that fortune lay within his grasp.

A few days later, the bubble popped. It was just as bright a day as any preceding. I stopped at Amargosa, took my drill samples and mail into the station and spoke to Tom. He seemed considerably less cheerful than usual.

"They have passed the official word that there's no more oil in the ground over at the Johnnie strike than there is in my wife's kitchen lamp," he said glumly.

It was a curious tale that Tom told me that day; but I will not repeat it here, as it was an incomplete version of what I heard years later from Charles H. Labbe who was one of the central figures in the "oil" rush.

Labbe was operating a five-stamp mill on the bajada next to the Johnnie. In January, 1918, he had three leasers working for him. One blustery day, one of them—a tall heavy lad named Hadden (or Haddon), commonly called "Happy"—decided to take a walk down the tailings canyon of the Johnnie. Jack Millet, a leaser on the Congress Mine, joined him.

At some point in their trip they came to a flat place and there found a piece of "asphaltum looking stuff" mixed with sandy tailings. The two miners took a second look and began to speculate.

"It looks like a piece of blacktop," said one. "Maybe the Johnnie once had a road in here."

"Blacktop my eye," answered his companion. "That's oil float!"

The two men were sure they had a fortune by the tail—but they didn't know what to do about it. So they turned to Charley Labbe. The land could be located only by sections, and Labbe had the necessary maps of the local terrain; in fact, he had found many of the survey corners in making

his mineral locations. His experience and wide acquaintance in the area were needed. And he could keep a secret.

But, one way or another, the news leaked out. Most of the uninvited guests who came first, stirring up the soda dust of the Amargosa Desert and deepening the road ruts along the Tonapah & Tidewater, were from the north. Goldfield and Tonapah were well represented.

"About this time," Labbe remembers, "fourteen friends from Goldfield came down to see me. They wanted assurance. The geology was gone over, and it sounded as good or better than that of other oil fields which had become good producers. Then a piece of the 'bitumen' was tried in the fire. It burned like a smoky lamp, the smell of crude oil filling the room. Fourteen pairs of heavy boots beat approval on the floor, rattling the rafters. The men were elated."

Next day, the group decided to go over the field and obtain data for a report.

"We divided into two groups," Labbe recalls. "One was driven to a point on the road which crossed the tailings well below the original point of discovery and followed the canyon upward. The other went from the top of the canyon down a precipitous side path and checked the surface of the tailings. After the two groups met, the evidence was too sadly plain. At one time some crude oil had followed the tailings and rains had made oil pools." What a loss of enthusiasm!

At this point, Labbe stepped over to the Johnnie Mine to investigate. Someone—possibly O. T. Johnson, nephew of the original financier and then in charge—called attention to the fact that back in 1906 the Johnnie installed Fairbanks-Morse engines for their new mill. Crude oil generators were also used. With this kind of equipment, a volatile gas was produced from the crudes to run the engines. The process left a sludge residue which went down the tailings canyon with the other detritus and which cooled and hardened into cake. This was pressed into the sand by overburden.

There could have been waste oily matter in the sludge from imperfect processing. But major source of the crude oil was leakage and spillage from fuel tanks on the verge of the canyon.

For several weeks after this discovery, would-be locators who had just heard the oil rumors continued to come into the area. But they soon left—and the better natured among them were able to laugh at the innocent hoax of the Amargosa oil rush.

Uncle Sam Bought a Cactus Garden

Many Americans did not think much of the deal 100 years ago when Congress paid Mexico \$10,000,000 for 45,535 square miles of "worthless land" in what is now southern Arizona and New Mexico, known as the Gadsden Purchase. United States would have had a port on the Gulf of California if Congress had not trimmed down the size of the tract after Gadsden had made his deal with Santa Anna of Mexico.

By MURIEL LEDERER
Map by Norton Allen

"I WANT TO UPHOLD friendly relations with all the other governments on this continent. Especially, I want to settle the boundary dispute between Mexico and our Territory of New Mexico!"

This was Franklin Pierce's intent when he became President of the United States in March, 1853. And to this end he immediately appointed James Gadsden, a Southern railroader, as special envoy to Mexico. Gadsden was surprised at his appointment, "But as a voluntary offer from the President, it is the higher appreciated," he remarked, and started off to Mexico City with a long list of strict instructions.

He was to say that an eligible route for a railroad was the sole object of the desire of the American government for a change in the boundary line established by the Treaty of Guadalupe Hidalgo. He was to emphasize that Mexico would benefit from the railroad. He was to improve commercial relations with Mexico, and was authorized to offer a moderate sum of money with the negotiation.

Gadsden's mission was necessary because of a strange turn of events, the results of which were even more unexpected than their provocation.

The Mexican War of the 1840s had been conducted haphazardly. Unpopular with the Americans, it was really the result of a series of misunderstandings with Mexico.

The Treaty of Guadalupe Hidalgo in 1848 was written to end a war which Americans did not want, and in their efforts to bring a speedy end to the hostilities, the men who framed the document gave little thought to issues which might arise in future years. They overlooked the need for a route which eastern railroad interests desired in order to extend a line to Southern California.

The land south of the Gila River was regarded as quite worthless, and even when Pierce appointed James Gadsden as special envoy to Mexico it was with no thought of acquiring valuable territory. Rather, he was interested in settling a dispute as to boundary lines, and in securing a narrow path for the southern transcontinental railroad to the Pacific.

The Southwest had become important in 1848 when gold was discovered in California. Drove of settlers set out for the Pacific Coast, and the need for a railroad grew. A corps of engineers under Cooke surveyed the Rocky Mountains and decided the Gila River route would be the best way to link the East with the newly opened



James Gadsden (1788-1858), American railroad executive appointed by President Franklin Pierce to negotiate the treaty with Mexico which now bears his name. From a portrait by George Flagg.

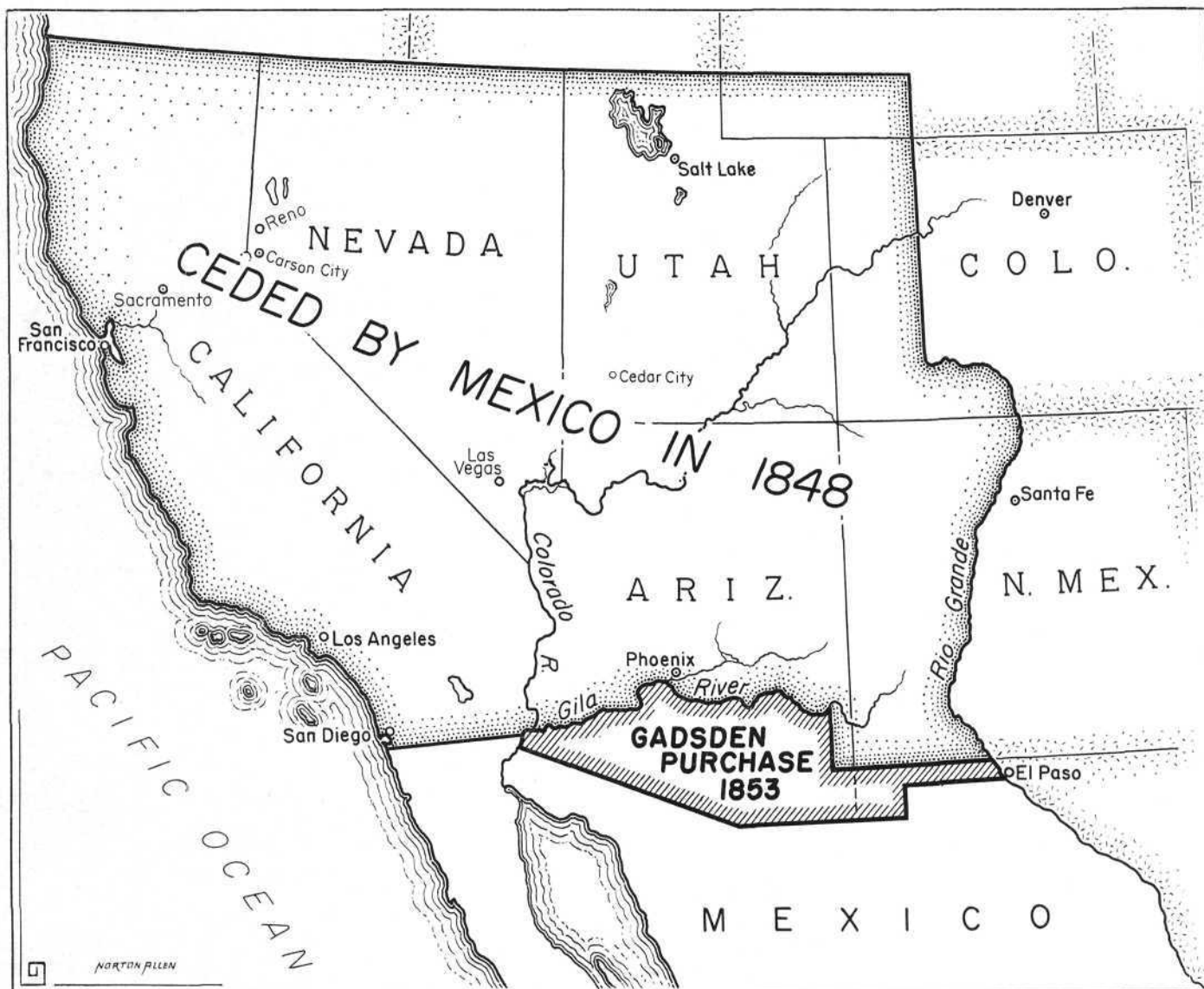
West. However, the best pass was across Mexican Territory. Because of the instability of Mexican politics, a road wholly on American soil was necessary.

The route Cooke chose was made up of old paths used by the Mexicans and Indians and, later, by wagon trains to California. In addition to serving the growing mining communities of California, Easterners hoped the railroad would encourage trade with the Orient.

In 1853, James Gadsden, an American soldier and diplomat, of Charleston, South Carolina, was President of the South Carolina Railroad Company and was the first advocate of a wholly southern railroad route with Charleston as its Eastern terminus. Gadsden had had an active career after graduating from Yale in 1806. He had been a merchant, an army man with Jackson in the Seminole Wars in Florida, a rice planter and finally a railway president.

With the growing tension in Congress in the 1850s over the slavery question, Southerners were anxious to build a transcontinental railroad to rival the Union Pacific being built in the North. Gadsden, both a Southerner and railroad man, became a champion of settlement of the border question.

Gadsden was successful in his negotiations with Santa Anna, head of the Mexican government, and on December



30, 1853, Santa Anna signed a treaty which: (1) Gave the United States freedom of transit for mails, merchandise and troops across the Isthmus of Tehuantepec; (2) Readjusted the boundary set by the Treaty of Guadalupe Hidalgo to allow railroad right of way south of the Gila River; (3) Annexed to the United States 45,535 square miles, bounded on the north by the Gila River, on the east by the Rio Grande River and on the west by the Colorado River. The United States paid \$10,000,000 to Mexico for these concessions.

Gadsden returned to Washington for ratification of the Treaty; but the document wasn't to President Pierce's liking. He rejected it. It went to the Senate where, after heated debate, it was adopted with some revisions. Gadsden was sent back to Mexico where Santa Anna was forced to sign because his government was bankrupt and desperately needed the money. President Pierce finally signed the Treaty on June 29, 1854.

In debate in the Senate three dis-

tinct groups formed. One favored ratification of the Treaty in its original form. Another faction favored a larger acquisition of Mexican territory and a port on the Gulf of California. A third group, composed largely of Southerners, demanded a boundary line which would allow a good route for a southern railroad.

Northerners feared the huge new territory might become confederate—which it did. They also feared the spread of slavery to the Pacific. So they cut the size of Gadsden's originally negotiated purchase to the area which was finally bought.

Congress was criticized by the public for buying a seemingly useless tract of desert. They called it "our national cactus garden" and "rattle-snake heaven."

The Purchase gave the United States the Mesilla Valley. Gadsden tried to get land all the way to the Gulf of California, but Congressmen said, "No!" When they changed their minds later, the Mexicans weren't willing to sell any more land. The new land was

often called Apache Country because many wild Apache tribesmen regarded this as part of their tribal hunting grounds.

There were border disputes for many years which kept the Territory in a turmoil. Raids by Mexicans, Indians, bandits and smugglers contributed to the tense atmosphere.

After June, 1854, the new territory was opened for settlement and problems cropped up. The main issues were in connection with claims for damage by both nations in the boundary dispute and Indian depredations. A real hatred developed between the two countries. Gadsden was then appointed Ambassador to Mexico, but was so unpopular there that his removal was requested by outraged Mexicans who had not favored the Gadsden Purchase.

The Purchase was the last addition of territory adjacent to the continental United States. A bill was introduced in Congress in 1857 to make the Gadsden Purchase a territory because it was forced by distance to act inde-

pendently of the Territory of New Mexico of which it was a part. This petition was denied for several years.

In the years after the Mexican War, the Territory was constantly being crossed by thousands of people on their way to California. Many stopped and set up ranches and farms along the Gila River. Indians continued to attack wagon trains and stage coaches.

One of the earliest pioneers who came from the East immediately after the Purchase was Charles D. Poston, the "Father of Arizona," who figured prominently in development of the Territory. He set up the Heintzelman ore mine, 30 miles from Tubac. Then he organized the Arizona Mining and Trading Company and a copper mine at Ajo in 1854. Gold was discovered along the Gila in 1858.

All this time the Territory was still politically one area, though too large to be wieldy. Tucson was the largest city in the Gadsden Purchase area but was 500 miles by stagecoach from the capital at Santa Fe. The Santa Cruz

THERE WAS OPPOSITION TO THE PURCHASE

Thomas Hart Benton: "Desolate, desert and God-forsaken."

Kit Carson: "A wolf could not make a living upon it."

New York Herald and other northern papers attacked it because of partisan or regional reasons.

Southern papers praised the treaty except for a few who thought it was worthless land.

Some papers attacked Gadsden personally and some praised his work.

Philadelphia Public Ledger said: "The treaty might as well be called a purchase of the right of way for a railroad to the Pacific as any other name."

New York Times favored it because it settled all the problems with Mexico.

In Mexico the opposition was so vigorous that Santa Anna was banished as a traitor to Mexico in 1855 for his part in the sale!

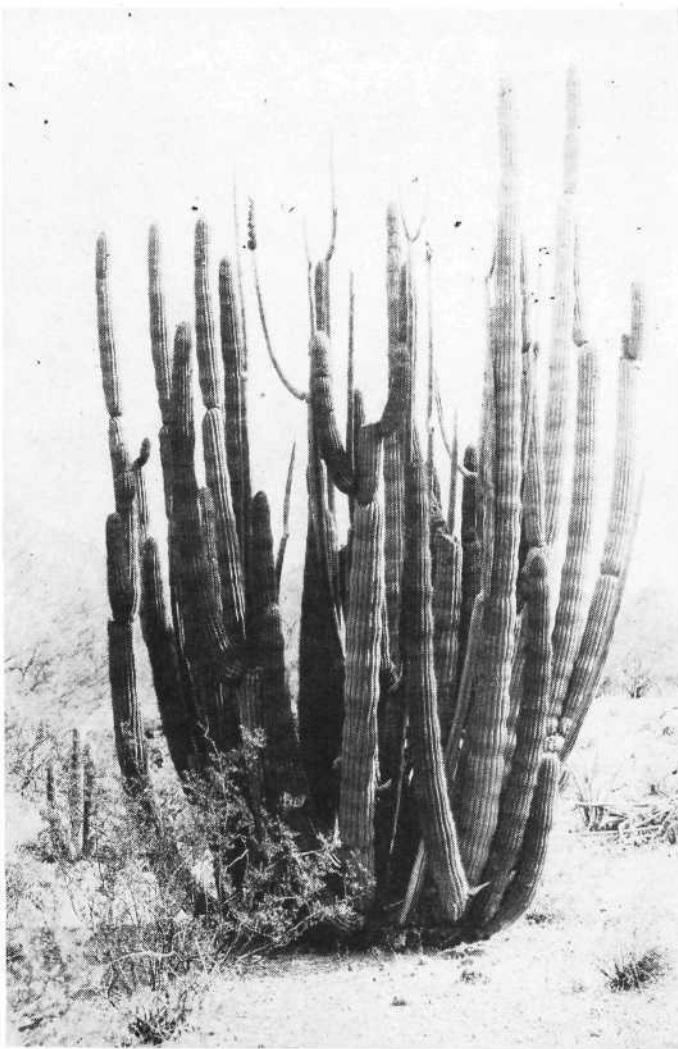
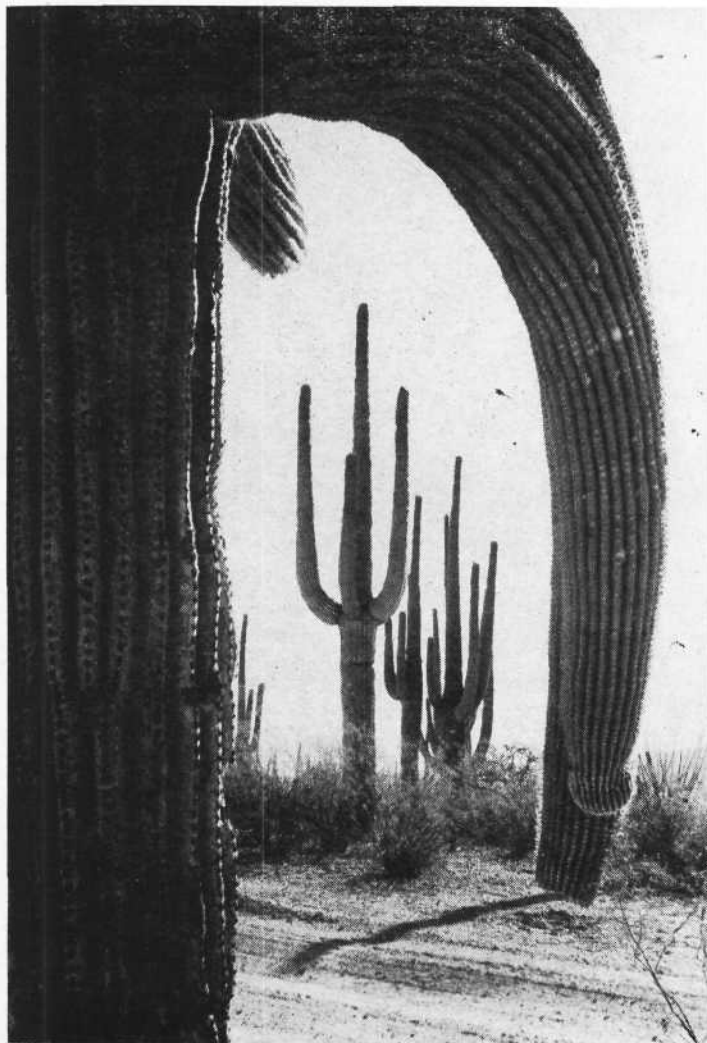
Valley made and administered its own laws by necessity.

