DESERT MAGAZINE ARTICLES

- 00 On the Trail to Rainbow Bridge. Henderson. June, 1941.
- 01 Dirty Devil: The Saga of a River. Kelly. February, 1943.
- 02 Glyph Hunters in the Indian Country. Henderson. November, 1946.
- 03 Grand Canyon Voyage. Henderson. November, 1947.
- 04 Zeke Johnson's Natural Bridges. Kelly and Martin. November 1947.
- 05 Grand Canyon Voyage. Henderson. December, 1947.
- 06 Grand Canyon Voyage. Henderson. January, 1948.
- 07 Grand Canyon Voyage. Henderson. February, 1948.
- 08 Utah's Incredible Arches. Freeman. August, 1948.
- 09 19 Days on Utah Trails. Henderson. October, 1949.
- 10 19 Days on Utah Trails. Henderson. November, 1949.
- 11 Colorado River: Rocks Where the Rivers Meet. Weight. July, 1950.
- 12 Escalante River: When the Boats Wouldn't Float--We Pulled 'em. Henderson. September, 1950.
- 13 Spanish Trail: Forgotten Trail of the Old West. Kelly. October, 1950.
- 14 Kelly of Capitol Reef. Henderson. November, 1955.
- 15 Arches: Over the Top of Landscape Arch. Ouellette. March, 1958.
- 16 The Water Was Rough in Cataract Canyon. Henderson. February, 1958.
- 17 The Hard Life at Robber's Roost. Baker. May, 1963.
- 18 The Outlas Trail of Robber's Roost. Masland. May, 1966.
- 19 Plan Now for Canyonlands. Barnard. May, 1967.
- 20a When a Fortune was a Drop in the Bucket. Knyvett. June, 1969.
- 20b San Juan River. Ford. June, 1969.
- 21 Porcupine Rim. Barnes. June, 1977.
- 22 Trachyte Creek. Maharidge. July, 1977.

DESERT

Calendar

MAY 30-JUNE 1 Wild flower show, Julian, California. Also weekends of May 17-18, May 24-25. In town hall.

JUNE 3-4 Annual Pioneer Day, Clovis, New Mexico. Rodeo.

- 3-5 Intermountain Junior fat stock show, North Salt Lake City, Utah. M. Vern Woodhead, secretary.
- 4 Strawberry Day at Provo, Utah.
- 6-7 State rifle matches at Fort Huachuca range, Arizona. George F. Parker, Jr., president state association.
- 7-8 Arizona semi-annual district convention of 20-30 clubs, Kingman. Guido Sartori, chairman.
- 7-8 Annual Regatta, Elephant Butte Lake, Hot Springs, N. M.
- 8 Annual northern Arizona Masonic picnic at Pine Flats picnic grounds, Oak Creek. Claude B. Harrison, Jerome, chairman. Masons, Eastern Star members, their families and friends throughout Arizona are invited.
- 8-10 State convention of Veterans of Foreign Wars, Albuquerque, N. M.
- 12-28 Arizona landscapes, oil paintings by Robert Atwood of Phoenix, on exhibit at Museum of North-
- ern Arizona, Flagstaff.

 San Antonio day to be celebrated at Taos Pueblo, New Mexico.
- 13-15 Cherry Festival, Beaumont, California.
- 14-15 Los Angeles Cactus show at Manchester playground, 8800 South Hoover street, Los Angeles, California.
- 23-25 Society for Research on Meteorites in Flagstaff, Arizona. Arizona State Teachers College, Museum of Northern Arizona and Lowell Observatory, joint hosts. L. F. Brady, arrangements.
- 24 San Juan Day, Corn Dance at Taos Indian Pueblo, New Mexico.
- 28-29 Utah Association of National Letter Carriers meets in Logan. H. Lee Hales of Logan, president and chairman.
- 28-29 Stamp clubs of Tucson, Phoenix and Prescott, Arizona, meet in Prescott. Submit stamps before June 27 to Mrs. Maxine Thilken or Leo Stephens of Prescott. Display open to public.



| Volume 4 | JUNE, 1941 | | Nu | ml | эе | r 8 |
|---------------|--|---------|------------|----|-----|------------|
| COVER | ARIZONA, by Ivan B. Mardis, Tucson. awarded second prize in Desert cover contest in March. | Th M | nis Iag | pi | ctu | ıre e's |
| CALENDAR | Current events on the desert | | | | | 3 |
| PHOTOGRAPHY | Prize winning pictures in May | | | | | 4 |
| RECREATION | On the Trail to Rainbow Bridge By RANDALL HENDERSON | | | | | 5 |
| BOTANY | Flower with the Clinging Leaves By MARY BEAL | | | | | 12 |
| PERSONALITY | Steamboat Captain on the Colorado By FRANK C. LOCKWOOD | | | | | 13 |
| PERSONALITY | Desert Trail to Contentment By LOIS ELDER STEINER | | | | | 17 |
| PUZZLE | Desert Quiz—a test of your desert know | | ge | | | 19 |
| POETRY | ARTISTRY OF GOD, and other poems | | | | | 20 |
| TREASURE | Lost Gold of Sonoyta By JOHN D. MITCHELL | | | | | 21 |
| FIELD TRIPS | We Found Pink Opal in Nevada's Black By JOHN W. HILTON | Cli | ffs | | | 23 |
| LETTERS | Comment from Desert Magazine reader | S | | | | 26 |
| NATURE | Odd Members of the Saguaro Family By NATT N. DODGE | | | | | 28 |
| FICTION | Hard Rock Shorty of Death Valley By LON GARRISON | | | | | 30 |
| PHOTOGRAPHY | Hunting Chuckawallas—With a Camero By WELDON D. WOODSON | | | | | 31 |
| LANDMARK | Goblet of Venus-By OLIVIA McHUGH | | | | | 34 |
| CONTEST | Prize announcement for June | | | | | 35 |
| ART OF LIVING | Desert Home—By MARSHAL SOUTH . | | | | | 37 |
| BOOKS | Reviews of Southwestern books | | | | | 40 |
| WEATHER | April temperatures on the Desert | | | | | 41 |
| NEWS | Here and There on the Desert | | | | | 42 |
| MINING | Briefs from the Desert region | | | | | 47 |
| PLACE NAMES | Origin of names in the Southwest | | | | | 48 |
| HOBBY | Gems and Minerals Edited by ARTHUR L. EATON | | | | | 49 |
| TRAVEL | Rambling Rocknuts By BERTHA GREELEY BROWN . | | | | | 50 |
| COMMENT | Just Between You and Me-by the Edita | or | | | | 54 |

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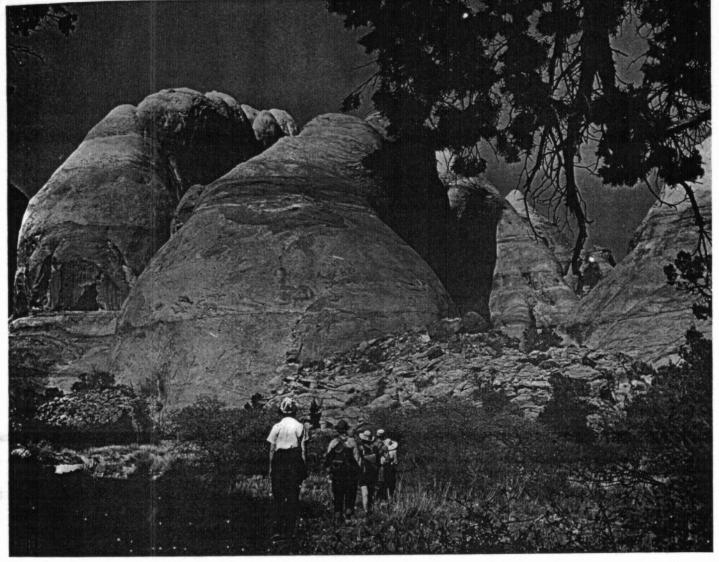
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Sierrans on the march. This picture taken on the approach to Redbud pass.

On the Trail to Rainbow Bridge

An average of only 200 persons visit Rainbow Natural bridge in southern Utah each year. It is a very inaccessible place. But this year the great register at the base of the giant arch was signed by one-third of its normal annual quota of visitors in one day. The Sierra Club of California selected the Rainbow trail for its yearly Easter vacation trek—and here is the story of what the Sierrans found in the wild region that lies between Navajo mountain and the Colorado river.

By RANDALL HENDERSON Photographs by Richard B. Freeman

N the great canvas-bound register that rests on a rock pedestal beneath the huge arch of Rainbow natural bridge in southern Utah there are many names.

Dr. Byron Cummings and John Wetherill were the first to record their visit to this remote desert landmark. That was

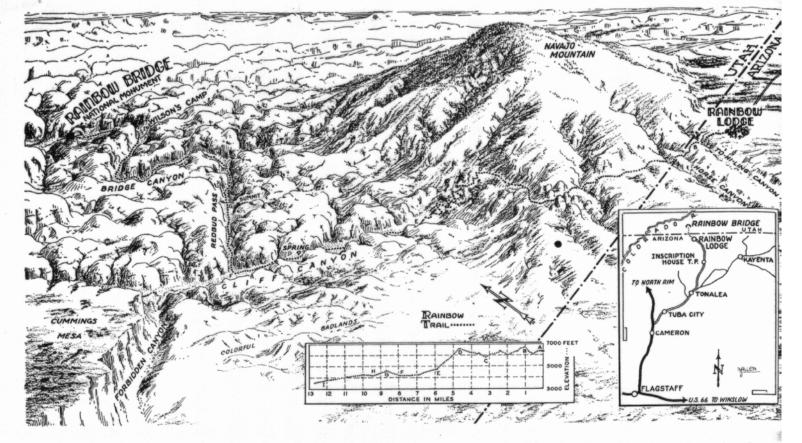
in August 1909.

Theodore Roosevelt signed his name there in 1913. Zane Grey was one of the first visitors. J. B. Priestley and Irvin Cobb have left their scrawls across the pages in more recent years. And there are hundreds of other names not so well

When I signed the big 500-page book in the afternoon of April 8 this year I was No. 3323 on the list of visitors. Being curious, I remained there for an hour reading the inscriptions that appeared on its pages. There is human interest in that book. Some of the visitors wrote poetry. Others merely wrote rhymes. There were uncomplimentary remarks about the mules that brought some of the visitors over the 14-mile trail from Rainbow lodge. Some of the remarks were reverent, some were funny. They were just a cross-section of America.

I think the most expressive notation was that of the man who wrote: "I hiked the 14 miles. I've been under this bridge and on top of it and I've seen it from both sides-and I still don't believe it.'

But don't let this fellow's unbelief keep you from visiting Rainbow bridge if you have the opportunity to go. There is enough color and artistry and splendor along that 14-mile trail to make the trip



worth while even if the world's largest stone rainbow was not at the end of it.

I went to Rainbow bridge with the Sierra club of California—which means I walked the 14 miles.

We could not have ridden in if, we wanted to. There were 78 in our party, and there aren't that many saddle horses in that part of Arizona unless you count those half-tamed little Navajo mustangs from the reservation. As a matter of fact, Bill Wilson, who operates the pack train out of Rainbow lodge had to recruit some of these Indian ponies to help his mules carry in the ton and a half of bedrolls and grub for the hiking party. Bill said it was the biggest party on record.

The Sierrans organized the trip under the leadership of W. E. (Andy) Andrews. It was the annual spring outing trip of California's best known outdoor organization.

Our rendezvous was the U. S. Forestry camp ground seven miles south of Prescott, Arizona. We assembled there for our first campfire program Saturday night, April 5. Cars were rolling into camp far into the night. There were school teachers, lawyers, stenographers, engineers, bankers, artisans—folks who like to spread their sleeping bags on the ground and explore the remote mountain areas for rare flowers and strange birds and unusual camera shots. Or who go just for the companionship they find in forests and among rocky pinnacles.

Our schedule for the Sunday trip north into the painted desert of northern Arizona included many detours. Some of the Sierrans visited Walnut canyon national monument. Others went to Sunset crater and Wupatki ruins.

Our Sunday night camp was in a little clearing in the juniper trees on the rim of Neetsin canyon near Inscription House trading post. We met a friendly welcome there. Jimmy Brewer, custodian of the Navajo national monument, and Gladwell (Toney) Richardson had selected the campsite—and were there to see that both Arizona and the National park service extended due courtesies to the visitors from California.

The elevation there is close to 7,000 feet. It was cold that night. Ice froze in the wash basins. But wood was plentiful and we had a roaring campfire. We were on the Navajo reservation, and Toney Richardson invited some of his Indian friends to stage a native dance for the white tribesmen from California. The Indians were quite willing—for a consideration—and the canyon echoed with their weird chant as they stamped around the fire.

The Richardsons—Toney and his father—are the traders at Inscription House. Rather, the elder Richardson does most of the trading while Toney writes thrilling western novels. He has sixty-odd titles to his credit, most of them published in England. The war put a crimp in his market and now he is spending much of his time trading flour and velveteen for blankets and silver jewelry and wool—and gathering material for more stories.

Jimmy Brewer—smiling Jimmy—was our guide the next day on a hike down in-

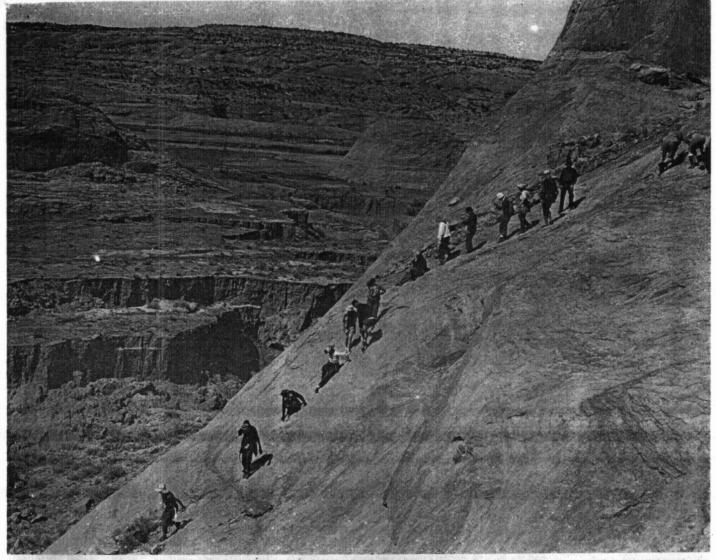
to Neetsin canyon to visit the ancient Inscription House ruins. These are wattle-and-daub cliff dwellings built, according to tree-ring records, between 1200 and 1300 A. D. Their name derives from an old date etched in one of the walls — 1661. No one knows who put it there, or the circumstances. John Wetherill, who was one of the first white men to visit these ruins, says there were faint traces of additional lettering when he first saw the inscription. But the message was unintelligible, and today only the date remains.

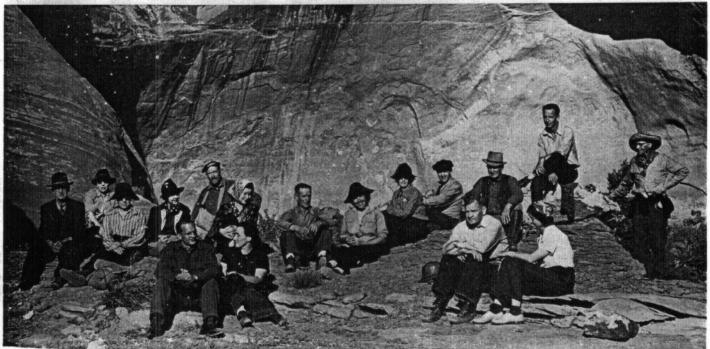
Inscription House is one of the three ruins in the Navajo national monument. The other two are Betatakin and Keet Seel. Jimmy and Sally Brewer live in a little cabin near Betatakin, keep a watchful eye over the cliff dwellings, guide visitors along the trails in summer and keep busy shoveling a pathway to the woodpile and the water tank when they are snowed in during the winter months. They wouldn't trade places with the richest member of the stock exchange.

Shallow steps have been cut in the steep sandstone wall that leads up to the overhung cove where the Indians built their dwellings. It is a rather precarious climb — but the Indian women carried their ollas of water up this same route 700 years ago, and thought nothing of it.

The visit to Inscription House was merely a sidetrip for the Sierra party. Our goal was Rainbow bridge.

At noon Monday our caravan headed out along the 35-mile road to Rainbow





Above—Members of the Sierra club party detoured from the Rainbow trail to visit Inscription House ruins in a cave high up in the sandstone cliffs. Shallow steps have been cut in the rock for climbers. Below—Sierra hikers along Rainbow trail. Andy Andrews, leader of the party is second from the right.

lodge where our third night's camp was scheduled.

Navajo mountain is the landmark for travelers in this part of Arizona. Nat-sis-an the Indians call it. Its summit is 10,416 feet high, and when we were there it was capped with snow. Some of the Sierrans had planned to climb it, but they had failed to bring their skis, and the natives advised against it.

Rainbow lodge, where Katherine and Bill Wilson furnish meals and lodging and pack and saddle animals for visitors to the bridge, is at the southern base of

the mountain.

Every one who has traveled the remote desert trails of the Southwest is acquainted with Katherine and Bill. She knows human nature and all the arts of the hostess. Bill knows mules. They say he can actually talk their language. The Wilsons are a perfect team for this far outpost. Half the pleasure of a trip to the bridge is the evening spent in the cozy lodge of the Wilsons.

We camped that night among the rocks and piñons and junipers near the lodge. We sat around a huge fire. There were stories and songs, but we were mostly interested in plans for the 14-mile trek to Rainbow arch. Bill Wilson told us about the trail, and Andy gave final instructions for the early morning start. Bedrolls and food for seven meals, including such cooking utensils as were necessary, were to be stacked at the corral ready for the packers by seven a. m. The load limit for each person was 30 pounds.

John Wetherill and Charles L. Bern-

heimer first scouted the possibility of a trail to Rainbow bridge between 1921 and 1924. John was guide and skipper on the four expeditions they made into this unexplored country. Bernheimer supplied the finances. They mapped a route and some work was done on it.

But the trail in use today was built for the most part by Hubert and S. I. Richardson. Later Hubert bought out his brother's interest. He erected the lodge and built much of the road that connects it with Inscription House trading post.

It was a pioneering job that called for some capital and a great deal of faith. But the Richardsons had what the task required. It has not been a paying investment so far—but if you stop at Hubert's trading post in Cameron and ask him about it, he will laugh and tell you he had a lot of fun doing it, and he doesn't regret

The Sierra campers, each little group around its own campfire, were eating their bacon and hot cakes when the sun came up Tuesday morning. By seven o'clock the duffle bags were piled high around the corral, and the hikers were strung out along the trail. Seventy-two members of the party were walking, and six had arranged for saddle horses. Among the walkers were three men nearly 70 years of age and several women past 50.

For a trip of this kind, the Sierran's rule of the trail is simple—every member according to his own wishes. The seasoned hikers may travel as fast as they want to go. The short-rests-and-lots-of-them walkers may take their time. The botanists are

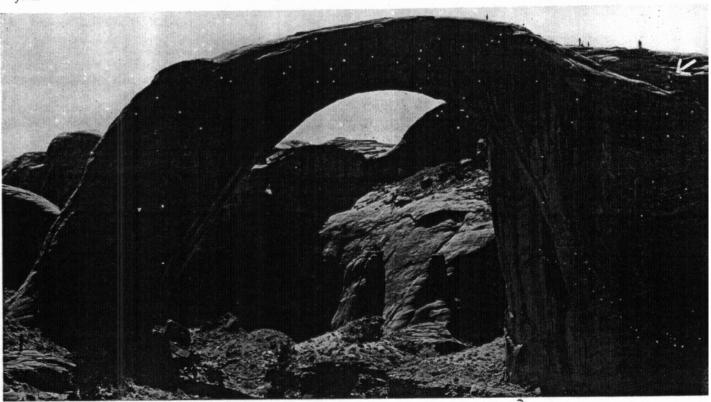
free to botanize as they go along, and it is a field day for the camera clan. And since a majority of those who go on these trips are city dwellers, how they do enjoy the freedom of such an outing.

Leaving Rainbow lodge, the well-defined trail skirts for miles around the base of Navajo mountain. The elevation at the lodge is 6400 feet, at the bridge 3750. But it is not down hill all the way. There are deep gorges to cross: To-hi-ling canyon, Horse canyon, and a third which none of the wranglers could name. We would zig-zag down to the floor of the canyon, then climb the steep trail up the opposite wall—and as far as elevation is concerned would be just about where we started. There is no monotony on such a trail.

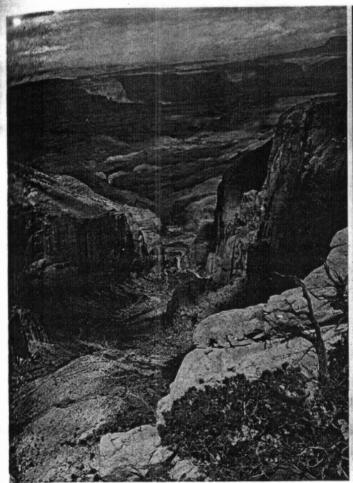
A mile and a half from the lodge we passed a slab of rock that marks the Utah boundary. Rainbow bridge is accessible only from Arizona, except for those who brave the Colorado's rapids and come downstream to the mouth of Bridge canyon in a boat. This is one place where you can cross a state boundary without having to prove that you are an American citizen and have no white mice in your luggage.

Two hours after leaving the lodge we had crossed the intervening canyons and reached the great talus slope that extends 2000 feet down to the floor of Cliff canyon.

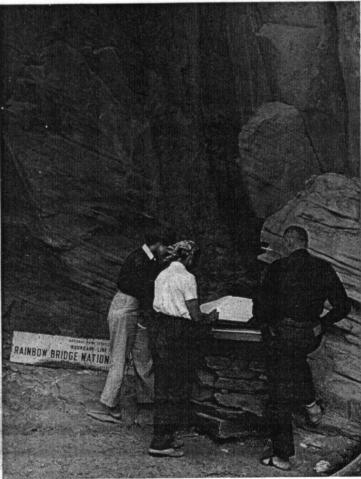
From this point, what a panorama! If you can imagine the coloring of Bryce canyon combined with the sheer rugged majesty of Grand Canyon you have a picture that approaches the view from Rainbow trail high up on the side of Navajo



Some of the hikers climbed to the top of the bridge. The arch is reached by roping down from an adjacent dome. White arrow indicates one of the climbers on the 50-foot rope-down.



From high upon the side of Navajo mountain looking down 2000 feet to the floor of Cliff canyon. The trail zig-zags down the mountain side and may be seen winding along the bottom of the canyon below.



Over 3400 visitors have signed this register beneath the arch of Rainbow bridge, the first being Dr. Byron Cummings and John Wetherill, first white men to record their visit here in August 1909.

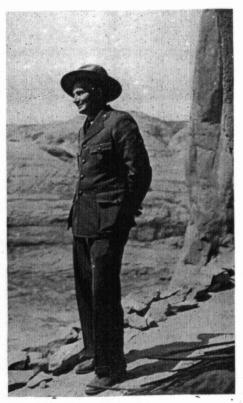
mountain. It is a landscape of cliffs and turrets and canyons and domes as far as the eye can see—all daubed and streaked and splashed with the pastels of the painted desert

When you have viewed from this point the vast jumble of sandstone erosions that lie between Navajo mountain and the Colorado river you will understand why the white man did not find Rainbow bridge until 1909. Also, you will understand why a bronze plaque has been placed on the canyon wall near the bridge honoring the Piute Indian boy Nasjah Begay who guided the first party through that wild labyrinth of stone to the place where the arch is located.

A slender white line is visible far down on the floor of Cliff canyon. That is our trail but it takes a lot of zigging and zagging to get down to it.

We found water seeping from the sands in the bottom of the gorge, the first opportunity we had had since leaving the lodge to replenish our canteens. It was

Jimmy Brewer, custodian of Inscription House ruins for the National Park Service.



noon when we reached there and we ate our lunch beside the cool stream that runs between vertical sandstone walls.

During the morning trip our view was always down, to gorgeous scenery below. But for the rest of the day we traveled between high cliff walls, looking up on either side to fantastic forms fashioned by erosion and weather, and decorated with water-stain patterns of strange design.

Sometimes the stream would disappear in the sands, but farther below it would come to the surface again. Our trail wound back and forth across the creekbed. Flowers were just beginning to blossom. Wild onion and loco weed were most common. If you are not acquainted with these flowers, do not be prejudiced against them by their names. Loco weed has a lovely purple blossom—and you don't have to eat it. The little lavender flower of the onion is most fragrant.

This was my first acquaintance with wild onion, and I picked a couple of blossoms for their perfume. But that was a mistake. The broken stems also have a perfume of a different character — and it was hours before I got the odor of onions off my hands. Wild onion belongs

by the side of the trail where Nature put it.

When we had gone down Cliff canyon perhaps two miles we came to a little meadow — the junction where Redbud canyon enters Cliff canyon. There are two abandoned Navajo hogans here, and on a nearby rock wall are ancient inscriptions, evidently incised there before the Navajo invaded this region.

We left Cliff canyon at this point and followed the upstream course of the Redbud territory to our right. The season was early, but in a sheltered cove we saw three of the Redbud trees in blossom. If you will imagine a young apricot tree with crimson flowers you have an approximate picture of the Redbud. It is a lovely decoration for this grim-walled canyon.

The pass at the head of Redbud canyon is through a narrow crevice. There is a steep climb over a sandy hump, and then the trail drops down to a narrow passageway that leads out into Bridge canyon. From here the route follows the floor of the canyon downstream to the place where the giant arch spans the creek.

The canyon is so narrow and the walls so high we were in shade much of the time despite the fact that it was early

afternoon.

Some distance upstream from Rainbow bridge the trail climbs out of the bottom of the gorge and contours around the sidewall to a little mesa where there is a spring, and here Bill Wilson has established a terminal camp for his pack trains. The bridge is less than a mile below.'

Some of us decided to continue downstream along the floor of the canyon. This route is not passable to pack animals, but we had little difficulty scrambling over the rocks and detouring the pools of water.

One of my companions suddenly exclaimed, "There it is!" I looked up and saw Rainbow bridge almost overhead. I had no idea it was so close. I can understand the thrill Dr. Cummings and John Wetherill felt when first they caught sight of that great arch. It is so big, so symmetrical, so colorful as to leave one gasping for words.

There's a magic tonic in that bridge. Seven hours on such a trail is a long hike for people who work in offices and classrooms and shops — and we were tired when we reached the arch. But there was little evidence of it. Before sundown the rocks and ledges around the bridge were swarming with Sierrans — signing the register, taking pictures, climbing difficult walls, exploring the possibilities of an ascent to the top of the arch.

Snow-capped Navajo peak in the back-

Snow-capped Navajo peak in the background provided a striking backdrop for the photographers. It is a picture that could not be gotten later in the season.

We were to camp that night on a rocky bench above the bridge, near the Wilson camp. Bill Wilson, who had remained behind with the pack train, rode into camp about dusk with the report that the animals with our bedding and food would be very late.

To transport the huge load of dunnage for this record crowd of visitors, it was necessary to recruit extra animals from the Navajo. Those Indian ponies are never too well fed, and are temperamentally unfitted for packing purposes. Probably for the same reason that a Navajo Indian would never make a good hod-carrier. They are creatures of the wild. But they

were the only stock available — so Bill made the best of it.

The mules came through on schedule but the Indian ponies were still arriving at midnight, and some of the food and bedding never did reach this camp.

But Bill Wilson was equal to the emergency. There was a well-stocked commissary at the packer's camp in a nearby cove. Wilson built a blazing fire, rolled out three big dutch ovens and numerous cans of corn and beans and tomatoes—and by 10 o'clock that night was serving mulligan and biscuits to relay after relay of hungry Sierrans. Bill made the biscuits himself — and no wrangler ever did a better job. There was ample bedding in storage at the camp for those whose sleeping bags did not arrive.

For the Sierrans all this was a gay adventure. A huge campfire was built and while the hikers awaited their turn in the breadline they sang and told stories and planned the things they would do to-morrow.

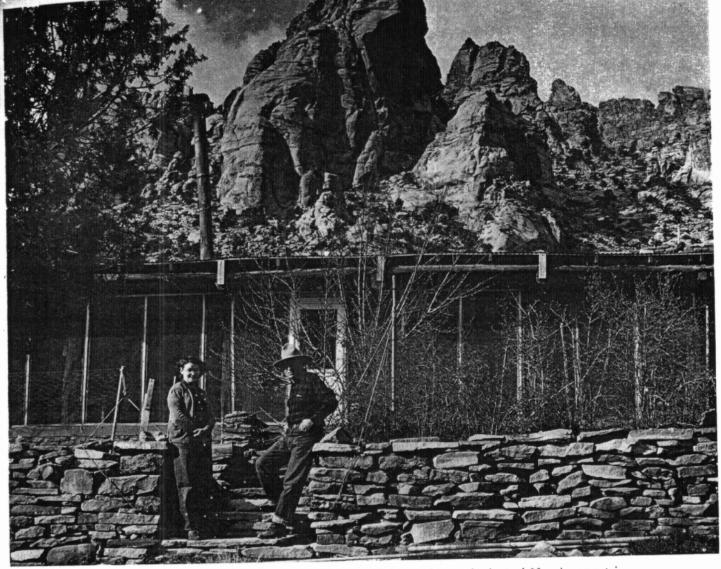
Including the packers there were nearly 100 persons in camp. By midnight Skippers Bill Wilson and Andy Andrews had everyone fed and bedded down for the night.

Various excursions were planned for the second day at Rainbow. Ropes had been brought along and one group was to climb the arch of the bridge. Others, including Superintendent Frank A. Kittridge of Grand Canyon national park who had joined the hiking party at the lodge, wanted to walk the six miles down Bridge canyon to the Colorado river.

I joined the climbing party. Following the usual route, we went downstream a



It required many pack animals to carry bedrolls and grub to the night camp at Rainbow bridge for the 78 members of the Sierra party. The wranglers in the background are Navajo Indians.



Katherine and Bill Wilson in front of their Rainbow lodge at the foot of Navajo mountain.

quarter of a mile below the bridge, then worked our way up a sandstone wall on the south side of the canyon. It was comparatively easy going until we reached a vertical pitch 20 feet high. Here shallow holes had been cut in the rock by previous climbers. The ascent was not especially difficult but a rope belayed from above was used by most of the party as a safety measure.

From that point it was an easy walk over smooth sandstone to the dome of the buttress which flanks the south end of the Rainbow arch. This dome is higher than the bridge, and separated from it by a narrow crevice. To reach the end of the bridge span it is necessary to go down an almost vertical 50-foot wall into the crevice.

In 1927 a group of climbers from the Plaindealer in Cleveland, Ohio, cut 30 toe and finger holes in the vertical wall and this is the route used by subsequent climbers to reach the top of the bridge. An iron belay pin has been drilled into the top of the dome for roping purposes.

The register on top of the bridge is a tin can weighted down with a couple of loose rocks. The procedure is to write your name on any slip of paper you happen to have in your possession and stuff it in the can. I judged there were 25 or 30 names on record, and our party added a dozen more.

It was nearly noon when we returned to the base—and there I had the unexpected pleasure of meeting Norman Nevills and a party of voyagers navigating the Colorado from Mexican Hat, Utah, to Lees ferry. They had camped at the mouth of Bridge canyon the previous night and walked the six miles up to the bridge. Other members of the party were Tommy and Evelyn Box and T. Allen, Jr., and Hazel and Lynn Lyman.

"I told them we would probably be the first visitors to register at Rainbow bridge this season," Norman confessed, "and when we arrived we found hikers on every rock and ledge."

Early in the afternoon we took the back trail toward the lodge. The return was to be made in two stages. We hiked the seven miles back over Redbud pass and camped that night in the meadow where the old hogans were located, at the junction of Cliff and Redbud canyons.

By noon the following day the advance guard of the excursion party began arriving at Rainbow lodge. The others followed during the afternoon and that night Katherine Wilson served a bountiful dinner to the entire party. She even baked pies for the mob—such pies as one would hardly expect to find far off in that remote corner of the northern Arizona desert.

Yes, the Sierrans were tired that night. Twenty-eight miles of hiking over such terrain, plus many extra miles of climbing and detouring for a majority of the party, is a big assignment for folks whose normal routine seldom includes anything more strenuous than hoeing the flower garden or changing a tire on the automobile. But the memory of a trek to Rainbow bridge will bring a glow of satisfaction to those who were on the trip long after the sore muscles have been forgotten.

Calendar

FEB. 2 Candlemas Day dance, San Felipe Indian pueblo, New Mexico.

Meeting of the Mineralogical Society of Arizona, Phoenix, Arizona.

 Turtle dance, Taos Indian pueblo, New Mexico.

Meeting of the Mineralogical Society of Arizona, Phoenix, Arizona.

26 Beginning of Lenten rituals of Los Hermanos Penitentes (The Penitent Brotherhood).

DATE NOT SET—New Mexico wool grower's convention, Albuquerque, New Mexico.

Throughout February special exhibition of arts and crafts of all Arizona Indians. Museum of Northern Arizona, Flagstaff, Arizona.

Weather

FROM PHOENIX BUREAU

| Temperatures— | Degrees |
|----------------------------------|----------------|
| Mean for December | 56.0 |
| Normal for December | 52.0 |
| High on Dec. 15 | 70.0 |
| Low on Dec. 8 | 35.0 |
| Rain— Total for December | Inches 0.36 |
| Normal for December | 1.00 |
| Weather— | |
| Days clear Days partly cloudy | 17 |
| Days cloudy | 7 |
| Percentage of possible sunshir | ne78 |
| E. L. FELTON, | |

| U |
|---|
| Degrees 59.0 55.2 80.0 39.0 |
| Inches 0.01 |
| 23 6 2 s of sunshine |
| |

CREED OF THE DESERT

By JUNE LEMERT PAXTON Yucca Valley, California

Relentlessly the rain did sweep Down mountain sides, and canyons deep.