Most of the settlers in the newly acquired area were Southerners, and in 1861 voted to join the Confederacy. In the same year a company of Texas Confederates under Colonel John R. Baylor defeated Union forces in the

Rio Grande Valley. In 1862 Jefferson Davis declared it a part of the Confederacy.

Slavery was no problem to the New Mexico Territory. Captured Indians and Mexicans had long served as slaves. In 1861, only 22 negro slaves were counted. There was no strong

Two of the species found in the "cactus garden" Uncle Sam acquired with the Gadsden Treaty. Saguaro National Monument (left) is near Tucson, and Organ Pipe National Monument is south of Ajo. Josef Muench photos.



attachment to the Union, and affinity to the South developed through the immigrants.

Arizona was organized by Congress as a separate territory in 1863. The boundaries were about as they are today except that a part of lower Nevada was included. The capital was established in Phoenix in 1889.

In the years after the Civil War the area continued to grow and develop, aided by the first railroad track laid in 1878. The line was called the Atlantic and Pacific, later became the Atchison, Topeka and Santa Fe. This brought prospectors and capitalists for the great mining boom of 1879.

The Pecos Valley became a thriving agricultural center in 1888—aided by the discovery of artesian water.

An epoch-making event for the Territory was the completion of a telegraph line from Fort Leavenworth to Santa Fe in 1869. In 1868 daily mail from the East had also speeded up communication. From then on, nothing was able to stop the area's wondrous development.

In one of the most important land deals in American history, we bought 45,535 square miles of valuable Southwest land from Mexico. We got a bargain—only \$10,000,000 for land that yields that much in value every month of the year! Included were the cities of Tucson, Douglas and Bisbee—high in Arizona worth and population—and Cochise County which has an assessed value of well over \$200,000,000.

The area still has a mixture of the Old West's charm — ranches, cow hands, rodeos, Indians, lost mines, ghost towns—all attractive to tourists and health-seekers.

Its population has grown from 61,547 in 1850 for the whole of New Mexico Territory (all of present-day Arizona and New Mexico) to 749,587 for Arizona and 681,187 for New Mexico in 1950.

The so-called worthless land has proved rich in metals. In Arizona from 1858-1940, \$3,000,000,000 worth of metals were mined—copper, gold, silver, lead, zinc and others. Thirty-two and nine tenths percent of the total copper in the United States comes from Arizona. In New Mexico, with most of its land under irrigation, \$78,000,000 in crops and \$127,000,000 in livestock products were produced in 1950 alone.

It is just one hundred years ago that the Gadsden Purchase became law. Though many people were against it at the time, the consensus today is that we should have bought more when we had the opportunity!

January Rains Promise Wildflowers in Some Areas

January rains assured some higher desert areas a colorful wildflower season, but at lower elevations the much-needed moisture seemed to have come too late to promise even a fair display.

After two good rains in mid-January, the Palm Desert bajada and the dunes along the Palm Springs-Indio highway showed only a few green sprouts in sheltered spots.

The outlook was dismal also in the Coolidge, Arizona area. According to Superintendent A. T. Bicknell, Casa Grande National Monument received only about one-half inch of rain the middle of January — "hardly enough to alleviate the poor wildflower situation."

At Apache Junction, Arizona, Julian M. King was optimistic. More than an inch of rain fell at Kings Ranch in a series of January storms, coaxing shoots of green to break through the desert floor. King hopes for a reasonably normal display; however, because the rains were late, the season will be tardy.

King remembers the late Fred Gibson's observation that trees seemed to bloom best in dry years. "If this is true, the palo verdes and ironwoods should be beautiful this spring," he predicts.

Samuel A. King, superintendent of Joshua Tree National Monument, California, also was encouraged by January rains; more than one-half inch fell in storms January 14 and 19. On a patrol January 26, Ranger Chuck Adams reported *thamnosma* blooming at the Twentynine Palms entrance and locoweed at Hidden Valley campground. The day before he had spotted numerous seedlings beginning to make their appearance. He recognized phacelia, woody bottle washer and desert dandelion. "It may mean we will have some of these in blossom by the third week in February," Superintendent King hoped.

Under conditions similar to those this year, records show that some plants have been in bloom by late March, King reports — filaree, chia, fiddleneck and others at lower elevations, with April and May flowering at higher elevations in Queen Valley and Lost Horse.

Other Mojave Desert areas than Joshua Tree looked forward to a good wildflower year. Since this desert is higher than the Colorado Desert south of the Little San Bernardino Moun-

tains, the flowering season normally is a month or so later.

Mary Beal, desert botanist of Daggett, California, was cheered considerably by January rains and, although February 1 was too early to be sure, she hoped for a colorful display. "We definitely have had a good start," she writes, "and we're very hopeful for more rains later on."

In another section of the Mojave Desert, Antelope Valley, Jane S. Pinheiro of Quartz Hill reported about 2½ inches of rain — "but more is needed for a mass display."

Hard Rock Shorty

of
Death
Valley



A group of scientists who had stopped at the Inferno store for supplies were discussing the lack of rainfall in Death Valley, and the reason for it.

Hard Rock Shorty, who had surrendered his seat on the bench to the distinguished visitors, listened for a while to the learned discussion, and then he could restrain himself no longer.

"Yu don't have to have a lot o' book learnin' to know why it seldom rains in this country," he exclaimed.

"It's all on account o' this place bein' below sea level an' the air bein' so dry. Rain has to fall too far — all evaporates before it gits down here.

"My ol' pardner, Pisgah Bill spent half his life tryin' tu figure how to git that rain-water down to earth—an' he finally gave it up an' moved his chicken ranch up into the Panamints where it was higher. Plenty o' rain up there — but the chickens never got used to that high altitude an' they all died o' pneumonia.

"If you smart fellers'll figure out some way to keep that water from evaporatin' too soon, we'll be growin' corn and pumpkins all over this place."

LIFE ON THE DESERT

By LOUISE SWITZER THOMPSON

The Navajo Indians have a keen sense of humor—but Mother Switzer could never quite understand this, and life on the edge of the reservation was a constant source of alarm to her.

THE SWITZERS migrated from Kentucky to California after the civil war and lived in the vicinity of Los Angeles until 1883. Then, pioneering in an easterly direction, they went to Flagstaff, Arizona, being obliged to lay over in Needles until the bridge over the Colorado was completed. They crossed over the river on the first passenger train over the span. There were then six children in the family, and I was but one year old.

By the time my memories of life in Arizona begin we were living on what is still known as "the Old Switzer Place" a mile east of Flagstaff proper. Most of the town clustered about the sawmill at that time, and the first public school was situated on the present site of Northern Arizona state College, half way between the two settlements. Our old house is gone now, but the gnarled old apple and cherry trees that father hopefully planted in the yard for mother are there, and the draw back of them is called Switzer Canyon after father.

Mother never became reconciled to life in Arizona. She looked for wild Indians behind every bush and was justified somewhat in her expectations if not in her fear of them. The railroad passed within a hundred yards of the house, and the wagon road that led to the desert reservations of the Navajo and Hopi Indians was between us and the railroad. Every passerby was an event. A train whistle brought us children out to line the fence to wave at the crews who soon became our friends. There were tramps along the railroad, cowboys on horses, wagons from the Mormon settlements about Tuba City, and Indians from the reservations to fascinate us.

The Indians came only in the summer time, the men dressed in calico pants since they had been told not to come into town without them. Mother's first fright came from a Navajo who lacked the required garment. While skimming milk in the pantry, a dark little room that opened off the porch on the northeast corner of the house, she was startled by a guttural grunt and whirled about to face a stark naked Indian. With a stifled scream she dropped the skimmer. She interpreted his gestures and grunts as meaning he needed pants. She quite concurred in this but it took nerve to squeeze past him in the narrow room. She dashed into the house, threw out a pair of levis, slammed the door and collapsed sobbing. We children

watched him don the pants and walk off toward town holding them up with one hand. Father was much larger around the middle than he.

The Indians soon learned that the fruit-starved people of Flagstaff were a ready market for their grapes and little red peaches which they peddled from door to door. One poor fellow, having no basket, stole a chamber pot, commonly called a thunder mug, from a back door where it had been left to sun, filled it with grapes and went the rounds. Probably he never knew why his grapes did not sell that day.

More than once father cautioned mother to show no hostility toward the Indians who came to our door, so when a band of Navajo men, women and children visited our home she opened the door but stood in the doorway, hoping they would not try to enter. A young Indian woman came up and handed her little papoose to mother and deftly took our own baby Walter out of mother's arms. The Indians crowded around to look at the white child. When mother tried to return the papoose and regain her own baby the Indians laughed and one of the men said "trade?"

"No, no!" mother cried frantically and thrusting the papoose back in its mother's arms, seized her own baby. The Indians went away laughing.

Father soon knew many of the Indians well. There was one tall, straight old Navajo who always managed to get firewater when he came to town, and it got to be a regular thing for father to bail him out of jail and send him home. This *Noc-o-to-clish* came in late one afternoon with twelve young braves whom he introduced as his sons, although father said they all looked to be about the same age to him. He wanted to make camp for the night and go into town next day. Father gave permission, and we watched fascinated while they built a fire and sat around talking to him. They made no preparations for a meal so father sent me in to tell mother she had guests for dinner. She was appalled, but fortunately we were a large family, and there was a side of beef hanging in the pantry and a pot of soup simmering on the stove. We lined up against the wall as they filed in after father and sat down to eat our supper.

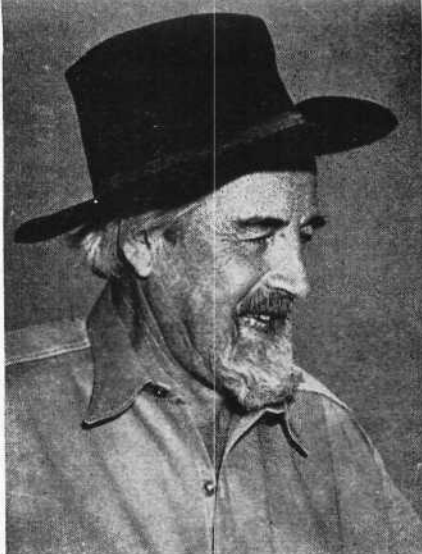
"Start them off with the soup," father said, "It'll fill them up." Mother was nervous, and about half way down the table an Indian elbow came in

contact with a scalding bowl of soup and one of the sons was burned. He jumped up knocking over his chair and gave a yelp. Father stood up and mother cowered with arms outspread in front of us, sure that her prediction that we would all one day be scalped was about to come true. But she had not counted on the Indian sense of humor. The young men burst into howls of laughter at the plight of their brother, and he sheepishly sat down to help clean up the table.

After that we were not so afraid of the Indians. If we saw them coming we made a dash for the house, but once inside the fence that enclosed the little orchard we watched them go by with never ending curiosity.

The Navajos brought small broom-tail horses to sell, and father bought two of them for my brothers. They rode out in the forest after school to bring in the milk cows that ranged freely during the day while their calves were penned at home. As their calves grew older they ranged farther afield. One fall afternoon the boys found them about two miles from the house along the road to the reservation. As they rounded them up to start them home a group of Navajos met them and one of the men reached out for the bridle of the buckskin pony. The pony shied away. Alarmed, the boys tried to hurry the cows but two of the men wheeled their horses and followed them shouting demands that they did not understand. "Let's beat it," Ed said, "they want to steal the ponies back." They abandoned the cows and started on a run for home. The Indians chased them for about a mile then turned back. It was an old trick, reclaiming horses they had sold and returning them to the reservation where the whites would never see them again.

It was a happy ten years we children spent in Flagstaff among the pine trees, the malpais rocks, the wildflowers. We saw the Grand Canyon, the Painted Desert and the Petrified Forest. Wild turkeys, shy deer and curious antelope were well known to us. There was even an indifferent brown bear that crossed the road between us and the house while mother stood petrified with fear in the doorway. Small wonder that she prevailed upon father to return to California. But we all left a part of our hearts in Arizona, and most of us returned to make our homes there.



Harry Oliver

Let 'er Blow . . . By HARRY OLIVER

Out on the California desert at Thousand Palms, Harry Oliver publishes the Desert Rat Scrapbook—a 5-page quarterly of humor and folklore. With only five pages of space, Harry has learned the fine art of brevity—hence it is possible to condense all the tall wind tales published in the Scrapbook over a period of seven years in one page of Desert Magazine—and here are the stories:

¶ I live in Thousand Palms and get all the wind coming down from San Geronio Pass, and in those 35 miles there's nothing to stop the wind but three barbed wire fences. Of course it blows all the barbs to the corners, but it slows the breeze some.

* * *

¶ I didn't like the wind my first year in this desert because I lost sixteen hats. Then I found I could screw those hats on by using the wrinkles in my forehead to hold them.

* * *

¶ The wind, back a few miles from Garnet, got to turning the windmills so fast, with so much friction, that the water came out hot. So a real estate man named the place Desert Hot Springs, and now he's selling lots.

* * *

¶ Most generally the wind comes from wherever it happens to be. But talking about heavy winds—once over at Garnet the wind blew a cook stove 14 miles, and came back next day to get the lids and the poker behind the door.

* * *

¶ Our school teacher at Thousand Palms says she scours her pans by holding them up to the keyhole. The sand coming through in a stream polishes them better than she can by the usual method.

* * *

¶ The S.P. Railroad turns its engines around so the heavy end is in front to keep the wind from blowing the light end off the track.

* * *

¶ Jack Secor, of Snow Creek Station, was blown through a screen door and put together again on the other side. A silver dollar he had in his pocket made a hole in the screen that he uses to prove the story, to this day.

* * *

¶ Scotty has a hat farm along with his gas station at Thousand Palms. He's got a six foot woven fence along side the station that nets him 12 to 15 hats a night, and sometimes a dollar bill.

* * *

¶ Soon after you turn off Highway 99 to enter Palm Springs there is a spot where the wind sure goes "plumb loco." The people leaving town sometimes get spun clear around, others have landed in the ditch. The Mayor ordered a warning sign put up. The sign painter got the sign almost up—then the wind hit him. He finished the sign in El Centro, 125 miles away.

* * *

¶ We don't have hurricanes in the desert because our local winds just blow them into a couple of dozen dust devils before they get a good start.

¶ I've seen it blow so hard from the west the poor old sun was at least three hours late going down.

* * *

¶ Going from Brawley to Indio the wind was so strong it bent the beam of my head lights back under the car and darned if I didn't have to turn around and back all the way to town.

* * *

¶ Notice in Desert Hot Springs newspaper—"60 acres for sale, between Garnet and Whitewater. If purchased before next heavy windstorm a three room shack will be included."

* * *

¶ We get used to it being windy. Why, we get so we can wake up at night and taste which way the wind's been blowing. Yes we know from the taste that the wind's been blowing from Imperial Valley (cow country), out Blythe way, or over the hills from 29 Palms. Of course, there's more spice in those wild night winds coming from Palm Springs.