And even the sun could not condemn When it saw new fields of rock and gem.



| Volume 6 | FEBRUARY, 1943 | Numb | oer 4 |
|---------------|---|----------|---------------|
| COVER | RED ROCK CANYON. Mojave Desert, Photo by Fred H. Ragsdale, Los Ang | Califor | rnia Calif |
| PHOTOGRAPHY | Prize winning photographs in December | | . 2 |
| CALENDAR | February events on the desert | | . 3 |
| WEATHER | December temperatures on the desert . | | . 3 |
| POETRY | Burros, and other poems | . : | . 4 |
| HOBBY | The Greeks Had a NameFor City Rock Co By ED AINSWORTH | ollector | s . 5 |
| PHILOSOPHER | Soliloquies of a Prospector By FRANK and DICK ADAMS | | |
| INDIANS | Mojaves and Their Next Door Neighbors By MARGARET STONE | | |
| WILDLIFE | Golden Eagle's Eyrie By GEORGE McCLELLAN BRADT . | | . 12 |
| DESERT QUIZ | A test of your desert knowledge | | . 14 |
| GEOGRAPHY | Dirty Devil—The Saga of a River By CHARLES KELLY | | |
| HISTORY | Massacre in the Mountains By RICHARD VAN VALKENBURGH | | |
| ART OF LIVING | Desert Refuge, by MARSHAL SOUTH . | | 23 |
| LANDMARK | Walpi, by LEO WEAVER and RICHARD BE | NNETT | 25 |
| LETTERS | Comment from Desert Magazine readers | | 27 |
| NEWS | Here and There on the Desert | | |
| HUMOR | Hard Rock Shorty of Death Valley By LON GARRISON | | |
| CONTEST . | Landmark contest announcement | | |
| HOBBY | Gems and Minerals —Edited by ARTHUR L. EATON | | |
| CRAFTS | Amateur Gem Cutter-by LELANDE QUIC | | |
| MINING | Briefs from the desert | | |
| COMMENT | Just Between You and Me—by the Editor | | 38 |
| BOOKS | The Harvey Girls, and other reviews | | 39 |

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RANDALL HENDERSON, Editor.

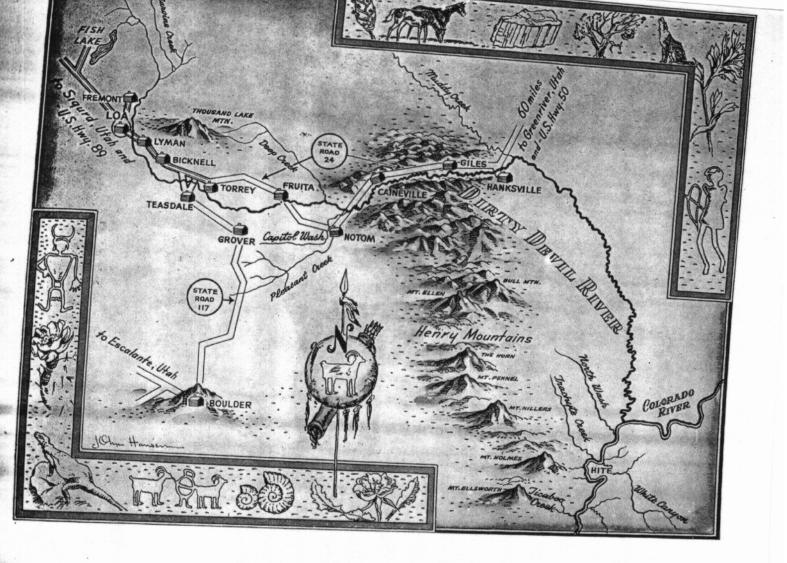
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Dirty Devil--

By CHARLES KELLY

When Dunn shouted back to Major John Wesley Powell that the tributary ahead was no trout stream but "a dirty devil," members of that Colorado river expedition in 1869 probably did not realize how well it was named. Although it later was officially designated the Fremont river, the first epithet clung to it. Both its appearance and its actions during the following generations matched its name, as many a Mormon settler who battled with it can testify. This is the story of a river and its vagaries—and the people who tried to make their homes along its shifting course.

HEN Major John Wesley Powell reached the lower end of Cataract canyon on his first expedition down the Colorado river in 1869, he found hims: If short of supplies.

Much of the flour carried in his small boats had been ruined by water and his bacon had spoiled. His men were weary and hungry. After passing through the dangerous cataracts and into the quiet waters of upper Glen canyon they hoped to find some clear mountain stream entering the Colorado where they could fish for

trout to replenish their supplies and supplement their monotonous menu.

As they emerged from Narrow canyon they were delighted to observe an opening in the canyon wall indicating a tributary stream. As the leading boat approached the opening a man in one of the rear boats shouted:

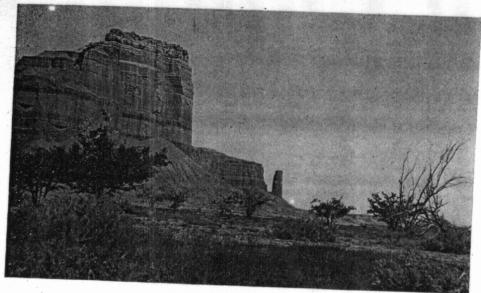
"It is a trout stream?"

Dunn, in the lead, took one look at the water rolling out of the tributary, which was even heavier with silt than that in the Colorado, and shouted back:

"No! It's a dirty devil!"

That's how the Dirty Devil river of Utah got its picturesque name. In later years Powell officially designated the stream as Fremont river, but the old name stuck in spite of him. How well it deserves that name today is the subject of this story.

The Dirty Devil river, in southeastern Utah, has its source in Fish lake. After dropping down from high Fish lake plateau it passes through a canyon to the little town of Fremont, then through an open



Dead orchards mark the site of once comfortable homes along the Dirty Devil.

valley to Grover, where it enters another deep canyon.

At Fruita, five miles below, it dives into another canyon for 13 miles, having gouged a channel through Capitol Reef. Just a short distance above the old settlement of Cainesville, it enters a flat alluvial valley from one to two miles wide, which continues for about 25 miles to Hanksville. Below the latter settlement it continues through another long, deep canyon to the Colorado. Its total length is about 200 miles.

At the time of Powell's first expedition in 1869 there were no white settlements anywhere along the Dirty Devil. Hanksville, the oldest settlement, was founded in 1880 by Ebenezer Hanks as a hideout for Mormons who wished to practice polygamy unmolested by the law. He could not

have selected a safer spot. Located in the heart of the roughest kind of broken desert country, no United States officer ever interfered with the Mormons.

In those days the Dirty Devil above Hanksville meandered peacefully through its long, narrow valley, its banks bordered with a thick growth of willows. Its channel was not more than a dozen steps wide and it could be waded almost anywhere. It required but little effort to run irrigation ditches with a plow and construct diversion dams of rocks and willows and put water on hundreds of acres of flat land. The red alluvial soil proved rich and it was easy to plow and cultivate.

Within a short time more settlers began moving down along the Dirty Devil. A settlement called Cainesville was started at the upper end of what the pioneers called Blue valley, and another called

The Dirty Devil above Hanksville. In pioneer times it was a small, meandering stream and this valley was dotted with fertile farms.



Giles was later founded between the two older settlements. Good homes were built, orchards planted, and the banks of the Dirty Devil began to take on an air of prosperity. Each rancher owned large herds of cattle which grew fat on the wild grasses of the surrounding desert.

Pioneer Mormons were industrious farmers. As the valley filled with settlers they began clearing away the dense growth of willow brush along the river to make room for more crops of corn and hay. In places the stream's meanderings interfered with their ideal of wide, square fields, so they plowed new channels to straighten its course. At the next flood season the river obligingly followed those new channels. But as time went on it seemed almost too eager to follow a direct course. The straightening process had increased its fall, willows no longer protected its banks, and soon it began eating its way downward through the fine silt it had been so long depositing in the valley.

Then one hot summer day a cloudburst struck far up in the mountains. Within a short time a high wall of water burst from the canyon above Cainesville and poured down through Blue valley. Few meanders were left to check its flow and but few willows to protect its caving banks. When the flood subsided it was found that the river had lowered its channel nearly three feet through the entire length of the valley.

This meant that old irrigation ditches would no longer carry water to the fields. New ditches had to be dug, sometimes for miles, to tap the stream at a higher level. The channel also had been greatly widened, necessitating larger and more durable diversion dams. But the people went to work energetically and in time repaired the damage. It had been a very unusual flood, they said, and might never happen again.

But it did happen again and again, and for a reason not then understood. Horses and cattle of the first settlers were being gradually replaced by sheep, which for a time were more profitable. As sheep destroyed desert vegetation floods became increasingly more disastrous. New ditches had to be dug to tap the precious water, now several feet below its old channel. The channel, too, had widened, cutting away hundreds of acres of rich soil.

At Hanksville, where the stream passed through a sort of rock dyke, a dirt and brush diversion dam had been built. It served its purpose well enough until the

first big flood, when it was washed away. Another larger dam was built. This in turn melted before the increasing floods. A third was constructed, and a fourth, of rock, logs and sand. They all went downstream, one after the other, leaving ditches high and dry in summer when water was most needed.

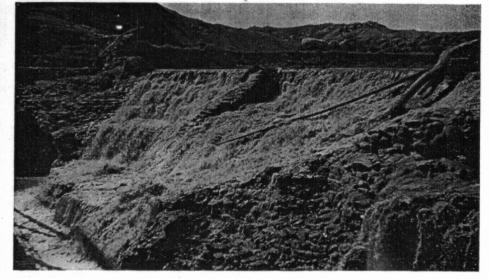
People were spending more time on their dams and ditches than on their farms. The work was unending, yet it had to be done if the settlers were to survive. There was no such thing in those days, in Hanksville at least, as ditch digging machinery. Every foot of irrigating canal and every dam was built by horse and man power. They did not even have powder to blast rock, and several tunnels through solid rock between Cainesville and Hanksville were dug by men with rock hammers and crowbars, lying on their bellies.

No irrigating company ever was formed for the settlements along the Dirty Devil. The work was all cooperative. Whenever a ditch needed mending or a dam had to be built the Mormon bishop called on men to do the work and they did it without remuneration other than the eventual benefit to their own land. As the river channel widened the road had to be changed, until at last it was carved out of the bluffs high above any possible flood. This was also done by cooperative labor before the county was able to appropriate money for such construction.

As sheep gradually destroyed natural vegetation the river cut its channel deeper and wider with each succeeding flood season. Many rich farms were washed downstream into the Colorado. Others had to be abandoned because it was impossible to put water on them. A large part of the town of Hanksville was washed away. But the people of that village believed they could control the floods if they had a dam that would hold. So they went to work building a permanent dam at the narrows above town. Rock was cut and hauled from nearby hills and laid up by hand 40 feet high and over 100 feet wide between two rock abutments. This required an immense amount of labor for so small a community, but it was finally finished and Hanksville felt safe for the first time in many years.

In August of the following summer another big flood came roaring down the Dirty Devil. Every citizen of Hanksville rushed out to see if their dam, built with so much effort, would hold. When the peak of the torrent passed they were overjoyed to see their rock wall still intact—but the river channel behind it was level full of silt!

The Hanksville dam still stands, a monument to the tireless energy of those



This diversion dam, built by cooperative labor, is a monument to the Mormon settlers of Hanksville, Utah, on the Dirty Devil river.

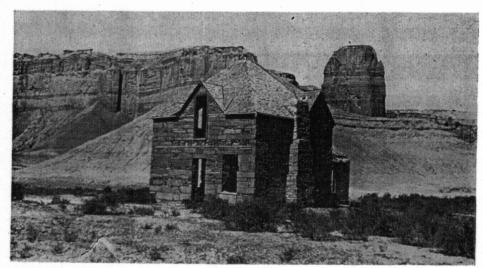
early settlers along the Dirty Devil. But most of the fertile acres below it have gone down the Colorado and those still remaining are scarcely worth watering. In earlier days Hanksville was a lively town of prosperous farmers and cattlemen. Now it is almost abandoned. In its heydey Charley Gibbons' store did an annual business of \$200,000. When I passed through last September, the town's one remaining store expected to close within a month.

Where once the river meandered quietly between willow-lined banks, it now has cut a channel sometimes 40 feet deep almost the full length and width of its long valley. What land remains has long ago reverted to sagebrush and greasewood. Here and there dead orchards mark the site of some pioneer home, while old ditches, long dry, are lined with dead stumps.

Where once stood the flourishing village of Giles nothing is left but an empty church, standing gaunt and alone in a sea of sagebrush. At Cainesville a few ranches survive, but even these are being slowly washed away.

Returning from a recent trip to the Henry mountains, Dr. Inglesby and I were about to cross the river above Cainesville when we heard a roar and saw a four-foot wall of water advancing toward us. It was too late to cross so we stood on the bank and watched the flood come down. Higher and higher it rose until it filled the wide, deep channel. Not until noon the next day did it recede enough for us to cross safely. We knew that many more acres of red soil had been washed down to Boulder dam. And we knew, too, why old-timers along the river still persist in calling it the Dirty Devil.

This pioneer home, carefully constructed of native rock, stands abandoned in the sagebrush along the Dirty Devil.



DESERT

Close-Ups

· Toney Richardson has spent most of his life in the Navajo country. His father is trader at the Inscription House trading post near Tonalea, and Hubert Richardson of the Cameron trading post is his uncle. Toney not only speaks, but can think in Navajo. During the past 10 years he has written 40-odd western fiction novels, most of them published in Eng-land. Following his return from the South Pacific a year ago where he served as a naval officer, he decided he wanted to do some writing for the "slick" magazines, and he selected DESERT as his first choice of markets. So-this month we print the first of a series of feature stories written by a man who really knows the Navajo country. Gladwell Richardson is his real name—but to DESERT readers he will be known, as he is known to his close friends-as Toney.

DESERT CALENDAR

Nov. 2—State conference of Centennial beautification committees, Hotel Utah, Salt Lake City. To plan campaigns to prepare and beautify state for Centennial observance in July, 1947.

Nov. 2-6—28th annual livestock show, Ogden, Utah. At Ogden Union stock-

Nov. 6-9—Annual Turkey show, Hemet, California.

Nov. 9-11—Sierra Club, Southern California, led by Frank A. Schilling, will visit Parker Dam and vicinity.

Nov. 8-17—Arizona state fair, Phoenix. Special exhibits by Mineralogical Society of Arizona.

Nov. 15-17 — Branding - time rodeo, Tucson, Arizona. Junior chamber of commerce.

Nov. 17—Annual all-breed dog show, Palm Springs. American Legion.

Nov. 17-18—Fall rodeo and show, Palo Verde Rodeo and Livestock association, Blythe, California.

Nov. 30 - Dec. 1—Show of minerals, gems, lapidary and fluorescence by San Fernando Valley Mineral and Gem society, North Hollywood Recreation center, 5301 Tujunga Ave., North Hollywood.

HUNTING SEASONS

Nov. 1-17 — Deer season throughout Arizona, except Kaibab North national forest. Desert mule deer south of Gila river, Nov 11-17 only.

Nov. 1-17—Turkey season in specified Arizona national forest areas.

Nov. 10-21—Regular big game season, New Mexico. Apply State Game Warden, Santa Fe.

Nov. 20-Dec. 4—Elk hunt, Arizona. Applications during October: H. L. Reid, director Arizona Game and Fish commission, Phoenix.

Nov. 23-Jan. 6—Ducks, geese, mudhens, California counties of San Bernardino, Riverside and Imperial. Same dates, New Mexico.

Nov. 26-Dec. 15—Scaled or Gambel quail, New Mexico. Pheasants, special New Mexico areas only, Nov. 23-25.



| Volume 10 | NOVEMBER, 1946 | Nu | mb | er l | |
|---------------|---|--------------|----|------|--|
| COVER | PETROGLYPHS ON CANOPY ROCK, souther Photo by Randall Henderson. | theast Utah. | | | |
| PHOTOGRAPHY | Prize winners in September contest | | | 2 | |
| CLOSE-UPS | Notes on Desert contributors | | | 3 | |
| CALENDAR | November events on the desert | | | 3 | |
| INDIANS | Last Powwow of the Navajo By RICHARD VAN VALKENBURGH . | | | 4 | |
| HUMOR | Hard Rock Shorty of Death Valley | | | 7 | |
| LOST MINES | 'Lost Pegleg Gold is not a Myth' By HENRY E. W. WILSON | | | 8 | |
| CONTEST | Rules for November photograph contest . | | | 10 | |
| EXPLORATION | Glyph Hunters in the Indian Country By RANDALL HENDERSON | | | 11 | |
| CARTOON | Jalopy Joe, by FRANK ADAMS | | | 16 | |
| ART OF LIVING | Desert Refuge, by MARSHAL SOUTH | | | 17 | |
| FIELD TRIP | Where Tree Stumps Turned to Stone By TONEY RICHARDSON | | | 19 | |
| MINING | Current news briefs | | | 22 | |
| NEWS | Here and There on the Desert | | ٠. | 23 | |
| TRUE OR FALSE | A test of your desert knowledge | | | 26 | |
| LAPIDARY | Amateur Gem Cutter, by LELANDE QUICK | | | 28 | |
| НОВВУ | Gems and Minerals | | | 29 | |
| BOOKS | Review of Southwest books | | | 36 | |
| COMMENT | Just Between You and Me, by the Editor . | | | 38 | |
| LETTERS | Comment from Desert readers | | | 39 | |

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BESS STACY, Business Manager.

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Glyph Hunters in the Indian Country

On thousands of rocks in the desert Southwest are to be found the picture writings of prehistoric Indians. No one knows what they mean, or whether they were put there to convey information, to express art, or to doodle away idle hours. But students and scientists haven't admitted yet that they cannot find the answer. They are working on it. Here is a story of the latest expedition sent out to photograph and measure these petroglyphs—in the hope that a little more light may be cast on the unsolved mystery.

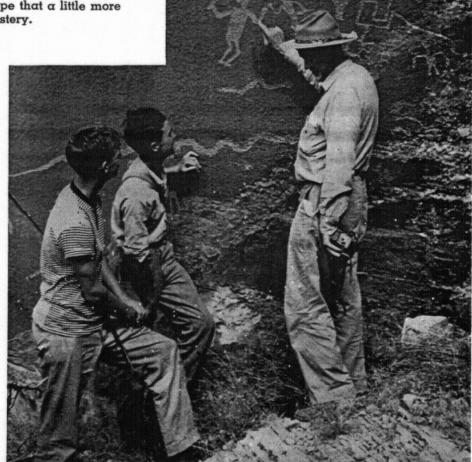
By RANDALL HENDERSON

LAD only in a breech-clout, his long black hair tied with a cord of Yucca fiber, a bronzed Indian stood before a sandstone wall pounding with a sharp-pointed piece of obsidian on the smooth surface of the rock. Gradually, a figure was taking form as the impact of the flint-hard tool chipped away tiny particles of the softer stone—the crudely formed outline of a mountain sheep of the bighorn species.

The sandstone cliff rose in terraces above, with the deep green juniper on the ledges outlined against the yellow and white coloring of the canyon wall. Although he was intent on making his image as life-like as possible, the artist was conscious always of the sounds that came from the virgin wilderness around him—the rustle of the wind in the leaves of willow trees, the music of a little stream tumbling over the rocks, the descending scale of the canyon wren's call, the snapping of a twig as a deer moved through the underbrush.

No white man witnessed this tribesman at his work, for the scene I have described was enacted perhaps 700 or a thousand years ago—long before the European invaded American shores. What I have written about this aboriginal artist is the picture which took form in my mind recently when I stood before a great wall of rock literally covered with glyphs incised there by prehistoric tribesmen.

The place was Indian creek in southeastern Utah—a tributary of the Colorado river. There are many Indian "art galleries" along the base of the cliffs which confine Indian creek. One of them is outstanding. It far surpasses in both number and clarity the glyphs on the famous Newspaper Rock in the Petrified Forest national monument.

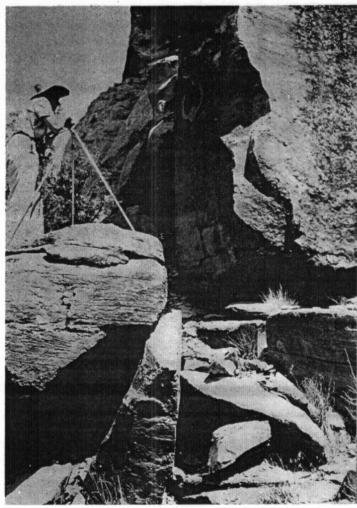


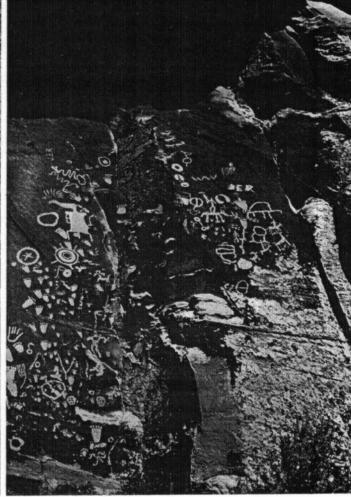
These glyphs, Arthur Woodward is telling his youthful helpers, probably are dancing figures, incised there possibly 700 or 800 years ago.

In my notebook I identified this unusual collection of Indian writing as Canopy Rock. The name is suggested by the wide smooth shelf of sandstone which projects from the wall just above the etchings. Perhaps the protection against sun and rain provided by this natural canopy had something to do with the selection of this place by the Indians for some of their finest and most extensive art work. Certainly the overhang is responsible in a large measure for the excellent preservation of the petroglyphs found there.

My visit to Indian canyon was made possible through the courtesy of Ansel Hall, former naturalist at Mesa Verde national park in southwestern Colorado. Hall has been identified with exploration and archeological work in the Southwest for many years.

More recently he conceived the idea of establishing a summer camp for boys in the mountains near Mesa Verde. The Explorer's camp consists of a 10-week training course in mountaineering, archeology, camping and other phases of outdoor life.





Barbara Loomis photographing a horned symbol on the wall of Indian canyon.

A section of the great "art gallery" at Canopy Rock in Indian canyon.

The boys range from 14 to 17. Camp headquarters is at the old Gold King mine in La Plata canyon, nine miles from Hesperus, Colorado.

Early last summer 32 boys from more than a score of states arrived at the Gold King where they were quartered in old mine buildings. They were divided in three groups. One group with leader, cook, packer and physician was assigned to a high mountain camp to spend the time studying the arts of camp life, exploring, climbing and nature study. A second group went to an old Indian site in Utah and spent the time excavating prehistoric ruins in quest of artifacts which might throw light on the culture of the ancients.

A third group went out to explore the canyons in the Four Corners region in search for petroglyphs and pictographs which would be photographed and measured for future study. The assignments of the groups were alternated so that eventually all the boys had the opportunity to participate in every phase of the general program.

Ansel Hall wrote several months ago suggesting that a couple of weeks with the glyph hunters would make an interesting vacation for Desert Magazine's editor, and I was glad to accept his invitation. An added inducement was the fact that this group would be headed by Arthur Woodward, curator of history at Los Angeles museum, an experienced archeologist and an occasional writer for Desert.

On the morning of August 7 our little caravan departed from Gold King on an expedition that covered parts of Colorado, Utah, Arizona and New Mexico. One truck provided transportation for the 14 boys in the party. Another truck was "chuck wagon." We had a jeep for scouting purposes. In addition to Woodward, the adult members of the party were Barbara Loomis, curatorial assistant at the Los Angeles museum, Dr. J. E. Hughes of Shawnee, Oklahoma, in the role of camp physician, Ray Jahn of the Chadwick Seaside school near Los Angeles as camp manager and cook. Also, with us part of the time were Forbes Parkhill, writer for nationally known magazines, and Fran Hall, photographer.

Through arrangement between Ansel Hall and the Los Angeles museum, Arthur Woodward, while serving as group leader for the boys, was also engaged in a field

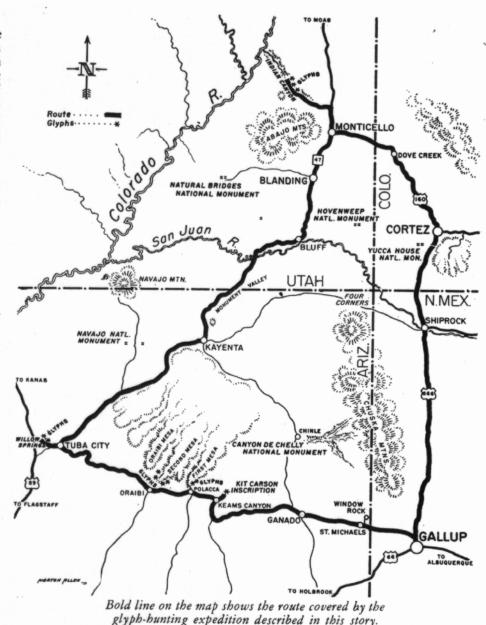
project of scientific importance to the museum. His program was the mapping and recording of as many of the Indian writings, both petroglyphs incised in the rocks and pictographs painted on the rocks, as could be covered in a 10-week period. Since glyphs may exist in any canyon in the vast Indian country that extends over four of the Southwestern states, and there are literally thousands of glyph sites which have never officially been mapped and recorded, the use of a troop of boys to search canyon walls and explore tributaries gave Woodward a wider range than is possible for a normal field party. And the boys regarded it as great sport. Their job was to locate the Indian art work, and if it was of sufficient importance, Woodward and Miss Loomis would follow up and take pictures, make sketches, secure measurements and other data to be assembled and studied later. With all the material before him, Woodward hopes in the months ahead to be able to discover patterns or arrive at conclusions which will penetrate the mystery now surrounding most of this ancient Indian art work.

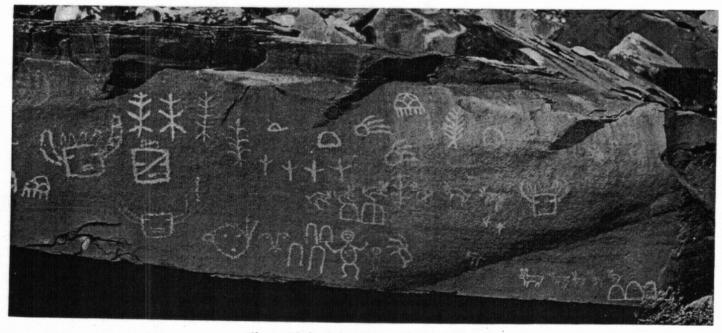
It soon becomes apparent to one engaged in this study that while there is considerable variation in the artistic skill of the Indians who made these pictures, and often enough difference in design to distinguish one tribe or one period from another, at the same time there is an amazing degree of similarity in subjects selected by tribesmen as widely separated in geography and culture as are the Pueblans of Colorado and New Mexico from the desert Cahuilla of Southern California.

At Canopy Rock, Woodward soon reached the conclusion that the figures had been made by Utes, some as recent as 150 years ago. However, in some instances the more recent forms had been incised over old glyphs which appeared to be of Pueblan design.

The dating of glyphs is very difficult, except in the rare instances when they occur near ancient ruins where timbers are available for tree-ring dating. And even in such cases there is an element of uncertainty as to whether or not the incisions were made by local Indians during the period of residence at the local site.

There is a wide divergence of opinion perhaps speculation would be a more accurate word - as to the motive that prompted these Indian inscriptions. There are many theories: (1) That the figures are designed to convey information to other Indians—the location of springs, the abundance of game, or perhaps illustrate an adventure or experience in the life of the artist. (2) That they are mere doodling-an occupation to pass away idle hours, and represent only a passing whim of the artist. (3) That they represent the first primitive impulse toward self-expression, and were prompted by the same creative urge which causes humans to paint landscapes and write poetry and do sculpturing today. And that they are the work of the most ad-





Clan symbols of the Hopi at Willow Springs.

vanced and skilled artisans of their period. Arthur Woodward rejects the idea that they are the work of doodlers. But beyond that conclusion, he admits he is as much at sea as other students of Indian glyphs. In the months ahead when he has assembled in his workshop the hundreds of photographs and measurements taken during the summer expedition, and has the time to study and compare them with relation to the geography of their occurrence, perhaps much new light will be thrown on the mystery of these glyphs.

We camped three days along Indian creek. We struck pay dirt there. The canyon walls for a distance of five miles along the stream carry hundreds of well preserved petroglyphs, and in two places we found badly eroded pictographs in white

and red paint.

While the outstanding group is at Can-

opy Rock where not less than 350 figures remain clear and sharp on the well-protected wall, there were a number of less conspicuous "art galleries" which I recorded in my notebook as Nine Goats, Arrowhead, Big Snake, Ladder and Maze glyphs. I merely used the most conspicuous figure in each group to identify the location.

The water in the creek was clear the day we arrived there. But that night there were rains in the Blue mountains at the headwaters, and the next morning the stream was flowing a thick muddy mixture that wasn't even fit for washing dishes. It never cleared while we were there, so we hauled our drinking water from the headquarters of the S. & S. cattle ranch down the canyon.

The boys scrambled over rocks, climbed walls, explored tributaries and had a great time. Getting them up at 5:30 in the morning was never easy. But Arthur had a flip-

gun loaded with some mysterious concoction which had the reputation of being a very potent getter-upper. Arthur never used the gun, so no one ever knew just what was in it—but he did such an effective propaganda job that he merely had to bring the weapon out where the sleepy-eyed youngsters could see it, and there was an immediate scramble to get clear of the sleeping bags.

From Indian creek we returned to Monticello and followed State Highway 47 south through Blanding, Mexican Hat, Monument valley, Kayenta and Tonalea to Tuba City, Arizona. It rained the night we camped in Monument valley. Those who did not have waterproof bedrolls found shelter in or under the trucks. And when we reached Kayenta at midday water was

coming down in sheets.

That night we camped near the top of Marsh pass, and the next day along the road to Tonalea (Red Lake) we found the dips running full of water. At one point a bridge approach had gone out, and we had to do some emergency road engineering to build a passable detour. At another wash the flood had brought down a great drift of tumbleweeds and piled them squarely across the road. The drift was seven feet high and soggy with mud. The jeep tried to crash through what appeared to be a mere pile of weeds-and bounced back as if it had hit a rubber wall. We tried burning the drift, but it was too wet. Then we tried tearing it apart with shovels-and in the end we built a detour around it. I would not have believed this story if I had not been through the experience.

At Tuba City we took a little-used road that led off into a jumble of rimrock and boulders, and after some search located Willow Springs, a historic old waterhole on the ancient Hopi salt trail. In the days before traders brought salt in sacks and cakes to the Indian country, the Hopi made long treks to a rock-salt ledge deep in the canyon of the Little Colorado.

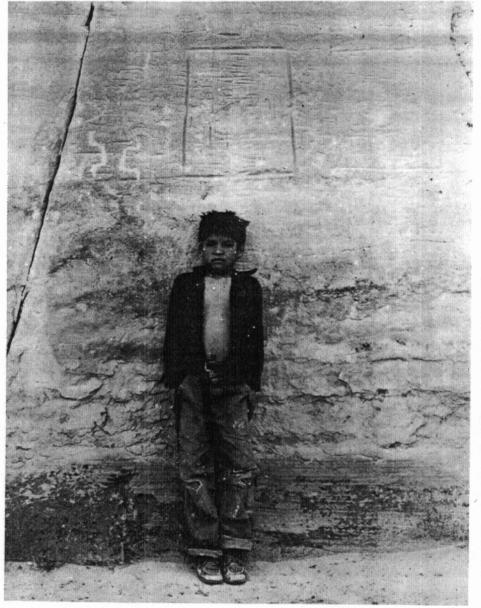
The trail has not been used for many years, but near Willow Springs are more than a score of glyph-covered slabs and boulders—relics of the days when every Hopi salt pilgrim stopped here to incise his own clan symbol as a permanent record of his trip.

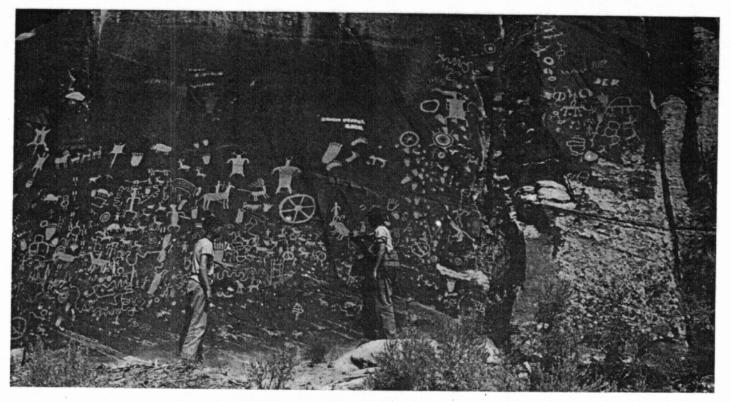
These glyphs probably cover a span of many hundreds of years—some of the later ones being incised over the more ancient ones. One huge block-like boulder 22 feet long and nine feet high is literally covered with them, all four sides and the top.

According to tradition the traveler added a new symbol for each trip. Thus there will be a row of cornstalks put there by the same corn clansman, each representing one trip to the salt deposit. There are symbols of the sun clan, spider clan, katchina clan, coyote clan, eagle clan, lizard clan and scores of others, some of them now extinct.

Dr. Harold S. Colton published a de-

Below—"Growing marks" on the cliff below Shipaulovi. When a Hopi youth gets his mark inside the square it is a proud day—he has then become a man.





Canopy Rock in Indian canyon. These glyphs probably were made by the Utes.

tailed report on these Hopi petroglyphs in the July, 1946, issue of *The Plateau*, quarterly publication of the Museum of Northern Arizona, of which he is director.

From Willow Springs we took the road 'through Moenkopi and across the Navajo

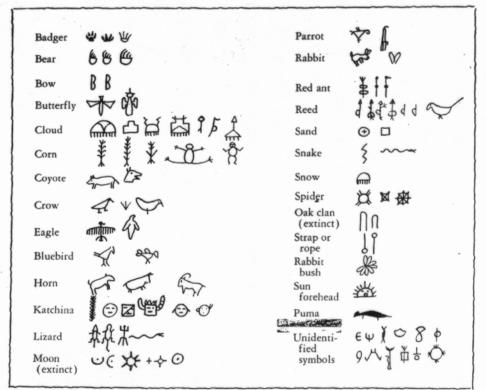
and Hopi reservations to Hotevilla. The rains had been ahead of us there too, and we pulled a truck out of Dinnebito wash just before we reached the Hopi Third Mesa.

At Shipaulovi on the Second Mesa we

spent a pleasant hour with Chief Joe Sekakuku and then one of the younger Indians took us to the base of the mesa where are located the tribal "growing marks." For many hundreds of years it was Hopi custom for the Indian boys, as soon as they



The glyph hunters: Standing, left to right: Emile Behre of Baton Rouge, La.; Roger Hall, Mancos, Colo.; Paul B. Wiggin, Montclair, N. J.; Harold Lundberg Jr., Wilmette, Ill.; Alan D. Stuart, Royal Oak, Mich.; Arthur Woodward, leader; Barbara Loomis, Los Angeles museum; Donn Schindler, Scarsdale, N. Y.; George Brunstetter, New York City; Ralph Condit, Greenwich, Conn.; Mike Maule, El Monte, Calif. Seated: Ray Jahn, Chadwick Seaside School, Los Angeles, camp manager and cook; Dr. J. E. Hughes, Shawnee, Okla.; Jack Pickering, Goshen, Ind.; John Anderson, Randolph, Minn.; Clay Doss, Bloomfield Hills, Mich.; John Randal, New York City; Duncan McEyre, Colorado Springs, Colo.



Clan symbols on the rocks at Willow Springs, identified by Edmund Nequatewa, a Hopi Indian. These drawings reprinted from the quarterly magazine, The Plateau, through the courtesy of Dr. Harold S. Colton, director of the Museum of Northern Arizona at Flagstaff.

were old enough to climb down the trail, to stand beside a vertical slab of rock while a member of the family incised a mark showing the height of the youngster. At periodic intervals through life new marks were made showing growth to full-sized manhood. There are a number of these marker rocks, and the wear of hundreds of incisions indicates that the tradition continued among the Hopi for many generations.

At many places around the Hopi mesas are found the glyphs inscribed there by ancient members of the tribe. Along the trail to Walpi is Tally Rock, where the Tewa Indians, brought to Hopiland to protect its residents against Apache marauders, kept a record of the enemies slain by incising a vertical mark on the rock face for each victim. Dama Langley once told me she had counted 180 marks on the scoreboard.

Today's generation of Hopi youngsters have been learning the ways of their white neighbors. The fast disappearing glyphs of the ancients are being replaced by crudely scrawled initials and names, sometimes incised, more often painted on the rocks. Perhaps the picture writings of the ancients and the ugly initial writing of the moderns are prompted by the same exhibitionist urge in human nature. I do not know. But I much prefer the art of the savages, primitive though it may be.

During his summer trip Woodward and his boys covered many glyph sites in addition to those I have mentioned. Several days were spent in Canyon de Chelly where the Navajo even today are inscribing crude animal and other forms on the sandstone

Today's generation of Indians is able to throw little light on the origin or meaning of the older glyphs except those at Willow Springs. There are a few oldsters on the Hopi mesas who traveled the old salt trail and know the story of the clan symbols left along the way. But for the most part the glyphs of the ancients remain an unsolved mystery, and Arthur Woodward will tell you frankly that while his studies may throw some new light on the subject, he does not expect to discover any magic key which will unlock the secret.

Wanted—Brains, not Rubber Stamps

Part of the red tape which previously has encumbered the Indian service has been tossed out the window by Secretary of Interior Krug. The secretary not only has given Indian Commissioner William A. Brophy greater authority than previous commissioners have enjoyed, but he has made plain that wider discretionary powers are to be passed down the line to subordinates. Here are some of the functions which previously required secretarial approval, but which now have been delegated to field officials: Execution of contracts for medical, nursing or hospital organizations, for social service, relief and child welfare; execution of leases for oil, gas and other mineral rights covering restricted allotted Indian lands; exchange of lands between Indians and non-Indians.

JALOPY JOE

By Frank Adams



"It's takin' an awful lot o' air to get this thing blowed up tonight."

DESERT CALENDAR

The Desert Calendar keeps readers informed of the important events scheduled to be held in the desert country. Civic groups and committees are invited to send dates and pertinent information about state conventions, fairs, rodeos, fiestas—in fact, anything of civic, cultural or commercial nature which has more than local interest. There is no charge, but listings must be in by the first of the month preceding date of publica-

Oct. 31-Celebration of the passage of the Gila project bill, with programs at Wellton and Yuma, Arizona.

Nov. 1-2-Annual rodeo and parade,

Blythe, California.

Nov. 6-7—New Mexico farm bureau convention, Roswell, New Mexico.

Nov. 7-16—Arizona state fair, fair grounds, Phoenix, Arizona. In-cludes first competitive mineral ex-

Nov. 12-St. James' day annual fiesta and dances. Jemez pueblo, New Mexico.

Nov. 12—St. James' day fiesta and dances, Tesuque pueblo, New Mexico.

Nov. 14-16-Second annual Greenlee county rodeo, Apache Grove, be-tween Clifton and Duncan, Arizona.

Nov. 15-16-Old Tucson Days, dances, fiddling contest, Tucson mountain

park, Tucson, Arizona. Nov. 16-21—Ogden Livestock show,

Ogden, Utah. Nov. 23-26—Convention, New Mexico Educational association, Albuquerque, New Mexico.

Nov. 28-30—Desert Peaks section of Sierra club to climb Picacho peak in Southern California and Castle Dome in Arizona. Niles Werner, leader.

Nov.-Dec.—Exhibition, paintings of the Southwest by the late Edgar Alwin Payne, Southwest Museum, Los Angeles, California.

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El Centro, California



| Volume 11 | NOVEMBER, 1947 Number 1 |
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| COVER | GRAND CANYON VOYAGE. Photograph taken by Randall Henderson on Lake Mead at end of voyage through Grand Canyon. |
| CALENDAR | November events on the desert |
| ADVENTURE | Grand Canyon Voyage By RANDALL HENDERSON 4 |
| POETRY | Tracks of the Overland Stage By MARSHAL SOUTH |
| PERSONALITY | Zeke Johnson's Natural Bridges By CHAS. KELLY and CHARLOTTE MARTIN 12 |
| HUMOR | Hardrock Shorty of Death Valley 14 |
| INDIANS | Trail to the Tower of the Standing God By RICHARD VAN VALKENBURGH 16 |
| PERSONALITY | Indian Agent, by TONEY RICHARDSON 19 |
| LOST MINE | Jack Stewart's Lost Ace-in-the-Hole Ledge 22 |
| POETRY | Ahead, by TANYA SOUTH 23 |
| DESERT QUIZ | A test of your knowledge of the desert 23 |
| PHOTOGRAPHY | Announcement of September contest winners . 24 |
| NATURE | Lizard With a Voice, by GLENN E. VARGAS 25 |
| FIELD TRIP | He Staked a Claim for the Rockhounds By HAROLD O. WEIGHT 26 |
| CONTEST | Announcement of November photo contest 28 |
| BOTANY | Lip-Ferns on the Desert, by MARY BEAL 30 |
| LETTERS | Comment from Desert Magazine readers 31 |
| MINING | Current news briefs |
| NEWS | Here and There on the Desert |
| HOBBY | Gems and Minerals |
| LAPIDARY | Amateur Gem Cutter, by LELANDE QUICK 45 |
| COMMENT | Just Between You and Me, by the Editor 46 |
| BOOKS | Current reviews of books of the Southwest 47 |

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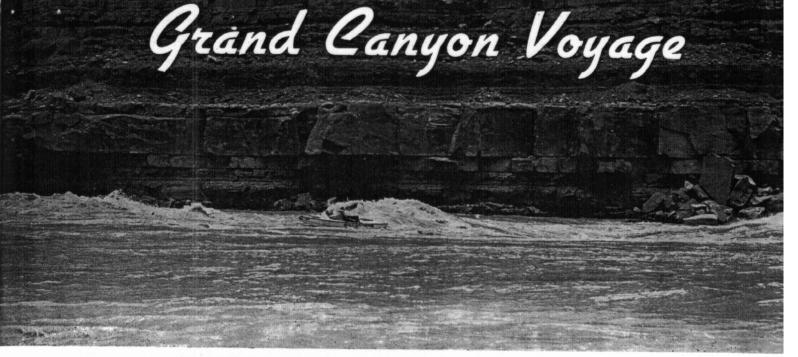
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Norman Nevills running North Canyon rapids with Margaret Marston as passenger.

With Norman Nevills as skipper, Randall Henderson and 10 other companions spent three weeks last summer running the Marble and Grand Canyon rapids from Lee's ferry to Lake Mead. The trip was made in four cataract boats designed and built by Nevills. The story of how this river party faced and surmounted the treacherous cascades which have claimed many lives since Major John Wesley Powell made the first voyage through the gorge in 1869, will appear in four consecutive issues of Desert, beginning with this November number.

By RANDALL HENDERSON

UR RENDEZVOUS for Norman Nevills' 1947 boat run through Grand Canyon was Art Green's Marble Canyon lodge, situated on the bluff where Highway 89 crosses the Colorado river on Navajo bridge. Lee's ferry, where our boats were moored for the start, is seven miles away.

Twelve of us were scheduled for the trip—four boatmen and eight passengers. Our start was scheduled for July 12. But there was to be one cool refreshing night's sleep in the comfortable cabins of Art Green's lodge before we began our 20-day adventure in the sultry depths of Marble and Grand Canyons, for the party had assembled for preliminary briefing the previous day.

There was no confusion in the final hours before the start, for Norman and Doris Nevills had been planning this expedition a year in advance. They are a good team, those Nevills. They are frontier people. Most of their mature lives have been spent at Mexican Hat, Utah, where Norman is a hydraulic engineer employed by the U. S. geological survey to take daily water readings on the San Juan river.

Norman engineered and built the special type of cataract boats which were to be our safeguards against the powerful

waves and rocks and holes and eddies in the gorge that lay ahead of us. And Norman had trained the boatmen who were to pilot the craft. Doris' part of the preliminary planning was less spectacular perhaps, but not less important than that of her husband. She planned the commissary, and bought the provisions. This was no simple task for an expedition that would have only one contact with the outside world in three weeks. Weight and bulk must be kept to a minimum. And since mid-day temperatures in the bottom of the gorge range from 102 to 130 degrees at this time of the year, it was necessary to plan three meals a day for 12 people for 20 days practically without perishables. You do not realize the extent to which we Americans depend on fresh meats and vegetables and fruits in our daily menu until you attempt to schedule 60 consecutive meals without them.

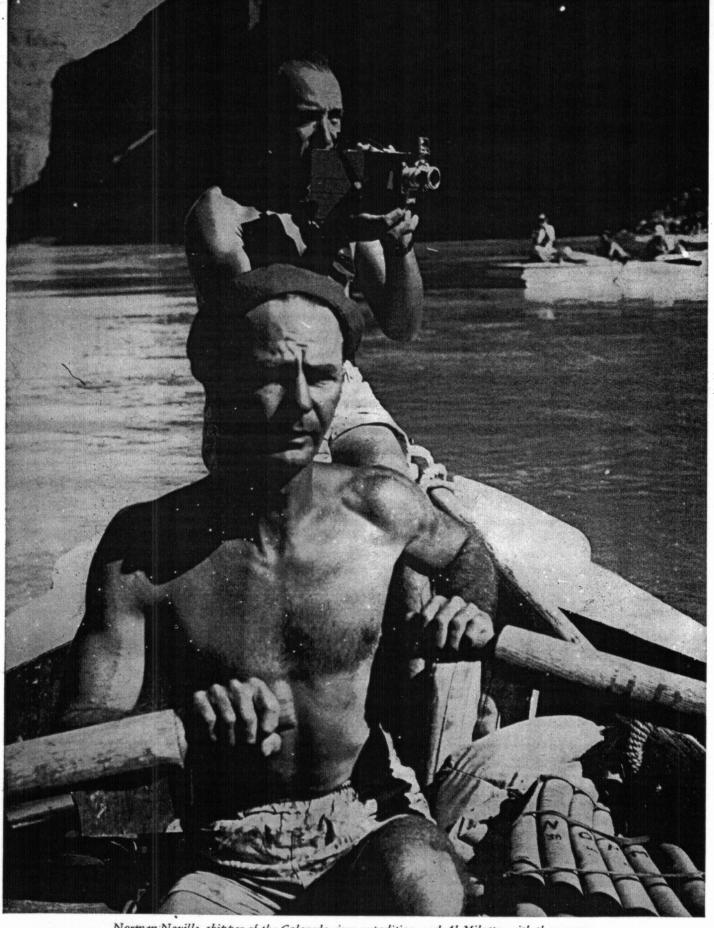
We were eager to be on our way—but knowing that the days ahead would be spent under a sizzling desert sun without shade, and the nights on sandbars and rock ledges with the roar of a great cascading river nearly always in our ears, we were doubly appreciative of the luxury which Mr. and Mrs. Green and their family provided at the lodge. Three daughters with

their husbands—to be joined later by a G.I. son who now is in school—have created out here on the northern Arizona desert one of the most delightful hostelries it will ever be your privilege to visit. Art developed his water supply from a little spring up under the Vermilion cliffs. Most of the cabins are built of native rock. There is air-cooling in every room. The place is kept spotless—and always there is a friendly smile and a cooling drink for the wayfarer who rolls in off the hot paved highway.

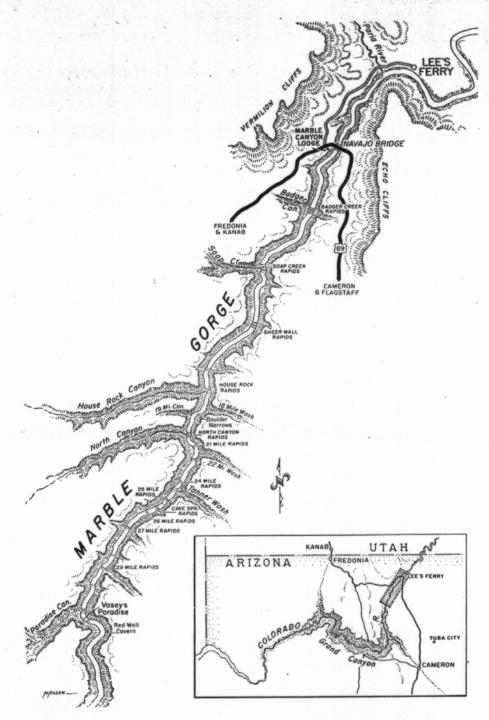
Recently a landing strip was installed for planes—and when the last members of our party arrived the evening before departure in a 3-motored plane—the first big plane to land on the new runway—Art felt amply repaid for the months of hard work he and the boys have done to prepare this landing strip.

Three members of our party had been through the canyon before. For the others it was to be a thrilling adventure on waters which have claimed many lives since Major John Wesley Powell and his half-starved boatmen first ventured through what was then, in 1869, an unknown can-

Norman announced the boat assignments. He would pilot the flagship Wen,



Norman Nevills, skipper of the Colorado river expedition, and Al Milotte, with the camera, were the author's companions in the veteran cataract boat W en on the trip through Grand Canyon.



named in honor of his father, William Eugene Nevills, mining man whose interest in oil seepages near Mexican Hat had brought Norman to that remote Utah region just after he had finished high school at Oakland in 1925. The elder Nevills passed away many years ago, but it was his interest and encouragement which started Norman on a hobby and eventually to recognition as the top-ranking white water boatman of America, perhaps of the world. For Norman now has completed 13,400 miles of navigation on the San Juan, Green, Snake, Salmon and Colorado rivers without losing a boat or passenger. Actually he never has capsized a boat in his long career on the toughest rapids to be found in North America. Riding with the skipper in the Wen were Al Milotte of

Hollywood, free lance photographer whose best films are purchased by the Walt Disney studios, and the editor of Desert Magazine.

Number two position in the little 4-boat fleet was assigned to Kent Frost in the Mexican Hat II, young bean farmer of Monticello, Utah, and veteran of the navy. If Kent Frost had lived 100 years ago, he would have been a Mountain Man. He is a woodsman at heart, and when work is light on the ranch he shoulders his rifle and heads into the southeastern Utah wilderness where he lives off the land for days at a time. This was Kent's first trip through the Grand Canyon, but he has served with Norman on the San Juan and Green rivers and knows what to do when the 10-foot waves are breaking ahead. He

has all of a woodsman's reticence—and also the sterling qualities of a true outdoor man. Riding with Kent were Elma Milotte, wife of the photographer, and Pauline Saylor, elementary school teacher in Covina, California.

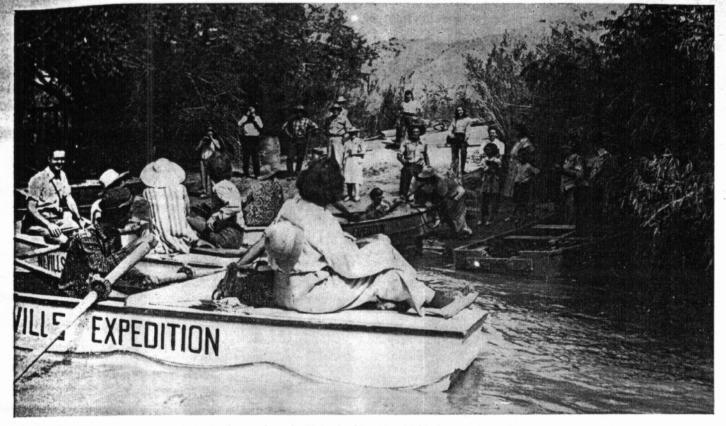
Garth Marston, 22-year-old G.I. student at the University of California was boatman in the Sandra, third in line. Garth went through the canyon as a passenger with Nevills in 1942. Big, strong Garth not only proved a capable boatman, but his good-natured clowning was at its best when the going was toughest. Riding with Garth were Marjorie Farquhar, top-ranking mountaineer of the Sierra club, and wife of Francis Farquhar, who rode in boat No. 4, and Rosalind Johnson, noted riding instructor and steeplechase expert of Pasadena, California.

The Joan, No. 4 in the line, was piloted by Garth's father, Otis R. (Doc) Marston, investment counsellor of Berkeley, whose life-long hobby has been swimming and boating. He was a passenger with Nevills on the 1942 canyon expedition, and this year became a full-fledged boatman, and a top hand in any kind of water. His passengers were his wife Margaret, and Francis Farquhar of Berkeley, past-president of the Sierra club of California, who divides his time between his public accountant business in San Francisco and his many hobbies which include wildlife conservation, writing, mountaineering, travel and photography.

Five women and seven men! Some of them good swimmers and others only mediocre, but all of them lured to this rendezvous by the same impulse that causes humans to climb difficult mountains and visit cannibal islands and explore the unknown wilderness. And if you ask why people go out of their way to achieve difficult and hazardous feats, I cannot tell you the answer. But I am sure that if the time ever comes when human beings are content to follow only the beaten paths and do things the easy way, this will be a dismal and decadent world in which to

Zero hour for departure was 10 o'clock the morning of July 12. Norman and Kent Frost had brought the boats down from Mexican Hat in trailers earlier in the week. The provisions had been stowed away in the watertight compartments, so distributed that if a boat was wrecked and lost we still would have balanced rations, even if the loss would leave them somewhat skimpy.

This was to be the Sandra's maiden voyage. The boat was built at Mexican Hat this year, modeled after the other three which already had proved their stability in rough water. Six-year-old Sandra, youngest daughter of the Nevills, was at the Lee's ferry landing with her mother for the christening. A bottle was filled with river water, and since there is little metal on these river boats, a stone was placed



As the boats shoved off at the historic old landing at Lee's ferry.

on the bow for breaking the bottle. And while everyone took pictures Sandra smacked the bottle on the rock—and broke the rock instead of the bottle. So it had to be done all over again. But the little ship Sandra was too young to be superstitious about the miscue in the dedication ritual, and performed beautifully throughout the trip which followed.

An hour before we were to leave, Barry Goldwater of Phoenix arrived in his plane. Barry was on the Nevills' 1940 expedition and flew in to bid us bon voyage. He was accompanied by his friend Bill Saufley. Norman invited them to ride with us as

far as the Badger creek rapids, where there was a trail by which they could climb out. Doris Nevills also accompanied us to Badger, the first major rapid we would encounter that day.

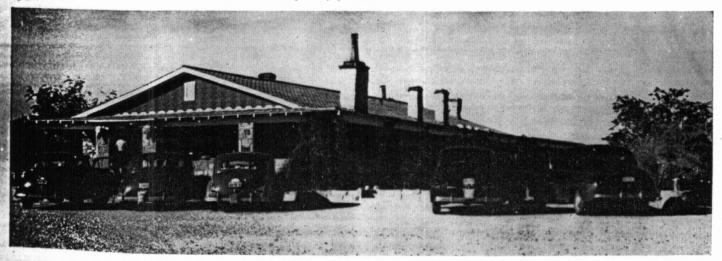
James E. Klohr, hydraulic engineer for the geological survey at Lee's ferry, told us the Colorado was running 37,000 second-feet. Our start was at an elevation of 3170, and the temperature was 86 degrees.

Dr. Harold Bryant, superintendent of the Grand Canyon national park, and Mrs. Bryant had driven the Farquhars from Grand Canyon to Lee's ferry, and remained for our departure. Being a very active outdoor man I think Dr. Bryant would gladly have changed places with any of those in the boats.

Everything was in readiness at 9:40—20 minutes ahead of schedule—and Norman gave the starting signal by shoving the Wen off the little beach and heading out into the stream. Below Lee's ferry there were three riffles—miniatures of the big rapids which lay ahead, and in 45 minutes we passed under the Navajo bridge where the personnel and guests of the lodge could be seen along the rail 467 feet above us.

Here the old Arizona-Utah feud which

Marble Canyon lodge—where Art Green and his family maintain friendly roadside hospitality for desert travelers.



Norman and Barry Goldwater carry on incessantly when they are together flared up. "I understand the Arizonans built this bridge," Norman shouted across to his old antagonist, "so the dry Arizonans could go to Utah, the land of milk and honey." Barry's reply was equally sarcastic.

Twenty minutes later we reached the riffle at Six-Mile canyon where there were two huge piles of driftwood piled on the rocks at the mouth of the dry creek. We pulled to shore long enough for Norman and Barry to touch a match to the wood. Years ago reclamation bureau officials suggested to Norman it would simplify their operations at Hoover dam if, whenever convenient, he would burn the drift along the Colorado. Later, when we reached Lake Mead, I saw the reason for this request. Driftwood on the lake is a constant threat to the propellers of the hundreds of small craft on the lake, and the removal of the drift before it gets into the penstocks at the power plant is an expensive chore for the reclamation service.

Distance from Lee's ferry to the headwaters of Lake Mead is 243 miles. While this gorge is referred to in general terms as the Grand Canyon, actually it is divided into two major canyon systems. From Lee's ferry to the mouth of the Little Colorado river is Marble canyon, and from the Little Colorado to Grand wash at Lake Mead is

Grand Canyon. We were hardly beyond the noise of the Six-Mile riffle when a deeper-toned rumble of falling water became audible. "Sounds like Ol' Man River talking to himself down there," Norman remarked as we drifted along on the 6-mile current. Then we rounded a bend and the rumble became a roar. The boat was on smooth water, but less than a quarter-mile below us the river dropped out of sight. We could see the spray of water dashing against rocks below the rim of smooth water where the river disappeared. But at Badger creek the river drops 20 feet in less than 300-and from an upstream boat it is impossible to see the rapids until

"Badger creek rapids," Norman shouted. "Landing on the right." Kent, in the next boat, passed the order back to Garth who in turn relayed it to his father in the Joan. This was a procedure repeated many times as we continued through the canyon. At every major rapid the boats landed above and the boatmen assembled on a high point overlooking the cataract to study the tumbling torrent for rocks, eddies, whirlpools. Norman made the final decisions—first, if the boats should run the rapid, second, who should take them through, and third, whether passengers should ride or detour the falls on foot.

one is on the brink of the cascade.

There were several variations in this procedure. At some of the lesser rapids Norman's order would be, "Stand by for possible landing." Then he would stand up in the boat as it floated along the placid

waters always found above a cataract, and if he could see the falling water below and spotted no serious obstacle, his command would be, "Let's go!" and the boats would plunge ahead.

Norman was eager to reach Badger and Soap creek rapids. "When I get the feel of the water in those rapids I'll know what Ol' Man River has in store for us ahead," he said. Every stage of the river creates a different set of problems. At low water the rocks are exposed and the current is more sluggish. At high water more of the rocks are submerged, but the waves are higher and the current faster and more powerful. On his 1940 expedition the discharge at Lee's ferry on zero day was 3000 second-feet. In 1941 it was 25,900 feet, in 1942 the reading was 19,400. With 37,-000 feet, this was the highest river Norman had faced in his cataract boats. Badger and Soap creeks would reveal the pattern for navigation at this stage.

Badger was rough. A long tongue of smooth water in the center of the stream ended in a series of six and eight-foot waves. On both sides of the tongue and below, great boulders were piled in the stream. With 37,000 second-feet this was a high water stage, and most of the rocks were submerged, but the maelstrom of breakers around them, and the hole immediately below where the water poured in to fill the vacuum created by the rock, made it easy to spot them.

But Norman saw a way through, where skillful work at the oars would miss the pitfalls. He ran the Wen, Joan and Sandra through himself, taking his wife Doris as passenger on the first run, Barry Goldwater on the second, and Pauline Saylor on the third. Kent Frost ran his own boat through. The rest of us climbed over the rocks and driftwood that lined the shore, and met the boats below.

It was 12:30 when the boats were all through Badger, and we ate lunch on a sand bar—rye bread and pressed meat sandwiches and grapefruit juice.

At 2:20 we arrived at the second major rapid—Soap creek. With few exceptions the rapids in the Colorado river occur at the mouths of side canyons, where cloud-burst torrents on the rim above have brought an avalanche of rocky debris down from the plateau and deposited it in the river. When such debris includes boulders as big as a house, the result is a sort of weir that partially dams the stream. The water pours over and around and through these great deposits of loose rock—and therein lies the baffling problem of Grand Canyon navigation.

In the books written about previous expeditions through the canyon, the most widely circulated being the reports of Powell, Stanton, Dellenbaugh, Stone, Kolb, Freeman, Eddy and Goldwater, there has been some difference of opinion as to the most favorable stage for running the rapids. Norman has tried them all, from 3000

to 37,000 feet. His first choice is a 25,000 foot river. The dates for his canyon runs are set months in advance when it is impossible to predict what the run-off will be. But the odds favor July. In June, which often is the peak month in the annual runoff from melting snows in the Rocky mountain watershed, the discharge may be 50,000 or 75,000 second-feet, even higher. In August, the odds are it will be under 25,000. In 1940 when the Nevills' party left Lee's ferry August 4, the flow was only 3000 feet. It was a hard trip. The rapids were strewn with projecting boulders, and in the intervals between rapids the current was so sluggish it was necessary to row almost continually to maintain the schedule. The schedule is important, for there are no grocery stores along the way to replenish the food supply if progress is delayed.

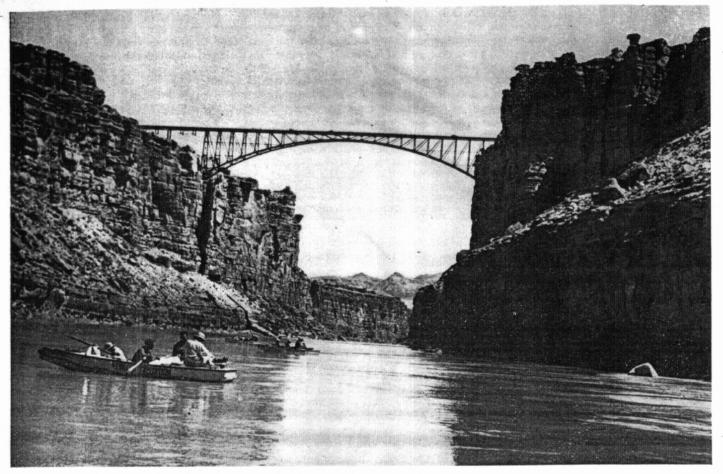
Jacob Hamblin, the Mormon missionary, camped along the Colorado river at this point in the 1850's. According to Mormon folklore he killed a badger along the creek which now bears that name. That night he camped downstream two miles on another tributary creek. The badger was put in the pot to boil. Next morning the badger stew was crusted with soap, due to the combination of animal fat and alkali water. I'll not vouch for the chemistry of this incident, but anyway that is how Soap creek got its name.

Landing for inspection of a rapid always is on the side of the stream where it is easiest for the passengers to make their way along the shore. At Soap creek this was on the right side where the creek had poured a great avalanche of rocks into the Colorado. On July 10, 1889, Frank M. Brown of the Brown-Stanton party, engaged in surveying a possible railroad line through the Grand Canyon, was caught in an eddy and his boat upset. His companion, Harry McDonald, swam out, but Brown was sucked into the vortex of the whirlpool, and never seen again.

On this 12th day of July, 58 years later, Norman entered in his notes: "Soap creek—rough but not difficult." He invited me to ride through as passenger, and I did not get as wet as I did two years ago when I rode with him through 13-foot rapids on the San Juan river. The other boats ran through without passengers.

A mile and a half below Soap creek we landed on a bar on the left for night camp. We carried perishables for the first two days, and that night had a steak dinner with mashed potatoes and gravy. For dessert, canned apricots. Kent Frost served in the double role of boatman and camp cook. We liked Kent's steak dinner—and subsequent meals confirmed the high opinion we formed of his cooking skill that first evening.

He follows the traditional camp style of the woodsman and cowboy. He doesn't bother with Coleman stoves and stone fireplaces. He simply builds a roaring fire of



Seven miles after leaving Lee's ferry the boats passed under Navajo bridge, 467 feet overhead. Six miles below this point the voyagers encountered their first bad water at Badger Creek rapids.

driftwood, and after it has burned to redhot coals, rakes them out and puts the cooking vessels on the coals. With a big frying pan, a couple of stew pans, a coffee pot and a pair of pliers to manipulate them, Kent would have the meal ready by the time the boats were unloaded and the bedrolls spread out for the night.

Then, when the meal was over Garth Marston would take over. Garth was the happiest dishwasher I have ever known. Also he proved that a laugh and a song pay dividends, even on a rapid-shooting expedition. For somehow, when he tackled that big pile of cooking utensils and aluminum plates, he always had two or three volunteers from among the women members of the party to give him a hand. For the morning and night meals, water was heated to wash plates and cups. The heavy utensils and all the kitchenware used for the cold lunch at noon were washed in the sand and rinsed in river water.

That evening I established a precedent which was continued at each night camp during the entire trip. I had my portable typewriter in the boat, and prepared a typewritten summary of the day's progress, put it in a bottle, and built a cairn for it on a bench above the high water mark.

That night the canyon walls around us

were lighted by the flames of a huge bonfire when Kent touched a match to a great pile of driftwood on the bar above us.

Norman announced that rising time would be when the sun touched the rim of the 1500-foot canyon wall opposite camp. When morning came the sky was overcast—but that did not give us any extra sleep. At 5:45 Kent whanged a reveille on the bottom of his frying pan—an instrument somewhat less musical than a cowbell, but very effective.

I carried an altimeter—one of those inexpensive automobile instruments — to keep a record of our daily loss in elevation. At the end of the first day it showed we were 80 feet higher than when we left Lee's ferry. When it played the same trick the second day I chucked it overboard. I have no doubt that on an automobile it is a trustworthy instrument. But obviously it had not been able to readiust itself to travel on the rough water of that river.

The river came up an estimated 500 second-feet during the night. At 7:50 we shoved off for the second day's run. At 8:15 we ran Sheer Wall rapid without even putting on our life belts. This is believed to be the place where Peter Hausbrough and Henry Richards of the Brown-Stanton expedition capsized and were

drowned in 1889. The big waves tossed their boat against the canyon wall, and when they shoved it off a whirlpool turned it over. Hausbrough was never seen again. Richards, one of the two Negro members of the expedition, came up, but the current carried him downstream and he was unable to make shore. Following this second tragedy in five days, Stanton decided to abandon the project. Several months later he returned with a reorganized party and completed the railroad survey. Backers of the project looked over the reports and decided a railroad in Grand Canyon was not practicable.

We ran a heavy riffle and then came to House Rock rapid. There are three types of rapids in the canyon—the straight away, the S-shape and the C-shape. The shape of the rapid, however, gives no indication of its ferocity. It is the number and size and location of the big rocks in and under the water which make the difference between a bad cataract and an easy one. House Rock was an S-rapid, but in high water it presented no serious problems and we ran through without landing.

At 18½ miles from Lee's ferry we passed Boulder Narrows where a great block of stone sits in mid-channel. There was plenty of water to go around it on either side, and Norman chose the right side.

At 9:15 we came to North Canyon rapids, the meanest looking S-rapid we had encountered. We landed above while Norman and his brain trust, the boatmen, looked it over. It had some tricky-looking holes where water eddied around huge submerged boulders, and the decision was that the boatmen would ride, the passengers walk. The ¾-mile detour was rough going for the hikers and it was necessary to do some hand-and-toe climbing to work down from a ledge to the point where the boats were landed below.