* * *

¶ General George Patton was holding maneuvers at Camp Young when one of his desert trained boys came drifting into camp and landed with a bump. Slightly bruised and cut up, he was taken to General Patton. "You've really got nerve, son, to come down in a parachute with this 100-mile wind blowing. You might have been killed," said the General. "I didn't come down in a parachute, sir," replied the soldier—"I went up in a tent."

* * *

¶ My friend, Austin Cranston, told about the time he was out at Searchlight, and saw a chicken, with its tail to the wind, lay the same egg five times.

* * *

¶ Jack Diamond over at Hidden Springs Ranch used to have a lot of fine chickens. But he ran out of buckshot. You see if he doesn't feed those chickens lots of buckshot the wind blows them away. Fact is he is starting a new brand of buckskin chickens making them tough. Wind kept them moulting all the time, so he's teaching them to go around without feathers.

* * *

¶ The bend in the road from Palm Springs to Garnet was done by the wind. Years ago the oldtimers decided they wanted a road to the Garnet depot from the end of Indian Avenue. The road boss said "Follow me with your wagons and we will bust her through." He started out just as one of our sand storms came up. Well, he got out of sight, and the wind blew those horse tracks a half mile to the east, and that's why the road bends and misses the depot.



Air view of the rugged Superstition Range, scene of the Don's annual Trek for Lost Gold. In the left foreground is Weaver's Needle, important landmark in the legend of the Lost Dutchman Mine.

Trek for Lost Gold . . .

One day 70-odd years ago Jacob Walz came out of Arizona's Superstition Mountains, his mules loaded with rich gold ore. Walz died in 1891 without revealing the source of his wealth. Although many have searched, and some have lost their lives, no one has re-discovered the fabulous mine. But the legend of the Lost Dutchman Mine persists, and the Don's Club of Phoenix each year conducts a trek to the Superstition Mountains in a mass attempt to find the lode.

By THOMAS B. LESURE
Photographs by Mel Compton

KEEPING ALIVE the lore, legends and traditions of the Old West is the dedicated purpose of the Dons, a group of 50 Phoenix businessmen who have adopted the name and costume of the early Spanish settlers in the Southwest.

To familiarize visitors and residents with the landmarks of legend and history and the scenic beauty of the state, the Dons conduct weekly tours, visiting such places as the Apache Trail, Montezuma Castle, the Pima Indian

reservation, Grand Canyon, Tuzigoot ruins and Fort McDowell.

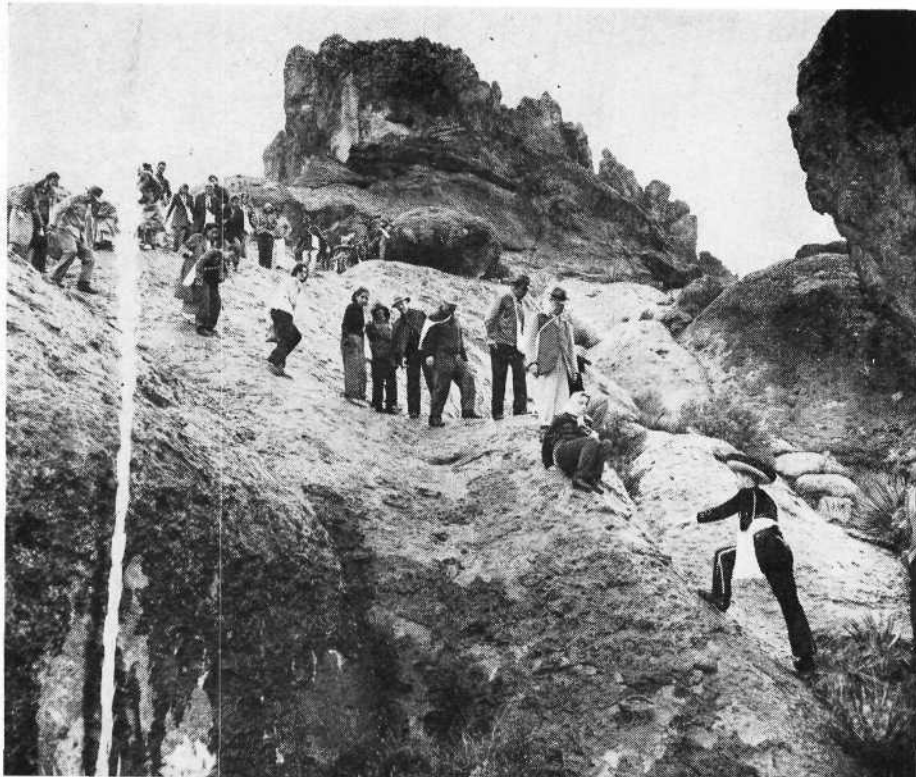
One of the most popular trips, staged annually during the first week of March, is the Trek for Lost Gold, a hike through Arizona's rugged and fabled Superstition Mountains of 1200 amateur adventurers prospecting en masse for the Lost Dutchman Mine.

The annual trek perpetuates one of the West's most intriguing stories, that of Jacob Walz, the "Dutchman" who one day in the 1870s came out of the wilderness of the Superstitions with a wild tale of a fabulous gold strike. He backed up his stories with muleloads

of rich ore that ran as high as one-third pure gold. Many gold seekers tried to follow him and discover his cache. But Walz eluded them all, disappearing into the vastness of the Superstitions, then emerging again in a few months with another valuable load of gold.

When he died in 1891, Walz left only sketchy directions for finding his mine. And to this day, despite countless attempts to locate the Lost Dutchman gold, the Superstitions still hold the secret locked tightly among their jagged peaks and rocky canyons.

Weaving the events of Trek Day around this story, the Dons lead groups in a mock search for the legendary mine. The day begins about 8:00 a.m. when the Dons' motorcade assembles in downtown Phoenix. Then, as a black smoke signal, rising like the plume of a volcano, cuts the morning sky above the Superstitions, the motorcade heads eastward for 50 miles



Above—A Don offers a helping hand to one of the hikers as the amateur gold seekers scramble up and down the rugged slopes of the Superstitions in search of the Lost Dutchman Mine.

Below—For those who do not join the strenuous all-day hike, there is plenty to see at Base Camp. Here cowboys use wooden plaques in a demonstration of branding techniques, giving the branded blocks to onlookers as souvenirs.

across the desert to a base camp set in a natural amphitheater oasis at the foot of the massive mountains. Here, among ramadas featuring Western exhibits, the visitors divide into two groups. Some look for the lost mine;

the others stay at Base Camp for a day of Western entertainment.

Those who decide to take the strenuous nine-mile hike brace themselves with another cup of coffee from the Dons' canteen and, packing lunches,

join one of the colorfully-garbed Dons who lead groups of 50 persons into the vastness of the Superstitions.

They make their way upward over a twisting trail which affords sweeping panoramas of the Gila Valley and distant mountains like Poston's Butte. Along the way are lovely cactus gardens and weird rock formations, the "Stone People" of Indian legends.

The trail dips and curves—rising ever higher over undulating ledges to a steep rock slope known as Devil's Slide where ascent is made by use of ropes. Then, past Geronimo's Cave and its weathered evidences of roaming Apaches to a high plateau overlooking monolithic Weaver's Needle, one of the most prominent landmarks in the lost mine legend.

The return trip is made through historic, rock-bound Peralta Canyon where groves of sweet laurel, oak and pinyon pine and a crystal-clear stream provide welcomed relief for the hikers.

Visitors not wishing to take the all-day hike stay at Base Camp where there's something doing every minute. Indian silversmiths, potters and basket weavers demonstrate their skills at the "Indian Village." Old prospectors show how to pan for gold. The Powderhorn Clan thrills onlookers with fancy shooting and the firing of early American arms. Indian and Mexican dancers perform their rhythmic steps. Other Westerners demonstrate the use of branding irons, explain western saddle making and leathercraft, describe desert gems, Hohokam artifacts and denizens of the desert such as the hairy tarantula, scorpion and the Gila Monster.

About 5:00 p.m., when everyone has returned from the long hike, the Dons and Doñas begin serving up huge portions of real Western barbecued beef with all the trimmings. After supper, signal fires are lighted around Base Camp and a huge campfire is kindled. The next two hours are filled with the dances and songs of Indians, Mexicans, cowboys and old pioneers.

Then, as the campfire burns low, all lights are extinguished. A Don, in the heavily-accented phrases of Jacob Walz, begins relating the Lost Dutchman's story. The cool desert air whisks over the camp, adding an eerie emphasis to the legend. Overhead, heat lightning flashes through the sky. And in the background, 800 feet above the camp, a ghostly fire burns on Superstition Mountain. The Dutchman's story ends. A signal flare rockets up—answered by another from the mountain top. Then, as a grand climax to the day, a river of burning coals tumbles over the mountainside, lights up the camp, and slowly fades away.

LETTERS

Know Your Packrats . . .

Riverside, California

Desert:

I was indeed somewhat disturbed when I read in January's *Desert Magazine* the article entitled "Robber Rat of the Desert." It contains some very serious errors.

First, the picture is not that of a desert wood-rat or packrat but that of a high mountain wood-rat. This rat dwells near or above tree-line, most often in the Rocky Mountains. The desert species of *Neotomas* do not have such heavily haired tails.

The specific name *Orolestes* means "mountain robber" and is correct for the rodent pictured. There are three species of desert *Neotomas*: *albigula*, *lepida* and *mexicana*, called respectively the white-throated, the desert and the Mexican wood-rat. All have scant-haired tails.

Second, I can find no record in any of the numerous scientific papers treating the habits of packrats of any of these rodents having prehensile tails that can be wound around an egg "to pull it behind him." This statement falls under the category of fiction or hearsay.

Third, no packrat has "pockets in his mouth." The author must have confused packrats with kangaroo rats which have cheek pouches. These are merely infoldings of skin opening not into but outside the mouth. They are held in place by small muscles. Further, to say that "cheek pouches are designed by Nature for digestive purposes" is a mistake so erroneous as to border on the ridiculous.

Fourth, packrats do not "range over almost all of North America." Had the author consulted any seriously written book on North American mammals — such as Burt and Grossenheider's *A Field Guide to the Mammals*—she would have discovered that a greater part of northern United States and most of Canada except the extreme western part are uninhabited by wood-rats.

Better than the word "usually" in the sentence, "he usually leaves something in exchange for what he takes," would be "sometimes," or "quite often."

There are other loosely worded statements in this short article which could have been stated more accurately.

EDMUND C. JAEGER
Curator of Plants
Municipal Museum

The Rattler's Strike . . .

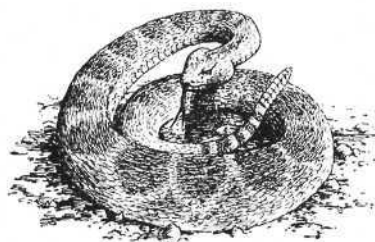
Ione, Colorado

Desert:

I enjoy reading your magazine, especially the Desert Quiz. However, I surely cannot agree with your answer to the first question in the January True and False.

On page 466 of *The Reptile Book* by the late Raymond Ditmars, the author has the following to say about the rattlesnake:

"It strikes generally a third, sometimes half its length, but never springs bodily as alleged by the writers of sensational snake stories. Nor is it necessary for the snake to be coiled to deal a blow. While retreating toward shelter it will often turn and from a crawling position draw back



the head by contracting the neck into an S-shaped loop and strike readily."

The Reptile Book was written in 1915, but I doubt whether the habits of the rattlesnake have changed very much in the past 40 years.

T. C. FORWARD

Reader Forward is right—*Desert's* quiz editor used the word "coil" too loosely in the January issue. Actually it was meant that a rattler cannot strike without some curvature of its body—although the curves may be merely in the form of an S—which is the position the snake takes for a quick strike. The striking position may vary all the way from a tight S to a full coil—but never when the body is extended full length on the ground.—R.H.

• • •

Berkeley, California

Desert:

I take issue with the first question in the January Desert Quiz. It claims a rattlesnake cannot strike without first coiling.

On the ground with room to do so, a rattler will loop itself into a compact position which might be called a coil. But don't ever hold one unless thumb and forefinger are directly back of the head. It can turn and strike if given a fraction of an inch leeway. Don't try to pick one up by the tail. It can lash out or up even with its head down. And most of all, stay clear if

you encounter one swimming. It can and will lash sideways, and there is no coiling involved.

WILLIAM H. NELSON

On page 9 of the December, 1947 issue of *Desert* is a picture of Kent Frost holding a snake aloft by the tail to prove that it cannot strike from that position. Of course he was careful to pin its head down with a stick before picking it up. Probably he would not want to hold a snake longer than three feet in this manner.—R.H.

• • •

Quizmaster Caught Napping . . .

Trumansburg, New York

Desert:

I have always appreciated the high degree of diversity the Desert Quiz has maintained—and so it was disappointing to me to find question number 8 in the November issue repeated in January.

Question number 11 in the December quiz asks who brought the first camel train across the American desert. *Desert's* answer is "W. F. Beale." The correct name is Edward Fitzgerald Beale, which would make his first initial E. instead of W.

HENRY F. DOBYNS

Desert's quizmaster checks his questions and answers each month, but occasionally errors slip by—like the wrong Beale initial in December and the question repetition in January. He promises an extra check for good measure after this.—R.H.

• • •

A Problem Everywhere . . .

New Buffalo, Michigan

Desert:

In the January issue of *Desert* were letters from three of your readers complaining about roadside trash. Two of these correspondents, Mrs. G. H. Luthy and Charles Kelly, were impressed by the comparative lack of litter along the roads in the Midwest. They must have been fortunate enough to choose the cleanest route at the best time.

No, litter is not "strictly a Western problem," as Mr. Kelly fears. Some of the picnic tables I have seen along the roads here were left in such condition that no one would think of lunching there. I have seen boxes and shopping bags and other containers full of garbage lying close to the highways. There are thousands of beer cans. Believe me, the Chicago area is jammed with litterbugs.

Mr. Kelly's Utah is beautiful, clean and spacious, typical of the vast and fascinating West which I have visited on seven vacation trips. Someday I hope to make my home there.

RITA PLAHETKA

How to Scare 'em Away . . .

Haverhill, Massachusetts

Desert:

In "Just Between You and Me" in the December issue, the editor confesses he is "out of patience with poets" because they favor him with too many of their efforts.

There is a method for discouraging literary attempts which has been used successfully by a Hollywood film corporation. It seems unkind, but at least it is effective.

Many years ago, after much time and work, I completed writing a play which I submitted to this studio.

The manuscript was returned—unopened, unrolled, unread—with a terse note: "We have not read your play. We do not intend to read it. We have our own staff of writers who perfectly supply all our needs. Who told you that we were in the market for outside material?"

Needless to say, I didn't try them again.

P.S. I am submitting no poetry.

MINA I. LEWIS

Thanks to Reader Lewis for not submitting more poetry for our already bulging supplies—but if she had, Desert's poetry editors would have read every verse. Desert Magazine appreciates good desert poems, and its only source is poet readers. But at times a heavy batch of poor rhyme does tax the patience of a busy staff.—R.H.

• • •

To Protect Her Young . . .

Buffalo, Wyoming

Desert:

I guess we'll keep hearing from people who don't believe that rattlesnakes swallow their young—just because they haven't seen it done.

Well, I have seen it. But from my observation, the mother snake doesn't "swallow" her brood; she just opens her mouth big and wide and lets the little guys run in until danger is past.

I have lived on a cattle ranch in Wyoming all my life, and until a few years ago, when the government and some individuals started gassing rattlesnake dens, we spent a lot of time dodging the critters.

One time, many years ago, four of us were out riding. Just as we dropped down into a wash, we saw a rattler lying close to a ledge, surrounded by four little ones stretched out in the sun. The moment the mother saw us, she opened her mouth and in a matter of a few seconds the little ones were down her throat. We jumped off our horses, and one of us got her with a rock just as she started down her hole. We cut her open, and the four

little ones crawled out. They were about 4 inches long and a bluish color with no markings.

Another time a couple of us startled a rattler lying near her hole with five or six little ones around her. They performed just as the other quartet had, only this time the mother beat us to the hole and escaped with the family intact.

Several times I have encountered little rattlers, six or eight inches long, sunning themselves by a rock or bank out of the wind. But by that age they seemed to be on their own, as no elder appeared when danger threatened. By then they had all the markings of an adult rattler and the start of buttons on the ends of their tails. They shook them vigorously, but produced not even a buzz.

Instead of sitting around doubting, perhaps more of the disbelievers should saddle up horses and ride through the hills and the rocks and the sagebrush every day for a month or two. I am sure they will see many strange and interesting things. Maybe they'll even come on a mother rattler, just baby-sitting.

WILBUR F. WILLIAMS

• • •

Ain't This Monotonous? . . .

Salt Lake City, Utah

Desert:

As one drives through Utah, he will come upon many strange signs similar to the "Ain't This Monotonous" one pictured in the January *Desert*. These have been erected by the Stinker Gas Company of Salt Lake City to break the "monotony" of long highway stretches across the desert and are intended to relieve with a smile the tired tourist's trip.

JAMES P. SHARP

• • •

We'd Rather Have Junipers . . .

Danville, Illinois

Desert:

I have a well authenticated article, 1200 words, one photo, entitled "Make Way for Grass." It is about eradicating the juniper in the Southwest, showing what they do to soil, how they will take over, how many more cattle the land would support if they were gone, how they can be removed. Let me know if you are interested.

J. T. K.

Except for the cattlemen, very few of us here in the West want to see our hills denuded of juniper. They add too much beauty to the landscape. And as long as the lands available are able to produce more food than we can use, we would prefer to have the beauty.—R.H.

The Lost Dutchman . . .

Apache Junction, Arizona

Desert:

The Lost Dutchman Mine story by Mary L. Bagwell (January *Desert Magazine*) was very interesting to me and to other residents of this Superstition Mountain area. Herman Petrasch, whose version of the Lost Dutchman is repeated by Mrs. Bagwell, is our friend and neighbor.

Herman lives on the extreme eastern stretches of the Lost Dutchman area, on the banks of Queen Creek. My ranch is located on the western side, and Tex Barkley's spread is on the south. We are several miles apart, but in this country that makes us neighbors.

I have lived here in the shadows of the Superstitions for 46 years, and in that time have personally helped bring out the bodies of four of those who lost their lives searching for this elusive mine.

BARNEY BARNARD

• • •

Rx: Three Drops of Gall . . .

Hong Kong, China

Desert:

I recently read an article by a missionary who had spent some years among the Indians in South America. He said these tribesmen had completely stopped death from snake bite by giving the victim a potion made from the gall of the coati mundi, an animal also common to the southern Arizona desert country. According to the article, the Indians carried a small bottle of the gall with them, and if bitten by a poisonous snake (sometimes a rattler), would drink three drops of the gall in a cup of tepid water and suffer no ill effects from the bite.

Perhaps the Indians' treatment is worth investigating.

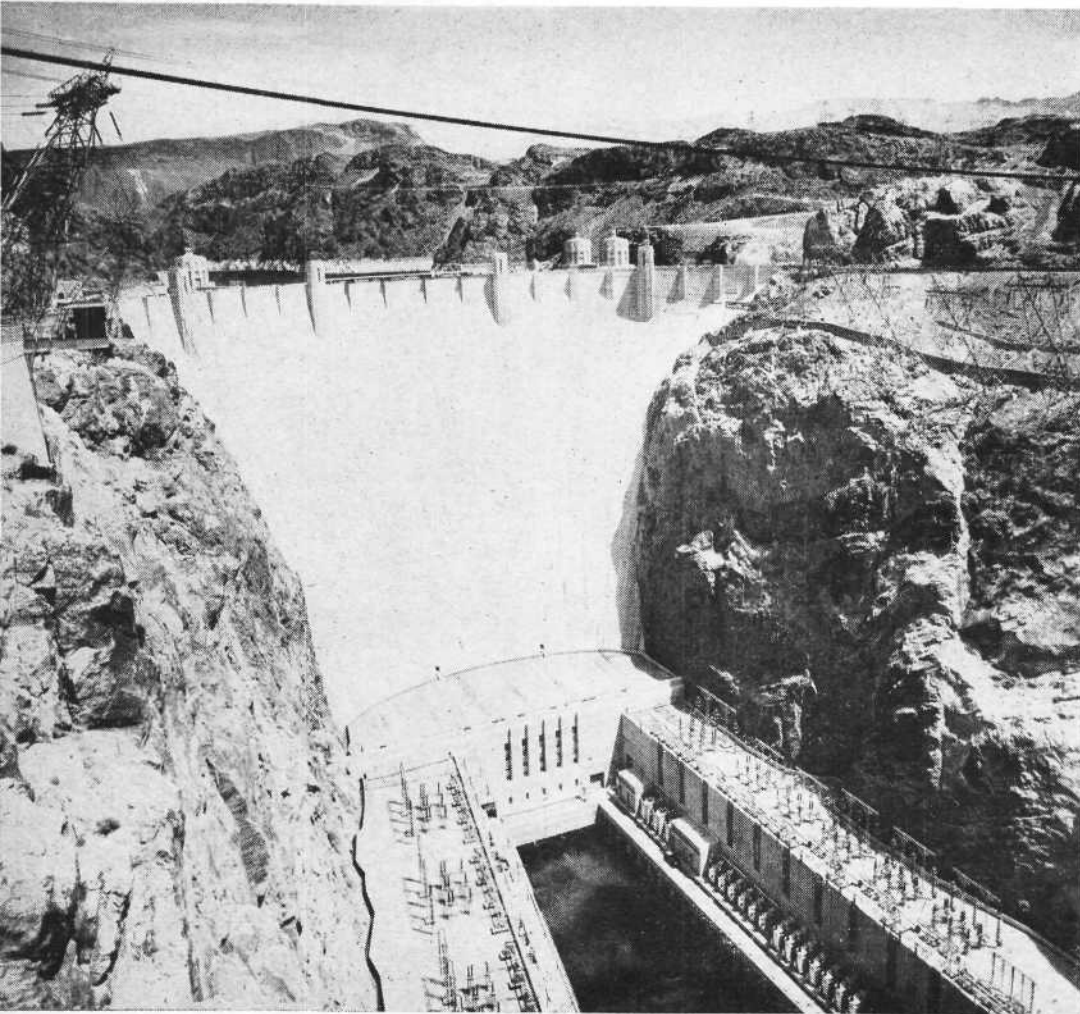
EDWIN R. PURDIE

I am rather dubious about all the detail of the story quoted by the missionary. Snake poison is injected directly into the blood stream, and anything taken into the stomach would not reach the blood stream for several hours—too late to prevent the swelling and other violent effects which follow soon after injection of the venom. However, Hopi Indians seem to have some sort of immunity from snakebite, as they often are bitten during their snake dance yet rarely suffer any ill effects. After the dance, the Hopis drink some kind of a purgative—possibly similar to that of the South American tribes—which causes violent vomiting. But the Hopis' real secret of immunization is still a mystery.—R.H.

PICTURES OF THE MONTH

Hummingbird . . .

High on the walls of a deep side canyon near the headwaters of Lake Mead, Hulbert Burroughs of Tarzana, California, came upon this mother hummingbird warming her nest. Unperturbed by her human visitor, she allowed Burroughs to come within three feet to take this picture, first prize winner in January. He used a Rolleiflex Automatic camera, Zeiss Proxar close-up lens, Super XX film, 1/50 second at f. 8.



Dam . . .

This study of Hoover Dam won second prize in the January contest. It was taken by Willard Luce of Provo, Utah, with a 4x5 graphic view camera, 88 mm. B. & L. wide angle lens, Isopan film, 1/10 second at f. 32.

MINES and MINING

Monticello, Utah . . .

In a \$2 million deal, Charles Steen of Moab and William McCormick of Dove Creek, Colorado, secured an option on the Big Buck mining claims 32 miles north of Monticello in the Big Indian district. Steen and McCormick in turn sold their option to Joseph Frazer of the automotive corporation who joined associates to form the Standard Uranium Corporation. They plan an intensive exploration program in the next six months. — *San Juan Record*.

Moab, Utah . . .

It seems certain that Moab will have a uranium sampler by this spring, with a mill to be in operation within two years. Plans for the sampling plant were to be completed by the end of January, and some of the equipment had already been ordered. The plant became necessary with recent big ore discoveries in the Big Indian area and elsewhere on the Colorado Plateau. — *Moab Times-Independent*.

Lovelock, Nevada . . .

Successful testing here of a revolutionary mobile magnetometer by the United Geophysical Company of Pasadena, California, has resulted in the location of three iron ore bodies. The discoveries are in northeast Pershing County and northeast Churchill County. The operators say that it will revolutionize the prospecting business because, mounted on a truck, it can cover up to 200 miles a day compared with one mile by the hand-borne instrument. It is superior to airborne equipment in that it gives a definite location of ore bodies. — *Territorial Enterprise*.

Santa Fe, New Mexico . . .

Tower Mining and Refining Company's new \$65,000 manganese milling plant in Sierra County was scheduled to go into production in January. The mill, known as the heavy media plant type, has a capacity of 30 tons an hour. — *Pioche Record*.

Silver Peak, Nevada . . .

Sunshine Mining Co. has started drilling north and south on the 500-foot level of its Mohawk Mine 30 miles southwest of here. The development at this level is to determine the continuity in depth of the ore body previously developed on the 218-foot level, which brought assays of 40 ounces of silver per ton in several places. — *Pioche Record*.

Austin, Nevada . . .

Paul Litell of Auburn, California, has optioned the Silver Palace mine and mill at Grantsville from Harry Howard of Fallon and has a small crew preparing to reopen the property. The ore is tungsten, lead, silver and zinc with tungsten predominating. It is estimated that the mine will produce 50 tons a day. — *Pioche Record*.

Moab, Utah . . .

Uranium, Inc., a newly-formed Utah corporation, has secured an option on the Turner Mine, located on the Colorado Plateau. The Turner is producing uranium ore that has been averaging about .44 U308 and 2.3 vanadium. — *Humboldt Star*.

Hite, Utah . . .

Vanadium Corporation of America has abandoned plans to build a \$3 million uranium mill at Hite in Garfield County. The decision was made after a controversy with the Atomic Energy Commission over metallurgy to be employed at the proposed plant reached a stalemate. The AEC claims that pilot plant operations and research have proved that greater recoveries can be obtained through the commission-approved flow sheet, and that the taxpayer loses if full value of ore bought by the government is not realized. The VCA argues that its process has been perfected by experienced operators in the concentration of uranium and is equally as effective as the AEC method. — *Salt Lake Tribune*.

Battle Mountain, Nevada . . .

A potentially rich strike of turquoise has been located at the old Turquoise Queen Mine in Copper Basin near Battle Mountain by Ray Jepperson and Glenn Johnson. First traces of the deposit were discovered last November. Since that time, the mine has turned out a fair amount of good grade turquoise running in a deep blue and rich green strain. Plans have been completed to start intensive excavation; to date, operation has been limited to open cut work. — *Humboldt Star*.

Kingman, Arizona . . .

Production on the six Treasure House claims, located in the River Range along the Colorado River, will begin at once. First operation probably will be the running of a tunnel to tap the surface ore body. Construction of a mill in the area is planned for the near future. — *Humboldt Star*.

Washington, D. C. . . .

The National Petroleum Council has asked for legislation to amend the nation's mining laws so that oil, gas and other minerals covered by the Mineral Leasing Act of 1920 would be reserved to the government in all future mining claims and ensuing patents. The NPC's suggestion would permit multiple development and use of public lands. — *Battle Mountain Scout*.

Battle Mountain, Nevada . . .

A new electronic gadget which eventually may aid prospectors in their search for uranium, has been perfected by a Palo Alto, California electronics firm. Made of two induction coils, a pint of water, a bank of storage batteries and some ordinary electronic recording instruments, the machine determines with high precision the basic strength of the earth's magnetic field. This is important to metal prospectors because the most minute change in the field strength may indicate the presence nearby of an ore body. — *Battle Mountain Scout*.

Moab, Utah . . .

Two minority stockholders in Utex Exploration Company will receive \$3,272,500 for stock in which they invested \$19,500, Charles A. Steen, Utex president, has announced. Steen said he has purchased the interests of Dan O'Laurie of Casper, Wyoming, and R. M. Barrett of Dove Creek. The sale involved cash payment of \$150,000. — *Mining Record*.

Monticello, Utah . . .

J. L. Wade might have been the uranium king of North America—but his finds were made before the mineral became valuable. He discovered the precious ore in October, 1888, at the mouth of Disappointment Creek in Colorado, and he found it later in Paradox Valley, Colorado, and in the Four Corners country, scene of the current giant uranium development. He said he came out of the enterprise with a "fair income"—but nobody in those days suspected they were going to use uranium to make atom bombs. — *San Juan Record*.

Kingman, Arizona . . .

Purchase and plans for operation of the Tennessee mine and mill at Chloride have been announced by Harry J. Olson, president of the Mojave Enterprises, Inc. The Los Angeles man said that the mill would be in operation by the middle of March and the mine will be reopened as soon as dewatering is accomplished. — *Mining Record*.

Thomas B. Lesure took his first "Lost Gold Trek" last year, a few weeks after joining the Phoenix Dons Club. He tells about the trip in this issue of *Desert Magazine*.

Lesure, his wife Nancy and their three young children came West to live about a year and a half ago, choosing Phoenix as the setting for their El Rancho Nato. They had first visited the Southwest on a cross-country tour in 1951 and had decided then someday to make their home in Arizona.

The Lesure clan are good travelers, and Tom and Nancy never hesitate to "pack up the kids" and start on a trip. Author Lesure writes only travel articles and stories dealing with the lore, legends and history of the Southwest.

Mel Compton, who took the pictures for "Trek for Lost Gold," was a combat photographer for the Marine Corps during World War II, spending most of his time in the South Pacific. Later, he was recalled to duty and served a year in Korea.

Upon his return from the Marines, Compton became a professional photographer in Phoenix. He particularly likes to shoot rodeo action. For recreation, he finds nothing more satisfying than riding his horse, Babe, over Arizona desert trails.

Although she grew up in Chicago, Muriel Lederer, author of "Uncle Sam Bought a Cactus Garden," learned early to know and love the desert. She first visited the Southwest at the age of five, and her family returned for numerous stays throughout her childhood.

After attending Vassar College, she became the wife of Fred Lederer, a Chicago manufacturer of flexible packaging materials. They live in suburban Winnetka, Illinois.

Mrs. Lederer has always been interested in United States history and enjoyed the research necessary for this *Desert Magazine* story of the Gadsden Purchase.

"It may be a lazy way to polish stones, but it is very satisfying and a lot of fun," E. J. Mueller says of tumbling. In this month's gem and mineral department, Mueller tells fellow rockhounds how they can construct small tumbling mills for their home workshops. The baroque stones

Prizes for Camera Fans . . .

January rains brought hope for wildflowers, and if a good display results, the camera fans will be out in force to record the beauty of the blossoming plants. Even if the display isn't spectacular, there will still be pictures for the photographer—studies of small groups of blossoms along a canyon wall, a few clusters of flowers on a wide white dune, a single tiny bloom demanding a special photographic lens.

And if the wildflowers aren't inspiring, consider the many other subject acceptable in *Desert Magazine's* monthly photo contest: Indians, wildlife, desert characters, landscapes, landmarks—anything of the desert Southwest. But remember, it is the unusual picture which has the best chance for an award.

Entries for the March contest must be in the *Desert Magazine* office, Palm Desert, California, by March 20, and the winning prints will appear in the May 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

are becoming more and more popular with amateur jewelry craftsmen.

Mueller's work as chief chemical engineer for the Mexican mining department of American Smelting and Refining Company keeps him too busy for much time at his hobby bench and necessitates frequent trips into Mexico. During his absence, Mrs. Mueller carried on tests with the experimental tumbling machine and she also has become a great enthusiast of baroque stone polishing. Both are active members of the El Paso Mineral and Gem Society.

Louise Switzer Thompson, who relates her memories of Arizona in the 1880s in this month's Life on the Desert story, is a retired schoolteacher. "The love of scribbling runs in the family," Mrs. Thompson writes, and explains that one of her four children reports part time for the San Bernardino, California, paper. Besides "scribbling," Mrs. Thompson enjoys puttering in the garden of her San Diego home.

BELOW NORMAL COLORADO RUN-OFF IS INDICATED

Snowfall in the upper basin of the Colorado River, according to the January report of the U. S. Weather Bureau, ranges from 50 percent of normal to near normal in the various sections of the watershed.

On the Colorado drainage basin above Cisco the reports indicated 81 to 94 percent of normal. In the upper Green River basin the snowfall had ranged from 53 to 80 percent, with an average of 60 percent.

From the San Juan tributary an estimated run-off of from 85 to 93 percent of normal is predicted.

For the Little Colorado and Gila Rivers the outlook was very poor, ranging from 2 to 42 percent of normal.

The above predictions were based on the rain and snowfall from September through December, and the outlook may be changed to a marked extent by snow and rainfall after January 1.

Maps *For Desert Travel, Gem Fields, Exploration, Ghost Towns, Lost Treasure, Hiking Trips*

For 17 years the Desert Magazine staff has been mapping the desert areas. Over 400 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 guides obtainable to a thousand interesting places.

FOR THE LOST TREASURE HUNTER . . .

(5 of these stories include maps)

- Aug. '46—John D. Lee's lost gold mine, Arizona.
- Sep. '48—Haunted Silver in Arizona. MAP
- 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.
- 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.
- Oct. '51—Lost Ledge of the Sheep Hole Mtns. MAP
- Nov. '51—Buried Treasure of the Chiricahuas. MAP
- Dec. '51—Golden Treasure of Tule Canyon. MAP
- Jan. '52—Lost Shotgun Mine.
- Mar. '52—Goler's Lost Gold. MAP
- Jul. '52—Lost Mine With the Iron Door.

LOST TREASURE SET, 18 Magazines \$3.00

MAPS FOR THE ROCK HUNTER . . .