Twenty-One mile rapid proved to be no more than a heavy riffle at this stage of the river and we ran it without stopping. At 11:15 we arrived at 25-Mile rapid, the third of the 17 major cataracts we were to encounter on this expedition. This was a long C-rapid extending around a bend in the river. Before running it Norman wanted to walk around the bend to look at the lower end, so he and I worked our way over the boulders and along a series of shelves a quarter-mile downstream. And that was where I stumbled into one of the prettiest fields of agate, jasper, banded onyx, carnelian and chalcedony I have ever seen. While Norman looked the river over, I was exclaiming over the rare coloring of the rocks that lay underfoot and all around me.

I had seen much fine jasper and onyx along the way, but here was an area with enough of it to build a castle, ranging from tiny round nodules to great blocks as big as a freight car.

I showed some of the specimens to Norman. "I wouldn't dare bring an expedition of rockhounds down this river," he remarked. "They'd throw all the grub away and load the boats with rocks."

That is one prize mineral field I can dream about with the assurance that no one is going to disturb it.

Norman decided to run the boats through while the passengers took a walk. When the boats were through at 12:45 we spread lunch on a ledge. Temperature in the shade was 96 degrees.

Below 25-Mile rapid we ran Cave Spring rapid, 26-Mile rapid, 27-Mile rapid, 29-Mile rapid and four heavy riffles without stopping and at 3:30 landed on a bar above Vasey's Paradise for night. camp. We traveled 201/2 miles that day, ran two major rapids, six minor rapids and 12 heavy riffles. The passengers walked around two rapids and had to do some bailing in six of those we ran. Bailing water became a regular daily chore—often many times a day. Every boat was equipped with two buckets and a supply of empty cans-and it was part of the unwritten code of the river that passengers should help the boatman bail out the boat when one of those big waves piled into the cockpit. Margaret Marston, who undoubtedly is a fastidious housekeeper at home,

even kept one of Doc's discarded shirts in the bottom of the *Joan* to mop up the remaining drops of moisture after the cans had scraped bottom. In the *Wen* there are two places where the paint has been scraped off the floor—proof that Al Milotte and I did our duty as bailer-outers.

Before writing about the lovely campsite we found at Vasey's Paradise, I want to clear up certain discrepancies regarding the number of rapids in Grand Canyon. Julius Stone reported his party ran 318 rapids between Lee's ferry and the present site of Hoover dam. Dellenbaugh reported 204 rapids between Lee's ferry and Kanab canyon. Clyde Eddy said his party ran 245 bad rapids in Grand Canyon. The U. S. geological map based on the survey made in 1923 lists 70 rapids by name and indicates rough water at many other points. One of the Grand Canyon park rangers in his daily lecture at Yavapai Point announces "there are said to be 365 rapids in the Canyon—one for every day in the year."

I started on this expedition with a fine resolution. I was going to count those rapids very carefully—and settle that dispute once and for all time. I took along a mechanical counter—one of those gadgets that add one every time you press a lever. I would have a mechanical record that could not be questioned.

And now I want to offer my apologies to all my rapid-counting predecessors. Their figures vary from 70 to 365 rapids—and as far as I am concerned every one of them is telling the truth, even including the park ranger who admitted he had never been on the river in his life.

There are several reasons why the figures do not agree-and why they will never be reconciled. In the first place the character of the rapids changes with every variation in the flow of the stream. A 35,-000 second-foot river may flow over a rocky obstacle with only a big ripple on the surface, and at 5000 feet that obstacle may be a nightmare to boatmen. The changing character of the river is one factor-and the Colorado never carries exactly the same volume of water two days in succession. During the 19 years from 1902 to 1920, the records at Yuma, Arizona, show a discharge varying from 1800 second-feet in January, 1919, to 240,000 second-feet in January, 1916. The average annual maximum flow is 108,464 feet, and the average annual minimum is 3849. The flow at Yuma of course has been stabilized since Hoover dam was built.

Then, who is to define a rapid? Counting rapids in Grand Canyon is like counting the branches on a tree. Who is to decide whether a 3-inch sprout is to be classified as a twig or a limb? That's the way it is on the Colorado. The rapids, at every stage of the river, vary from a tiny riffle that barely rocks the boat, to a roaring cataract that puts goose-flesh on a seasoned boatman.

Norman and I discussed this question many times as we rode along in the Wen. For the purposes of my own records I classed the white-caps in the Colorado under three categories—major rapids, minor rapids, and riffles—and I did not count the riffles unless the waves were at least $2\frac{1}{2}$ feet high.

When I totalled up my figures after we reached Lake Mead my records showed 17 major rapids, 51 minor rapids, and 178 riffles. There were at least 150 smaller riffles I did not count—some of which at lower stages might give a boatman considerable trouble. These figures are offered merely for this stage of the water—37,000 second-feet at the start and 16,000 second-feet when we reached Lake Mead.

Like everything else in Nature, the Colorado is a changing stream. There always is the possibility that a cloudburst torrent on one of the rims may send down a new avalanche of rock which will change a riffle into a troublesome rapid. Norman says this has happened at the mouth of Clear creek in Marble canyon since his last trip through in 1942.

And after all else is said, Norman suggests that "the hazard of running the Colorado is largely a state of mind. When the day is bright and spirits are high and everything is going well, none of the rapids frighten you. And by the same token, when things have been going badly and you're feeling a little low, a minor rapid may scare the daylights out of you."

(Randall Henderson's story of his voyage through Marble and Grand canyons will be continued in the December issue of Desert.)

MANY NAVAJO CHILDREN WILL HAVE NO SCHOOLS

By train and bus, 1000 Navajo children left their desert homeland during the last week in September for off-reservation schools in New Mexico, Arizona, California, Nevada and Oklahoma. All of the children were over 12 years old, and below the fifth grade. Many had never been to school before.

There are an estimated 10,000 Navajo children between the ages of 13 and 18, but current funds and facilities were sufficient to take only 1000 in the off-reservation school program this year. Of these, 200 went to Albuquerque, 200 to Phoenix, 100 to Chilocco, Oklahoma, 350 to Sherman Institute, Riverside, California, and 150 to Carson Indian school, Stewart, Nevada. Thirty children of high school age went to Indian schools at Ft. Sill and Anadarko, Oklahoma.

The reservation schools opened during the first week in October. They were expected to take 4500 of the estimated 12,-000 Navajo children who are between the ages of six and 12. Ft. Wingate will be the only reservation school taking older students this year, and 75 war veterans were expected to be among the students there.

DESERT CALENDAR

The Desert Calendar keeps readers informed of the important events scheduled to be held in the desert country. Civic groups and committees are invited to send dates and pertinent information about state conventions, fairs, rodeos, fiestas—in fact, anything of civic, cul-tural or commercial nature which has more than local interest. There is no charge, but listings must be in by the first of the month preceding date of publica-

Oct. 31-Celebration of the passage of the Gila project bill, with programs at Wellton and Yuma, Arizona.

Nov. 1-2-Annual rodeo and parade,

Blythe, California. Nov. 6-7—New Mexico farm bureau convention, Roswell, New Mexico.

Nov. 7-16-Arizona state fair, fair grounds, Phoenix, Arizona. Includes first competitive mineral ex-

Nov. 12-St. James' day annual fiesta and dances. Jemez pueblo, New Mexico.

Nov. 12-St. James' day fiesta and Tesuque pueblo, New dances, Mexico.

Nov. 14-16—Second annual Greenlee county rodeo, Apache Grove, be-tween Clifton and Duncan, Arizona.

Nov. 15-16-Old Tucson Days, dances, fiddling contest, Tucson mountain park, Tucson, Arizona.

Nov. 16-21-Ogden Livestock show, Ogden, Utah.

Nov. 23-26—Convention, New Mexico Educational association, Albuquerque, New Mexico.

Nov. 28-30-Desert Peaks section of Sierra club to climb Picacho peak in Southern California and Castle Dome in Arizona. Niles Werner, leader.

Nov.-Dec.—Exhibition, paintings of the Southwest by the late Edgar Alwin Payne, Southwest Museum, Los Angeles, California.

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El Centro, California



| Volume 11 | NOVEMBER, 1947 | Numbe | r 1 |
|-------------|---|-----------------|-----|
| COVER | GRAND CANYON VOYAGE. Photograph by Randall Henderson on Lake Mead of voyage through Grand Canyon. | taken at end | |
| CALENDAR | November events on the desert | | 3 |
| ADVENTURE | Grand Canyon Voyage By RANDALL HENDERSON | | 4 |
| POETRY | Tracks of the Overland Stage By MARSHAL SOUTH | | 11 |
| PERSONALITY | Zeke Johnson's Natural Bridges By CHAS. KELLY and CHARLOTTE M | IARTIN | 12 |
| HUMOR | Hardrock Shorty of Death Valley | | 14 |
| INDIANS | Trail to the Tower of the Standing God By RICHARD VAN VALKENBURGH | | 16 |
| PERSONALITY | Indian Agent, by TONEY RICHARDSON | | 19 |
| LOST MINE | Jack Stewart's Lost Ace-in-the-Hole Ledge | | 22 |
| POETRY | Ahead, by TANYA SOUTH | | 23 |
| DESERT QUIZ | A test of your knowledge of the desert . | | 23 |
| PHOTOGRAPHY | Announcement of September contest winn | ners . | 24 |
| NATURE | Lizard With a Voice, by GLENN E. VARGA | S | 25 |
| FIELD TRIP | He Staked a Claim for the Rockhounds By HAROLD O. WEIGHT | | 26 |
| CONTEST | Announcement of November photo contes | t | 28 |
| BOTANY | Lip-Ferns on the Desert, by MARY BEAL | | 30 |
| LETTERS | Comment from Desert Magazine readers | | 31 |
| MINING | Current news briefs | | 32 |
| NEWS | Here and There on the Desert | | 33 |
| HOBBY | Gems and Minerals | | 39 |
| LAPIDARY | Amateur Gem Cutter, by LELANDE QUICK | | 45 |
| COMMENT | Just Between You and Me, by the Editor | | 46 |
| BOOKS | Current reviews of books of the Southwes | | 47 |

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RANDALL HENDERSON, Editor. BESS STACY, Business Manager. HAROLD and LUCILE WEIGHT, Associate Editors.

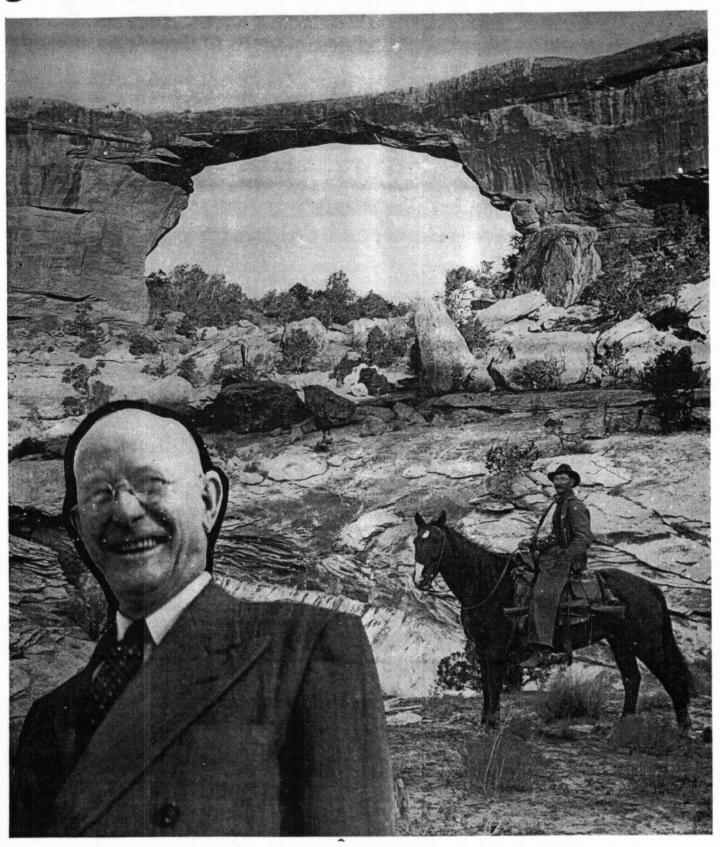
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Zeke Johnson's Natural Bridges



Zeke Johnson, and the most spectacular of the three bridges in the monument. This is Owachomo, formerly known as Edwin bridge. The horseman also is Zeke—in 1916.

Photo courtesy Dr. W. H. Hopkins.



Zeke Johnson's packtrain in Comb wash. This was taken before a good road was built to the monument. Photo courtesy Dr. W. H. Hopkins.

By CHARLES KELLY and CHARLOTTE MARTIN

HILE George Dern, former secretary of war, was still governor of Utah, he made a trip to San Juan county in the southeast corner of the state to deliver a political speech. That thinly populated section was not often visited by state dignitaries and the welcoming committee was determined to show the governor what the county had in the way of scenery.

They jolted him over miles of rough trails, winding up the festivities by arranging a trip to Natural Bridges national monument, 50 miles west of Blanding. Dern was not very enthusiastic but agreed to go when told he could travel most of the distance in a car. Zeke Johnson, famous southern Utah guide in charge of this expedition, had arranged for saddle horses at the end of the incompleted road.

After transferring to the horses Dern's party started off in high spirits, being assured it was only a short ride to the bridges. After two and a half hours the governor became a little saddle weary.

"How much farther is it to these bridges?" he asked Zeke as his horse scrambled up a rocky slope.

"Oh, about a mile and a half," Zeke replied innocently.

At the end of another two hours, with their destination still nowhere in sight, the governor again inquired how much farther they would have to ride.

"Just about a mile and a half from here," Zeke said, spurring his horse to avoid further questioning. No, Zeke didn't build the bridges. Nature has been working at that job probably for millions of years—but more than any one person, Zeke deserves the credit for making these great natural wonders of Utah accessible to those who like to prowl the out-of-the-way places in the West. Here is the story of a big man and a rare place to visit.

This was repeated several times and each time Zeke's answer was the same. Finally, after eight hours in the saddle they rode out on a rocky point and dismounted opposite Edwin bridge, first of the three majestic structures in White canyon; but Governor Dern was too weary to enjoy the spectacle.

"Why did you keep telling us it was only a mile and a half, Zeke, when you knew it was at least twenty-five?" Dr. A. L. Inglesby inquired.

"Well, Doc," Zeke explained, "I knew the governor would never come if he knew how far it was, and I sure wanted him to see these bridges."

"You and your mile and a half!" Doc exclaimed. "We ought to nickname you 'Old Mile-and-a-Half' Johnson." That's just what they did and the name still sticks.

For 40 years Zeke Johnson was the best known guide in southern Utah. For 34 of those years he was custodian of Natural Bridges national monument. He guided thousands of persons to the monument and everyone he met became a friend. Because of his uncontrolled enthusiasm for these wonders of nature they are often called "Zeke Johnson's bridges." No story about them would be complete without the story of their first custodian. His only regret is that he was not the original discoverer.

That honor appears to belong to Emery Knowles who first saw them while searching for cattle in 1895. Al Scorup, Utah's cattle king (Desert, Oct. '40), who made and lost fortunes in the White canyon country, heard of the bridges from Knowles and visited them about five years later while hunting new range. Being more interested in grass than in rock formations, neither of these men publicized their find.

In 1889-90 Robert B. Stanton made a railroad survey down Colorado river canyon. In the Glen canyon section below Hite he found placer gold and later transported a big dredge to the river to recover it. When his company failed, Horace M. Long was sent out from Boston to wind up its affairs. During the year he spent on the river he met Scorup and learned about the bridges in White canyon. In 1903 he persuaded Scorup to guide him, and together they visited the bridges, where Long made the first photographs and was first to ride across the flat span of Edwin bridge. They found three, naming the largest Augusta after Long's wife, and another Caroline for Al Scorup's mother. The third was called Little Bridge. In August, 1904, Long's story and photographs were published in Century magazine and through that article the area was set aside as a national monument by Theodore Roosevelt

in 1908. Mrs. Long, who was an artist, made the first painting of the great bridge named for her, a fine piece of work of

which she was justly proud.

In 1905 Col. Edwin F. Holmes, of Salt Lake City, sponsored a second expedition, led by the artist H. L. A. Culmer, who sketched, photographed and measured all three bridges. At this time Little bridge was renamed Edwin in honor of Col. Holmes.

Three more years elapsed before Zeke Johnson saw the great formations with which his name has become so closely associated. He had just started a small cattle ranch near Blanding and wanted to visit his mother who lived in Tropic, near Bryce canyon. Zeke believed he could save several hundred miles by cutting directly across country. Indians told him no white man could do it; there were too few waterholes and most of the water was bad. They said there were no trails a white man could follow in the 100 miles between Blanding and Colorado river.

But Zeke Johnson came from a line of hardy slick-rock pioneers and was determined to explore a new route which would pass by the natural bridges reported to be somewhere in White canyon. He finally persuaded old Piute Mike to draw a map in the sand. After memorizing it he selected two of his sturdiest horses, filled a grub sack, and started west across what is probably the roughest country outdoors.

Crossing Comb wash and skirting the base of Elk ridge he passed the mouth of Arch canyon, struck upper White canyon and on the afternoon of the third day found one of Al Scorup's cattle trails which led him directly to Edwin bridge. Before sundown he had walked across its broad span and found water in a little pocket known as Zeke's bathtub.

When he returned to Blanding, Parley Redd introduced him to H. W. Wanamaker and Thomas E. Giddings, the latter ex-governor of Michigan. These men were anxious to locate a feasible railroad route from Taos to San Francisco and asked Zeke to guide them through the country he had just explored. They spent 60 days on the trip, visiting all three bridges and examining the surrounding country, again aided by the accurate descriptions of Piute Mike. This experience gave Zeke a thorough knowledge of the country and from that time on his cattle were neglected for the more exciting business of guiding men to the bridges, canyons and cliff dwellings of San Juan country.

When Park service officials began looking for a custodian for Natural Bridges national monument, Zeke Johnson was their natural choice. He served 12 years at the munificent salary of one dollar a month, plus the privilege of renting horses to what he always called "sightseers." He spent two years laying out 12 miles of trail, part of which was through a dense growth of

cedars. In order to reach Augusta bridge during flood season when White canyon was full of red mud, he built a trail down the face of a high cliff, constructing several short ladders. In one place he laid poles from the cliff to the top of a tall pine and visitors had to scramble down the tree, an experience to which some of them strenuously objected. "Zeke's tree" still stands, but modern visitors now use a long ladder placed nearby.

A cabin was built on a small flat opposite Edwin bridge, where Mrs. Johnson served chocolate cake, apple pie and cool drinks to famished hikers. Water in that country was always a problem of first importance. At first it was hauled or packed 21 miles from Kigalia spring, but later Zeke developed a small seep in the canyon near Edwin bridge, built a concrete tank and collected enough water for domestic use. He says he has "jackassed enough water out of the canyon from this spring to float the battleship Maine," which is not necessarily a Zeke Johnson yarn.

In 1920 Zeke was given a regular salary and remained as custodian until 1942, when he was retired and pensioned after serving two years beyond the prescribed age limit. But his retirement was not due to physical infirmities, even though he was then 73 years old.

During his very active lifetime Zeke guided many famous persons through his

beloved slick rock country, including such men as Rex Beach, Zane Grey, Harold Bell Wright and Horace M. Albright, director of the National Park service. After 1918 he guided Charles L. Bernheimer and Earl H. Morris on thirteen expeditions through southern Utah for the American Museum of Natural History and Peabody Institute. From two men and two packhorses these expeditions were increased to nine men, 36 pack mules and 11 saddle horses, visiting hundreds of cliff dwellings and exploring many square miles of red rock desert which had never seen the imprint of a white man's foot. His largest group was Governor Mabey's party of 1921, when he took 42 people and 35 pack mules to the bridges. On this trip Dr. Frederick Pack, geologist, discovered and named the "Goblet of Venus," now one of the best known landmarks of the state.

During his explorations of this area Zeke has discovered a great many hidden cliff dwellings and prehistoric burials. "One day," he says, "a sudden storm forced me to seek shelter in a shallow cave. Running my hand idly through the sand I uncovered a piece of charcoal and after digging a little while I uncovered a mummy's head. The two of us had quite a visit before I covered him up again. The old fellow has been dug up and photographed many times by sightseers eager to locate a burial. Guess he's still there and I

Hard Rock Shorty of Death Valley . . .



The sun beat down on Inferno, and the tourist crawled from the heated seat of his car to the scant shade of the store porch. He fanned his face with his hat.

"Do you have many days as hot as this?" he asked.

Hard Rock shifted his cut plug. "Comes the hot season it's a mite warm," he admitted. "Today's cool."

"What is the average rainfall here?" the stranger persisted.

Hard Rock considered the question judicially. "Couldn't say," he admitted at last. "I only been here 50 years. Ain't seen no rain in that time. This here's dry country."

"But I've heard of storms and cloudbursts in the desert," the tourist persisted.

Hard Rock sighed and reached for a whittling stick. "Wal, if yu mean storms, I do rec'lect one. Happened one day it wuz so hot yu could smell burnt feathers. And dry! It's allus dry here. But that day it wuz so dry even the patches o' shade withered up an' disappeared.

"Long 'bout four in the afternoon a whoppin' big cloud showed up. Hail it looked like, an' gettin' closer. I couldn't figger how it could hail on a hot dry day like that there. Still, I wuz hopin' for a little wettin' down.

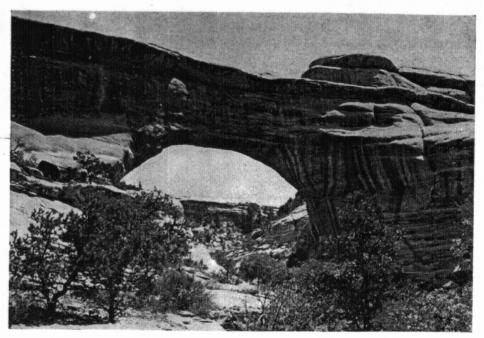
"Wal, that storm hit in about 15 minutes, and she wuz hail all right. But not reg'lar ice. No sir-ee. Weather wuz so dry that pore blasted cloud hailed dry ice. I made a mint o' money out o' that storm, too. Canned all them dry ice hailstones an' sold 'em to eatin' houses. They put 'em with sugar in the sugar bowls so customers could cool their coffee without saucerin' an' blowin' it."

wouldn't mind seeing his homely face again. His perfect teeth always made me envious."

Under President Taft's administration the monument boundaries were enlarged and at that time names of the bridges were changed by William B. Douglas of the general land office. Augusta became Sipapu; Caroline became Kachina; and Edwin was renamed Owachomo. The new names were Hopi words, bestowed under the mistaken impression that inhabitants of nearby cliff dwellings had been of Hopi origin. Certainly Indian names are appropriate; but they should have been Paiute rather than Hopi, since the latter never occupied San Juan county. The original names are still preferred by old-timers, particularly those who knew the artist, Augusta Long.

When Zeke Johnson became custodian it was necessary to make a hard two-day ride on horses to reach these natural bridges and the experience was one to be long remembered. In 1929 a road was built to the monument but it was rough and often impassable because of mud. Zeke wore out five of his own cars and two government trucks carrying passengers over this early road. Now a good desert road is maintained from Blanding, 50 miles, and has recently been continued to Colorado river at Hite and on west to Capitol Reef national monument.

After Johnson's retirement J. Wiley Redd, also of Blanding, was appointed custodian and lives at the monument during five or six months of the year, where he maintains horses for those who prefer

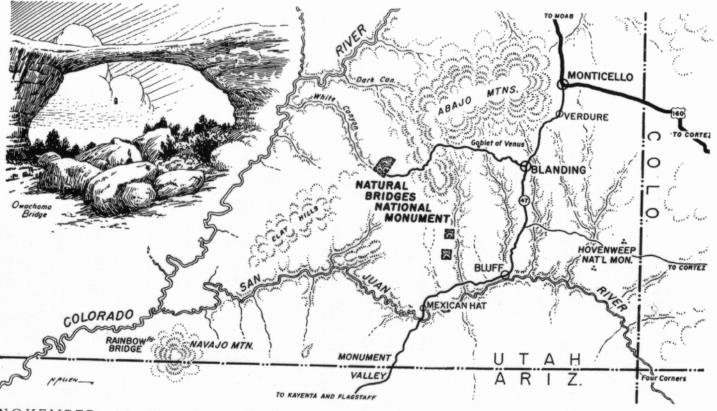


Sipapu bridge. Park service photo.

to ride the 12 miles of trail. While Edwin bridge can be viewed from a car, no road can be built to Augusta or Caroline; but the ride or hike is more than worth the effort involved.

After his retirement Zeke Johnson moved to Ogden, Utah, but makes frequent trips to his old stamping ground in San Juan county. Pelakana Nez (the tall white man) as his Navajo friends call him, has indelibly stamped his personality on the natural bridges; or perhaps more ac-

curately it's the other way 'round. His friendship is treasured by men in all walks of life, men who have listened to his humorous tales and homespun philosophy around many desert campfires. His 77 years have been kind to him; the big frame is still erect, the voice just as booming, the eyes as keen and the arms as eloquent as he continues to spin tales of the days, not too long distant, when he guided sight-seers and scientists through his mysterious beloved San Juan country.



DESEKT CALENDAR

Nov. 28-30—Desert Peaks section of Sierra club to climb Picacho peak in Southern California and Castle Dome in Arizona. Niles Werner, leader.

Dec. 1-6—National Indian Celebration, show and all-Indian rodeo, Mesa, Arizona.

Dec. 4-6—National Congress of American Indians, fourth annual convention, Santa Fe, New Mexico.

Dec. 6—Imperial Highway association monthly meeting in El Centro, California. Dinner at Barbara Worth hotel at 7 p. m.

Dec. 6-7—Sierra club hike, Hidden Springs from Box canyon, beyond Mecca, California. Desert Steve Ragsdale, leader.

Dec. 7—Lecture and color pictures:
"Cliff-dwellers of the Mesa Verde,
Colorado," by Paul Coze, Southwest
Museum, Los Angeles, California,

Dec. 15—Approximate date annual Snow Cup race (Giant Slalom) sponsored by Salt Lake Jr. Chamber of Commerce, Utah.

Dec. 21—Golf tournament open to all Boy Scouts, Imperial-Yuma council. Country club, Brawley, California.

Country club, Brawley, California.

Dec. 24—La Posada, Christmas Eve
Mexican ceremonies, Tucson, Arizona.

Dec. 24—Midnight Mass, mission churches at San Felipe, Laguna, Isleta and other pueblos, New Mexico.

Dec. 25—Christmas day dances and celebrations, Jemez, Santo Domingo, Tesuque, Santa Clara and other pueblos, New Mexico.

Dec. 28—Annual rendition of "The Messiah," with full symphony orchestra, oratorio chorus of 400 voices and guest soloists. Tabernacle, Salt Lake City, Utah.

Dec.—Exhibition, Paintings of the Southwest by the late Edgar Alwin Payne. Southwest Museum, Los Angeles, California.

Dec.—Shalako, house dedication and visit of the Gods. Date indefinite, usually early December. Ceremonies at night, photography prohibited. Zuñi pueblo, New Mexico.

Dec.—Papago Christmas ceremonial (exact date not available), Tucson, Ari-

HOPE

By TANYA SOUTH

Again, oh Soul of mine, look up! Again behold the stars!

Once more cling fast to love and hope!

For nothing mars

The inner Light that shines so clear, When we dispense with hate and fear.



| Volume 11 | DECEMBER, 1947 | Number | r 2 |
|---------------|---|-------------------|-----|
| COVER | JOSHUAS AT SUNSET. Photo taken in Nemountains near Needles, California Yoakum, Parker, Arizona. | w York , by J. | K. |
| CALENDAR | December events on the desert | | 3 |
| INDIANS | Geronimo, Apache Raider By ROSELLA MATTMUELLER | | 4 |
| HUMOR | Hard Rock Shorty of Death Valley | | 6 |
| ADVENTURE | Grand Canyon Voyage By RANDALL HENDERSON | | 7 |
| CONTEST | Prize announcement for photographers | | 12 |
| MINERALS | Nature's Onyx Factory By LEWIS W. WALKER | | 13 |
| PERSONALITY | Lady of the Hot Springs By HAROLD O. WEIGHT | f#xrb+ | 16 |
| ART OF LIVING | Desert Trails, by MARSHAL SOUTH . | | 19 |
| PHOTOGRAPHY | November prize winners | | 21 |
| ARTISTRY | For the Desert Home at Christmas By MARGARET CARRICK | | 22 |
| PROGRESS | For Desert Magazine—a new Home | | 24 |
| TRUE OR FALSE | A test of your desert knowledge | | 25 |
| MINING | Current news of desert mines | · | 26 |
| LETTERS | Comment from Desert's readers | | 27 |
| NATURE | A Burro's Back is Tough By BACIL B. WARREN | | 28 |
| NEWS | From here and there on the desert | | 29 |
| LAPIDARY | Amateur Gem Cutter, by LELANDE QUIC | K | 36 |
| HOBBY | Gems and minerals | | 37 |
| BOOKS | Reviews of current Southwest literature | | 44 |
| COMMENT | Just Between You and Me, by the Editor | | 46 |
| POETRY | Ghost Town, and other poems : | | 47 |

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When the rapids looked bad, a landing was made above and the boatmen looked the water over and then went into a huddle to determine the best route through.

Grand Canyon Voyage ...

Following the river trail blazed by Major Powell 78 years ago, Randall Henderson was a member of the 1947 Nevills expedition through Grand Canyon. Last month the author wrote of the departure from Lee's ferry and the rough water encountered at Badger and Soap Creek rapids. This month he continues his narrative through the treacherous Hance, Sockdolager and Grapevine rapids.

By RANDALL HENDERSON

ASEY'S Paradise is a little oasis on the sidewall just above the river—a hanging garden fed by a huge spring of clear cold water gushing out of a hole up in the canyon wall. Pouring down over the sandstone face, the water has deposited an apron of travertine which has become a tapestry of flowers and shrubs. I saw moss and ferns, scarlet monkey-flower, Indian paint brush, yucca, agave and joint-weed. There are even a few redbud trees clinging precariously to the sidewall. Major Powell named the

place in honor of his botanist friend Dr. George W. Vasey of St. Louis.

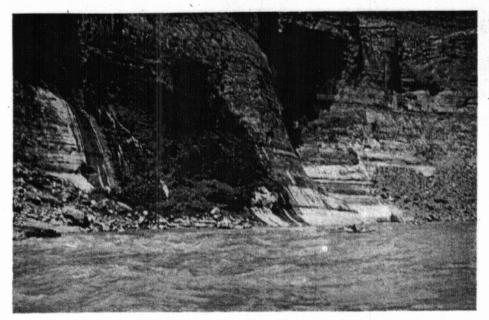
We made camp on a little sandbar above the oasis—and were eager to fill our canteens from Nature's big faucet, 120 feet up on the side of the cliff. But it was not as simple as that. At this stage of the river the water was surging past the base of the wall at 10 or 12 miles an hour—too fast for the swimmer or boatman to put in and stop there.

Doc Marston, a powerful swimmer, solved the dilemma by going downstream

on the end of a rope which we belayed from above. He found a toehold where the stream cascaded down to the river's edge. Later Francis Farquhar joined him, and the canteens were filled by lowering them downstream on the rope, and then pulling them back against the current. Later Doc and Francis returned with the help of the

So we had cool spring water that evening. As we rolled out our sleeping bags at dusk a canyon wren high up on the sidewall sang a friendly greeting to the visiting voyagers. The following morning was spent exploring caves in the Coconino sandstone above camp. Some members of the party worked up to a higher ledge where a human skeleton had been found on a previous expedition.

Barry Goldwater says there are four things you can do when you come to a rapid in the Grand Canyon: "You can run it, line it, portage it, or cuss it and climb



Vasey's Paradise—a little oasis on the sidewall fed by a stream of cool water gushing out of the cliff above.

out." Certainly climbing out would be a desperate alternative. Even in the few places where it can be done, the scaling of those 2000-to-5000-foot sidewalls with only the meager supply of water one could carry would be a terrifying possibility. Emery Kolb believes more shipwrecked voyagers have lost their lives trying to climb out of the canyon than have been drowned in the rapids. Perhaps the skeleton up there on the ledge above Vasey's Paradise was the victim of a futile effort to reach the top.

It was 98 degrees when we shoved off from Vasey's at 11:10. We took a last look at the ice-cold water gushing out of the canyon wall, and wished Nature had provided more of them along the way. Midday temperatures always ran over 100 degrees in the sun—and the oarsmen and passengers on these little boats have no escape from the sun. The water in the canteens, even when it is fresh water, soon becomes tepid. And when we drank river water, as we did about half the time, its temperature ranged from 76 to 79 degrees. Muddy water at 79 degrees is not a refreshing drink.

A mile below Vasey's Paradise is Redwall cavern where the erosive action of the sand-laden water has undercut the sidewall and formed a great open cave that extended 200 feet back under the overhang. We pulled in to the sandbar that formed the floor of the cavern, and the place was so cool and inviting we remained there for lunch. I estimated the span at the front of the cavern as 500 feet across and 150 feet high.

Elma Milotte stepped over to what she took to be a piece of driftwood, and then took a second look when it began to coil. It was a two-foot sidewinder. Either it sensed the fact that it was among friends or it was too comfortable in that shady

spot to be combative. It showed no resentment when we prodded it into all kinds of poses for the cameras. No one wanted to harm this peace-loving reptile—and for all I know the little horned rattler is now boasting to its progeny that it is the most photographed snake in Grand Canyon. I am sure that is quite true.

Below Redwall we ran five small cataracts including 36-Mile rapid where there was fast rough water but no hazardous holes or eddies. Below here were five or six miles of comparatively smooth water and Norman passed the message back that the passengers could take over the boats if they wished. We took turns rowing, and performed some feats of navigation not in the book. We passengers soon discovered what the boatmen already knew, that those Colorado river eddies, even in what appears to be mild water, are powerful currents which can spin a boat around like a carnival chariot. We learned this the hard way. Before the amateur regatta was over, the flagship Wen was tagging along at the tail-end of the procession—a most humiliating position for the little craft that has led five expeditions through Grand Can-

It was raining as we passed the Royal Arches, some rather spectacular recesses high up in the sidewall. The rain was delicious. It dropped the temperature to 84 degrees and since we were wet much of the time anyway it made little difference from which direction the water was coming.