- May '46—Green jasper, near Lake Mead, Nevada. MAP
- Jun. '46—Agate, chalcedony, etc., Arizona. MAP
- Jul. '46—Minerals at Calico. MAP
- Aug. '46—Fossils While You Wait. MAP
- Sep. '46—His Legacy Was a Gem Onyx Field. MAP
- Oct. '47—Collecting crystals, Topaz Mt., Utah. MAP
- May '49—Geodes, chalcedony, Southern Arizona. 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
- Dec. '49—Ant Hills Covered With Jewels. 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 Graces' Trail. MAP
- Jan. '51—Nevada Invited the Rockhounds. MAP
- Apr. '51—Geodes on an Old Silver Trail. MAP
- May '51—Gem Hunt on a Ghost Town Trail. MAP
- Jun. '51—Rocks of the Ages—In Utah. MAP
- Jul. '51—On Black Rock Desert Trails. MAP
- Aug. '51—Where Turquoise Was Mined. MAP
- Sep. '51—Agate Trail in Nevada. MAP
- Oct. '51—Geodes in Lizard Gulch. MAP
- Nov. '51—Cave of the Crystal Snowbanks. MAP

ROCK HUNTER'S SET, 30 Magazines \$5.00

MAPS FOR TRAVELER AND EXPLORER . . .

- May '46—By Jalopy Through "The Sweepings of the World." MAP
- 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
- Oct. '47—Don't Knock at a Hogan Door. MAP
- Dec. '47—Grand Canyon Voyage. MAP
- Sep. '48—Haunted Silver. MAP
- May '49—Great Salt Lake. MAP
- Jul. '49—On Hassayampa Trails. MAP
- Aug. '49—Indian Country Trek. MAP
- Sep. '49—They Left Their Story in the Sands. MAP
- Apr. '50—Painted Canyon in Mecca Hills. MAP
- May '50—They're Closing the Gates at Davis Dam. MAP
- Jul. '50—La Mora Canyon in Baja California. MAP
- Aug. '50—When Hopis Dance for Rain. MAP
- Sep. '50—Escalante River Trip. MAP
- 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
- Jan. '51—We Found a Way Into Elegante. MAP
- Apr. '51—Geodes on an Old Silver Trail. MAP
- Jun. '51—Trail of the 57 Shrines. MAP
- Jul. '51—We Camped With the Pai Pai. MAP
- Sep. '51—We Camped on Kaiparowitz. MAP
- Oct. '51—Trail to Hawkeye Natural Bridge. MAP
- Nov. '51—Cave of the Crystal Snowbanks. MAP
- Dec. '51—Golden Treasure of Tule Canyon. MAP
- Jan. '52—We Found the Lost Indian Cave. MAP
- Feb. '52—They Run the Ferry at Hite. MAP
- Mar. '52—Puzzle Rocks of the Badlands. MAP

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- May '46—When Hawaiians Came to the Utah Desert. MAP
- May '49—Great Salt Lake. MAP
- Jul. '49—On Hassayampa Trails. MAP
- Sep. '49—Gems on the Devil's Highway. MAP
- Mar. '50—Buckboard Days at Silver Reef. MAP
- Sep. '50—Escalante River Trip. MAP
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- Mar. '50—Buckboard Days at Silver Reef. MAP
- May '51—Forgotten Ghost of Gold Mountain. MAP
- Aug. '51—So They Built Ft. Bowie. MAP

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Here and There on The Desert

ARIZONA

Navajo Sawmill Burns . . .

FORT DEFIANCE — Largest and most successful of more than 20 industries operated by the Navajo Tribal Council was closed down in January by fire. An explosion of dust on a conveyor belt touched off a fire that destroyed the boiler building of the Navajo sawmill near Canyon de Chelly. Allen G. Harper, area director of the U. S. Indian Bureau, said damage would be between \$150,000 and \$200,000, most of it covered by insurance. It was hoped that the mill, which employed 240 Indians, could be repaired within six weeks.—*New Mexican*.

Globe-Bowie Line Out . . .

GLOBE — Effective January 1, Southern Pacific passenger train service between Globe and Bowie was discontinued. Complete bus service has been substituted, the stages traveling between Globe and Coolidge Dam via San Carlos. According to SP officials, the short line had been operating at heavy loss for some time.—*Graham County Guardian*.

Hopi Priest Dies . . .

HOTEVILLA—A Hopi priest who saw the first pioneers come to the land of the Hopi in Northern Arizona died January 10. He was Talashongnewa, known to his white friends as "Sam," who never accepted the white man's civilization, but who lived to see his grandchildren take their places among their white brothers. Talashongnewa was believed around 100 years old when he died. Upholding the vows of his priesthood until his death, he was buried in the robes of his office at Hotevilla.—*Phoenix Gazette*.

Indian Trader Succumbs . . .

MESA—Floyd L. Boyle, 51, owner of trading posts at Tonalea and Cow Springs on the Navajo Indian Reservation, died January 1 in Mesa. Boyle had lived in Arizona all his life and had operated the Tonalea post since 1935.—*Phoenix Gazette*.

New San Carlos Manager . . .

SAN CARLOS — A new manager was to take over the San Carlos Apache Tribal Council February 1. He is Tom Shiya, who will supervise the Indians' widely diversified business enterprises which return an estimated \$1,500,000 in annual gross income. The businesses include cattle ranges, stores, lumbering and mining operations.—*Phoenix Gazette*.

Deer Population Up . . .

FLAGSTAFF — Winter deer surveys by game department, forest service and park service personnel on both the Moqui and Bill Williams management units show upward trends in population. The general survey routes on the Moqui showed 25 percent more deer observed than last year, and the Bill Williams survey party saw 12.8 percent. The most noticeable increase was in the fawn crop.—*Coconino Sun*.

Huachuca to Serve Again . . .

FORT HUACHUCA—This historic fort, on a standby basis since July, was scheduled for reactivation February 1 as an army secret electronics proving ground. The proving ground is being moved from Fort Monmouth, New Jersey, where space was found to be inadequate. The base in its new capacity will have a personnel of about 8500 workers, including approximately 1000 civilians. — *San Pedro Valley News*.

CALIFORNIA

Annual Trek to Death Valley . . .

TWENTYNINE PALMS—The 6th annual encampment of Death Valley '49ers will be held in Death Valley on November 11, 12, 13, 14, it was decided in January at a meeting here of the organization's board of directors.

President George Savage announced that a plaque will be erected on a stone cairn monument at the site of Death Valley Scotty's grave, above his fabulous castle, as part of the encampment program. Mrs. Randall Henderson, sculptress of Palm Desert, California, has been commissioned to design the plaque. A memorial service will be held at Scotty's grave at the time the plaque is placed.

At the same time, the annual exhibit of gems and minerals from Los Angeles, Kern, Inyo and San Bernardino Counties will be designated as the William R. Harriman Memorial Mineralogy Exhibit, Savage said. "This will be in honor of Mr. Harriman, co-chairman of the display, who died earlier this month," he explained.

B. Paul Gruendyke, superintendent of Los Angeles County Parks and Recreation Department, was named production chairman for the Death Valley events.

Wins Liars Crown . . .

Ed Stevens of Imperial, California, was judged "the lyingest man there" at the Pegleg Smith liars contest at Borrego Springs New Year's Eve.

At a midnight campfire, Champion Liar Stevens told an audience of nearly

150 his tale of dry lake angling. It seems that Ed caught a 60-pound catfish (one which carries its own water) in one of the dry lakes in the Borrego desert. His partner, fishing the same lake, reeled in a rusty lantern with the flame still burning.

Ed argued the impossibility of the situation with his partner and only after knocking 45 pounds off his watered fish was he able to get his friend to put out the light.

Second prize went to Dwight Warren of Palm Springs who insisted that a decontamination station be set up in San Geronio Pass to make motorists change the air in their tires before they enter the valley.

"They bring smog in their tires and release it when they get down here," Warren contended.

Chairman of the New Year's Eve Pegleg event is Harry Oliver of Thousand Palms, editor-publisher of the *Desert Rat Scrapbook*.



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Begin Salton Park Work . . .

INDIO—After nearly two years of delay, work on Salton Sea State Park has begun. Development had been pending assurance of a water supply. Coachella Valley County Water District couldn't contract all the water needed by the park, which is outside the CVCWD district. The state finally decided it could use water from Salton Sea for sanitary purposes and transport drinking water if the water district could not fill all its needs.—*Coachella Valley Sun*.

Will Ebb in '68 . . .

INDIO — Salton Sea, which rose 13½ inches last year and now is 236.46 feet below sea level at its surface, will stop rising in 1968, engineers assure shore-side ranchers and resort owners who have suffered property damage because of the rise. The engineers estimate that the run-off from increased farming in Coachella and Imperial valleys will cause the sea to rise until it reaches 220 feet below sea level—about 1968—and then stop.—*Desert Sun*.

Temporary Labor Plan . . .

WASHINGTON—A stop-gap plan for importing Mexican laborers for work on farms in the Southwest has been devised pending a new agreement with Mexico. The plan provides for recruitment of Mexican agricultural workers at border stations by Labor Department representatives. This replaces the old plan under which the Mexican government did the recruiting in the interior and sent prospective workers to the border for admission.

Desert Lemon Boom . . .

COACHELLA — Desert lemons have a higher acid content than lemons grown in the citrus belt, and therefore they are better for the juice market. Because of the current juice boom, large-scale plantings of desert

lemon groves are being planned, especially in Coachella Valley and the Yuma, Arizona, area. Albert Newcomb, who grows lemon and citrus nursery stock near here, said that he knows of 60 acres of lemons that will be planted in Coachella Valley in the spring.—*Desert Rancher*.

NEVADA

Final Generator Ordered . . .

BOULDER CITY—A new generator has been ordered by the Colorado River Commission in cooperation with the city of Los Angeles, to occupy the last available space in the Hoover Dam power plant and bring the plant up to capacity. The new machine will be of

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110,000-kva capacity with a .95 power factor at 180 rpm and will be of 16,500 volts, three phase and 60 cycles of alternating current. Although it is of large size, it will not increase Nevada's power supply, but will serve peaking purposes and will fill in when one of the other generators is in need of repair. Delivery date is set for February, 1957, including installation.—*Las Vegas Review-Journal*.

All-Time Record . . .

BOULDER CITY—A new all-time travel record of 2,220,941 visitors to the Lake Mead National Recreation Area was set in 1953, National Park Service figures show. This is a 92 per-



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cent gain over the previous high mark of 2,046,649 set in 1951. As usual throughout the year, but particularly in the winter months, Hoover Dam continued to draw the heaviest portion of the travel. Winter fishing was second.—*Las Vegas Review-Journal*.

Supplement Antelope Herds . . .

CARSON CITY — To strengthen Nevada's presently declining antelope population, surplus animals from Montana herds will be shipped in. Montana now is trapping the antelope in hopes of reducing grazing pressure on the state's grasslands. The animals are being allotted to other states which can provide suitable habitat for them. — *Territorial Enterprise*.

Gunnery Range Threat . . .

FALLON — Four hundred square miles of land will be lost to mining and grazing if Fallon Naval Air Station is allowed to reoccupy a large tract in Pershing County for aerial gunnery practice. Surveyors have been at work in the area for the past year, making plans to include it in a giant naval gunnery range. But mine owners have stymied them by refusing to move out. If the gunnery range is approved, a large tract of only partially prospected land would be closed to mining. Government officials have said that grazing could be done on the area at certain periods.—*Reese River Reveille*.

NEW MEXICO

No More Corn on Cob . . .

GALLUP—A Navajo woman from Springstead trading post, Arizona, lost her false teeth recently at a Gallup bus depot. She advertised for their recovery over a Navajo language program, offering a reward, and soon after the teeth were reported found. But the finder refuses to ship the dentures to the loser until she sends him the reward, and the loser declines to send the reward until she tries out the teeth. It is hoped the matter can be settled before corn on the cob is again in season.—*New Mexican*.

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For Efficiency, Economy . . .

WASHINGTON—Secretary of Interior Douglas McKay has announced reorganization of the Indian Bureau. The present basic form of organization, including area offices, will be retained, but there will be some consolidations. The Window Rock, Arizona, area office is to be consolidated with the one at Albuquerque, with superintendencies at each place and separate superintendents for the Navajos and the Hopis. The position of superintendent of the United Pueblos Agency will be reestablished, distinct from the area director at Albuquerque. The building and utility branches at Albuquerque and Gallup will be merged.—*New Mexican*.

State Land Inventory . . .

SANTA FE — Although the state land commission's inventory of New Mexico lands is proving expensive—total cost will probably reach \$125,000—the job promises to return to the state considerably more than this investment. Among other things, the inventory team is finding that the state is leasing land for 3 cents an acre that is being subleased for \$1.25; that grazing leases are being farmed as irrigated land; that thousands of acres are being grazed free by holders of adjoining leases; that it costs more to patrol for fire the state forest lands in Catron County than the lands return. The inventory undoubtedly will precipitate new policies in the management of the 13 million acres of state lands.—*New Mexican*.

Museum Given Blanket . . .

CHIMAYO — A handsome handwoven blanket, gift of the famous Ortega Weavers of Chimayo, is one of the latest additions to the Museum of International Folk Art in Santa Fe. The blanket was woven by Nicacio Ortega, dean of the Chimayo weavers, who has been carrying on the weaving traditions of his people for 59 years. Although the blanket is a modern product, it is a beautiful example of a craft which has continued to flourish for many years among the Spanish people of the Rio Grande Valley. — *New Mexican*.

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Three Rs for Indians . . .

SANTA FE—Approximately 13,000 Indian children on the Navajo reservation are not receiving formal education because of lack of facilities. To remedy the situation, the survey team recently appointed by Secretary of Interior McKay to study the Indian problem recommended that further construction of relatively high-cost boarding schools be postponed and concentration put on less expensive semi-permanent facilities which can be provided sooner. The survey team's report said the pressing need on the reservation was for elementary schools. —*New Mexican*.

Cowboys' Feet Bigger . . .

SANTA FE—According to a man who should know, cowboys' feet are getting bigger. Theron Brooks, sales manager for one of the Southwest's oldest manufacturers of cowboy boots, claims "the cowboys of yesteryear couldn't begin to fill the boots of a modern range rider." Brooks said cowboys of the early 20th century wore an average 5½ shoe size; today's cowpokes currently average a size 9½ boot. —*New Mexican*.

UTAH

\$3 Million Bid for Land . . .

MONTICELLO — Seven tracts of San Juan County land, totaling 16,845 acres, went without bidders at a recent Indian land sale, while across the state line in San Juan County, New Mexico, 138,460 acres brought high bids totaling nearly \$3,000,000. The leases, which carry the usual provision of a 12½ percent royalty to the tribe or individual Indian owner of the allotment, all must gain official approval from Washington. —*Salt Lake Tribune*.

Echo Park Battle Continues . . .

WASHINGTON — Final okay by the Department of Interior of controversial Echo Park Dam in the Upper Colorado River storage project didn't end arguments.

Powerful conservation groups promised the administration is "in for a whale of a fight" if it persists in including the Echo site in the plan. Charles Callison, conservation director of the National Wildlife Federation, emphasized that the opponents of the dam were not against the Upper Colorado storage project, but they were against any phase of it which would include building a dam in Dinosaur National Monument, inundating scenic wilderness areas. The conservationists believe alternate damsites could be found which would supply the people of Utah with water and still protect the monument.

"Utterly fantastic," John Geoffrey

Will, manager of the newly-opened Washington office of the Upper Colorado River Commission and a strong proponent of the dam, termed these alternate damsites suggestions. He said the Echo Park Dam would be second only to Glen Canyon as a sound power producer for the area. There is no comparable site in the entire area which has less storage water evaporation loss.

A smaller national park is the "honest and simple way" to settle the controversy, believes Frederick P. Champ, chairman of the subcommittee on public lands of the U. S. Chamber of Commerce. Champ recalled the opposition of Utahans when the monument was suddenly enlarged from 160 to 205,000 acres some time ago. He recommends a great reduction in the park area to resolve the problem of encroachment by reclamation projects upon the monument.

Investigation Completed . . .

CEDAR CITY—Livestock men of southern Utah who suffered severe losses in sheep herds ranging near the atomic proving grounds in Nevada have been assured that radioactivity from atomic tests was not responsible for deaths and illness among the sheep. Intensive study by medical and veterinary research scientists proved that the atomic blasts had nothing to do with the strange malady. —*Iron County Record*.

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Shafer Trail Scenic Road . . .

MOAB—The Shafer Trail, although built primarily as an AEC access road into rich uranium territory, eventually will become known as one of the most spectacular scenic trips in the world, those who have traveled it believe. Although the grade of the road recently was cut from 17 to 14 percent, making the drive possible for passenger cars, the trip is not recommended for fainthearted drivers. There are many hairpin curves and sheer cliff drops. The scenery is fantastic, filled with weird natural forms and brilliant color. —*Moab Times-Independent*.

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DESERT CAVALCADE PAGEANT, 8:00 P.M.
- **Saturday, April 3** — Chuckwagon Breakfast 6:00 a.m.
Mexican barbecue, 12 noon.
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DESERT CAVALCADE PAGEANT, 8:00 P.M.
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A TUMBLING MILL FOR THE AMATEUR

To E. J. Mueller, mining and metallurgical engineer, rockhound, lapidary and jewelry hobbyist, tumbling gems presented a problem he had both the training and the interest to tackle. Refusing to be discouraged by pessimists who insisted that the process was impractical and too expensive for the amateur, he designed a baroque mill for his workshop. The result of months of intensive study and experimentation plus 30 years' engineering experience in the mining and metallurgical fields, here is Mueller's tumbler—a small and efficient machine which can be built for about \$53.00.

By E. J. MUELLER

NATURE EMPLOYS the ocean waves, century after century pounding beach pebbles against the shore, to polish the little stones which children—and adults too—like to pick up from the surf. Hurrying the natural process, commercial shops invented giant tumbling machines which toss about thousands of bits of gemstones until they are smooth enough and shiny enough to sell to the amateur jewelers who like their unusual shapes. But everybody thought the process was too expensive, too complicated and too impractical for the hobbyist. "You'll need a large mill and huge quantities of material," they said. "A small tumbler just won't work."

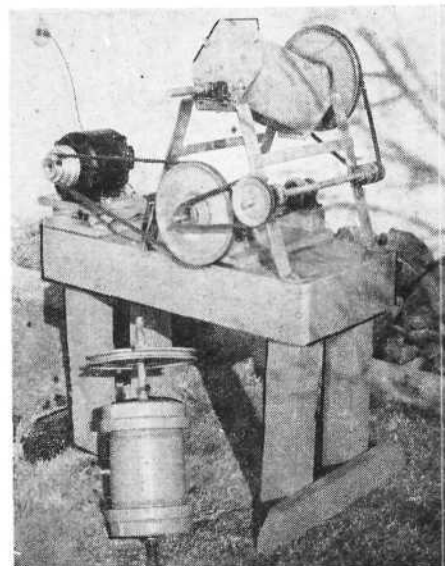
The problem intrigued me. A spare-time lapidary, I understood the thrill which would come upon opening my own tumbling mill and seeing the waste scraps I had tossed in emerge as beautifully polished baroque gems. I decided to try to develop a tumbling machine which the amateur could afford and use.

Writers on the subject of tumbling seemed to agree that narrow mills of large diameter are necessary to create enough interstone pressure for proper grinding and polishing.

The speed, they thought, should be controlled so that the stones would be elevated slowly to the top of the mill and then allowed to tumble and slide down again.

Although both of these presumptions are factors in tumbling, it seemed to me that the primary objective would be to create the greatest movement of the stones without force enough between adjacent stones to injure them by violent impact. The problem, I reasoned, was to create a mill that would provide a maximum amount of interstone movement, interstone pressure by centrifugal force rather than by weight alone, without hurting the stones by destructive impact. A mill of small diameter and greater length seemed the logical solution.

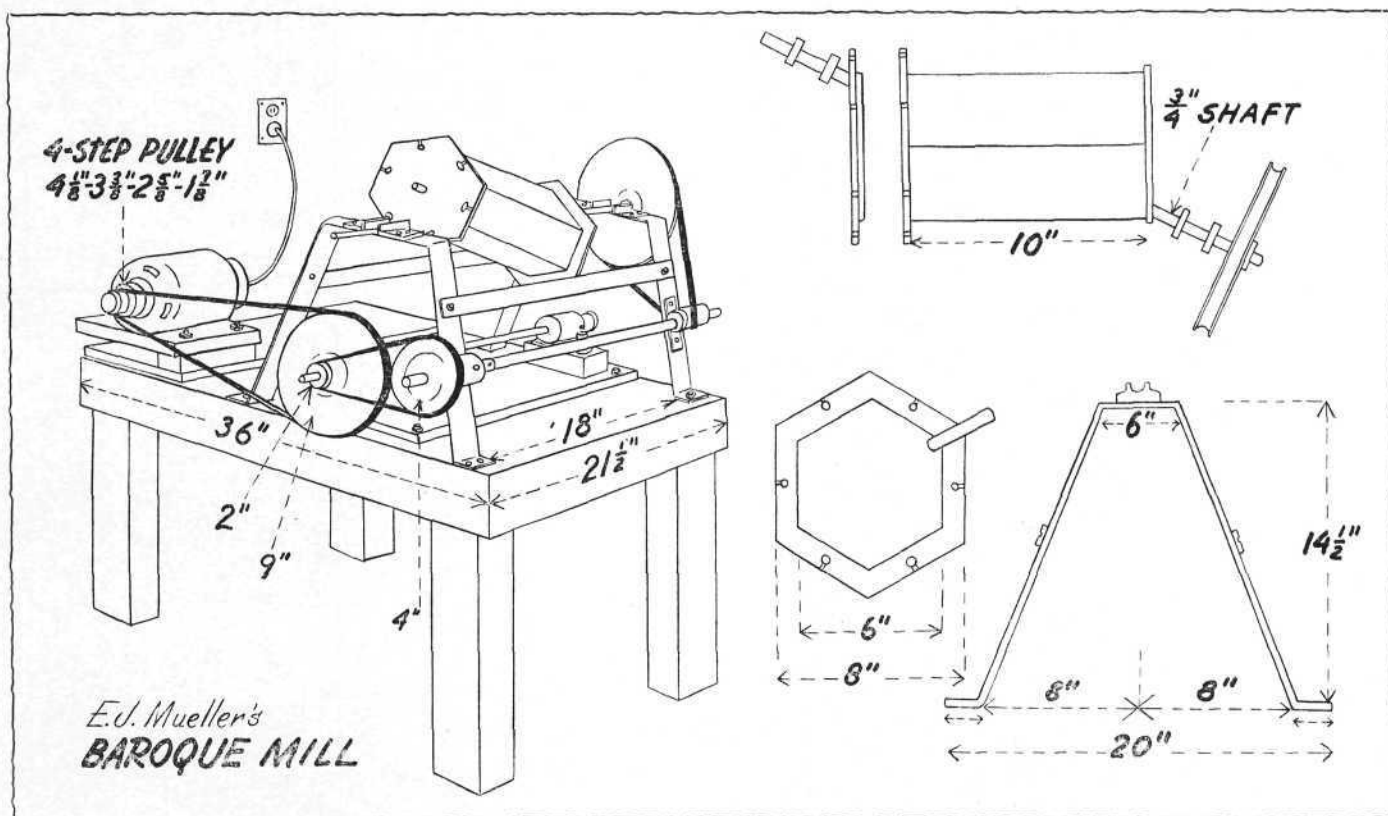
Preliminary tests were made with a regular laboratory type cylindrical ball mill, a 6" sleeve 10" long and capped at both ends with 6" pipe caps. A piece of $\frac{3}{4}$ " shafting was welded onto the caps, the mill suspended in cradle bearings and placed in operation. Varying amounts of stone, grit, water and filler such as clay flour, sawdust, lead shot, etc., were tried and the speed of the mill varied over a wide range.



E. J. Mueller's baroque mill, a practical and inexpensive tumbler for the amateur.

The first mill was not satisfactory. It merely pulverized the grit, and very little actual grinding was accomplished. I then built a hexagonal sleeve to fit snugly into the mill, perforating it with $\frac{1}{8}$ " holes spaced $\frac{1}{2}$ " apart. This improved the mill's operation, but grinding was still very inefficient and painfully slow.

I went to the drawing board and made a number of sketches. I decided to retain the hexagonal shape—to slow down any violent end motion and to slide the stones from one end of the mill to the other rather



than roll them. I also offset the shafts of the mill to help develop maximum centrifugal force and to balance vertical and horizontal motion with the mill. Other refinements were made, and the mill was built in the following manner:

A conventional sleeve 6" in diameter and 10" long was constructed from $\frac{1}{8}$ " steel plate. The sleeve was sealed on one end by welding on a 3/16x7" cover plate, and at the other end a 1" flange was welded around the hexagon at right angles to the length of the sleeve.

A cover plate was constructed of two 3/16" steel plates. One plate was cut to cover the sleeve and the flange around it; the other was cut to fit snugly into the end of the sleeve, and the two were joined together with a few rivets. The purpose of the cover is to seal the end of the mill. Its inner plate forms a shoulder to hold a 1/16" rubber gasket, forming a watertight seal, and serves to center the cover plate. A piece of $\frac{3}{4}$ " shafting was welded onto the two end plates, offset 3" from the center, so that the shafts would revolve in a horizontal plane when the mill was rotated.

While the general construction of the mill is shown in the diagram and photo, the following procedure for lining up the shafts on the cover plates may be helpful: A $\frac{3}{8}$ " hole was drilled into each cover plate, offset 3" from the center and on diagonally opposite sides of the sleeve. A 9/32" hole was drilled into one end of each shaft in the exact center to a depth of $\frac{1}{4}$ ". The holes were threaded to fit a 5/16" stud screw. The ends of the shafts were then cut off at an angle of about 26 degrees, and a 5/16" stud bolt was pushed through the hole in the cover plate from the inside and screwed into the threaded hole in the shaft, thus connecting the two. The removable cover plate was fastened into place with $\frac{1}{4}$ " bolts and wing nuts.

The mill was then placed in the cradle bearings of the machine and rotated. Minor adjustments were made on the shafts until they rotated in a horizontal plane. The shafts were brazed onto the cover plates. The stud bolts were removed, the heads cut off and the end slotted with a hacksaw and replaced in the shaft end with a screwdriver until flush with the inside of the cover plate.

Assembly of the machine is obvious from the photo and sketch, but a few points may need further explanation. The bearings for the countershaft directly under the mill are mounted on wooden block 2x2x6". These blocks are fastened to a 1x8x21" wooden board with bolts extending through bearing frame, blocks and board. The board is fastened to the mill base with two bolts through slotted holes $\frac{3}{8}$ x2" in the wooden base. This allows adjustment of the V belt connecting the 2" pulley on this shaft with the 4" pulley on the countershaft fastened on the legs of the mill bracket. Slotted holes are also beneath the bearings fastened to the legs of the mill bracket for adjustment of the V belt connecting the 2" pulley on this shaft to the 10" pulley of the mill shaft.

The base of the motor is also equipped with slots to adjust the position of the mount to the 4-step pulley on the motor shaft.

The mill has a capacity of from 4 to 10 pounds of material. With the $\frac{4}{8}$ " standard 4-step pulley, its speeds are 36, 50, 64 and 79 rpm.

For grinding cryptocrystalline rocks — agate, petrified wood, jasper, bloodstone, etc.—use 64 rpm. For crystalline rocks, like quartz, amethyst, citrine and moonstone, use 36 or 50 rpm, grinding time 24 to 96 hours.

PARTS LIST

Total cost of tumbler, including labor for construction of steel mill, approximately \$53.00.

MACHINE

Montgomery Ward

Catalogue No.	No.	Description	Price
84-C2895	1	4 $\frac{1}{8}$ " 4-step pulley	\$1.35
84-C2878	2	2" x $\frac{1}{2}$ " V pulley (A) @ 37c	.74
87-C5544	1	9" x $\frac{1}{2}$ " V pulley	1.98
84-C2878	1	4" x $\frac{1}{2}$ " V pulley	.70
84-C5544	1	10" x $\frac{3}{4}$ " V pulley	2.08
84-C2888	2	24" x $\frac{1}{2}$ " shafting @ 43c	.86
87-C5311	4	$\frac{1}{2}$ " babbitted bearings @ \$1.37	5.48
87-C5311	2	$\frac{3}{4}$ " babbitted bearings @ \$1.54	3.08
83-C4740	1	Floating motor rail	.89
84-C2889M	1	36" x $\frac{3}{4}$ " shafting	1.36
84-C2887	4	$\frac{3}{4}$ " shaft collars @ 2 for 39c	.78
84-C2887	4	$\frac{1}{2}$ " shaft collars @ 2 for 24c	.48
87-C5038	1	V belt (A) 25"	.52
87-C5038	1	V belt (A) 40"	.82
87-C5038	1	V belt (A) 55"	1.03

MISCELLANEOUS

8—1" x $\frac{1}{4}$ " machine bolts	4—2" x $\frac{1}{4}$ " lag screws
12—2" x $\frac{1}{4}$ " bolts	2 pcs. 3/16x2x40" strap iron (mill brackets)
4—4" x 5/16" bolts	2 pcs. $\frac{1}{8}$ x1x21" strap iron (braces)
6— $\frac{1}{4}$ " wing nuts	1— $\frac{1}{4}$ horsepower motor
30— $\frac{1}{4}$ " washers	
4—5/16" washers	

MILL

6 pcs. $\frac{1}{8}$ " steel plate 3 $\frac{1}{4}$ x10"	1 pc. 3/16x1x36" strap iron (flange for mill)
1 pc. 3/16" hexagonal 6" diam.	1—10x10x1/16" rubber gasket
1 pc. 3/16" hexagonal 7" diam.	
1 pc. 3/16" hexagonal 8" diam.	

WOODEN BASE

2 pcs. 2x12x36" lumber	2 pcs. 2x8x10" lumber (motor mt.)
1 pc. 2"x6"x10' lumber	1 pc. 4"x4"x10' (legs for base)
1 pc. 1x8x21" lumber	1 lb. No. 16p nails
2—2x2x6" wooden blocks	

All parts for the machine, except steel plates for mill, braces and brackets, can be purchased for about \$28.00. Most of them are available from Montgomery Ward. Materials and labor for mill and brackets should not exceed \$25.00. Steel balls $\frac{1}{2}$ " for operation of mill can be purchased from Mine and Smelter Supply Co., El Paso, Texas, for about 70 cents per pound. One set will last for years, as they abrade very slowly.

For agate type rocks, polish at 64 rpm and burnish at 79 rpm. For crystalline and small rocks, use 36 or 50 rpm.

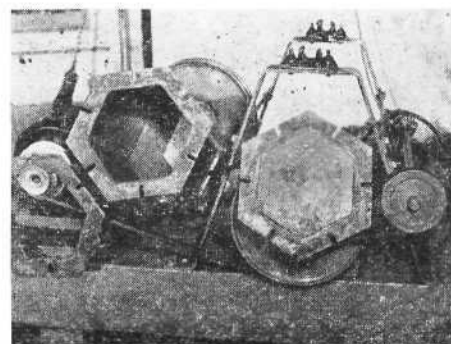
Charge the mill with 4 to 10 pounds of material, broken pieces, slabs or other chunks one square inch or less in size. Add 1 to three pounds of grit, 80 or 100 mesh with enough water to make a paste, and from 5 to 15 pounds of $\frac{1}{2}$ " steel balls.

Grind for 24 hours or less and inspect. Add a little more water to maintain a thin paste. No carrier need be added since it merely slows down the grinding speed. Silicon carbide and abraded rock particles will furnish a carrier in a short time.

Grind another 24 hours and inspect. If not ground enough, add $\frac{1}{4}$ to 1 pound of grit, coarse or fine depending upon how

much more grinding is necessary. Do not change grit. The crushed grit and rock particles help smooth the stones.

When stones are free from pits and scratches, wash stones and mill with water and a detergent until free from grit. Remove



Close-up of mill, showing hexagonal mill unit and cover plates.

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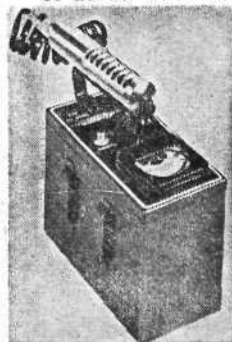
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the steel balls. Replace stones in mill with ¼ to ½ pound of tripoli, pumice or levigated alumina and just enough water to cover stones. Polish 12 to 24 hours until stones have a smooth satiny appearance.

Wash mill and stones to remove all sludge and polishing powder. Replace stones in mill. Add ½ cup of detergent and enough water to cover stones. Burnish 4 to 12 hours until a dull gloss is produced. Again wash mill and rocks until clean. Replace in mill with ½ cup of detergent and enough water to cover stones. Burnish 2 to 6 hours. The stones should now have a lustrous, glossy finish. Wash to remove detergent, dry and wipe with a soft cloth.

The above procedure is the average of about 30 tests and may have to be altered slightly depending upon the nature of the materials used. Cost of operation was from 30 to 35 cents per pound of finished stones, including all reagents and power.

Do not overload mill in grinding; two-thirds full is capacity, half-full is ideal. For polishing and burnishing, mill can be filled to within 2" of the top, or about 14 pounds of material.

The secret of high gloss in the finished product is the repeated burnishings with detergent and water for short periods of time. Burnishing abrades fine particles from the stones, and as these particles accumulate in the solution they act as an abrasive, again grinding the surfaces and dulling their finish. Short burnishing periods and a frequent change of solution prevents this, and a high gloss is obtained. If stones are burnished too long at a time, a pitted finish results.