At 2:35 we reached President Harding rapid. This is said to be the place where the U. S. Geological survey was camped in 1923 when word came over the radio that the President was dead. Norman insists the map-makers put the name on the wrong rapid.

The rapid looked tough. There was a huge submerged boulder in midstream at the head of the fall, and woe to the boatman who would allow his craft to be sucked into the hole below that rock. Norman looked it over and decided to run it without passengers. Francis Farquhar, who is a skilled amateur oarsman, took the *Joan* through while Otis Marston, the regular pilot, set up his tripod on the rocks and took pictures.

Night camp was scheduled for Nancoweap bar, and we reached there at 4:35. Where Nancoweap and Little Nancoweap creeks come in from the North Rim the canyon walls spread out and form a little valley of about 400 acres-Nancoweap valley. The landmark for our camping spot was a conspicuous mesquite tree on which is a board put there by a previous expedi-tion. It reads "Nevills' 1942 Floaters." This is one of Norman's regular camping places. A stream of clear water comes down the canyon, and there are great piles of drift from which to draw firewood. The 400 acres in this little valley are covered with dunes and mesquites and catsclawa bit of Southern California desert transplanted to the Grand Canyon of Arizona.

Thanks to the high stage of the river and resulting fast water we were running ahead of schedule and Norman announced we would remain over a day at Nancoweap. There are prehistoric Indian granaries high up in the cliffs that border the valley. Scattered among the sand dunes I saw bushels of broken pottery and other evidence of prehistoric Indian habitation.



Kent Frost demonstrates that a rattler held up by the tail may do some squirming—but cannot strike. This was the snake found at the mouth of the Little Colorado.

A day for exploring this area was an extra treat for all of us.

We slept through the first night on the sandbar at Nancoweap in a drizzling rain. Most of us carried waterproof tarpaulins, but we were not expecting the rain that blew in soon after we turned in for the night, and some of the bedding and clothes got wet. But the sun was out next morning and with driftwood we built drying racks for the bedding, and pup tents for shade. Nancoweap rapid was pounding against the limestone wall opposite our camp but we soon became so accustomed to the noise we scarcely heard it.

To give you a glimpse of how the time is passed on shore by our little band of voyagers in this far-off corner of the earth, here is an excerpt from my notes dated Tuesday, August 15, at 9 a. m.: "Norman is raising a dishtowel flag over the pup tent he erected early this morning by draping his tarp over a driftwood frame. Garth is sitting on a rock shaving, his mirror perched on another boulder. Marjorie just learned this is Elma's birthday, and is improvising a little gift out of tin cans and toilet paper. (It was presented later with appropriate ceremonies.) Kent is out in the dunes looking for Indian artifacts. Otis is tinkering with his camera—it is a busy job keeping four cameras in operation in this land of water and blow sand. Margaret is combing the sand out of her hair. Pauline is building a pup tent-it may rain again tonight. Al is rigging up a dark room for loading his cameras. Francis is reading the Powell report he brought along on this trip. Rosalind is heating water for some laundry." Me? I'm pounding away on my portable on a table I improvised from timbers I found in the drift.

The daily camp chores on such an expedition take many hours—unloading boats through those tiny hatches, repairing clothes, doing laundry, carrying water, maintaining some semblance of cleanliness, laying out the bedrolls, cooking, cleaning up camp, doctoring sun-blisters, scratches and bruises that are inevitable. But for the most part these are pleasant hours, for there is deep satisfaction in being on your own for awhile—in a far-off world where cooperation rather than competition is the rule.

At Nancoweap we entered the Grand Canyon national park. Noisy Nancoweap rapid proved to be little more than a heavy riffle when we bobbed through it in the boats. There were a few fleecy clouds in the sky—just enough to make the kodachrome photographers happy.

After a short run down the river we landed above Kwagunt rapid. It is not a major cataract, but had some spectacular waves, and members of the party wanted to take pictures of the boats going through it.

Then Cape Solitude came into view—a projecting point of the South Rim that rises a sheer 6150 feet above the junction

where the Little Colorado enters the main stream. But before we arrived at the Colorado Chiquito we ran 60-Mile rapid. We plunged into it without stopping. The waves were eight feet high and three of them swept over the stern deck of the Wen in quick succession. But Norman has placed some very stout and convenient ropes on the decks of his boats, and with a good grip on these ropes all I got was another ducking. With the temperature at 106 degrees, the water was refreshing.

We landed just above the mouth of the Little Colorado, and found a 3-foot rattler enjoying the shade of the step-like ledges which divide the two streams at their junction.

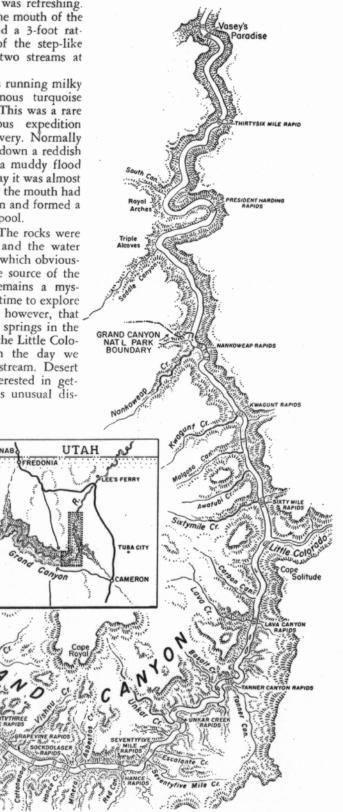
The Little Colorado was running milky blue water—like the famous turquoise stream in Havasu canyon. This was a rare phenomenon. No previous expedition had reported such a discovery. Normally the Little Colorado brings down a reddish stream which varies from a muddy flood to a dirty little rivulet. Today it was almost clear, and blue, and a bar at the mouth had partially dammed the stream and formed a great turquoise swimming pool.

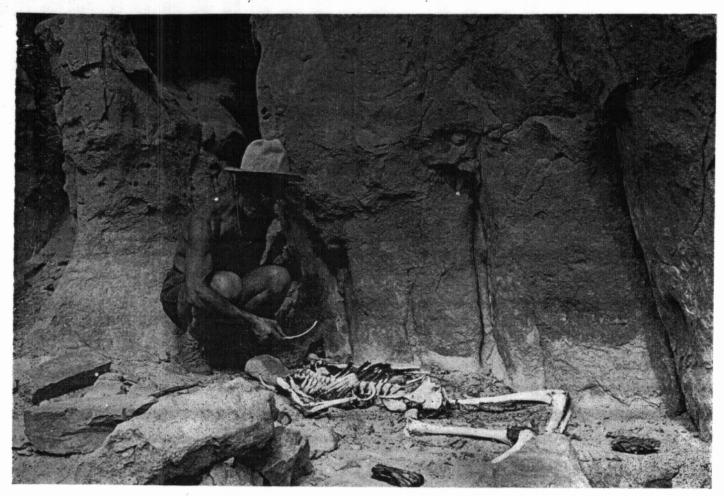
So we went swimming. The rocks were encrusted with travertine, and the water tasted strongly of the lime which obviously gave it its coloring. The source of the lime-impregnated water remains a mystery, since we did not have time to explore the tributary. It is certain, however, that the blue water comes from springs in the gorge below Cameron, for the Little Colorado was dry at Cameron the day we passed the mouth of the stream. Desert Magazine staff will be interested in getting further reports on this unusual discovery.

ARIZONA

We made a short run after leaving the Little Colorado and landed at the head of Lava canyon rapids for our night camp. From here it was less than a mile's hike to the old camp and mine where Seth B. Tanner, Mormon pioneer, tried many years ago to develop a copper mine, with values in other minerals.

The mine has long been abandoned, and the old camp out on a flat among mesquite





Otis Marston examines the mystery skeleton—perhaps of a Colorado river boatman who tried to climb out.

trees is today just a shambles of decayed wood and broken equipment. With flashlights we entered the old mine tunnel, wading in water to our shoe-tops. The timbering had decayed, and I felt none too secure in the old workings, but I saw a mineral display of rare beauty in there.

The seepage water coming through the walls has encrusted the tunnel with white crystalline salt, and from the ceiling were hanging tiny stalactites of what appeared to be azurite and malachite. They were dainty little "icicles" of blue and green, the longest perhaps 2½ inches. Occasionally on the sidewalls a crystalline formation of deep blue azurite could be seen in vugs among the salt crystals.

In a more accessible place they would have to post guards to keep the rockhound fraternity running off with this rare cavern. Here is a beautiful blue and green and white stalactite cave in the making. And as if these colors were not enough I saw a stalagmite stained with the golden brown of hematite. But Nature has protected this rare mineral display well, for the old Tanner trail which once led down from the South Rim is no longer passable.

Fortunately, this old mining tunnel is in the Grand Canyon national park, and the rangers will take over for the preservation of this colorful formation if it ever again is made accessible from the top.

Norman found a few sticks of dynamite and some caps in the tunnel, and as a safety measure he and Kent took them out on a bar along the river and exploded them.

At Tanner camp we were in view of Hopi Tower on the South Rim, and that night we lighted a huge pile of driftwood as a signal that we were running on schedule. Norman had arranged in advance that other fire signals should be used in the event we were in trouble.

It was at Lava Canyon rapids that we picked up our mascot. Just at daybreak a blue heron flew in and from its perch on an off-shore boulder, looked our camp over. Evidently the bird liked the looks of the outfit, for it stayed with us all the way through the canyon to Lake Mead. Each day it would fly over just after we had shoved off, and keep ahead of us all day, stopping at each bend in the river until we almost caught up and then flying on a few hundred yards ahead.

We shoved off at 9:05 in the morning and rowed across the river to inspect another mine tunnel visible from our camp. It was just a shallow "coyote hole" but turned out to be a veritable museum of mining relics. When the operators abandoned it they carefully stored their tools,

burro harness, groceries, medicines, dynamite and even the camp library in the tunnel. And as it had remained dry, most of the items were well preserved. We found magazines dated 1928.

The bailing crew had work to do going through Lava Canyon rapids, but the boats never were in trouble, and after running some heavy riffles below, we landed at the mouth of Tanner canyon, downstream 11/2 miles from the mine, and spent the day exploring. We were running ahead of schedule, thanks to high fast water in the river. It was down this canyon that Seth Tanner built a trail to bring in supplies and pack out ore. I suspect that little ore ever reached the top. My impression of the mine was that the rhyolite formation there is threaded with tiny stringers of very rich ore-but it takes more than tiny stringers to make a copper mine, and no larger body of pay ore ever was uncovered.

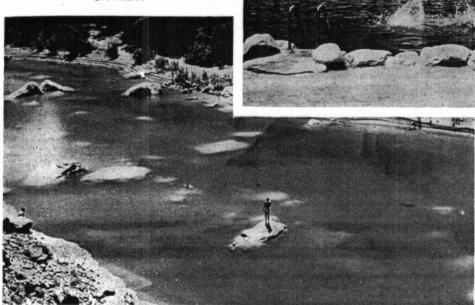
The last time the old Tanner trail was given a working assignment was in 1923 when the government rangers attempted to drive 5000 head of deer from the Kaibab plateau on the North Rim across to the South Rim to keep them from starving to death. It was a charitable plan—but the deer did not like the idea of being regimented. Before they reached the Colorado

river they stampeded—and that was the end of the deer drive.

We built a signal fire again that night for the folks in Hopi Tower nearly 5000 feet above us, and got some dots and dashes in return, but were unable to translate them into an intelligible message.

We were up at five the next morning. All loose items except the bailing cans

Swimming pool of turquoise waters
—at the mouth of the Little
Colorado.



Phantom ranch—a little oasis maintained by Fred Harvey near where Bright Angel creek flows into the Colorado.

were stowed in the hatches, and lifebelts given a careful checking. For today we were to face five of the 17 major rapids between Lee's ferry and Lake Mead: Unker Creek rapids, 75-Mile, Hance, Sockdolager and Grapevine.

Unker Creek was a long C-shaped rapid, the river plunging against a sheer wall on the left. Norman looked it over—and then announced we would all ride through. It was rough enough to be exciting but the boatmen kept well away from the wall and we had no difficulty.

Thirty-five minutes later we reached 75-Mile rapid. The waves here were the largest we had seen, from 10 to 12 feet high, but there were no bad rocks in the way and we ran it without stopping. All the boats had to do some bailing going through.

Then we came to Hance, and the boatmen studied it carefully for this one really looked vicious. Great waves broke over submerged boulders in the channel, and there were so many of them I wondered how the oarsmen could find a way through. But they did it, and Elma rode with Norman as a passenger, the first woman to ride through Hance rapid.

This cataract was named for Capt. John Hance, who was guiding visitors down into the canyon from the South Rim on a trail he built himself in the 1880's. Captain John has been dead for many years,

but the tall tales he delighted in telling his visitors are still repeated around Grand Canyon campfires.

We finished the run through Hance rapid at 10:40, and an hour later arrived at Sockdolager. Tough ol' Sockdolager! This is a cataract no Colorado river voyager ever forgets. It isn't the worst rapid in the canyon—but there is no way to portage the boats or walk around it. Abrupt walls rise many hundreds of feet on both sides—and you either ride through or your journey ends here.

Frederick S. Dellenbaugh, who accompanied the second Powell expedition in 1872, described Sockdolager in *Romance* of the Colorado:

"We heard a deep sullen roar and from the boats the whole river seemed to vanish instantly from the earth. (From the sidewall above) we could look down on one of the most fearful places I ever saw or hope to see under like circumstances, a place which might have been a gate to hell . . . We were nearing the beginning of a tremendous fall. The narrow river dropped suddenly away, and then beaten to foam, plunged and boomed for a third of a mile through a descent from 80 to 100 feet, the enormous waves leaping 20 to 30 feet in the air and sending spray twice as high. On each side were the steep, ragged granitic walls, with tumultuous waters lashing and pounding against them in a

way that precluded all idea of portage or let-down. It needed no second glance to tell us there was only one way of getting through."

One of Stanton's boats, the *Marie*, was smashed here, and in 1927 Clyde Eddy and Parley Galloway made it through and then capsized in an eddy at the lower end.

But Sockdolager has tamed much since Dellenbaugh's vivid description was written. Col. Birdseye's government survey party took actual measurement of the fall and found it to be between 24 and 25 feet. The waves when we reached there did not exceed 12 feet.

But from a ledge above Sockdolager looks bad. The canyon walls close in to form a narrow portal which backs up the stream. Once through the portal the water plunges down a steep incline where great waves look as if they would engulf any craft which got in their way. The boats must stay in the waves, for ragged walls on both sides threaten to crush any boat which slides out of the central channel.

I am sure that at the high stage of the river Sockdolager is less terrifying than in low water. Anyway, we hung tight to the ropes and made it through with no trouble. Norman led out in the Wen, giving the other boatmen orders to follow at five-minute intervals. We were tossed around like a chip in a storm, but the boats were always right side up. Good old boats!

In quiet water below the rapid Norman pulled to shore and we climbed to a ledge to watch the others come through. The rocks were so hot they almost blistered our hands.

Three miles below Sockdolager we came to Grapevine rapid—and this was the roughest of them all. Grapevine is another of those cataracts that have to be run. There is no way to climb out or hike

around. This rapid is a short sharp straight-away. The boatmen studied their route carefully, then we shoved off. The waves almost stood us on end in places, and four of them broke over the Wen and gave us a good dunking. But the boat always came out on top.

Then all hands started bailing, for we could hear the roar of another rapid below. For the next few miles the cascades came in such quick succession the bailing passengers never got the boats emptied. Zoroaster, 83-Mile rapid and Clear Creek with heavy riffles between them were run in fast order. There were so many of them it almost seemed like one continuous cataract, and Norman, master navigator that he is, once admitted he was lost. But we had passed the five major rapids on this day's journey, and we knew that around one of the bends below we would come in sight of the suspension bridge which spans the Colorado at the foot of Bright Angel trail.

Below the mouth of the Little Colorado we had left the limestones of Marble canyon and entered the hard grey and black rocks of Upper Granite gorge. The walls were shot with intrusions of black basalt. and in some places the volcanic material came down to the river's edge. Between 83-Mile and Zoroaster rapids the erosion of the river had cut and polished some of this basalt into miniature temples and domes and battlements. Wet by the spray from the river they looked like finely polished ebony.

July 18 had been a day of thrills. We had come safely through some of the most treacherous rapids in Grand Canyon, and we were happy when Bright Angel bridge came in sight.

We pulled into smooth water below the bridge at 3:05—just five minutes late on Norman's schedule. Doris Nevills, Mrs. Lon Garrison and Jim Eden, ranger, were on the shore to greet us. And over on a sandbar under a tarpaulin was a big stack of boxed food which had been packed down on mules to replenish the commissary for the two weeks' journey before we reached Lake Mead.

We spent two days enjoying the fine hospitality of Manager Willis Malone and his wife May and their associates in the operation of Fred Harvey's Phantom Ranch. The ranch is on the floor of Bright Angel creek a half mile above where the creek enters the Colorado.

There was a swimming pool constructed of native rocks, with a waterfall at one end. The peaches in the orchard were ripe. The stone cabins were air-cooled, and the Malones served meals which, if such a thing is possible, excelled the usual Harvey standard. At mealtime deer came to the dining room door to mooch food from the guests.

Packtrains arrive at all hours of the day, bringing guests and supplies from both the North and South Rims. One of the popular pastimes at the bottom is watching the dudes arrive. The North Rim trail to the top is 14 miles, the Kaibab trail to the South Rim 7 miles, and Bright Angel trail 11 miles. Riders not accustomed to the saddle sometimes have to be lifted off their mules at the end of the trail. It is a rugged journey for the tenderfoot—but after a few hours of rest and a swim in the pool they are ready to go again.

Phantom ranch is a delightful oasis in a high-walled desert. There are fish in the stream, which was named by Powell in 1879. After drinking warm muddy Colorado river water for several days I can understand why Powell called this clear cool stream Bright Angel creek.

According to Cliff Jenkins, temporarily on duty at this station as government hydraulic engineer, the Colorado river had dropped to 26,000 second-feet during the week since we left Lee's ferry. This is near Norman's perfect stage for Colorado river navigation.

Living in the stone ranger station at the mouth of Bright Angel are Mr. and Mrs. Orville Stoker. Their responsibility is to keep the trail in repair, and their kindness often is extended to weary hikers who spend a night in the nearby public camp ground.

The second day at Phantom, Lon Garrison, assistant superintendent of the park rode down from the rim. Lon had expected to be there when we arrived, but a 17-yearold boy had gone outside the guard rail at Hopi point on the South Rim two days before, and had slipped and fallen 1000 feet down the sidewall. Lon remained to direct the search and recover the body before joining us. Grand Canyon park has had a record season for tourists, over 600,000 of them this year, but Dr. Bryant and Lon and the other rangers never appear too busy to be courteous. The Park service probably has the highest morale and the finest type of public service in the entire organization of government. Outdoor environment helps make that possible.

Two carefree days at Phantom ranch passed quickly, and then we prepared to shove off for the rough water ahead of us in Middle and Lower Granite gorges before we reached Lake Mead.

(The third chapter in Randall Henderson's story of the voyage through Grand Canyon will appear in the January issue of Desert.)

SMALL DESERT FOLK Photo Contest

The small folk of the desert are not publicity seekers and seldom do they sit willingly for portraits. But they are always present—pack and kangaroo rats, lizards, insects, spiders, birds—and they form an important part of the desert scene. Desert Magazine wants pictures of the little desert creatures, and prizes in the December contest will go to the photographers who best portray them in their native habitat.

First prize is \$10, and second prize \$5. For non-prize winning pictures accepted for publication \$2 each will be paid. Entries must reach the Desert Magazine office in El Centro, California, not later than December 20, and the winning prints will be published in the February issue.

HERE ARE THE RULES

- l—Prints must be on black and white, 5x7 or larger, printed on glossy paper.
- 2—All entries must be in the Desert Magazine office by the 20th of the contest month.
 - 3—Prints will be returned only when return postage is enclosed.
- 4—Contests are open to both amateur and professional photographers. Desert Magazine requires first publication rights of prize winning pictures only.
- 5—Time and place of photograph are immaterial except that they must be from the desert Southwest.
- 6—Judges will be selected from Desert's editorial staff, and awards will be made immediately after the close of the contest each month.
- 7—Each photograph submitted should be fully labeled as to subject, time, place. Also as to technical data: shutter speed, hour of day, etc.

ADDRESS ALL ENTRIES TO PHOTO EDITOR, DESERT MAGAZINE



EL CENTRO, CALIFORNIA

Desert Calendar

January—Monthly free Winter Visitors Party, sponsored by Mesa junior chamber of commerce. Exact date not available. Events vary, including trek to Superstition mountains, barbecues, Western dances.

Jan. 1—Lost Pegleg Mine Trek. First conducted search for the Pegleg Smith mine, planned as annual affair. All desert rats invited. Meet at Borrego Valley post office, Borrego, Calif.

Jan. 1—New Year's Day dances, Jemez and other New Mexico pueblos.

Jan. 1-10—Edgar A. Payne exhibit of Southwestern paintings, Southwest Museum, Highland Park, Los Angeles, California.

Jan. 4-Invitational ski jumping open

meet, Provo, Utah.

Jan. 6-Installation of new governors at San Felipe, Santo Domingo, Cochiti, Santa Ana, Zia, San Ildefonso and Taos pueblos, New Mexico. Cele-bration of "Old Christmas" and many dances. Eagle dance at San Ildefonso, Buffalo and Deer dances at Taos.

at Taos.

Jan. 10-18—Exhibit of photographs of recently discovered Maya temples in southern Mexico, and their mural paintings, taken by Giles Greville Healey. Southwest museum, Highland Park, Los Angeles, California.

Jan. 11—Utah three-way championship, sanctioned by Intermountain Ski as-

sanctioned by Intermountain Ski association, Provo, Utah.

Jan. 17-18-Sierra club hike up Bear Creek canyon to Bear Creek palm oasis. Camp site near southwest corner of La Quinta, California. Ran-

dall Henderson, leader. 17-18—Reno Winter Jan. 17-18-Reno

Reno, Nevada. Jan. 19-Feb. 1-Exhibit of Southwestern photographs by Dr. E. Leslie Eames, and a collection of carvings by a Navajo artist, representing Yebi-chai personages. Southwest muse-um, Highland Park, Los Angeles,

California. Jan. 22-25-Open golf tournament, Phoenix, Arizona.

Jan. 23-Feast day and annual fiesta, Buffalo dance, San Ildefonso pueblo, New Mexico.

Jan. 24-25-Nevada state ski jumping championship and giant slalom, Carson City Ski club, White Hills, Nevada.

Jan. 25-Intermountain cross - country, sanctioned by Intermountain Ski as-

sociation, Provo, Utah. 25—Lecture, "Through Navajo Jan. 25-Lecture, Land, Monument Valley and New Mexico Pueblos," by Dr. E. Leslie Eames. Illustrated with color pictures. 3 p. m., Southwest museum, Highland Park, Los Angeles, Cali-

Jan. 27—Intermountain cross - country, sanctioned by Intermountain Ski

association, Timpanogos, Utah.

Jan. 28-Feb. 3—Open golf tournament,
Tucson, Arizona.

31-Feb. 1—Sierra club official hike, Rabbit peak, Santa Rosa mountains. Meet at Borrego, California. Bill Henderson, leader.

Jan. 31-Feb. 1-Thunderbird Ski meet, sponsored by Phoenix chamber of commerce, Snow Bowl, Flagstaff, Arizona.



| Volume 11 | JANUARY, 1948 | Nu | ımb | er 3 |
|---------------|--|------|-----|------|
| COVER | COYOTE. Photo taken by G. E. Kirkp San Diego, California. | atri | ck, | |
| CALENDAR | January events on the desert | | | 3 |
| INDIANS | Wolf Men of the Navajo By RICHARD VAN VALKENBURGH | | | 4 |
| TRUE OR FALSE | A test of your desert knowledge | | | 8 |
| ADVENTURE | Grand Canyon Voyage By RANDALL HENDERSON | | | 9 |
| POETRY | Desert Dweller by PAUL P. WILHELM Art by JOHN KRUPA | | | 15 |
| LOST MINE | Their 'Glory Hole' Pinched Out By JOHN D. MITCHELL | | | 16 |
| PERSONALITY | Traders at Tonalea By TONEY RICHARDSON | | ٠. | 17 |
| HUMOR | Hard Rock Shorty of Death Valley | ٠٩. | | 20 |
| ART OF LIVING | Desert Trails by MARSHAL SOUTH . | | | 21 |
| LETTERS | Comment from Desert's readers | | | 23 |
| PHOTOGRAPHY | November prize winners | | | 24 |
| FIELD TRIP | Hunting Rocks in the Calicos By HAROLD O. WEIGHT | | | 26 |
| CONTEST | Prize announcement for photographers | | | 30 |
| NEWS | From here and there on the desert | | | 31 |
| MINING | Current news of desert mines | | | 38 |
| НОВВУ | Gems and minerals | | | 39 |
| LAPIDARY | Amateur Gem Cutter, by LELANDE QUICK | | | 45 |
| COMMENT | Just Between You and Me, by the Editor . | | | 46 |
| BOOKS | Reviews of current Southwest literature . | | | 47 |

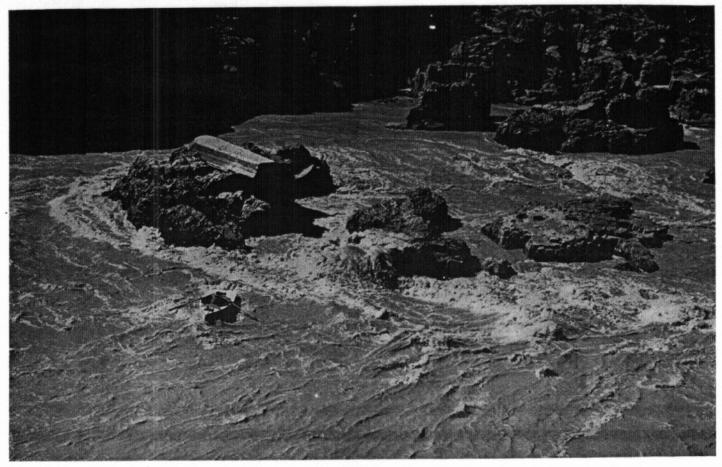
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RANDALL HENDERSON, Editor. BESS STACY, Business Manager. HAROLD and LUCILE WEIGHT, Associate Editors.

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On the midstream boulders in Bedrock rapids was the wreckage of a Reclamation Bureau boat which broke away at Lee's ferry some months before and was deposited here by high water. Kent Frost, taking one of the Nevills boats through these rapids was caught in an eddy and spun round and round.

Grand Canyon Voyage

After two leisurely days at the Phantom ranch in the bottom of Grand Canyon, the Nevills expedition of 1947 shoved off to face the churning cascades in the Middle and Lower Granite gorges for the second lap of their journey down Danger River. This is the third chapter of a story written for Desert Magazine by a reporter who rode the deck through many of the Colorado's ill-famed rapids.

By RANDALL HENDERSON

HILE we loafed in the shade and splashed in the pool at Phantom ranch awaiting the hour when we would pack our kits in the little 16-foot boats and head into the turbulent water that lay ahead, there were some changes in the personnel of our party.

Marjory and Francis Farquhar, Rosalind Johnson, Pauline Saylor and Elma Milotte were scheduled to leave the expedition here and return by mule to the Grand Canyon rim above. They had been fine companions and there was genuine regret when we bade them farewell.

Taking their places in the boats were Joseph Desloge, mining man and industrialist of St. Louis and members of his family-Joe Jr., 22, the daughters, Anne 20 and Zoe 18, and Marie Saalfrank, governess for the family since the mother's

death many years ago.

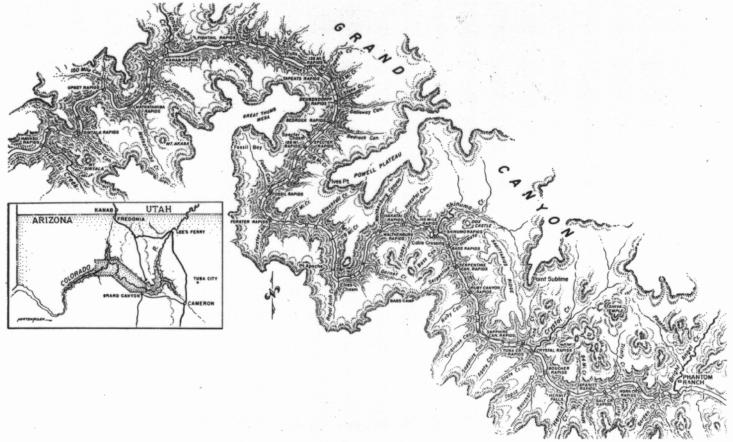
The Desloges arrived dusty and perspiring but showing no signs of weariness after the 11-mile hike down the trail from the South rim, and were soon frolicking in the pool. Their midwestern home is on the banks of the Missouri river and they are all excellent swimmers. They ran the San Juan river with Norman Nevills in 1946, and quickly adapted themselves to the routine of Colorado river navigation.

We shoved off at 9:00 a. m. July 21 for

the second stage of our river journey. Below Bright Angel there was a series of seven riffles, then Horn creek, one of the minor rapids. Norman looked it over carefully and then ran through with Zoe Desloge as passenger. The other pilots took their boats through empty while the passengers lined the rocky shore and took pictures.

We ran Salt creek rapids without stopping and then came to Granite Falls, one of the Colorado's big name rapids. It had some wicked looking boulders in midstream, and Norman and his boatmen studied it two hours-and then ran through with hardly a splash of water. Norman used his "stealing" technique

on this one. He rode the smooth tongue of water in the center of the channel down to the point where it suddenly became a churning series of 10-foot waves, and then with a few powerful strokes on the oars slipped out into the less turbulent water on the side. It is not always possible to do this, for great submerged boulders on the



sidelines sometimes make it necessary to ride the big waves down the center of the channel. But the two-hour session of the brain-trust was not wasted. They spotted each rock and hole and eddy, and then one boatman stood on a ledge above and gave hand signals as each of the others went through. In a boat surrounded by high waves the oarsmen seldom can see far ahead, but this signal system which was used on many of the rapids kept them out of trouble.

Norman always took the Wen through first. There was a double reason for this. The less experienced boatmen, watching from a vantage point, gained the benefit of Norman's experience in the treacherous stream. And then, the skipper wanted to be anchored below the dangerous water, ready to put out into the stream and capture the boat or rescue the swimming oarsmen if any of them got into trouble and capsized or were thrown from their boats.

The rest of us made our way over the rocks to the landing point Norman had designated below the falls. Some great granite boulders were perched precariously on the ledges above. We wondered if it would be 10 or 100 or 1000 years before the erosive forces of Nature would send them booming down into the stream. Sooner or later it will happen, and perhaps create new problems for future river navigators.

Imprisoned within the walls of that great canyon day after day one gets a more vivid concept of the tremendous span of time involved in the creation of this earth.

When one considers the hundreds and perhaps thousands of years required for sand and water to cut even a small groove in one of those granite boulders, the time required to chisel out a gorge such as this becomes immeasurable, even to the most active imagination.

We were through Granite Falls at two o'clock, and then floated leisurely downstream a mile to the mouth of Hermit creek where a clear stream of water comes in from the South Rim. We ate lunch on a shaded sandbar at the base of the vertical left wall.

Below us was Hermit Falls, with the channel on both sides of the tongue obstructed with boulders, and 12-foot waves lashing themselves into a fury in the mill-race between.

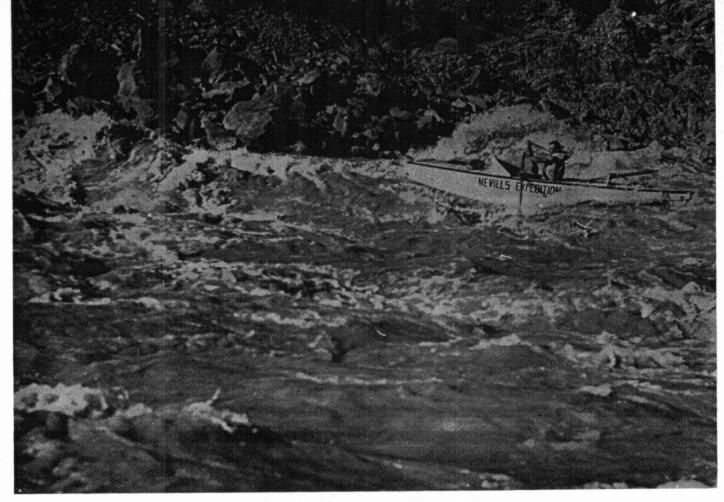
"I don't like the looks of this one," Norman remarked after studying it awhile. And when Norman doesn't like 'em they really are bad, for the skipper from Mexican Hat gets the same satisfaction in taking a boat through a bad rapid that a rodeo champion finds in climbing on a horse that has never been ridden. Away from his rivers and rapids Norman gives the impression of being a dare-devil sort of fellow. But there is no recklessness in his boating technique. He doesn't worry about himself. He'll tackle anything with water enough to float a boat. But he is jealous of his long record of never having lost a passenger or boat-and when he comes face to face with those great rollers pounding over the rocks, he becomes Ol' Man ConservaThe boats would have to be lined around Hermit, he decided. This was no place to be stranded with a smashed boat and short rations.

Ropes were fastened to the bow and stern of the *Mexican Hat* and the little craft was pushed and pulled and lifted over and around the rocks along the shore. It wasn't a portage job, where the boats are lifted bodily from the water and carried around. But the only available route, without letting the *Mexican Hat* get into the surging main current, involved so much lifting it was almost as strenuous as a portage.

Obviously, it would require many hours of hard work to pass Hermit Falls by such a route, and when Joe Desloge started needling the skipper about the waste of effort, Norman weakened and decided to run the rest of the boats through. He even carried Joe as a passenger on the Wen. Garth took the Sandra through, and Norman ran the Joan so Otis Marston could get pictures of the most vicious rapids we had encountered so far on the expedition.

We camped on the sandbar beside the rapids that night, the roar being so loud we had to shout to carry on conversation. The women slept on the bar above the campfire, the men below.

Launching the boats in the rough water along the shore next morning was a tedious job, but we got away at 8:00 o'clock and ran a series of minor rapids in quick succession. The first was Bouchere where Norman stood up in the boat to look it over as we approached, and then shouted



Norman Nevills in the rough water at Hermit Falls rapids.

"Let's go!" and we ran through without stopping. Then came Crystal rapids, Tuna, Sapphire, Turquoise, Ruby, Serpentine and Bass. We got a ducking in Serpentine, and more or less splashing in all of them. Al's camera was soaked when he tried to take pictures going through the rough water.

Just below Bass rapids we moored the boats and climbed to the anchor point up on the cliff where the old Bass cable is still suspended above the river. This cable crossing was built many years ago by W. W. Bass, explorer and guide, who had visions of establishing a guest camp in the canyon. He built a trail to the river and his cable car was big enough to carry a horse across to the north side. Bass died at Wickenburg, Arizona, January 18, 1933, before his dream was fulfilled. His ashes were scattered in Grand Canyon.

At 11:40 we pulled in to one of the prettiest campsites along the entire journey, at the mouth of Shinumo creek which brings a fine stream of water down from the North Rim. Less than 100 yards up the creek was a 12-foot waterfall, with fish in the pool below it. I climbed around the waterfall and in a little niche in the sidewall found a bouillon cube can containing

a message signed by Miles, Carl and T. H. Cureton of Williams, Arizona. Dated June 27, 1938, it stated they had packed down through Powell Pass and caught many channel catfish in the stream. Otis Marston caught several catfish at the mouth of the creek. Today I saw more of the beautifully carved basalt along the edge of the stream.

Kent's frying pan tom-tom woke us at six the next morning. We were off at 7:35 and ran Shinumo rapids, which were merely a heavy riffle, then 110-Mile rapids and Hakatai, which we glided through without stopping. Then we came to Walthenberg, another of the major cataracts.

Norman looked it over from a point of rock, and decided to run it with all passengers. The boats took it easily, and after a series of riffles we came to Elves Chasm. Here a clear stream flowed from a side canyon on the left, and although it was only 10:15 we liked the place so well we decided to have an early lunch there.

Elves Chasm is the name given a huge grotto in the sidewall back 50 yards from the river. The front of the cavern is concealed by a jumble of boulders and a thicket of mesquite and catsclaw trees. Many river parties have found shelter in this cave, as evidenced by the names

scratched on the wall. N. Galloway registered here in 1897, Norman Oliver on June 8, 1908, Frank E. Dodge September 5, 1923, and Clyde Eddy in 1927.

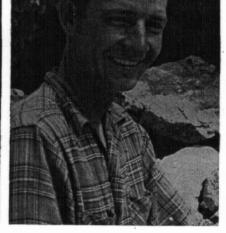
Norman prefers not to mark up the walls of Grand Canyon with inscriptions, and has placed a little book here—a register where members of his expeditions always record their passing.

We left Elves Chasm at 11:30 and ran nine riffles in rapid succession, then came to 120-mile rapid, a long S-course that gave us no trouble. Al Milotte wanted to take pictures of the boats from behind, so young Joe Desloge took his place in the Wen and Norman did a hitch as passenger while Joe took us through Forster rapids, a long rough one which Joe piloted like a veteran. Norman was back in the pilot's seat when we came to Fossil rapids, and a little later in 128-Mile rapids the Wen got caught in an eddy and slammed against the sidewall a couple of times. But no damage was done. Those 5-ply boats are very sturdy.

Specter rapids which we reached at 2:15 proved to be a long millrace with no bad rocks. At 2:35 we arrived at Bedrock rapids, and it had a nasty look. Some great blocks of granite had tumbled into mid-









Francis Farquhar

Marjory Farquhar

Kent Frost

Pauline Saylor

stream half way down, and on one of these was the wreckage of a Reclamation Bureau boat which had broken away from a surveying party at Lee's ferry, and been deposited here by high water.

The passengers would walk, Norman decided. Actually, I think the detour over the cliffs around this rapid was more hazardous than the trip through. While the boats were gliding along on the swift current around those midstream boulders, we walking folks were hanging on to the ledges with our fingernails and hoping our

toes wouldn't slip.

On this trip I decided that the hardest working man on earth is a field photographer. Al was taking pictures for Hollywood, and Doc Marston was accumulating both stills and kodachrome movies for lecture work, and other commercial outlets. Those two cameramen, neither of them very large, packed their heavy camera equipment and tripods over ledges that would be rough going for a mountain goat. They not only had from 20 to 50 pounds extra weight, but both hands were full, and with these loads they scrambled over wet rocks and up sidewalls where the footing was treacherous even for an unencumbered person. Watching them at work, my thoughts went back to the gritty Kolb brothers in 1911 when with even more cumbersome equipment they ran their boats through, much of the time alone, in

midwinter when during the early morning hours these same rocks were covered with ice. And despite all these handicaps they came out with a marvelous photographic record of the canyon from Green river to the Gulf of California. Those boys had guts—and their pictures, still being shown daily during the tourist season, constitute one of the most interesting and informative attractions in the Grand Canyon national park.

At 4:10 we came to the ill-reputed Deubendorff rapids, named in honor of S. S. Deubendorff of the Julius Stone party which reached here November 8, 1909. His boat capsized, but he swam out below with blood streaming from a gash in his head. Clyde Eddy's party lost a boat here while lining around the bad water.

Norman decided the boats could make it through. He gave instructions that the other boatmen should wait until he was through and had returned to the landing

above the rapids.

He shoved off on the smooth water above the fall and rowed across to the head of the tongue which was on the far side of the channel. In a wild torrent such as this the actual time going through the roughest water amounts to a minute or two at most. For a few moments the boatman is at the mercy of the waves. Then it is over.

Norman plunged through the highest breakers. At one moment we could see the white boat on the crest of a wave, and the next instant he was out of sight. But he always came up again. He went straight down the middle of the stream, with Margaret as passenger, then pulled out to a landing in a back eddy. A half hour later he joined us.

"That is the most fun I have had in years," he exclaimed. "I want to go through again." So he took the Mexican Hat down with Kent and Joe Jr. as passen-

gers.

It was nearly dark, so we camped below the rapids, leaving the other two boats to be brought down in the morning.

We were up at six and Joe Desloge and I went through as passengers with Norman in the *Joan* while Garth ran the *Sandra*

carrying Anne and Zoe.

While the boats were coming through Joe Jr. plunged into the stream at the lower end of the rapids and swam to the opposite shore and back, taking some of the heavy waves on the way back. The jaunt across the stream proved so easy he asked the skipper for permission to come down the full length of the rapids in a life jacket. Norman and the elder Desloge both gave their consent—and Joe made it through with no difficulty. Kent rowed out in midstream to pick him up below the rapids.

A word about the life preservers: The boatmen wore kapok jackets which were

Otis Marston

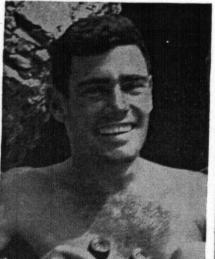
Margaret Marston

Garth Marston

Rosalind T. Johnson

















Joe Desloge Ir.

Anne Desloge

Zoe Desloge

Joseph Desloge

ready for instant use, requiring no inflation. The passengers, when running the heavy rapids, wore the navy type of lifebelt with two parallel air-cells, which are quickly blown up and then clasped around the waist.

Joe liked the ride through the big tumblers so well he went back and did it again. And then the idea became epidemic. After some bantering back and forth, four members of the party went to the head of the rapids and came through by the swimming route—which was right down the central channel where the waves were highest. In the foursome, Garth Marston came down on an air mattress, Zoe Desloge in a life jacket, and young Joe and Otis Marston swam it without preservers. Joe is a giant in the water, and Otis formerly was a swimming coach. It is not a stunt for a weak swimmer.

"It is all in the breathing," explained Otis Marston. "Any strong swimmer who knows how and when to breathe will come through without trouble at this stage of the water when there is no danger of collision with rocks." But woe to the swimmer who tries to fill his lungs at the wrong time—for in such turbulent water one cannot always be on the surface.

We were off at 9:55 for a short day's run. We wanted to camp that night at Tapeats creek where a fine stream of water comes in from the North Rim. Going

through 133-Mile rapids I wanted to get some action pictures while riding the rough water. But the waves were bigger



The Skipper

than I had anticipated. One of them drove the camera against my face so hard it flattened my nose. After that I hung onto the ropes. It was 111 degrees on the little sandbar at the mouth of Tapeats creek. But a 60-degree mountain stream tumbled over the boulders, and that really was a bit of luxury. Al and I erected pup tents for shade, but a sandstorm blew in and wrecked them, so we sought what shelter we could find under the willows and arrowweeds along the creek.

Otis Marston unpacked his rod and creel as soon as we beached and disappeared up Tapeats creek. He returned at dusk with 20 rainbow trout—and Kent did them full justice in the cooking. Doc went out again at daybreak next morning and brought in another creel of trout which we packed in the boats for dinner that evening.

We were entering the Lower Sonoran zone of vegetation—the plants and shrubs of my own desert in Southern California. Along the creek I found several species of cacti, including bisnaga, and some prickly pear with a fine crop of purple-ripe fruit. Plant life is sparse in Grand Canyon. The predominating tree is catsclaw. A fringe of them grows at the high water contour on both sides all the way down the canyon, wherever they can find a foothold. At one of the coves where a side canyon comes in I saw a giant specimen with an 18-inch trunk and a span of 28 feet.

At the mouth of each tributary there generally is a sandbar and on these grow

Al Milotte

Elma Milotte

Marie Saalfrank

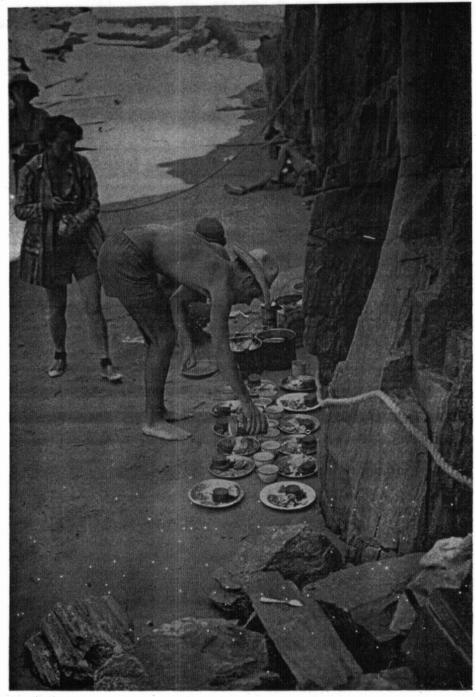
Randall Henderson











Lunch on a sandbar—peanut butter, canned ham, jam, pickles, crackers and shoestring potatoes.

dense thickets of willow, arrowweed and tamarisk. These shrubs are never large, for the high floods which come down the gorge periodically sweep them away. But a new growth starts the next season and with an ample supply of water they grow rapidly.

We left Tapeats at 8:10 July 25 with the temperature at 86 degrees. Tapeats rapids gave us no trouble and at 8:30 we passed through Granite Narrows where the walls close in and the stream races through a portal not over 75 feet wide.

At 8:50 we stopped at Deer Creek falls where a slender stream of water shoots out of a crevice 120 feet up on the sidewall and drops sheer to a little cove along the river. The falling water spreads out into a pounding deluge at the bottom—and here Norman invited the crew and passengers to take an endurance test that has become traditional on Grand Canyon expeditions. The winner of the contest is the one who can take the longest beating under the terrible force of that ice-cold shower.

The two Joes and Garth and Doc entered the waterfall and remained over three minutes. Doc was first out, but do not hold that against him for Doc was under a terrific handicap. His head is as bald as a basalt boulder. The senior Desloge was the winner.

Deer Creek rapids, just below the falls merely was an oversized riffle when we ran through it. We had now emerged from Middle Granite gorge and were in sandstones and limestones again. High up in a recess in the Tonto platform we saw prehistoric Indian granaries under an overhanging ledge.

We took Fishtail rapids without stopping and then landed at Kanab creek above the rapids which bear that name for lunch. An old trail led up this creek to the North Rim and it was here that the second Powell expedition ended September 7, 1872. It is not an impressive canyon at the mouth, and the little stream of water was warm. We ate lunch under some tamarisk trees, and shoved off.

Kanab rapids were easy, and we ran Matkatamiba rapids without stopping. Just above Matkatamiba there was a pretty oasis on the sidewall, fed by a spring above. It was covered with maidenhair ferns—a miniature Vasey's Paradise.

We floated along on smooth water for a mile and then came to Upset rapids at the mouth of 150-Mile canyon. The side canyons and rapids identified in terms of mileage are measured from Lee's ferry, and are the designations given by the U. S. Geological survey in 1923. Where no other place name was available the mileage at that point becomes a place name. It is possible these mileage designations will give way to descriptive names as future Grand Canyon navigators have misadventures along the way. We often reminded Norman that none of the rapids bears the name "Nevills."

"If you'll turn over a boat in one of these cascades, we'll petition the Geographic place name board to name it in your honor," Al Milotte told him. Norman's reply was that he preferred to maintain his record of never having capsized in Grand Canyon.

Upset rapids looked mean, and the boatmen studied it carefully from a ledge above. "It looks tough," Norman finally announced, "but the climb around it looks even tougher." So we ran through with all passengers on board. Garth and Kent both shipped some water, but in the Wen we wrangled our way through with hardly a splash. The rapids got their name in 1923 when one of the survey boats turned over in the big waves.

At 3:15 we ran Sinyala rapids without trouble, and at four o'clock reached the mouth of Havasu creek—the place of the blue-green water. A wavering finger of turquoise water comes out of the side canyon and is immediately swallowed up by the muddy eddies of the Colorado. Here we found one of the loveliest camping spots along the entire river voyage.

(The fourth and last chapter in Randall Henderson's story of the voyage through Grand Canyon will appear in the February issue of Desert.)

Desert Calendar

- Jan. 28-Feb. 3—Open golf tournament, Tucson, Arizona.
- Jan. 31-Feb. 1—Sierra club official hike, Rabbit peak, Santa Rosa mountains. Meet at Borrego, California. Bill Henderson, leader.
- Jan. 31-Feb. 1—Second annual Thunderbird Ski meet, Arizona Snow bowl, Flagstaff, Arizona.
- Feb. 6-7—First annual Carrot Festival of Imperial Valley, Holtville, Calif.
- Feb. 7-8—Sierra club, All-American canal camp and desert hike in Orocopia - Chocolate mountains area. Camp in desert wash about four miles from Mecca. Jim Gorin and Russell Hubbard, leaders.
- Feb. 8—Snow Basin giant Slalom, Snow Basin, Utah.
- Feb. 9—Intermountain jumping championships, Ecker Hill, Utah.
- Feb. 10-15—Livestock show, Tucson, Arizona.
- Feb. 11-15—Riverside County Fair and Date Festival, Indio, California.
- Feb: 11-15—Pima County fair, Tucson, Arizona.
- Feb. 14-15—Third annual championship Silver Spur rodeo, sponsored by Junior chamber of commerce, Tucson, Arizona.
- Feb. 15—Intermountain invitational giant slalom, Ephraim canyon, Ephraim, Utah.
- Feb. 20-22—Annual Ski Carnival, Arizona Snow Bowl, Flagstaff, Ariz.
- Feb. 20-23—23rd annual Fiesta de Los Vaqueros, Tucson, Arizona.
- Feb. 21-22—University of Nevada Winter Carnival and Pacific Northwest Intercollegiate meet, Mt. Rose, Nev.
- Feb. 22—Lecture, "National Parks and Monuments of the Southwest" by Frank A. Schilling, Southwest museum, Highland Park, Los Angeles, California.
- Feb. 22—Intermountain cross country championships at Brighton, Utah.
- Feb. 28-29—Four-way invitational winter sports meet, Provo, Utah.
- Feb. 28-March 7—Imperial County fair, County fair grounds, Imperial, California.
- Feb. 29—Annual Dons club Trek to Superstition Mountains, from Phoenix, Arizona.
- Feb. 29—"The Jarabe Dancers," lecture, Southwest Museum, Highland Park, Los Angeles, California.
- Each Saturday until June 1 Palm Springs Desert Breakfast rides, with guests of all Palm Springs, California, hotels participating.
- Each Saturday until June 1 Palm Springs Sunfun hikes to study plant life and geology of Colorado desert and mountain canyons. Desert Museum naturalists give explanatory talks. Palm Springs, California.



| Volume 11 | FEBRUARY, 1948 | Nu | mb | er 4 |
|-------------|--|-----|-----|------|
| COVER | DESERT DAISIES. Photo taken by Don Santa Barbara, California. | Oll | is, | |
| CALENDAR | February events on the desert | | | 3 |
| EXPLORATION | Operation Underground! By JOHN PRISER | ٠. | | 4 |
| BOTANY | Oak Trees on Desert Mountains By MARY BEAL | | | 8 |
| ADVENTURE | Grand Canyon Voyage By RANDALL HENDERSON | | | 9 |
| DESERT QUIZ | A test of your knowledge of the desert | | | 16 |
| HISTORY | He Guards the Secret of Turquoise Shrine By TONEY RICHARDSON | | | 17 |
| CONTEST | Prize announcement for photographers | | | 20 |
| ARTIST | Paul Coze—Friend of the Tribesmen By HOPE GILBERT | | | 21 |
| PHOTOGRAPHY | December prize photographs | | | 25 |
| MINING | Current news of desert mines | | | 26 |
| NATURE | Cactus Campmates By IRENE OLIN | | | 27 |
| NEWS | From here and there on the desert $$. $$. | | | 29 |
| LETTERS | Comment from Desert's readers | | | 37 |
| POETRY | Miracle Hour and other poems | | | 39 |
| LAPIDARY | Amateur Gem Cutter, by LELANDE QUICK | | | 40 |
| НОВВУ | Gems and Minerals | | | 41 |
| COMMENT | Just Between You and Me, by the Editor $$. | | | 46 |
| BOOKS | Reviews of current Southwest literature . | | | 47 |

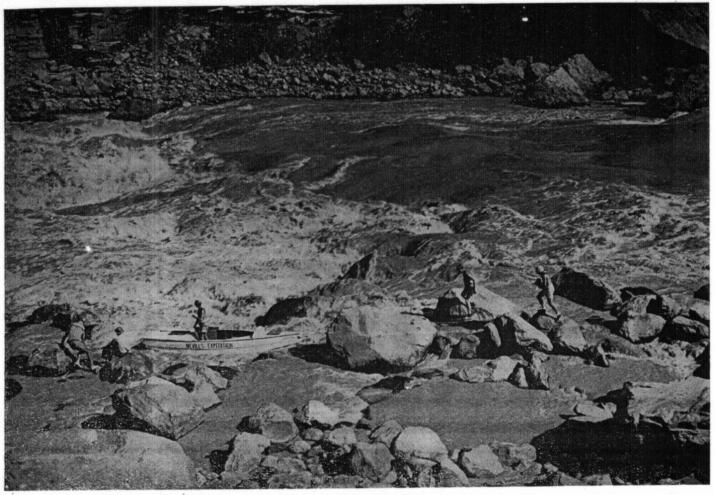
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Norman Nevills and his lining crew lowered the boats along the edge of Lava falls with ropes, while the passengers portaged the cargoes on shore.

Grand Canyon Voyage . . .

At Lava Falls the Nevills river expedition faced its most hazardous water—but passage was made by portaging the cargo and lining the boats along the edge of the rapids. Then after conquering the most treacherous obstacle at this stage of the river, one of the boats nearly capsized in a little riffle below. This is the concluding chapter of Randall Henderson's story of his voyage through Grand Canyon with the 1947 Nevills expedition.

By RANDALL HENDERSON

HE ENTRANCE to Havasu canyon is a narrow slit in the Grand Canyon sidewall. The turquoise blue water which enters the Colorado river in the Havasu tributary was deep enough for our boats, but so narrow we had difficulty using the oars. But the current was sluggish and we were able to propel ourselves 150 feet back into the crevice, to a point where the cliffs open up and the stream is bordered by a grassy floor wide enough for our camp.

This is a lovely spot. The lower sidewalls are coated with lime. Cascading down between them, with a green border of grass and water cress is one of the most colorful streams in western America. In quiet pools the water is green, and then it tumbles over a miniature waterfall and is churned to a milky turquoise blue.

A small tribe of Indians—the Supai—live seven miles upstream. But they seldom come to the river, and there is no trail. I hiked from Supai village to the Colorado with 15 members of the Sierra club in 1942. We waded much of the way, and clawed our way through dense thickets the remainder.

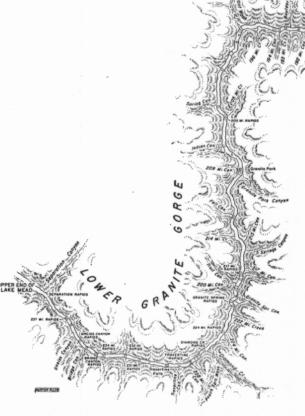
With a cascade of blue-green water at our feet, a narrow slit of sky overhead, and sidewalls that blend from pure white to dark brown and grey between, this truly is a colorful setting, and we could have enjoyed this camp for days if our schedule had permitted.

We had rainbow trout for supper—the fish Otis Marston caught that morning at Tapeats creek. But the perishable items in our commissary were gone. We left Phantom ranch with many loaves of bread, but the last of them had turned moldy. The remaining bacon, cheese and eggs were hardly edible. But while some items in our food stock were low, we still had an ample supply of others.

Major Powell wrote that at this point his rations were reduced to a little musty flour, some dried apples, and an ample supply of coffee. In our boats were many cans of canned ham, fruit and fruit juice, biscuit and flapjack flour, cream of wheat, potatoes, peanut butter, pork and beans, pickles, tomatoes and milk and coffee and tea. Despite the moldy bread we were living in luxury compared with those early Colorado river navigators.

Sleeping space was rather limited here, but each of us found a ledge or a grassy corner big enough for a bedroll, and instead of the roar of rapids we had the tinkling music of Havasu creek as our bedtime serenade.

Most members of the party had sleeping bags. At the last minute before leaving Lee's ferry I discarded mine, and I never



had occasion to regret it. My bedroll was an air mattress, a blanket, and a light waterproof tarpaulin, and that was enough. Only on rare occasions on a summertime trip through Grand Canyon is it cool enough to crawl inside a sleeping bag. They are of service only as padding—and an air mattress does the job much better.

We were up at six next morning and after a breakfast of buckwheat cakes, spent three hours climbing the walls and exploring the lower Havasu. Norman and Joe climbed to a high point upstream from the Havasu-Colorado junction where five well-constructed rock cairns could be seen, but found no records in them. Some one dared Norman to jump over Havasu creek from sidewall to sidewall at the top of the narrow slot through which we had brought the boats, 40 feet above the stream. Before the bantering had ended, Norman, Garth, Al and Kent all jumped the 10 or 12-foot span. Then Joe Jr. jumped from a ledge 30 feet up on the sidewall to the creek below

But there were more rapids ahead and

at 10:10 we departed reluctantly from our little shangri-la in Havasu canyon. We ran Havasu and 164-Mile rapids without stopping, and then had lunch on a bar above Cataract creek. Joe Jr. ran the Wen through Stairway creek rapids, all the boats carrying full passenger loads. We ran Red Slide rapids easily and after navigating six heavy riffles, passed a huge plug of lava out in the stream, known as Vulcan's Forge.

One of the questions I had intended to ask Norman at the end of the trip was which, in his opinion, was the roughest rapid on this voyage through the canyon. But when we came to Lava Falls I knew the answer. At this stage of the river, Lava Falls is the daddy of them all.

According to the geological map the river drops 25 feet in a half mile, which is less than at some of the other rapids. But as Norman put it, "It isn't the depth of the fall that counts, but the manner of doing it." In most of the rapids Ol' Man River rolls over submerged boulders, creating a hump on the surface of the water

and a treacherous hole below each of them. But at Lava the river collides with its buried blocks of lava. Every wave is an explosion wave, sending a spray high in the air.

ARIZONA

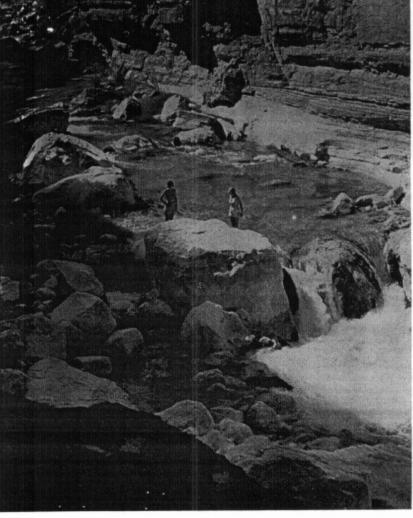
Norman ran this rapid in low water in 1940, but at this high stage it looked like suicide to attempt it. "We'll line this one," the skipper said, after looking it over.

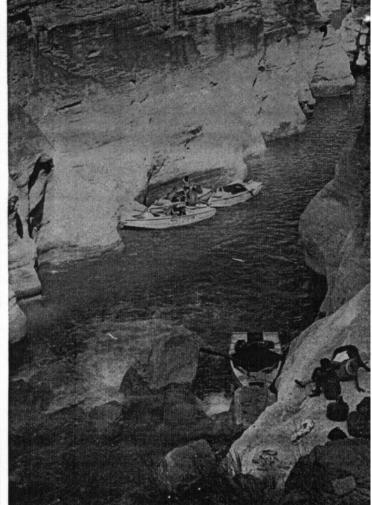
There was a narrow beach above the falls, and some clear water seeping out of the bank. It had the sweetish taste of limewater, but was palatable, and we had a comfortable camp that night, always with the roar of the rapids in our ears.

A visitor arrived during the evening, the first stranger we had met since leaving Phantom ranch. John Riffey, custodian of Grand Canyon national monument on the North Rim—not to be confused with Grand Canyon national park — hiked down from his headquarters at Tuweap, at an elevation of 4775 feet, to spend the night with us. He had been advised in advance of our schedule and the rangers at Phantom ranch told us he probably would be with us for a few hours.

We were camped on the south shore, but when we saw him making his way down over the lava talus on the north side just before dusk, Norman rowed across and brought him to camp. From him we learned the geological history of this sector of Grand Canyon. The north wall here is solid lava, which according to geologists, probably came from a now extinct crater on the North Rim known as Vulcan's Throne. Three times in geological history Vulcan has erupted and sent a great stream of molten rock into the gorge at this point. One can imagine the thunderous hiss of steam and the great clouds of vapor which filled the skies when those streams and avalanches of hot lava poured over the rim and into the water of the Colorado.

At each of those periods the canyon was partially plugged, and reservoirs created above. But eventually the scouring action of the silt-laden water cut its way through the obstacle. The action was hastened by the fact that Nature doesn't take as much pains with its lava dams as does a 20th





Where the voyagers camped overnight beside the blue-green water near the mouth of Havasu creek. The white coating on the lower sidewalls is lime deposited by the stream.

century engineer when he creates a structure such as Hoover dam. These natural dikes of lava lacked the deep bedrock foundations and the recessed abutments of a man-made structure. And as the lava hardened it cracked and left crevices through which the water seeped, and hastened the process of destruction. We saw blocks of prehistoric lava clinging to the granite and limstone and sandstone walls during the remainder of the trip all the way to Lake Mead.

But Nature has not yet finished the job of cutting a smooth floor for the river at Lava Falls. And the side canyons are still bringing in storm debris to block the channel.

We slept on the beach that night, and next morning Lava Falls looked as ugly as it had the day before. And yet, despite the chaos of mighty waves out there in midstream, I believe that if Norman had taken a vote of the passengers and boatmen as to whether it should be run, or the boats lined down the side, the decision would have been almost unanimous for the ride through. Such was the confidence the members of this expedition felt in their

boatmen and the sturdy 16-foot cataract

But we did not argue with the skipper. He knows the river far better than any of the rest of us will ever know it. And so in good spirit we began the arduous task of portaging food and bedrolls and camp equipment down along the rocky shoreline a third of a mile to a point below the falls.

Norman organized a lining team composed of Kent and Joe Jr. on the tow rope and Garth and John Riffey on the stern rope. As captain of the team he remained in the boat to guide it over and around the rocks on the edge of the torrent. In fast water the crew on the upper rope held the boat back, and when it had to be skidded over boulders that projected above the surface the ropemen below pulled it along. The rest of us were making trip after trip with our packs along the shore.

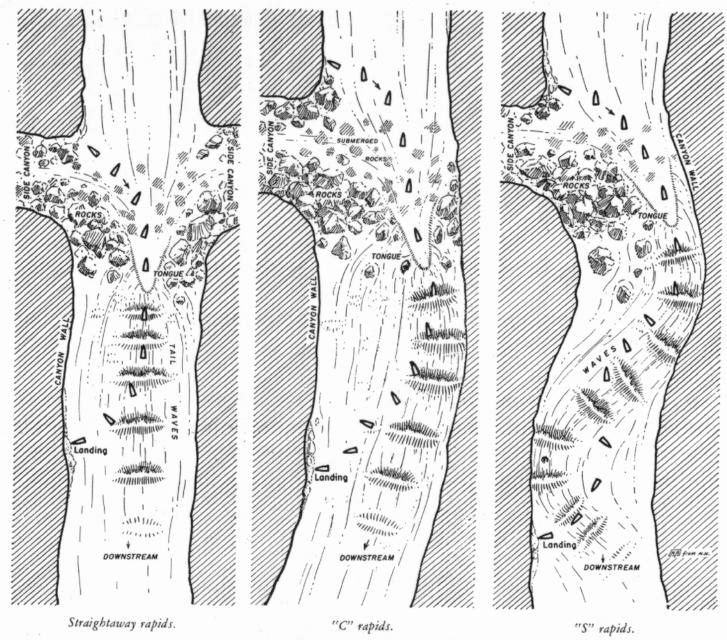
At 11:00 o'clock the boats were through and reloaded, and we dropped downstream a half mile to a sandbar where we ate lunch in the shade of an arrowweed thicket. The thermometer read 108 degrees.

One drinks literally gallons of water

each day in such temperatures, and we were taking salt tablets to keep our systems from being drained of their minerals. There are some pretty springs gushing from banks of maidenhair ferns below Lava Falls. The water was clear, and looked most inviting—but its temperature was 79 degrees, and it tasted so bad we preferred to drink the muddy 79-degree water that ran in the river. On the map this place is marked as "Warm Springs" and there have been widely varying reports as to its temperature. We checked it with two thermometers at 79 degrees.

We were grateful to John Riffey for the help he had given us in the lining and portage job. Norman invited him to ride through a riffle just below our lunch camp and get a sample of white water navigation before starting the return hike up the cliffs to Tuweap.

Before we shoved off, Norman told Al and me to put on our life belts. Then he gave one to John, showed him how to put it on, and then slipped into his own kapok jacket. I thought it rather strange we should be putting on our preservers for a



These sketches by Norman Nevills and Norton Allen show the technique most commonly used on the Nevills expeditions to run the boats through the three types of rapids. There are many variations, depending on the height of the stream and the rocks, both submerged and protruding, but the theory generally is to follow the main tongue or "V" to the point where it breaks into huge waves, and then get out of the waves as soon as practicable. The boat goes stern first so the oarsman is always facing his greatest danger, whether it be rocks, holes, waves or sidewall.

lowly riffle with only three-foot waves. But the skipper usually knows what he is about, and we did as we were told and

asked no questions.

We headed into the riffle, but instead of "stealing" through in the usual manner Norman turned the boat broadside just in time for one of those 3-footers to curl over and land on top of us. The weight of the water on one side tipped the boat on edge and for a moment I thought we were going to turn over. Al and I were out in front on the stern deck and the wave lifted us clear off the wood and we were hanging by the ropes. I was on the low side, and if Al had lost his grip and come tumbling

down on top of me we would both have gone overboard.

But just at the critical moment Norman dropped his oars and leaped to the upper side, and I think his added weight there kept us from capsizing. The boat righted, full of water to the gunwales. Instinctively, we began fishing in the bottom for something with which to bail. Al found a bucket down there, but when he tried to bring it up Norman's foot was wedged in it. But we drifted into smoother water and by the time we had reached the shore had bailed at least a half ton of water out of the cockpit.

"I wanted to give John a little sample of

rough water," Norman admitted afterward, "but I didn't intend to come that near pitching you fellows overboard." In one little riffle, John Riffey had come closer to a capsize than any of us had experienced on all the rest of the trip.

Below Lava Falls we had an exciting moment when we spied the yellow coloring of what appeared to be a boat lodged among the weeds on a sandbar. "May be Roemer's boat," Norman yelled, and started pulling for the shore. We had been looking for the wreckage of such a boat all the way down from Phantom ranch.

The story: An Austrian known as Charles Roemer left Lee's ferry October



Members of the 1947 expedition at the Separation rapids plaque installed by Julius F. Stone.

19, 1946, with only meager provision, stating he was going to run the Grand Canyon rapids in his rubber boat. He was last seen floating past the foot of Bright Angel trail October 24, and his fate remains a mystery.

We had seen footprints on the sandbar at one of the rapids on the way down and had every reason to believe they were made by Roemer, but we found no other evidence of his passing. Norman was first to reach the yellow something in the weeds—and he turned back with an exclamation of disgust.

"It is a boat," he said, "but not Roemer's." It was a small wooden skiff, tied to a mesquite tree, and probably had been used by fishermen coming down Whitmore canyon. We left it as we found it.