Steel balls are not essential to the grinding, but their presence does speed up the process and produce a smoother surface at less cost in grit and power. The amount of grit consumed should not exceed 1 to 1½ times the weight of material abraded in grinding. More indicates a waste of grit.

A rectangular wooden frame with a piece of screen wire or hardware cloth tacked to the bottom is a handy gadget to use in washing stones.

This mill, different from conventionally narrow mills with large diameters and central drive shafts, combines tumbling, sliding and rolling action in a pattern of a slightly flattened spiral. It can be run at higher speeds without breaking the stones, grinding, polishing and burnishing at a faster rate due to a greater interstone movement and interstone pressure developed by centrifugal force rather than by weight alone.

This mill has been tested with most common stones the amateur will encounter, also with some semi-precious and precious stones such as topaz, sapphire, garnet, aquamarine, etc., all with remarkable results.

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GEMS and MINERALS

PETRIFIED WOOD TO BE FEATURE EXHIBIT AT SHOW

Feature exhibit at the March 26-28 convention of the California Federation of Mineralogical Societies, to be held at the Riverside County Fair Grounds in Indio, California, will be Joel Hauser's collection of petrified wood.

The display will include 40 polished cross sections of petrified logs ranging in size from 12 inches to 28 inches in diameter and varying in weight from 20 to 500 pounds. Also on exhibit will be 20 unpolished cross sections of petrified logs from the Rainbow Forest, weighing from 200 to 2000 pounds. Some extremely rare color combinations are included. The collection is comprised of wood gathered over the period of years from 1939 to 1953 and has material from eight different forests.

Other special exhibits will be Dick Gilmore's quartz crystal, Charles Hensen's minerals, Mrs. Susie Cowling's silver jewelry and displays by Chuckawalla Slim, Norman Dawson and Jack Frost.

Two field trips planned for convention visitors are to the Kaiser iron mine at Eagle Mountain and down the northeast shore of the Salton Sea with stops at Hot Mineral Spring and glauconite deposits. Trips will be by chartered bus.

SPRING SHOW READIED BY REDWOOD GEM SOCIETY

March 13 and 14 are dates of Redwood Gem and Mineral Society's 1954 show. Exhibits will be arranged in the Barnett Motor Showroom, 955 Santa Rosa Avenue, Santa Rosa, California. Hours are from 10 a.m. to 10 p.m. Saturday and from 10 a.m. to 8 p.m. Sunday.

"MEET ME IN MILWAUKEE" URGE CONVENTION CREWS

"Meet Me in Milwaukee—Midwest Mecca in '54," advance ballyhoosers are urging members of Midwest Federation societies. The federation's 1954 convention will be held June 24 to 26 in the Municipal Auditorium of that city. Two halls will be used for exhibits, allowing a total of 10,800 square feet of floor space for displays, and another hall has been reserved for federation meetings and business sessions. Official convention headquarters will be at the Hotel Wisconsin, 720 North Third Street.

One convention field trip already is scheduled: a visit to the Greene Memorial Museum of Milwaukee-Downer College where Dr. Katherine Greacen Nelson, curator, will guide visitors through the paleontology exhibits. A post-convention field trip to Lutz Quarry at Oshkosh, fine marcasite and pyrite location, also is assured.

Chairman of the convention is James C. Montague, past president and charter member of the federation. Oliver W. Lex is chairman of commercial displays, and Gilbert J. Thill is handling non-commercial exhibits.

JADE HAS EMPHASIS IN FEBRUARY SHOW

To honor the late jade collector, James L. Kraft, displays of jade will be featured at the seventh annual show of Monterey Bay Mineral Society, scheduled February 27 and 28 in the Y.M.C.A. building, Clay and Church street, Salinas, California. Hours will be from 12 noon to 10 p.m. Saturday and from noon until 6 p.m. Sunday.

SHASTA SHOW IN APRIL

Fourth annual show of Shasta Gem and Mineral Society has been scheduled for April 10 and 11 in Redding, California. Exact location of exhibits has not yet been decided and will be announced later.

MARCH SHOW NEARS FOR CASTRO VALLEYITES

Sixth annual show of the Mineral and Gem Society of Castro Valley will be held March 6 and 7 in the Hayward Union High School, 22300 Foothill Boulevard, Hayward, California. Among guest exhibits planned are displays of opal, spheres, fluorescents and California scenic rhodonite. Also invited are rock and flower arrangements to beautify the hall. These have become a popular attraction at Castro Valley shows. Doors will be open from 10 a.m. to 10 p.m. Saturday and from 10 a.m. to 6 p.m. Sunday.

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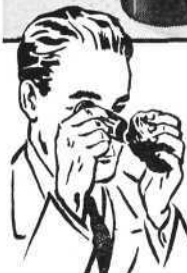
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Lloyd Larson described his trip into the interior of Mexico and Guatemala when he appeared as guest speaker for the Los Angeles Lapidary Society. He showed colored films.

"Tip of the Month" in *Gems*, bulletin of the Gem and Mineral Society of San Mateo County, California, was Member Lloyd Underwood's suggestion for polishing. Mix the usual polishing powder with denatured alcohol instead of water, he advised, claiming this procedure was more effective for difficult polishing.

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Clubs Elect 1954 Officers

Glenn Armstrong was elected president of Mojave Rock, Gem and Mineral Society at a recent meeting in Barstow, California. Other new officers are Robert Higgins, vice-president, and Jack Klein, secretary-treasurer. Directors are Ben Morton, Lew Barger, Mrs. Westerholt, Mrs. Ralph Reed and Bruce Baker, Morton was reelected field trip chairman.

At a general meeting of San Diego Mineral and Gem Society, Felix Kallis was elected to serve as president in 1954. On his executive board will be Norman Dawson, vice-president; Leslie Carl, treasurer, and Margarite Marble, corresponding secretary.

George M. Davis of Decatur was re-elected president of the Central Illinois Rockhounds Club in recent balloting. Brice Kennedy of Shelbyville and Lafayette Funk of Shirley were named vice-presidents; Helen Brundage of Decatur is new secretary-treasurer, and Harry W. Weiss of Decatur will serve as assistant secretary. The club draws members from towns within a 50-mile radius of Decatur.

At the January banquet of the Riverside County, California, Chamber of Mines, the following officers were elected: M. L. Moberley, president; Salley Gurley, first vice-president; F. A. Verdugo, second vice-president; Retta E. Ewers, secretary; Elva Albrecht, treasurer, and Col. Maurice Nordstrom, corresponding secretary. New directors are Charles Bixel, Clyde Hall, Bert Albrecht, H. L. Tomer, Harry Hails, William Yeager and Velma Congleton.

Seven new officers comprised the Compton Gem and Mineral Club board following elections in December. Marge Wakeman is president; Robert Bird, vice-president; Rhoda Brock, recording secretary; Bernice Anderson, corresponding secretary; Al Baily, treasurer; Emily Henninger, historian, and Ed Wilson, librarian.

Three officers were reelected to serve the San Jacinto-Hemet Rockhounds in 1954: Mrs. Edna Nichols, president; Mrs. Ruth Wagner, publicity chairman and librarian, and Mrs. Ethel Harwell, federation director. New officers are Webster Parker, vice-president; Katherine Kelley, secretary-treasurer; Willis Thompson, field trip director and H. C. Scott, assistant field trip leader.

Rawlins Rockhounds of Rawlins, Wyoming, began their second season of activities with an election of officers. Chris Larsen was named president; Ralph E. Platt, vice-president; Mrs. T. M. Wood, recording secretary-treasurer; Mrs. George O. Fellows, corresponding secretary; R. I. Martin, director at large, and Edward Cross, custodian.

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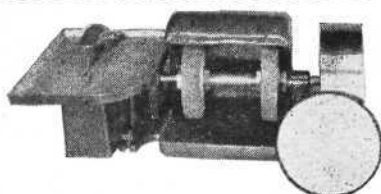
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"Bigger and better than last year," is the aim of committeemen working on the Oakland Gem and Mineral Show of East Bay Mineral Society. The show will be held May 22 and 23 at the same location as last year, the Masonic Temple, 6670 Foothill Boulevard, Oakland, California. Dennis Patterson is show chairman, and Frank Wilcox is arranging dealer displays. Demonstrations of gem cutting and polishing are planned.

Annual dinner meeting and installation of officers of San Francisco Gem and Mineral Society was held in January.



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Red Plume Agate (very beautiful), lb.	12.00
Slabs (minimum 4"), per inch	1.50
Mexican Agate, per lb.	3.50
Slabs (minimum 4"), per inch	.30
Tiger's Eye—Golden, per lb.	2.40
Slabs, per inch	.30
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Slabs, per inch	.50
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D. Jasp agate poppy, yellow	4-in. @ 75c—	3.00	6.00
E. Palm root	6-in. @ 35c—	2.10	.50
F. Amethyst wood	10-in. @ 50c—	5.00	1.75
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H. Jasp agate yellow moss	6-in. @ 50c—	3.00	4.00
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Clark County Gem Collectors of Las Vegas, Nevada, planned a field trip to the Spearhead Mine south of Henderson to search for onyx.

The curious geology of an extinct volcano in northern Arizona was described by Ben Humphreys of Cashion, Arizona, at a meeting of the Mineralogical Society of Arizona. He also told about Fern Mountain, another volcanic mountain in the northern part of the state. The latter yields chrysolite crystals in cavities of blue volcanic rocks.

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January destination of Compton Gem and Mineral Club was Boron Dry Lakes in Kern County, California. They hoped to find petrified wood, jasper and agate.

Howard Winters of the University of Chicago described pre-pottery peoples and their ways of life at a meeting of the Archeological Interest Group of the Earth Science Club of Northern Illinois.

A "Mineral Tour" was enjoyed by members of Sacramento, California, Mineral Society who visited the homes of the Martin Colonys, the Elmer Lesters and the Ernest Pooks to view their mineral collections and lapidary displays.

Braving a bitter cold wind, a group of rockhounds from Dona Ana County, New Mexico, visited Fluorite Ridge southwest of Cooks Peak and found carnelian, fluorite and some crinoids.

Raymond M. Alf calls fossils, "documents of life." He chose this as his topic recently when he appeared as guest speaker on an evening program of Shadow Mountain Gem and Mineral Society, Palm Desert, California.

Mineralogical Society of Arizona's field trip to the Magma Smelter at Superior was attended by 122 members and guests.

AMERICAN PROSPECTORS PLAN PLATEAU TRIPS

Stan Skiba, president of the American Prospectors Club of Los Angeles, is presenting a special course on uranium ores for club members at the February, March and April meetings.

Skiba is basing his lectures on his recently completed collection of radio-active ores. Scheduled discussions are on the following subjects: Use of Geiger Counters and Scintillation Counters and Their Application in Prospecting for Uranium Ores; Identification of Uranium Ores; Evaluation of Uranium Prospects and Uranium Prospecting Techniques. The latest information is being compiled for club members denoting the most likely areas to prospect for uranium. A study will be made of the Colorado Plateau Region from official figures released by the Atomic Energy Commission. Many of the club members are planning trips to the plateau with the coming of spring.

Another fantastic Agate Pete story appeared in the January issue of the *Voice of the El Paso, Texas, Rockhounds*. This time, Agate Pete found a silica-eating worm equipped with little teeth harder than diamonds with which he chewed his way through agate specimens. An Agate Pete yarn appears in each issue of the monthly bulletin.

A trip to Death Valley was scheduled for January 23 and 24 by Delvers Gem and Mineral Society of Downey, California. First day would be spent collecting petrified wood near Beatty, Nevada, or Wingate Pass plume agate; the second day's search would be for geodes near Artist Drive and would be followed by a hike up Trail Canyon.

According to Margaret Hasbach, hostess of San Fernando Valley Mineral and Gem Society, 1953 meeting attendance totaled 1542. The figure was boosted by such members as Harrison Stamp, who hasn't missed a single meeting since joining the society in 1946.

A "strictly business" meeting was held in January by San Antonio Rock and Lapidary Society to give a smooth start for club activities in 1954.



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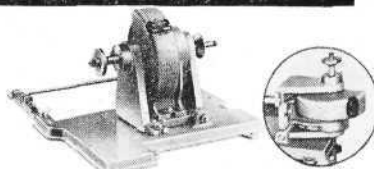
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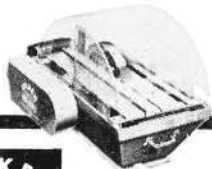
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PALM DESERT, CALIFORNIA

TWO ARIZONA SOCIETIES PLAN JOINT MARCH SHOW

All schools and mineral societies in Arizona have been invited to participate in the gem and mineral show to be held March 5 to 7 in the agricultural building on the state fairgrounds, 19th Avenue and McDowell, Phoenix, Arizona. The show is being sponsored jointly by the Maricopa Lapidary Society and the Mineralogical Society of Arizona. Among feature attractions will be a set of dishes, complete service for four, fashioned from onyx. Also shown will be minerals, crystals, jewelry, a fluorescent exhibit and lapidary demonstration. Chairman of the show is W. E. Reed of Maricopa Lapidary Society.

In 15-minute talks by six members, Santa Fe Gem and Mineral Society presented "A Course in Crystallography." Ruth Leakey discussed the isometric; Walt Wright, tetragonal; Milt Huston, hexagonal; Vi Kochendoerfer, orthorhombic; David Lent, monoclinic, and Bettie Morgan, triclinic.

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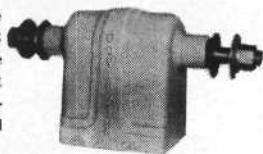
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To start off 1954 with some extra money in the treasury, Colorado Mineral Society, Denver, held a January auction.

At the January meeting of the Mineralogical Society of Southern California, Dr. A. E. J. Engel, professor of geology at California Institute of Technology, spoke on "Minerals as Geologic Thermometers."

Castle Butte was visited by Hollywood Lapidary and Mineral Society on a January field trip. To the meeting preceding the trip, members who had already visited the area brought material they had found there.

Stella and Charles Wible were invited to show their vacation pictures of Hawaii at the February meeting of Tacoma Agate Club, Tacoma, Washington.

Dr. Robert Norris of Santa Barbara College, University of California, will teach a class in mineral identification for members of the Santa Barbara Mineral and Gem Society.

The old Humdinger Mine and the weathered arrastre which used to grind its ores was visited by members of Coachella Valley Mineral Society, Indio, California, on a recent field trip. The mine is an old Spanish sulphur and lead producer.

"The Story of the Gems," Dr. J. Daniel Willems titled his talk before the Chicago Rocks and Minerals Society. He divided his discussion of gems into four "chapters": I—The Durability of Stones; II—Where they Are Found; III—Their Physical Properties, and IV—The Five Precious Stones.

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"Crystal Gazing with Chemicals and Projector" was the topic Carl T. Wood selected for his talk before the Pasadena Lapidary Society. He demonstrated the growth of crystals through the use of chemicals.

New officers of Humboldt Gem and Mineral Society, Eureka, California, are Mrs. Amelia Alward, president; Reg Petty, secretary-treasurer, and Lois Pederson, historian.

Nearly 1000 persons visited Wasatch Gem Society's recent show in Salt Lake City, Utah. Thirty collections were on display.

In the January issue of Minnesota Mineral Club's *Rock Rustler's News*, Ray Lulling showed members, by careful sketches and detailed instructions, how he made the gavel he recently presented to the club. The gavel is made to resemble a prospector's pick, and the handle is banded with polished sections of Minnesota stones.

Committee chairmen for 1954 have been named by Long Beach Mineral and Gem Society. They are Jessie Hardman, membership; Lowell Gordon, field trips; J. G. McGinley, raffle; Gerould Smith, library; Elsie Purvis, historian; Mrs. Kline, publicity; Milo Erdal, custodian; Harvey Hawkins, refreshments; Mrs. Ohlsen, hospitality; Wilma Bennett and Marguerite Hamilton, bulletin editors; Mrs. Dorothy Kenyon, courtesy, Jim Greene, exhibits. Orin Purvis is delegate to the Long Beach Museum and Aquarium Association, and Mamie Landiorio and Florence Gordon are Lapidary Association delegates.

Arthur L. Eaton, editor of the gem and mineral department of *Desert Magazine* previous to 1948, passed away on January 13 following an illness of several months. Burial was at Forest Lawn cemetery in Glendale, California. Before his death Eaton was an instructor in Holtville, California, high school for many years, and was a recognized authority on rocks and minerals.

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TRUE OR FALSE ANSWERS

Questions are on page 8

- 1—False. Coyotes do not hibernate.
- 2—False. The common flower of the dunes is verbenia.
- 3—True.
- 4—False. The bloom of the Joshua is creamy white.
- 5—True. 6—True.
- 7—False. The roadrunner can fly only a short distance.
- 8—False. Inter-marriage is common among most of the tribes.
- 9—False. The Apaches had acquired guns from traders and through pillaging.
- 10—True. 11—True.
- 12—False. The Hassayampa is a tributary of the Gila River.
- 13—True.
- 14—True. *Pitahaya dulce* is the Mexican name for organpipe cactus.
- 15—False. Butch Cassidy was a notorious outlaw.
- 16—False. Rainbow Natural Bridge is in Utah.
- 17—True. 18—True.
- 19—False. Winnemucca was a Paiute Indian.
- 20—True.