We camped that night on Whitmore's bar, and the following day after running only minor riffles arrived at the mouth of Spring canyon for an overnight stop. There is a fine spring a half mile up the side canyon, and Kent and Garth and I fought our way through a jungle of willow and arrowweed and mesquite to reach it. The temperature was 122 degrees, but it sprinkled just after dark and cooled the air enough to provide a comfortable night's rest.

There were clouds of bats in the air at dusk.

We were off at 8:00 in the morning. Fifteen minutes later we ran 205-Mile rapids without stopping. It was short and choppy. Then came Granite Park rapids which was an easy one, and at 10:35 we reached 217-Mile rapids. Although not a major rapid, it looked rough and we pulled in above to look it over.

Norman studied it awhile, then turned and said: "This is going to be Dub's day. I'll run the Wen through. Joe, you follow in the Mexican Hat. Randall, you bring the Sandra through, and Al will follow in the Joan. The rest will stay here on the rocks and watch you landlubbers do your stuff."

I wouldn't have been more surprised if Norman had told me to jump in the river and swim down to Lake Mead. I am neither a good swimmer nor an experienced boatman. And Norman knows it. I am like Dick Wick Hall's frog that lived on the desert so long it never learned to swim. Oh, I can paddle around a little, and I know which end of the oar to use as a propellor. But in the water I am a Dub with a capital "D."

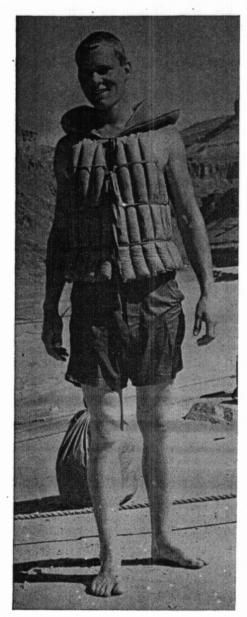
I grinned at Norman-and then I re-

alized he was not kidding. So—if he was willing to trust the newly-christened Sandra, the pet of his fleet, in my hands, I would surely do my best to deliver it rightside-up at the bottom of the rapids.

I stood on a high rock and watched Norman glide down the tongue of the rapid, carefully avoiding a big rock where the water tumbled over into a swirling eddy near the tip of it, and then pull like a sonuvagun to keep out of the 8-foot waves that could easily dash the boat into the granite wall on the opposite side. I've watched Norman take his boat through a hundred of those rapids on the San Juan and Colorado rivers. I knew the theory of it perfectly. But I wondered if those pesky oars would do what I told them to do.

Joe Jr. came through without trouble and then I made my way up the shore to where the boat was moored above, with much the same feeling I had at Kelly field in World War I the first time the instructor got out of the plane and said: "Now you take it off and fly around the course."

I overlooked no detail. I had observed that before Norman and Kent tackled rough rapids they always reached over the side of the boat and washed their hands



Joe Desloge Jr. in the kapok life jacket in which he swam Deubendorff rapids. Later he and Otis Marston went through without preservers.

and face in river water, and then took a drink of it. I don't know just what significance there is in that little ritual—but if there were any fetishes which would help a fellow stay right-side-up going through that tumbling water, I was going to need them. So I gathered up everything loose in the boat and put it in the hatches, stripped down to my bathing trunks, hooked a lifebelt around my waist, washed my face and hands in the river water, took a gulp of it, and then untied the boat and shoved off.

It took about four minutes to row out into the current above the tongue, a half minute more to glide down the tongue past that submerged rock, and then in less seconds than it takes to write this down on the typewriter I had pulled out of those big breakers and was coasting along in smooth water to a point just above where Norman had moored the Wen. Those oars

had done just what I told them to. "You followed my route perfectly," Norman said.

So that is the beginning and end of my career as a Colorado river boatman. I am going to quit now while my record, like Norman's, is 100 per cent. Lady Luck might not be so good to me next time.

We dropped down below 217-Mile for lunch, then in the afternoon ran Granite Springs and 224-Mile rapids without stopping. Granite Springs marks the high point reached by Harry Aleson in his effort to bring an outboard motorboat upstream from Lake Mead several years ago. He had to buck some rough water to get this far, for the lake was not as high then as it is now.

We camped that night on a sandbar at the mouth of Diamond creek where a road was built in to serve the drilling crew which spent several months on this spot scouting the possibilities of a storage dam in the river.

That evening, just as the sun went down, four of us were given our initiation into the Royal Order of Colorado River Rats. This is a ritual passed along to Norman many years ago by Emery Kolb, and is given to those who make their first trip through the gorge from Lee's ferry. Margaret, Kent, Al and I were the eligible members of this expedition. Margaret became the sixth woman to join the Order. Regarding the initiation, I can only say that it was a very wet affair.

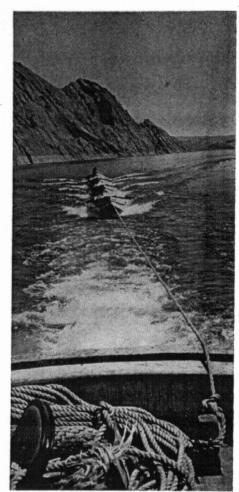
Otis Marston reported that a lion and cub were seen on a ledge below 205-Mile rapids. Also, some wild burros were seen and heard during the day.

That evening on the beach by the light of the moon we played charades, as we had done many evenings on the voyage through the gorge when we were not too tired. We chose sides and limited our acting to the titles of books, plays and songs. Ours was a congenial group and we enjoyed those evenings of play. From Lee's ferry to Boulder City I never heard an unkind word spoken by one member of the party to another.

All the major rapids had been passed, and my companions were relaxed and gay when we shoved off next morning. There were a few minor rapids to run that day—Diamond creek, Travertine, 231-Mile, 232-Mile, 234-Mile, Bridge canyon, Gneiss canyon—and then we came to Separation rapids, once a nightmare to boatmen, but now submerged under the waters of upper Lake Mead.

It was here that Powell's first expedition had a tragic split. Three of the crew, Wm. H. Dunn and O. G. and Seneca Howland, announced they were leaving the party and climbing out. Powell protested, but they climbed to the North Rim, and two days later were killed by Indians.

Historians have not agreed as to who was most to blame for the division in Powell's party, almost at the end of the



End of the journey. The cataract boats were towed from Pierce's ferry to Boulder City by a Park service launch.

journey. Some have accused Powell of being harsh and arbitrary. Others regard the men who left as deserters. Julius F. Stone became an outspoken partisan on the side of Dunn and the Howlands, and in 1939 placed a bronze plaque in memory of the three men on the sidewall above the rapids.

I was interested in Norman's conclusions regarding this episode. "Powell may have been guilty of all the misdeeds charged against him," said Norman, "and yet I cannot justify the men in leaving him at this critical point in the journey. In my opinion they were deserters."

We climbed the sidewall to read the inscription on the plaque, and then had lunch in the shade of trees along Separation creek.

One of the launches operated by private concessionnaires on Lake Mead was scheduled to meet us somewhere near the head of the lake. But the bars and shoals where the Colorado dumps its daily load of silt into the reservoir make treacherous navigation for large craft, and we were sure they would not come as far as Separation creek. That afternoon we rowed with the sluggish current in the upper lake, and when a breeze sprang up hoisted our tarpaulins as sails.

By six o'clock in the evening we estimated we had come 20 miles. We pulled in and camped among the tamarisks and willows on a bar near Quartermaster canyon. We could hear wild burros braying

during the night.

Next morning we were up at 5:30, and two hours later the camp chores were finished and we were on the lake again. The crew and passengers took turns with the one set of oars in each boat, working 30-minute shifts. Occasionally there would be a light breeze, and we would take advantage of it to raise the sails. But most of the time we were on our own power. The current had disappeared by the second day and it was slow going, but no one complained.

At 11:30 we pulled in to Emory falls, a picturesque cascade that drops 40 feet over a sheer cliff into a little cove. When Lake Mead is at low stage sandbars and driftwood often make the falls inaccessible by boat, but the lake was high now and we were able to fill our canteens by rowing

directly under the falling water.

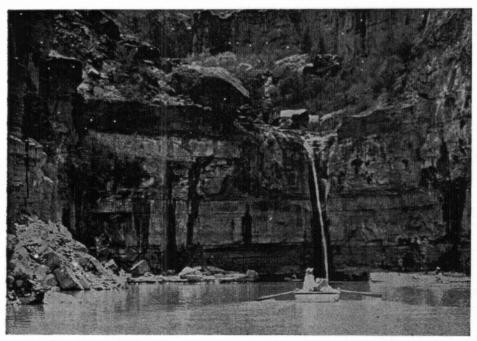
On the gravel bar at Emory falls is a botanical garden of strange bed-fellows. Yellow columbine, crimson monkey-flower, thistle and maidenhair ferns were growing together where a seepage from the sidewall provided moisture for their roots.

We had expected the launch to meet us here, but when it failed to arrive at 4:00 o'clock we shoved off and headed down the lake with our oars and improvised sails. Below Emory falls the canyon walls in which we had been imprisoned for nearly three weeks rolled back and unveiled a great expanse of blue sky. We were out of the Grand Canyon gorge.

Our immediate destination was Pierce's ferry. We were sure the boat would meet us there. As we headed into the great in-



Julius F. Stone erected this plaque at Separation rapids where Dunn and the Howlands left the Powell party.



At Emory falls the boatmen were able to row in and fill the canteens from the falling stream.

let in which the Pierce ferry landing is located we heard the put-put of an outboard motor, and in a few minutes Bill Green of the Pierce ferry ranger station came alongside. We tied onto the little power boat and arrived at the landing in tandem formation just before dusk.

Green lives alone at the old landing, operating a weather station for the Weather bureau, taking water measurements for the Reclamation bureau, seismological readings for the Geological survey, and in the service of the Park department filling the role of custodian and dude-wrangler. Fishermen and campers often follow the rough road to the old ferry for a few days' outing. This is part of the Hoover Dam recreational area and Bill Green is Uncle Sam's official representative in this remote corner of the desert world, and a good host he proved to be.

We camped overnight on the beach and next morning a National Park service launch arrived with a welcoming committee that included President Paul McDermott of the Las Vegas chamber of com-

DESERT QUIZ Here is Desert Magazine's monthly brain exercise. It is written for those who would like to become better acquainted with the desert playground of the

Southwest. It includes a bit of geography, history, geology, botany and the general lore of the desert country. You will not get them all right, but you will be a wiser person when you have tried. Twelve out of 20 is a fair score. From 13 to 15 is superior. Sixteen or over is exceptional. The answers are on page 45.

- 1—Highest peak visible from the California desert is— San Jacinto peak....... San Gorgonio peak...... Mt. Whitney...... Telescope peak......
- 2—Bill Williams river is a tributary of— The Colorado river...... Salt river...... San Juan...... Gila......
- -Stovepipe Wells hotel is located— In Salt river valley....... Death Valley...... Near Salt Lake...... In Imperial valley......
- 4—One of the following is a poisonous lizard— Gila Monster...... Alligator lizard...... Chuckawalla lizard...... Leopard lizard......
- 5—First party of white men to visit Rainbow bridge was led by— Kit Carson...... Marcos de Niza...... Lieut. Beale...... John Wetherill......
- -The name John Hance is associated with— Death Valley...... Grand Canyon...... Founding of Santa Fe...... Exploration of Great Salt Lake.....
- 7—The feud between the Clanton gang and the Earps came to a showdown fight at— Ehrenberg...... Bisbee...... Prescott...... Tombstone......
- -The staple meat in the diet of the Navajo Indian is— Beef...... Mutton...... Wild game...... Pork......
- 9-In driving your car through heavy sand you will probably get best results by Letting your wife drive while you push....... Putting chains on the wheels....... Reducing the air pressure in the tires....... Turning the car around and backing through......
- 10-The mountain range northeast of Salton sea in Southern California is the-Laguna...... Santa Rosa...... Castle Dome...... Chocolate......
- 11—The notorious Indian chief who used the Dragoon mountains of southern Arizona as a hideout was— Irateba...... Winnemucca...... Palma...... Cochise....
- 12-The common name of the desert plant of the genus Fouquieria should be spelled— Ocotillo...... Ocotilla...... Ocatilla...... Ocatillo......
- 13-The man for whom the Bandelier national monument of New Mexico was named was a-- Trapper...... Archeologist...... Artist...... Scout.......
- 14—The prehistoric Indian tribesmen known as Hohokam occupied the area now known as- Salt River valley...... Havasupai canyon....... Mojave desert...... White mountains of Arizona......
- 15—The famous Bottle House is located at— Rhyolite...... Goldfield....... Panamint City...... Calico......
- 16-The metallic name of the mineral known as Malachite is-Copper...... Iron...... Silver...... Lead.......
- 17—The infamous Mountain Meadows massacre occurred in— Nevada...... Arizona...... California...... Utah.......
- 18—The fleetest wild animal now found in Nevada is the— Mule deer...... Antelope...... Jackrabbit...... Bighorn sheep......
- 19-To reach the famous Phantom Ranch it would be necessary to-Cross the Paiute reservation in Nevada...... Climb the Enchanted Mesa...... Go to the bottom of Grand Canyon...... Take a trail out of Taos......
- 20—The territory known as the Gadsden Purchase was bought from— The Indians..... France..... Spain..... Mexico......

merce, Dr. Gordon Baldwin, archeologist for the Park service, P. C. Christensen, director of power at Hoover dam, and a group of newspaper and radio reporters and photographers. Uncle Sam's boat, piloted by Ray Poyser, veteran lake pilot, towed our boats on the last lap of the voyage to Boulder City.

That night we toured Hoover dam as guests of the Reclamation bureau, and had a final dinner together as a fitting end to the Nevills' Colorado River Expedition of

Somewhere up the lake we saw the last of our mascot, the blue heron. For its friendly interest in our journey through those rough waters I can only wish the bird a long and healthy life-and lots of fish dinners.

Navigation of Grand Canyon has passed through a radical transition since 1869. First came the explorers—the Powells, Stanton, Brown, Dellenbaugh and the pathfinders who proved the river was navigable. They won through terrible hardships and many casualties.

Then came that group of men-scientists, engineers and professional menwho pioneered the way to safe navigation. They were the forerunners of the flatbottomed boats and stern-first operation. Stone and Col. Birdseye and the Kolbs were the leaders in this period.

Then Clyde Eddy in 1927 brought a group of college boys down through the canyon for pure adventure.

And now, Norman Nevills has perfected the boats and the skill needed to make this canyon voyage a glorious adventure in comparative security. The waves are just as big and powerful, and the rocks and eddies no less treacherous than they were 80 years ago. And woe to the boatman who does not know how to face them. But the Colorado river can be run in comparative safety, and for future voyagers who follow this river trail I can only suggest that they never for an instant forget Norman Nevills' guiding rule: "Face your danger, and play it safe!'

THE END

BACK NUMBERS

For the information of new subscribers who missed the first three chapters of Randall Henderson's story of his Grand Canyon voyage, the November, December and January issues of Desert, all or any of them are available at 25c each, postpaid. Address Desert Magazine, El Centro, California.

Desert Calendar

July 24-Aug. 15-Exhibit Southwestern Indian paintings from collection of Mr. C. H. Dietrich, Museum of Northern Arizona, Flagstaff, Ari-

Aug. 1-Walker Lake annual outboard motor regatta. Hawthorne, Nevada.

Aug. 1-Summer visitors' tour to Moencopi, Hopi village, sponsored by Flagstaff Cavaliers, Flagstaff, Arizona.

Aug. 1-7—National archery tournament, Reno, Nevada.

Aug. 2—Feast day, Old Pecos dance, Jemez pueblo, New Mexico.

Aug. 3-4—Ogden junior fat stock show, Ogden, Utah.

Aug. 4-Feast day of Santo Domingo, Fiesta and summer corn dance, Santo Domingo pueblo, New Mexico.

Aug. 4-7-Pioneer days celebration, Raton, New Mexico.

Aug. 6-8-Annual Cowboys' Reunion, Las Vegas, New Mexico.

Aug. 8—Summer visitors' tour, Walnut Canyon, sponsored by Flagstaff Cavaliers, Flagstaff, Arizona.

Aug. 8-Annual Smoki ceremonial and snake dance, Flagstaff, Arizona.

Aug. 10-Feast day of San Lorenzo, fiesta and summer corn dance, San Lorenzo (Picuris) pueblo, New Mexico.

Aug. 12-Feast day of Santa Clara, fiesta and corn dance, Santa Clara pueblo, New Mexico.

Aug. 12-13-Wasatch county fair and Blackhawk encampment, Heber City, Utah. Aug. 15—Summer visitors' tour to a

petrified forest and to dinosaur' tracks north of Flagstaff, sponsored by Flagstaff Cavaliers, Flagstaff, Arizona.

Aug. 15—Assumption day, fiesta and corn dance, Zia pueblo, New Mexico.

Aug. 19-21-Summit county fair, Coalville, Utah.

Aug. 19-21-Box Elder county fair, Tre-

monton, Utah. Aug. 19-21—Davis county fair, Kaysville, Utah.

Aug. 19-22—Twenty - seventh annual Inter - Tribal Indian Ceremonial, dances and rodeo, Gallup, New Mexico.

Aug. 20-21-Millard county rodeo and

fair, Deseret, Utah.

Aug. 21-Sept. 12—Third Annual Arizona Photographers statewide pho-tographic exhibition, with emphasis on the Southwestern scene. Museum of Northern Arizona, Flagstaff, Arizona.

Aug. 22—Annual horse show, 111th Cavalry at Camp Luna, Las Vegas, New Mexico.

Aug. 22-Summer visitors' tour to typical cattle ranch, sponsored by Flag-staff Cavaliers, Flagstaff, Arizona. Aug. 25-28—Salt Lake county fair and

horse show, Murray, Utah. Aug. 26-28—Cache county fair and ro-

deo, Logan, Utah. Aug. 28—Feast day of San Augustin, fiesta and dance, Isleta pueblo, New Mexico.

Aug. 28-29-Annual rodeo sponsored by 20-30 club, Flagstaff, Arizona.



| Volume 11 | AUGUST, 1948 | Nu | ml | oer | 10 |
|---------------|---|-----|-----|-----|-------------|
| COVER | TAHQUITZ CANYON FALLS, California. by Nicholas H. Kozloff, San Bernar fornia. | Pho | oto | gro | iph ali- |
| CALENDAR | August events on the desert | | | | 3 |
| PATHBREAKER | Padre of the San Juan By MARIAN HUXOLL TALMADGE a IRIS PAVEY GILMORE | md | | | 5 |
| INSECT | He's not as Pious as he Looks By RICHARD L. CASSELL | | | | 10 |
| CEREMONIAL | Warning Rattles for Snake Dance Visitors By RAY JACKSON MILLER | | | | 11 |
| PHOTOGRAPHY | Announcement of Cover Contest Winners | | | | 13 |
| MINERALS | Magnetic Bombs from Pisgah By JERRY LAUDERMILK | | | | 14 |
| TRUE OR FALSE | A test of your desert knowledge | | | | 17 |
| POETRY | Little Ghost Town, by GRACE PARSONS HARMON. Art by HARRY OLIVER | | | | 18 |
| PERSONALITY | Artist of Copper Canyon By HAROLD O. WEIGHT | | | | 19 |
| ART OF LIVING | Desert Trails, by MARSHAL SOUTH . | | | | 21 |
| NATURE | Fur Animal of the Desert Country By EDMUND C. JAEGER | | | | 22 |
| NEW ADDRESS | Desert Has Moved | | | | 23 |
| TRAVEL | Utah's Incredible Arch of Stone By CATHERINE and DICK FREEMA | N | | | 24 |
| HUMOR | Hard Rock Shorty of Death Valley | | | | 28 |
| LETTERS | Comment from Desert Magazine readers | | | | 29 |
| MINING | Current news of desert mines | | | | 32 |
| NEWS | From here and there on the desert | | | | 33 |
| CONTEST | Prize announcement for photographers | | | | 38 |
| LAPIDARY | Amateur Gem Cutter, by LELANDE QUIC | K | | | 40 |
| HOBBY | Gems and Minerals | | | | 41 |
| COMMENT | Just Between You and Me, by the Editor | | | | 46 |
| BOOKS | Reviews of Southwest Literature | | | | 47 |

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Utah's Incredible Arch of Stone

A newly completed road makes it possible to reach Delicate Arch in eastern Utah's Arches national monument without all the struggles earlier visitors faced. But Dick and Catherine Freeman are agreed: it was worth the muddy roads, the quicksand and slick rock for a glimpse of the incredible crimson-hued rainbow of stone at the trail's end.

By CATHERINE FREEMAN Photos by DICK FREEMAN

HEELS spun and mud flew as the rear end of the government's old Chevy truck settled into a bowl of fine silt "pudding." Our hopes had been high that morning as Custodian Russell Mahan of the Arches national monument told us he was sure he could reach that amazing circlet of stone known as Delicate Arch. Now they sank to our boots.

Ranger Mahan, undaunted by slick mud oozing up over his boot-tops, reassured us. "We'll get her out of here all right," he said. "Bring a lot of that brush, and I'll dig out around the wheels. This is a regular occurrence on these roads," he added, grinning.

Now we understood why he had worn overalls and work boots, and had brought a strong shovel. But it was tough work digging out the mud faster than it oozed in, and pounding the brush down into the holes. Again and again we tried and each time the wheels of the old truck edged forward a few inches and then spun without progress.

"She'll make it next time," Ranger Mahan would say confidently. At last, she really did. With a snort and rattle the car rolled out onto firmer ground. An extended survey of the road and flats beyond brought our hopes to a new low. It was evident the car could never cross the bogs which lay ahead. So we fell to cutting more desert atriplex and artemisia to make a road back over the soupy mud for the car's return.

After that experience we expected Ranger Mahan to tell us we would have to try another day. But he wasn't born an Irishman for nothing. As soon as we were back on solid ground, he proposed another possible route to the arch.

"If we go 15 miles farther around by Thompsons, I'm sure we can make it," he predicted cheerfully. His confidence was infectious and we were hopeful as we bounced away toward Thompsons.

Our driver warned that we hadn't reached the bad place yet. But rolling over a smooth desert road on the higher mesas made it easy to believe nothing could stop us again. Then we saw water on the road ahead. Russell and Dick jumped out to reconnoitre. Before they had returned within hailing distance I knew we would not get through that day. Their shoes, caked

Russell Mahan, Uncle Sam's custodian at Arches national monument greets visitors to his colorful sandstone domain with a friendly welcome.



with mud to the tops, were mute testimony of the condition of the road.

"This'll dry up in a couple of days," said Russell, "and then we'll try it again. Might even be all right tomorrow." Thus ended our first attempt to reach Delicate Arch. It was only a short distance from us, according to the custodian, yet it might as well have been on the moon.

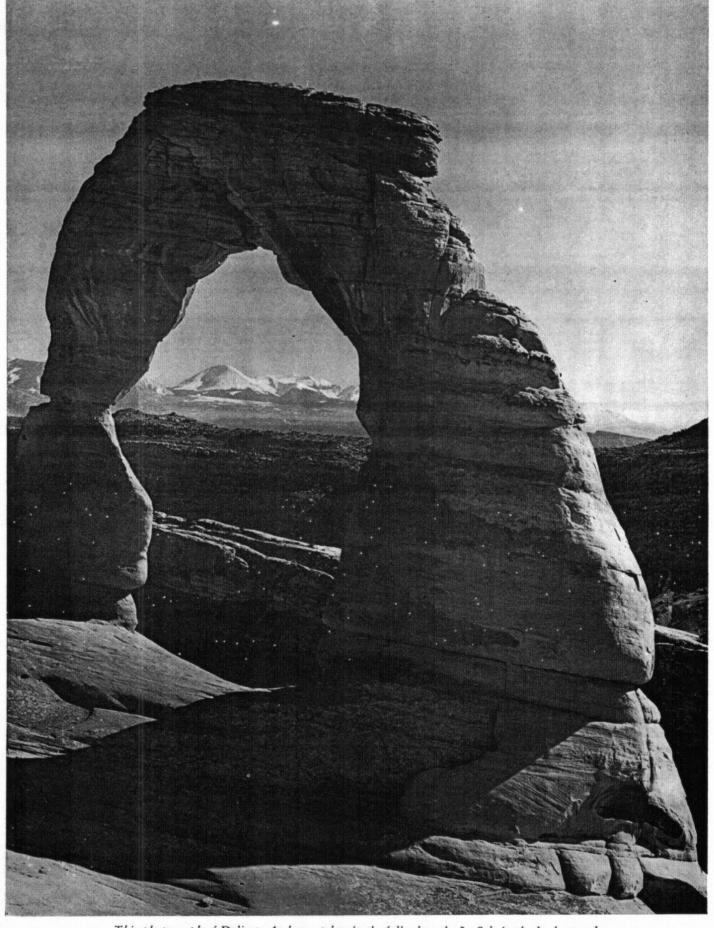
There are 88 known arches in Arches national monument in southeastern Utah. Delicate Arch attracts, perhaps, more attention than any of the others. After one has seen a picture of its graceful contours he feels he must see the original, no matter how difficult it may be to reach.

Two days later we made our second attempt to reach Delicate Arch, and the gods of desert roads were good to us this time. Although the valley route was still deep in mud, we were able to traverse the road from Thompsons without serious difficulty.

Since that first visit to Arches national monument a passable road has been completed to Delicate Arch, and today visitors to the Monument are able to reach this rare natural "rainbow" without difficulty.

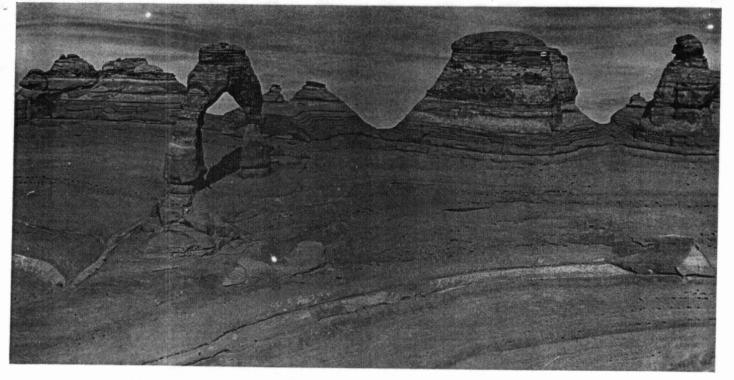
On each side of the road were acres of pinyon and juniper. Hoary old specimens, healthy and strong, they complement the rose-reds of the sandstone with their rich green foliage. Not quite so plentiful, but found in great numbers, was the single-leafed ash, a small tree, but lovely and golden in the fall. As we followed the washes, yellow tamarisks, willows and cottonwoods intensified the brilliance of the sun where just two or three weeks before, orange hued rabbitbrush had bloomed in profusion.

At last we pulled up beside an ancient weatherbeaten log cabin. The low rather flat roof was covered with small pieces of crushed greenish rock containing copper, and the logs were whitened and grey like pieces of driftwood on the beach. Turnbow cabin had been used, we were told, for over 50 years by sheepmen who came in every winter to pasture their sheep. Located at the end of the road, it had been operated as a source of supplies. All the cowboys and sheepherders for miles around have beaten a shiny trail over the slick rock to its door. The interior, a rendezvous for numerous rodents, is not inviting. But the



This photograph of Delicate Arch was taken in the fall when the La Sals in the background were covered with the first snow of the season.

AUGUST, 1948



While Nature has spent countless ages carving Delicate Arch she also has been eroding the bowl in which it is located.

greenish roof and greying sides blend harmoniously with the soft tones of the landscape.

"It's about two miles by trail now. We'll have to watch for quicksand as we cross Salt wash," warned the custodian. "Last week I got into it, and was down to my knees before I knew it. Luckily I had someone with me."

In the salty wash we found pickleweed and coarse grasses through which we pushed our way to higher ground. There we found great outcroppings of rosy agate which in the process of cooling had been cracked so much the stone is not commercially valuable in spite of its beauty.

Russell called our attention to the polished trail we were following on the sandstone. It had been made by the hoofs of the cowboys' horses. We needed no markers to follow it, but we did need wind to keep up with the long legs of the custodian. As we were visualizing mounted cowboys carefully picking their way over these sandstone shoulders, Russell interrupted our thoughts.

"There it is," he called. "Probably you can't see it." We looked uncertainly over the landscape. "Right there," he pointed. "It's end-on and looks like a pillar instead of an arch. We'll get a better view soon."

A final pull over a high sandstone shoulder and a drop into the bowl below brought us within close range of the amazing arch of stone. We wanted to stop and look, but Russell kept us going "for the best viewpoint," he explained.

Delicate Arch is located on the edge of a great sandstone bowl smoothed by the wind-driven sands of countless years. The trail leads up the edge of this great bowl and as we reached the foot of the arch its smoothness seemed somewhat alarming. Russell and Dick were disappearing around one of the buttresses, their feet clinging to what appeared to be the narrowest kind of an indentation. It is a good idea to wear rubber-soled shoes for this trip.

We cautiously followed Russell Mahan around the rim to where we could look through the slender crescent of stone which is Delicate Arch. Rising from the sandstone ridge it looks like a giant handle by which the bowl might conceivably be lifted. Soft salmon-pink against a bright blue sky, the arch forms an exquisite frame for the snowy 13,000 foot La Sal mountains to the south. This was the view Russell had wanted us to see first, and it was well worth the trouble of carrying heavy cameras and tripod. Dick fairly trembled with excitement as he carefully set up his equipment on the slick rock where one misstep might have been fatal.

Sweeping down 200 feet between him and the arch, the great pink sandstone bowl looked like a huge Indian mortar. Here the wind, carrying sharp crystalline particles, sweeps around like a whirlwind, grinding very, very slowly as a fine lens is ground.

All the great arches in Arches national monument were originally integral parts of huge sandstone ridges. or "fins" as they are called. As wind and sand wear away the softer parts a large block of stone becomes undermined and breaks away from

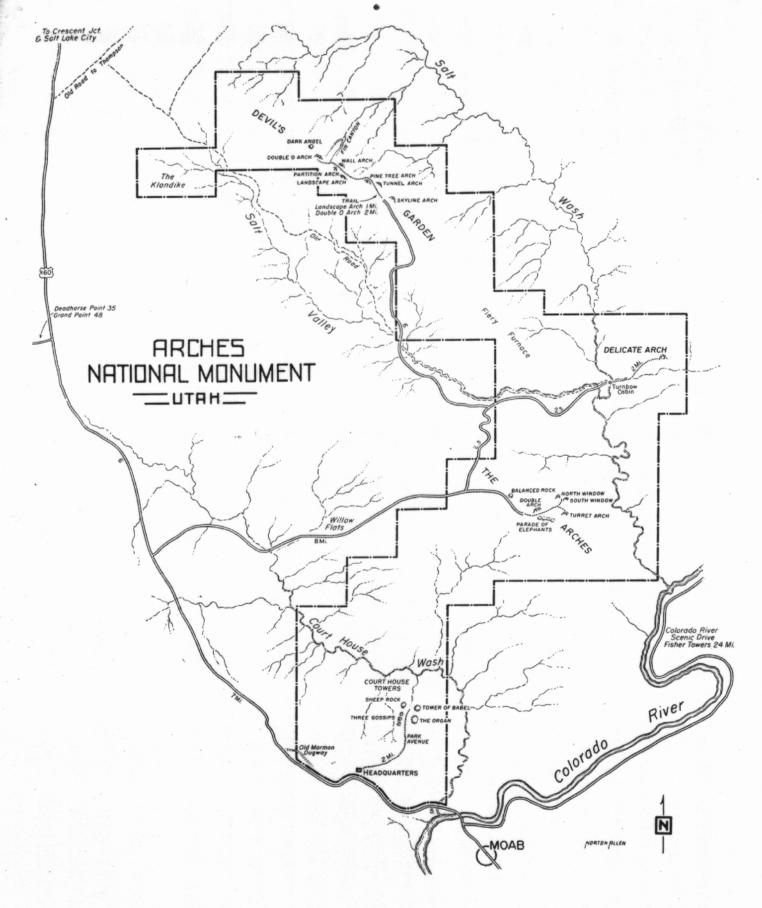
its original position frequently leaving an arch. Then the sand-filled winds smooth of the rough edges, a process which the hardest rock withstands the longest.

So Delicate Arch itself has been left standing, with all the less resistant stone around it eroded away. Sturdily the great bases of the arch cling to the ridge like two firmly placed elephant's feet. Save for one deeply eroded crease on the eastern abutment, the arch looks as if many centuries might pass away before the wind could consummate its destructive work.

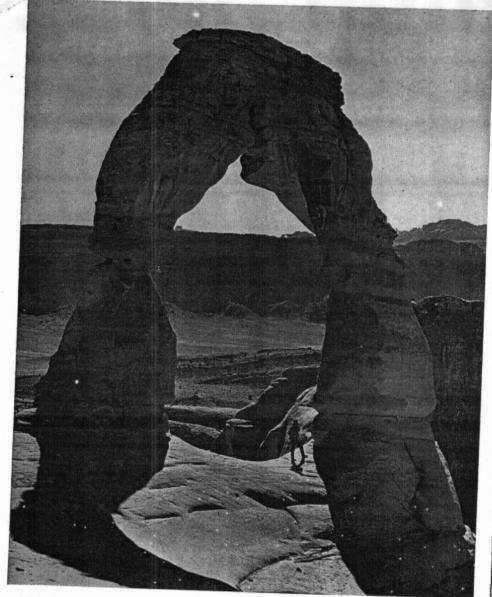
As we stood marveling at the incredible structure, Russell Mahan told us how the cowboys of the region used to call it the "Chaps" and at other times the "Schoolmarm's Pants."

"I can see how they got the chaps, but I can't see the other," he said, shaking his head and chuckling. But there wasn't much doubt that, regardless of what it might be called, Delicate Arch is Russell Mahan's pride and joy. His anxiety that we get the best view first, and the pleasure on his face when we showed our appreciation of the exquisite arch made that perfectly clear.