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AMATEUR GEM CUTTER

By LELANDE QUICK, Editor of The Lapidary Journal

Our experience with rockhounds is that as a whole they really are an exceptionally fine type of people. Their philosophy of appreciation for rocks and the places where they are to be found is a wholesome thing.

There is something about rockhounding that negates selfishness and we suppose that no hobbyist group shares their finds and their hoards as generously as the rock collectors. An old friend of ours, now gone, used to say that 50 percent of the fun of rockhounding was going after the rocks and the other 50 percent was in giving them away. Now and then one has some additional pleasure by cutting some of them. It is a fact that a great many tons of rocks will be hauled out of our deserts this beautiful January weekend and it is a fact that a large portion of the rocks hauled away will be given away to others in the course of time.

The reason we mention this is that we have an interesting communication from J. G. Atwood of Meridian, Miss. Mr. Atwood indicates that not all of the rockhounds appreciate to the fullest extent the value of the rocks they receive free from others. We have experiences ourself where we gave good gem material to strangers who later wrote to us and protested that they had wasted a lot of time trying to get something out of the miserable rock we had "forced" upon them.

But Mr. Atwood writes "has it ever happened to you?" He relates the following incident—"once upon a time when I was living in Wyoming I became interested in rock collecting. I spent my off days from railroading wandering around the foothills, picking up everything that had color in it, although I knew little of the composition of rocks at that time. I finally amassed quite a collection of fossils and woods, including many of the rarest specimens of Eden Valley and Whiskey Basin wood ever found. I got there ahead of the rush.

"One day I laid off my run and took a trip to Eden Valley forest. I was fortunate in finding some fine pieces. There were two beautiful tree rings with amethyst crystals from Whiskey Basin, some rare pieces of fossil algae, some beautiful palm wood from Eden Valley, etc.

"I spent over two days and traveled about 400 miles. I figured later that my lost time, expenses, hotel, etc., cost me about \$50. But I didn't think of that at the time; I figured I'd had a good outing and I was thrilled with my finds. I had just arrived home and cleaned the adobe mud from my specimens when the lady who had an apartment with us came in from uptown and saw my stuff. She said 'Jack, I just ran into old man Chalcedony and his wife from Denver. They were buying some rocks down at Brox's Rock Shop. I told them to come up here and see your rocks; that I was sure you'd sell them some if they cared to buy'. I told my friend that I had never sold any rocks and wouldn't know how to price them if anyone wanted to buy. She advised me not to give these people any rocks because they were old friends of hers and they had barrels of money and 'besides that I told them you'd sell them some'.

"In about a half hour the Chalcedonys arrived. Mrs. C. could hardly wait for an introduction before she began raving over the pile of new specimens I had just washed; said she just had to have those rocks if I would only part with them. She picked over the pile and selected most of them, including all the best pieces. Then she looked over my fancy rock fence and selected a few more specimens from a select pile I had in a corner of the yard.

"After visiting for a few minutes Mrs. C. told her husband to pay for the rocks so they could get going. Well, George was holding on to something away down deep in a front side pocket and he came up with one of those old time long snapping purses. He unsnapped it and opened it upside down over his cupped hand. The entire contents spilled out on his palm—60 cents! He fingered the change rather nervously, looked up at me and said meekly 'how much are the rocks?' I had to say 'oh, just take them along'. I thought my friend who had invited them was going to faint but I put my finger to my lips for silence. She really blew up when the Chalcedonys drove off with my best rocks. Has it ever happened to you?"

In the January issue we had an account of a new electric dopping device. This idea resulted in several people offering their own unique dopping methods. Among some of the better ones is the method of F. A. Portfors of Orofino, Idaho. He writes: "I made a heating device myself by using a standard yard-light fixture which can be purchased at any electric shop. To this I added two half inch tees and a close half inch nipple welded to a piece of half inch thin wall conduit which will slide through one of the tees. This upper tee is drilled and tapped for 1/4 NC set screw by which the light can be raised or lowered to control the heat as a thermostat. I use a regular infra-red heat lamp for the heat source.

"I heat my wax in a small cup and I am able to keep it at any temperature for long periods of time by adjusting the height of the bulb. I also lay the stone to be dopped under the bulb and warm it at the same time. Cold wax is heated in this manner in a very short time. It is usually ready by the time I need it.

"Another great advantage is for the dopping of large ends of rocks to a piece of board to complete the sawing, or for dopping small stones for sawing. A large stone, or a large amount of wax on the board, are quickly heated in this manner. This device has served me very well, and has answered some of the usual dopping difficulties I have encountered. It is also very useful for warming or drying various substances such as cement, glue or wet stones."

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GEMS AND MINERALS

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By RANDALL HENDERSON

7 HIS MORNING I was out in the sand dunes not far from my office in Coachella Valley, searching for the tiny sprouts which would be the forerunners of a spring wildflower display. In many other places over the California and Arizona deserts our volunteer correspondents were doing the same thing—trying to make a forecast of the flower display which will spread color over the desert landscape a month or two months from now.

Many of our readers, especially those who go in for photography, look forward to the forecasts which we publish in February, March and April each year, and plan their desert trips accordingly.

It isn't easy to make these forecasts. For instance, this year we had practically no rain before the middle of January, and then the showers were spotted. In a few places there was sufficient rainfall to germinate the seeds which have been lying dormant in the sand for many months, or perhaps years. There are no sprouts yet on our Coachella dunes, and the situation generally is not encouraging.

But even when the flower sprouts appear in late January or February, that is no guarantee that we will have an abundant exhibit of wildflowers. A late freeze or a sandstorm may change the outlook almost overnight.

But there will be some flowers on the desert regardless. The cacti and yuccas and agaves—those hardy perennials of the desert country—are equipped with storage tanks which enable them to blossom forth in a gorgeous array of color regardless of the seasonal rainfall. And that is true also of Palo Verde and Smoke tree—two of the loveliest flowering trees in the world. Normally, the golden blossom of the Palo Verde comes in April or early May, and the Smoke tree sends out its plumes of indigo in early June. You can depend on that.

* * *

My observation over a period of years has led me to the conclusion there are four kinds of campers insofar as the housekeeping of camp life is concerned.

1—There are those meticulous folks who just won't tolerate having old tin cans and debris around their campsites. As soon as the camp gear is unpacked they set about cleaning up the place. They bury not only their own discard material but they clean up the mess that was left by the bad-mannered campers ahead of them.

2—There are the conscientious campers who, while not willing to dispose of other people's garbage, are very careful to leave none of their own lying around.

3—This third group would leave a clean camp if the folks ahead of them had done so. But they found the camp dirty when they came, and they can see no point in burying their own litter when the place already is cluttered up with cans and bottles. So they just add their debris to what is already there.

4—These are the unregenerate litterbugs. They toss

their litter over their shoulders or out the car window and leave it lay where it falls.

I hope ol' St. Peter is reserving the best mansions in heaven's finest residential district for those who are in the No. 1 classification.

* * *

A special word of appreciation to the Walt Disney studios for the true-life film *The Living Desert* which is a current feature at many of the theaters. It is one of those pictures I want to see again—and again.

It is a series of intimate pictures of the dramatic struggle for survival which goes on unceasingly among the denizens of the desert.

A staff of six photographers, with infinite patience, spent years out on the desert securing close-up photographs in color of the seldom-witnessed drama in the lives of the lowly things that live on the dunes, in burrows and among the cactus—the rodents, insects, reptiles, birds, animals and plants.

The film is significant in that it reveals the processes by which Nature maintains balance in the world of wildlings—and balance is one of the problems which the human species has not yet solved.

* * *

An editorial writer for the *San Francisco Chronicle* has appraised the Death Valley Scotty legend in words which are worth passing along:

"Somewhere out in the wastelands of Death Valley (the legend ran) Scotty had struck gold—a fabulous bottomless mine of it—enough to do all those wonderfully foolish things that a thousand other grizzled prospectors had dreamed of doing, if they ever struck it rich.

"Scotty tipped bellboys with halves of \$50 bills—then bought back the halves with \$20 gold pieces. He hired a train to carry him to Chicago, and sitting in the cab, exhorted the engineer to such headlong speed that he set a record that stood for a quarter of a century. He built a storybook castle in the midst of the desert and sallied forth from his stronghold like some grizzled knight to perform lavish feats that awed the whole nation.

"We have always been a little sorry that the humdrum world of fact finally encroached upon Scotty's incomparably more interesting world of fancy—that the 'gold mine' turned out to be a Chicago financier, indulging in a fancy for the bizarre. . . .

"On the other hand, we are immensely grateful to Scotty for his long and faithful stewardship of the legend. He wrote a warm and amiable chapter in the story of the West, and more than that, he brought sparkle and romance into a world which has a surfeit of reality. Some say he was a fraud; we disagree. He was a purveyor of wonderful nonsense, whose medium was not a pen or a brush, but life itself."

BOOKS of the SOUTHWEST

INVITE THE SONGBIRDS TO LIVE IN YOUR GARDEN

"If you will follow the instructions in this book, your yard will attract birds, whether it is large or small, whether it is in the city or in the country," promises John K. Terres, author of *Songbirds in Your Garden*.

Terres' book is a treasury of information about making friends with the birds. It tells how to attract birds, what to feed them, where to get the food and how to prepare it. It suggests building materials they would appreciate at nesting time and bird-house, bird bath and water fountain designs they would like. There is information about the care and feeding of young birds and what to do about injured fledglings, helpful material on protecting adopted birds from cats and from harming themselves, and even a chapter on attracting birds by sounds.

The appendix includes charts showing the effects seasons have on different birds; lists of the songbird food ratings of plantings in the United States, including a section on the mountain and desert region; lists of bird foods, bird-house sizes for different species, garden flowers that attract hummingbirds, etc.

Author Terres has had a yard full of birds—nearly 100 different species—for many years, and his book contains much of the knowledge, lore and practical hints that he knows first hand. Illustrations, construction plans and explanatory diagrams make the easy-to-read text even clearer.

Published by Thomas Y. Crowell Co. 274 pages, appendix, index. \$3.95.

COMPLETE SOURCE BOOK FOR CUSTER BATTLE FANS

For over three quarters of a century the battle of the Little Big Horn, in which Major General George Armstrong Custer and five companies of the 7th U. S. Cavalry who rode with him died at the hands of the followers of Sitting Bull, has furnished material for controversy and speculation. Writers by the score have attempted to explain the events of that sultry afternoon in 1876.

Colonel W. A. Graham, U.S.A. Ret., decided that the need for a "source book to end all source books" on Custer had become imperative. He undertook the tremendous job himself.

Col. Graham's *The Custer Myth* is a handsome volume in four parts.

Indian accounts of the battle, including a personal interview with Sitting Bull himself, copies of the actual pages upon which Benteen wrote his version of the conflict and a comprehensive bibliography by Fred Dustin all go toward producing an outstanding source book of Custeriana.

There are many new photographs, maps and other illustrations, including full-color end papers which will especially intrigue Custer fans—a beautiful 10x15 inch reproduction of Artist Gayle P. Hoskins' dramatic panorama painting of the entire battlefield and the events taking place upon it, as accurate as history and the author's imagination could make it.

Published by the Stackpole Company. 435 7½x10½ inch pages, illustrated and indexed. \$10.00.

TIPS FOR WHITTLERS FROM A MASTER CARVER

"I just like to whittle," says Andy Anderson. But with Andy it is more than an idle pastime. With chisels, homemade knives and blocks of wood, the ex-cowpoke has whittled his way to fame, producing humorous wooden satires of the cowboys, horses, cattle and Indians that he learned to know so well during his years on the range.

In *How to Carve Characters in Wood*, Master Whittler Anderson, with the help of Al Thiel, offers step-by-

step instructions to the amateur—the best wood to use, tools and how to make and care for them, tips about work benches, patterns and carving techniques. An introduction traces the history of the whittling art.

The book is illustrated with photographs of the author's work, finished pieces as well as the developmental stages.

Published by the University of New Mexico Press, 82 pages, 35 photos by Bettie Thiel. \$2.50.

NOVEL BRINGS PICTURE OF EARLY VIRGINIA CITY

Borrasca—the Spanish word for "failure"—was a term aptly applied to most of Malcolm Douglas' life before he came to Virginia City. Once established on the Comstock, he was determined to shake off the epithet and gain for himself all the things he wanted—wealth, success and beautiful Althea Carmichael. A new novel, *Borrasca*, tells the story.

In Douglas' way stood the boyhood friend who had become his bitter enemy, Logan Berkeley. Rivals in business and love, they—and Althea—were the center of the novel's action. Motivated by greed, hatred and revenge, Malcolm gambles everything to get what he wants.

Borrasca, by veteran author Octavus Roy Cohen, not only is good reading, but it presents an authentic picture of life in boom-time Nevada.

Published by The Macmillan Company. 310 pages, \$3.50.

Books reviewed on this page are available at Desert Crafts Shop, Palm Desert

KNOW YOUR WILDFLOWERS

Have you walked up a desert canyon one warm spring day and suddenly come upon a beautiful little wildflower you had never seen before? Perhaps it was a pale rose-purple cup, each of its five petals marked with a splotch of vivid carmine red—later you identified it as a desert five-spot in your wildflower book. Wasn't the discovery somehow exciting?

This year, when the wildflowers start blooming, be prepared. Have one of these wildflower guides in your hand when you start your canyon hike, to identify the wee wildlings you meet. You'll come home with many new desert friends.

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By FREDERICK H. POUGH, Former Curator of Minerals, American Museum of Natural History

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has ever been printed for the rockhound and gem hunter. Available now. Order your copy today. If you are interested in rocks, gems or minerals, this book is a must for your library shelf.

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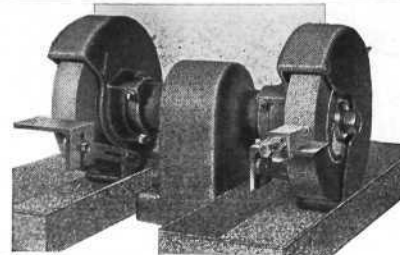
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More Fire..
than the Diamond!*

YOU WILL BE WEARING RAINBOWS

When you wear jewelry set with TITANIA. Gems of synthetic TITANIA have five times more ability than the diamond to break light into its component colors producing a magnificent rainbow effect. These magnificent gems can be set in mountings you may now have from which you have lost the original stone.

Visit Our Shop and See Ladies' and Men's Rings Set with Titania. A Large Stock of Titania Earwires Is Also Available.

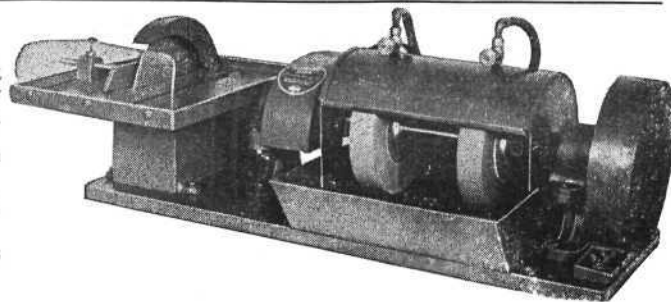
FREE LAPIDARY LESSONS

With the purchase of cabochon or facet cutting equipment having a value of \$85.00 or more, an experienced lapidary will give you a lesson in gemstone cutting in his own shop.

Model E-10 Gem Stone Cutter—\$139.75 F.O.B. Pasadena
Add \$3.00 crating for out-of-town shipments

Note: Trim saw has a vise (not illustrated) with lateral adjustment for slabbing.

This unit and other **HIGHLAND PARK EQUIPMENT** is fully described in our 56 page free catalog.



LET'S GET ACQUAINTED OFFER

18" Rhodium Plated Sterling Silver or
yellow Gold Filled Neck chains
2 for \$1.00 or \$4.50 per doz.
plus 20% Fed. E. Tax

ESTWING ALL STEEL ROCKHOUND PICKS

Gift Model—Polished\$4.10
Regular Black Finished\$3.85

Allow 3 lbs. Shipping weight

4 TUMBLING GEMS FREE

With every purchase of \$5.00 worth of merchandise you receive 4 tumble polished gems or baroque gems. With a \$25.00 purchase you receive 20 Tumbled Gems, with a \$50.00 order you receive 40 Tumbled Gems. If you visit our store you may select your own premiums. **WE TUMBLE OUR OWN GEMS**—our selection is large, the quality is the best, and our prices are low.

SEND FOR OUR APPROVAL SELECTION OF TUMBLING GEMS

You may select only those you desire or you may keep the entire selection at a **SENSATIONALLY LOW PRICE**. Our selections will contain highly colored Brazilian blue, green, carnelian, black and yellow agates.

GRIEGER'S • 1633 E. WALNUT ST. • PASADENA 4, CALIFORNIA

OUR STORE IS OPEN EVERY DAY EXCEPT SUNDAY FROM 8:30 TO 5:00. PHONE SY. 6-6423