This "delicate" arch is not so dainty in size. As Dick passed between it buttresses, each about 15 feet in diameter, he looked very small beneath its 65-foot height and 85-foot breadth. He was going to take a picture from the side up which we had climbed, where a narrow shoulder extends to the east. He still didn't realize there was a 500-foot sheer drop below him. However, the slick and sloping rock made him exceedingly cautious. Without the rubbershod tripod legs, he probably could not



This map, recently revised by Custodian Mahan, shows the new roads in the Monument. Double lines are dirt roads subject to weather conditions. Dotted lines are foot trails.



The size of the span may be judged by the figure of Ranger Mahan beneath and beyond the arch.

have secured the pictures and might have lost his camera.

Looking southwest from Delicate Arch in the direction of headquarters, Russell showed us where the new road to Delicate Arch was to be built. Instead of the roundabout route toward Thompsons covering 50 miles, this road adds but six miles to the already existing nine mile road into the Windows section.

We had left the wash and the Salt valley road when the vivid colors of sunset began to paint the softening outlines of the cliffs. The snow on the distant La Sals became suffused with a delicate glowing pink melting into lavenders and deep blues as the sun sank, while the cliffs in every direction made a constantly changing pattern of exquisite coloring from the deeper roses to soft mauves and purples.

It seemed no time at all before we reached Moab canyon where a little of the old Mormon dugway, built in 1855 by the

first missionaries, is still visible. U. S. Highway 160 curves down the grade below this old road, passing the monument headquarters just beyond the cliff which formed the barrier those early pioneers had to cross. Our trip to Utah's most extraordinary and lovely arch had become a reality at last and we had had a never-to-beforgotten glimpse of the spectacular wonders of amazing Arches national monument.

MOST IMPORTANT

By TANYA SOUTH

Have patience, then, and go your way With love and blessing every day, And peace and goodwill every night Toward everyone. For to live right Is most important of all things, And nearest unto heaven brings.

Hard Rock Shorty

of Death Valley



"Are you Mr. Hard Rock Shorty," asked the stranger who had just arrived at Inferno store.

Shorty looked the visitor over, and noted the brand new levis and boots and Stetson hat. "Yu can jes' call me 'Shorty," he replied, after a pause.

"You're just the man I'm looking for—a real old desert rat, if you'll pardon the use of the uncomplimentary term you prospectors apply to each other," the stranger gurgled. "I've always wanted to meet a real desert miner and go on a prospecting trip with him. Of course I'll furnish all the groceries, and I've got a new tent and some canned caviar and a portable radio . . ."

"I guess I ain't the feller you're lookin' fer," Shorty interrupted, and sauntered into the store to share his disgust with the clerk.

"One o' them blasted dudes!" he exploded. "I took one o' them on a trip once. But no more o' that. We set up camp over at Alum spring the first night. Had a sack o' potatoes an' some flour an' coffee—enough for a week, and we left word with Pisgah Bill to bring us another load o' grub in a few days.

"I told the dude to wash the spuds, an' do you know what that blasted tenderfoot did. While I wuz out gatherin' some wood he took that whole sack o' potatoes over and put 'em in the pool below the spring to wash 'em off—sack an' all.

"Fust thing I knowed I heard him over there hollerin' and when I went over t' see what was up there he wuz fishin' around in the water tryin' to find the taters. When he finally brought 'em up that alum water had shrunk 'em up to about the size o' peas in a Bull Durham sack.

"An' all we had to eat for a week wuz sourdough biscuits an' coffee. I ain't got no more time fer dude prospectors."

DESERT CALENDAR

Sept. 18-Oct. 15—First state-wide Crafts show, State Art museum, Santa Fe, New Mexico.

Sept. 30-Oct. 1, 2—Pioneer Days celebration, Banning, California.

Oct. 1-2—New Mexico State fair, Albuquerque.

Oct. 2—State chambers of commerce trek to Bill Williams mountain, starting at Williams, Arizona.

Oct. 4—Day of San Francisco. Annual trek of the Papago Indians from Arizona into Magdalena, Sonora, Mexico.

Oct. 4—Annual fiesta and dance, Nambe pueblo, New Mexico.

Oct. 4—Ranchos de Taos Fiesta, San Francisco Day processional, Taos, New Mexico.

Oct. 4-5—Nevada State Pharmacists convention, Las Vegas.

Oct. 5-8—Eastern New Mexico State fair, Roswell.

Oct. 6-8—Navajo Indian fair, Navajo exhibits and rodeo, Indian dances each evening, Shiprock, New Mexico.

Oct. 7-10—Salton Sea Regatta power boat races, at Desert Beach, California.

Oct. 8-9—Centennial '49er celebration, frontier parade, Chandler ranch, Desert Hot Springs, California.

Oct. 9-15—Las Cruces Centennial, fete, Las Cruces, New Mexico.

Oct. 14—Greenlee County fair, Duncan, Arizona.

Oct. 14-15-National Highway 66 convention, Albuquerque, N. M.

Oct. 14-16—Mojave Gold Rush days, rodeo, free barbecue, Mojave, California

Oct. 20-22—New Mexico School of Mines '49er Centennial celebration, Lordsburg.

Oct. 20-23—Graham County fair, Safford, Arizona.

Oct. 21-23—Tombstone Helldorado, in "the town too tough to die." Tombstone, Arizona.

Oct. 21-23—Dig 'n Dogie Days; rodeo, mining events and county fair, Kingman, Arizona.

Oct. 21-23—Papago Indian rodeo, Sells, Arizona.

Oct. 22-23—Twelfth annual Pioneer Days celebration; parade October 22 at 1:00 p.m. Twentynine Palms, California.

Oct. 26—Annual Rose Garden show, Valley Garden center, Phoenix, Arizona.

Oct. 26-30—Pima County fair, Tucson, Arizona.

Oct. 31—Mardi Gras, Barstow, California.



| Volume 12 | OCTOBER, 1949 | Vu | mbe | er 12 |
|---------------|--|----------|-----------|-------|
| COVER | WHITE HOUSE Cliff Dwelling in Canyo Chelly, Arizona. Photo by Hubert A. Low | on vm | de an. | |
| CALENDAR | October events on the desert | | | 3 |
| PHOTOGRAPHY | Contest winners in August | | | 4 |
| EXPLORATION | 19 Days on Utah Trails By RANDALL HENDERSON | | | 5 |
| HUMOR | Hard Rock Shorty of Death Valley | | | 10 |
| MUSIC | The Chants of My People By MANUEL ARCHULETA, as told to ILON BARTH | | | 13 |
| TRUE OR FALSE | Test of your desert knowledge | | | 14 |
| INDUSTRY | 'Yucca Gun' May Create an Industry By DOROTHY L. PILLSBURY | | | 15 |
| BOTANY | Sacred Mushroom of the Aztecs By CLAIRE MEYER PROCTOR | | | 18 |
| MINING | Current news of desert mines | | | 19 |
| POETRY | Silhouettes, and other poems | | | 20 |
| FIELD TRIP | Fossil Shells From a Vanished Sea By HAROLD O. WEIGHT | | | 21 |
| ADVENTURE | Rock Climbers Reach the Bottom of the Cave of the Winding Stairs | | | 26 |
| LETTERS | Comment of Desert Readers | | | 27 |
| CLOSE-UPS | About those who write for Desert | | | 28 |
| NEWS | From here and there on the desert | | | 29 |
| НОВВУ | Gems and Minerals | | | 37 |
| LAPIDARY | Amateur Gem Cutter, by LELANDE QUICK | | | 41 |
| ANNUAL INDEX | Contents of Desert for the past year | | | 42 |
| COMMENT | Just Between You and Me, by the Editor . | | | 46 |
| BOOKS | Reviews of Southwest Literature | | | 47 |

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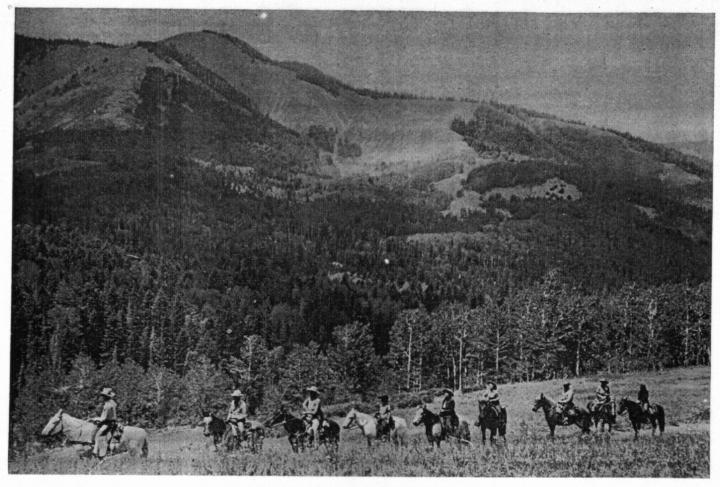
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The trail at this point led across a mountain meadow with the Abajo or Blue mountains in the background.

19 Days on Utah Trails . . .

Some of the trails we followed were first trod by cliff-dwelling aborigines hundreds of years ago. Most of them had been blazed more recently by cowboys and the rangers of the U.S. Forestry service. Some of them were so dim I wondered how Ross Musselman, our guide, was able to find his way. Others were deeply rutted by the tread of thousands of head of cattle. Some were so steep and rocky we had to dismount and lead our horses. At other times they led through lovely vistas of quaking aspen and spruce, with Mariposa tulip and Indian paint brush peering at us from the leafy undergrowth that bordered the trail. For 19 days we followed these trails with an ever-changing panorama of red and tan and white sandstone buttes and domes and palisades in the background. We rode 353 miles — and never went beyond the boundaries of San Juan county in the southeastern corner of Utah.

By RANDALL HENDERSON

HIS WAS the Utah desert wilderness—one of the most spectacular and least known regions in the United States. San Juan county has an area of roughly 3,800 square miles—more than the combined states of Delaware and Rhode Island—and yet its white population is less than 3000 persons, which probably is fewer persons than dwelt here at the peak of

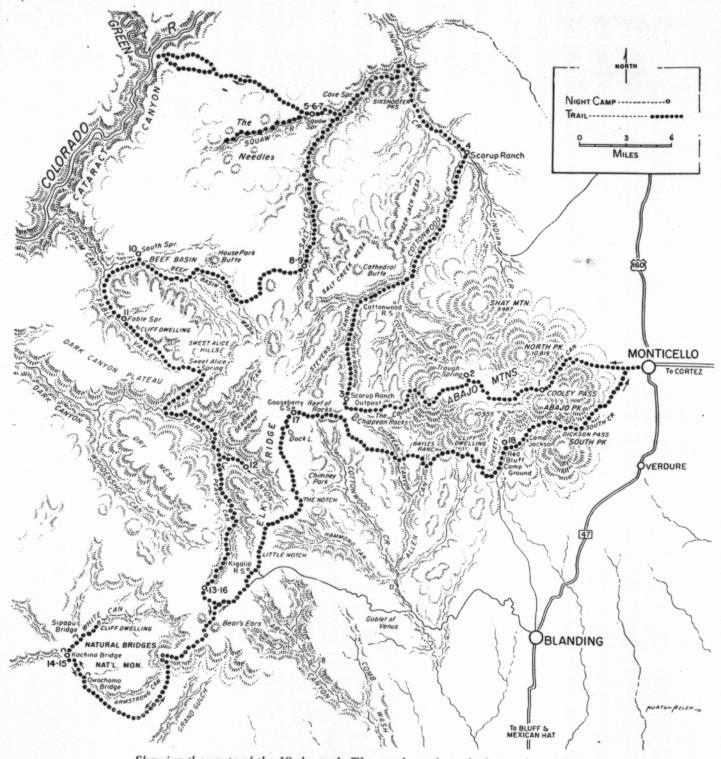
the cliff-dwelling culture a thousand years ago. There is no chamber of commerce in the county — which no doubt is one of the reasons Americans know so little about this colorful land.

From his guest ranch eight miles out of Monticello, Ross S. Musselman has been conducting pack trips into the San Juan country for 20 years. He probably knows the trails even better

than the cowboys who run cattle in parts of the county.

Ross invited me to accompany his 1949 expedition—and I was glad to accept, even though I realized the long hours in the saddle would involve some discomfort the first few days. I have long looked forward to an opportunity to get acquainted with this mysterious land of a thousand miniature Grand Canyons.

Nine of us arrived at Musselman's Four M ranch in mid-July, and met the four men who were to manage the pack train. In addition to Musselman, our crew included Val Leavitt, student from the Utah State Agricultural college at Logan, and Don Thomas, wrangler for the ranch, as packers, and Marvin Rogers, 16-year-old student of Berkeley, California, who was spending his summer vacation as a guest-employe at the ranch. Marvin's job technically is known as camp flunkey. But Marvin was no ordinary



Showing the route of the 19-day trek. The numbers along the heavy dotted line indicate the consecutive night camps—18 of them.

flunkey. He is an Eagle Scout who in the days ahead endeared himself to every member of the party by his indefatigible work and good humor.

Guest members of the party were: Scott and Edyth Carpenter of Nutley, New Jersey; Clarence (Pete) and Faune Spang of Butler, Pennsylvania; Elsie Flexon of Pittman, New Jersey; Leonard Martinson of San Francisco; Nancy Flack, 13-year-old of Pasadena, California; Gary Justice, 11-year-old of Berkeley, California, and Desert Magazine's reporter.

Before he came to Utah 20 years ago, Ross Musselman was secretary in charge of boys' camps for the Woodbury, New Jersey, Y.M.C.A., and his guests nearly always include boys and girls of school age who spend their summer vacations riding and camping with the Musselman expeditions.

We started with eight pack animals

— seven horses and Kewpie, a little

mule not much bigger than a burro, but the best pack animal of the train. Kewpie was the clown of the outfit.

Here is the day-by-day record of our 353-mile ride along the remote trails of Utah's sandstone wilderness:

First Day

All morning we loitered around the Four M corral, getting stirrups adjusted, saddlebags arranged, packs on the animals, and last-minute details completed. Some of the pack horses had





Cyclone valley, a former river channel now abandoned. The floor was covered with a new growth of tumble weeds. Typical spires and palisades of the San Juan country in the background.

Trail near the head of Indian creek where the Abajo mountain slopes were covered alternately with spruce, quaking aspens and talus slopes of broken granite.

There was snow in many of the ravines.

been on pasture for months and obviously did not fancy the idea of going to work again. But the saddle horses were veterans of the trail and Ross provided each rider with a well-broken mount.

We rode away at one p.m. and 2½ hours later stopped briefly in Monticello for last-minute purchases. Leaving the town we followed the well-graded road which leads over Abajo mountains to Blanding. Locally the Abajos are called the Blue mountains. This group of peaks is an island-like range rising to 11,357 feet from the 7,000-foot plateau on which Monticello and Blanding have been built. For the most part the range is timbered with aspen and spruce, but its slopes are checkered with great splotches of granite talus where nothing will grow.

We jogged along a lane bordered with dense thickets of Gambel oak, sometimes called Rocky Mountain white oak. The flowering season was at its best, and the dense underbrush was colorful with Mariposa tulip or Sego lily, the state flower of Utah, Canterbury bells, paint brush and wild rose.

As we climbed the oak gave way to aspen and spruce, and wild iris and columbine were added to the flower display. The trail led into North creek canyon where a tumbling stream pours down from melting snowbanks above.

Just before dusk we reached the summit of Cooley Pass where at an elevation of 10,600 feet we were to camp for the night. Nancy Musselman, 20-year-old daughter of our Chief, had driven up ahead of us in a jeep

pickup, and had a big fire going when we arrived. We carried water in buckets from the trickle below a nearby bank of snow. It was chilly at that altitude even in July, but most of the snow had melted when we recrossed the Abajos on our return trip nearly three weeks later.

We were in the La Sal forest reserve and the timbered areas on the range have been well protected. From our mountain camp we could look down on the checkerboard plateau where Utah ranchers grow beans and wheat on land that until recent years supported only sage brush. The annual rainfall in San Juan county varies from eight to 18 inches. Rain has been plentiful this year and big yields of wheat were being harvested.

One of the extra pack animals, car-



The mountain meadows were knee deep with grass—the result of heavy rains during the past season.

rying no pack, took off into the oak thickets this afternoon and finally got away from the pursuing wranglers, so our train was reduced to seven burdencarriers. But that was ample. Musselman figures one pack horse for each two riders. The biggest item in the pack load was oats, three quarts a day for each animal.

We spread our sleeping bags on a spongy mattress of leaves and twigs. Some of us had air mattresses, and later we were glad we brought them, but tonight the bed of leaves needed no extra padding for comfort. Our bedtime lullaby was the gentle swish of wind blowing through the spruce boughs.

Today we traveled 18 miles.

Second Day

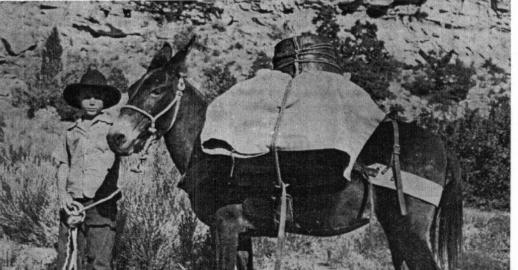
The horses had scattered through the timber during the night and it was ten o'clock in the morning before we were packed and ready for the trail. At this camp we left the dirt road and took a steep trail down the side of the mountain to the headwaters of Indian creek.

Again our path led through dense forests of quaking aspen. Mountain people call these trees "quakies." The aspen is a clannish tree. The tall slender white-barked trunks grow so close together a rider has to be on the alert constantly to avoid bruised legs.

We crossed and recrossed the creek many times. Trickles of snow water feeding in from the side ravines soon built it up to a sizable stream and we passed a party of men pulling trout from its waters.

Then we climbed out of the canyon and followed a good trail that contoured the mountain at about 10,000 feet. We had departed from our morning camp ahead of the pack animals,

Gary Justice, youngest member of the party, with Kewpie, the clown of the expedition.



and at noon we stopped in a sheltered cove beside a great snowbank to wait for them. A sudden rain squall sent us scurrying for cover under the spruce trees, but the sun soon reappeared.

Later we passed an Indian metate lying on the trail. In the days that followed we saw many of them — but we left them where they lay. One cannot collect Indian artifacts of such weight on a pack trip. Once Ross got off his horse and picked up a well-shaped mano — and I have that as a souvenir of the trip.

Late in the afternoon we reached a little meadow along Trough creek, a tributary of the great Cottonwood canyon system. There was a fine spring here, and water troughs for the cattle which run this range. The cowmen have improvised a type of trough worth mentioning. They hollow out huge logs, like dugout canoes, and then string them out end to end along the gentle slope so that each log overlaps the one next below, and overflows into it. Thus a string of a half dozen log troughs fed by gravity is always full, and will serve a large herd of stock.

We were in a little clearing sheltered by aspen, oak and Ponderosa pine, with a great white cliff wall towering on one side. Ross was chief cook, but all of us assisted with the camp chores—bringing in wood, carrying water, peeling potatoes. At most of the camps dry wood was plentiful, but there were times when springs had to be cleaned or dipping basins excavated to get clear water. Pete Spang assumed the role of water engineer and usually improvised easy access to the camp waterhole.

For cooking purposes, Ross followed the traditional practice of the range, where wood is plentiful. The method is to pile the fire high with wood, and then when it is reduced to hot embers, rake out little beds of them for the coffee pot, the skillet, and the stew pans. Thus the cooking is done around the fringes of the main fire, with each vessel on its own bed of coals.

Yes, it smokes up the kitchen ware — but it serves well. And I am sure it is easier on the pack animals and packers. I can imagine some of the remarks a wrangler would make each morning if he had to throw a squaw hitch over a portable camp stove.

With the fire going and the comissary unpacked, each of us turned to the important task of selecting a smooth place for the bedroll. At Trough springs camp we had to choose between wet sand along the creek, or a dry steep hillside. Each of us solved the problem in his own way — and if we made a bad decision we knew it

make the mistake again as long as we live and camp out.

For dinner tonight we had mulligan, made from fresh vegetables and canned meat, with canned plums, bread and jam, and coffee. We started with several loaves of fresh bread.

Today we rode 16 miles.

Third Day

We were up at 5:30 this morning. One of the animals went on a rampage just as Don and Val were throwing the hitch over its pack. The horse raced off through the aspens scattering pots and bedrolls as it went. Then a hard rain came and we had to seek shelter for a half hour under the oak trees.

It was 12 o'clock before we left camp. The trail led up out of the creek bottom to the top of a ridge where we had a glorious view of the country we were to traverse during the next few days. In the distance were the pinnacles of Monument valley. We were looking down on the Four Corners country, and could see the faint outlines of Shiprock in northwestern New Mexico.

Immediately below us was a series of white sandstone "cockscombs" towering above a forest of Ponderosa pine. This formation is called the Causeway, and is a spectacular landmark for this part of San Juan county.

Every hour or two the Chief would stop for a 30-minute rest. During the first few days of the ride these "stretch" periods were most welcome to those of us who had done little riding in recent years.

During the afternoon the trail led across a lovely mountain meadow fringed with pines. Among the trees ferns were growing as high as the horses' backs. Then the forest changed to aspens, with more ferns. Toward evening the trail led down into a broad valley of pasture lands. We saw a deer on the opposite hillside. The valley is called Mormon Pasture.

Our camp that night was near an old log house, where a generous flow of spring water was piped out to a corral. This cattle camp is said to have been established in the nineties by Mormon ranchers, but more recently has been acquired by the Al Scorup cattle interests.

Bordering the valley are great bluffs of red sandstone, with pinyon and juniper growing on the ledges and wherever they can obtain a root-hold. At an altiude of 7,000 feet, the night was cool and there was ample space for the bedrolls out in the pasture.

Around the edge of the pasture were wild gooseberry bushes laden with ripe fruit. No doubt Ross Musselman could make good gooseberry pies—but not with the equipment we had in this pack train.



Ross Musselman, who has been riding the Utah trails for 20 years.

Scorup's cowboys use this camp occasionally. A jeep was standing beside the log cabin. Cattlemen are using these cars more and more. They are useful for hauling supplies in the open country. But they do not take the place of the cowboy's pony when it comes to rounding up cattle in broken terrain and timber.

Today we rode 14 miles.

Fourth Day

There was dew on our bedrolls when we awakened at five o'clock this morning, but the desert sun soon dispersed the moisture. For breakfast we had creamed chipped beef with the last of the fresh bread.

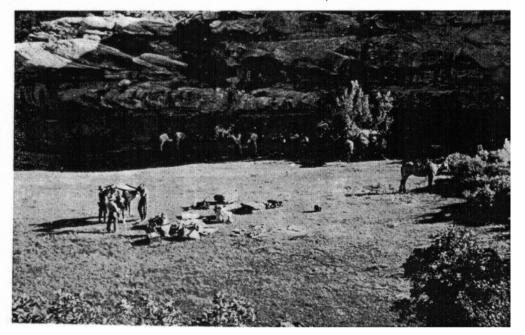
Then we rode along the creek in Mormon Pasture through endless fields of sage, sprinkled here and there with purple lupine. I am sure that lupine is the most widespread flowering plant in the Southwest, with Indian paint brush in second place. Lupine's

range is from sea level to 10,000-foot altitude.

As we rode down the valley, turreted walls of red and white sandstone gradually closed in, and an occasional Ponderosa towered above the forest of pinyon and juniper that covered the floor of the canyon. We followed the creek to its junction with Stevens canyon, and then down Stevens to Cottonwood canyon. Just below the junction with Cottonwood we stopped in the shade of a grove of cottonwood trees, and while some of the riders bathed in the creek others climbed a nearby butte where the slopes were covered with broken Indian pottery and obsidian chips. Many artifacts have been taken from the old pueblo ruins at the top of the summit, Ross told us.

Soon after we had resumed our ride down Cottonwood creek we passed huge blocks of sandstone in which were lodged sections of petrified tree trunks.

There were Indian petroglyphs on the walls near this camp on the grassy floor of a canyon.



Hard Rock Shorty Death Vallev

Hard Rock Shorty tipped his chair back to its most comfortable angle on the porch of the Inferno store, and allowed he might go up to the claim on Eight Ball crick and see how Pisgah Bill was getting along.

"Where does this Pisgah Bill stay all the time?" asked one of the bystanders. "We've never seen him. I don't believe there is

such a person."
"Well now," answered Shorty, "Bill is still a lively ol' cuss despite his 70-odd years, but you may never see him fer he's very shy. But he wasn't always that

way.
"Bill's been a changed man ever since he made that trip out to the city in the 'twenties. That trip really did somethin' to Bill.
"Yuh see when he arrived

there the streets wuz full o' strange lookin' fellers wearin' yella britches an' little red monkey hats on their heads. Bill couldn't figger it out - decided maybe he had gotten into a furrin country by mistake. Finally walked up to one o' them funny lookin' clowns and asked him if he could talk English. The feller said a few o' them could, and what did he want?

"'I want to git back to the

U.S.A.' hollered Bill.

"'Whereabouts in the U.S.A?' the feller wanted to know.

"'Death Valley, out in Californy. That's where my claim is, and I wanta go back there right now!' exclaimed Pisgah.

"'Come along with me, an we'll have some fun,' the feller

"So Pisgah jined the crowd, an' they played jokes on him, an' everybody laffed, an' they took him in a parade—an' finally Ol' Bill got it through his head these folks wasn't furriners-they was Shriners having a convention.

An' Bill was so ashamed of hisself fer bein' so dumb, he come back home and vowed he never wanted to see a dude again."

Today I got my first glimpse of a western collared lizard - and as far as I am concerned it is the prettiest member of the whole lizard family. Perhaps 10 inches long, of which more than half was tail, the striking characteristic of this lizard is its coloring. The head was orange. Then two black bands circled the neck, and the body was a brilliant green, tapering off to a slatecolored tail. In the days ahead I saw many of these brilliant-hued reptiles. Not all of them were as brightly colored as this first one, but I always stopped to watch them until they disappeared in the rocks.

At 6:30 we reached our night camp at the junction of Cottonwood and Indian creeks. Al Scorup's ranch headquarters in Indian creek canyon was just across the stream, and several hundred acres of cultivated fields are watered from the creek. We had been riding all day on the Scorup cattle domain. (Desert Magazine, Oct. '40). Al Scorup came into the San Juan country in 1891 as a youth of 19 with a few dollars in his pocket and grub on his pack horse. From that lowly start he has built a cattle empire that covers more than a million acres.

Nancy Musselman met us again with the jeep at this camp, bringing supplies that must last for the next nine days, for tomorrow our trail would lead into a wilderness where roads are unknown.

It had been a hard day's ride under a scorching sun, but we found a deep waterhole in Indian creek just below camp and the cool water dispelled all fatigue.

We were 10 hours on the trail today and rode 26 miles.

Fifth Day

We were up at 5:45 and had breakfast at seven. Then Ross and I crossed the creek to pay our respects to Al Scorup, on whose land we were camping. Although in his late seventies, he was saddling his horse for a morning ride. He is still a very active cattleman, and his intimate knowledge of the San Juan range enables him to direct its operation without spending 16 or 18 hours a day in the saddle as he did for many years.

We left camp at ten o'clock and for 11 miles followed a winding course down Indian creek. The spires of the twin Sixshooter peaks were conspicuous landmarks on our left as we rode down the valley. We stopped along the way to examine some petroglyphs on the rocks. This canyon, farther upstream, has some of the finest glyphs found in the Southwest. (Desert Magazine, Nov. '46).

We passed the mouth of tributary Lavender canyon, and then climbed a slick rock trail to Salt Creek mesa where we had a gorgeous view of what

is called The Needles country, a flaming labyrinth of domes, spires, castles, towers, pinnacles and monoliths that has never been made a National Park because it is so inaccessible. Against the towering cliffs the pinyon trees looked like dwarfed shrubs.

Then we dropped down into a meadow that led to Salt creek. The usual sage which blankets much of southeastern Utah was missing here and in its place was a great pasture of tumbleweeds. When tumbleweed is green the horses will eat it if there is nothing better. But portions of the flower structure dry into a disagreeable little thorn that both humans and animals avoid. When tumbleweed dries its roots give way before a strong wind and the plant goes rolling across the horizon, spreading seeds as it goes. We crossed through great fields of it at the lower levels of our journey.

Crossing Salt creek, which was now dry, we came to Cave spring, where a pool of water fed from seepage in the sidewalls is sheltered by a great overhanging cliff. This is another cowboy outpost. Faint pictographs on the walls indicated that prehistoric Indians had used this cave long before the cattle-

men came to this country.

We waited here for our pack train to arrive, and then rode another three miles to Squaw spring, where a fine flow of water bubbled up through the sandstone floor of an arroyo. Our camp site here was bare sandstone, and those of us with air mattresses were glad we had brought them. This was to be our base camp for the next two days, so we brought in a big supply of dead juniper from a nearby butte, and sought what comfort we could on the sandstone ledges.

Today we rode 24 miles.

Sixth Day

It rained during the night but there were waterproof tarpaulins enough to keep us fairly dry.

We were up at 5:45 and went about our camp chores leisurely, for the day's schedule was to include only eight miles

of riding.

At 10:45 we followed the Chief along a trail that led up Squaw creek into the heart of The Needles. Here millions of years of erosion have sculptured great cliffs of red and tan and cream sandstone into forms so fantastic as to make the term "Needles" wholly inadequate. In the gigantic palisades that towered above us we could find nearly any form imaginable. The sphinx was there, the pyramids, battleships, pipe organs, mammoth toadstools, and towers and spires and domes were everywhere. Pinyon grew on the ledges and in pockets, wherever it could find a toe-hold, and to add to the artistry of this mammoth fairyland

the walls in many places were streaked with patterns of tan and brown—the soluble desert varnish that rains had brought down from the capping at the

It rained while we were in The Needles and it was a disappointing day for pictures—but those weird formations probably will still be there for the photographers a thousand years from now.

We were reluctant to leave this gallery of the sculpturing gods and the sun was near the horizon when we departed for our camp on the slick rock. When we arrived at base camp the packers were trying to smoke out a rattlesnake they had seen crawl under a huge boulder. Eventually it came out for fresh air and was shot by Val. This was the only rattler seen during the 19 days. The natives told us San Juan county is "not good snake country."

Today we rode 8 miles.

Seventh Day

Six of us rode off early this morning for a sidetrip that would take us to the junction of the Green and Colorado rivers. The women chose to remain in camp to do their laundry — and rest.

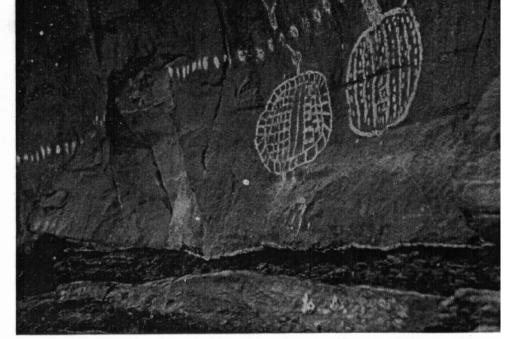
Our ride for the most part was across pinyon covered mesas, with an occasional shallow arroyo to cross. At 12:35 we reached the end of the horse trail, and then hiked along a ledge for a half mile to a saddle from which we could look down on the Y formed by the Colorado and its major tributary 1200 feet below us. This is the Cataract sector of the Colorado — where boatmen have encountered many hazards in the navigation of the stream.

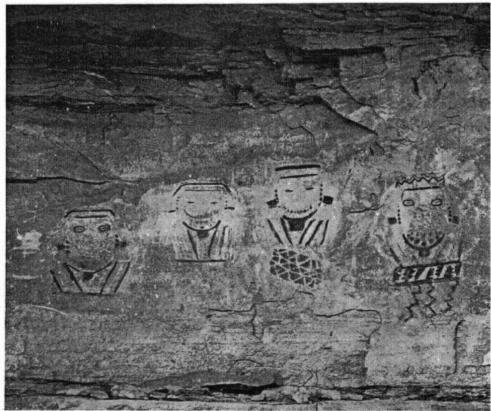
This point is accessible only by horse and foot trail, and few parties have visited the spot. We erected a cairn and Ross said that on his trip next year he would bring in a register so visitors could leave a record of their arrival at this remote spot.

When we returned to the horses Ross told us we would take a different route back. Parallel to the Colorado and less than a mile east of its channel we entered Cyclone valley, a vertical-walled gorge that resembled a hundred others we had seen — with the exception that it had a level alluvial floor covered with tumbleweed. Obviously, it had been formed during some prehistoric period by running water. But the stream long ago had been diverted elsewhere and today there is no stream channel in its floor.

We climbed out of Cyclone valley over a grade so steep we had to lead the horses, and dropped down into Devil's Lane, a formation almost identical to Cyclone—a gorge with no water channel in its floor.

Near the base of the sidewall in Cyclone canyon was a 12-foot stratum





Above — Petroglyphs of ancient design under a rock overhang near the head of Salt Creek. Below — These well-preserved pictographs found in a cave showed exceptional artistic skill.

of conglomerate that would provide a field day for a rockhound. It appeared to carry great quantities of jasper, and crystalline quartz and calcite.

Our return route wound through a maze of picturesque canyons. Once we had to detour a fresh earthquake or fault crevice three feet wide and apparently bottomless. When we returned to camp we learned that a rainstorm in The Needles during the afternoon had

sent a flash flood of thick red water down Squaw creek, submerging the spring. However, the runoff had been completed and clear cool water again was bubbling out of the rock in the bottom of the arroyo.

Today we rode 25 miles.

(This narrative will be completed in the November issue of Desert Magazine)

DESERT CALENDAR

Oct. 31-Nevada Day, parade, evening celebration, Carson City, Ne-

Nov. 1—All Saints Day, dances, Taos Pueblo, New Mexico.

Nov. 1—Opening of first Wickenburg golf course, Wickenburg, Arizona. Nov. 4-13 - Arizona State fair,

Phoenix.

Nov. 6-United Miners National conference, Reno, Nevada.

Nov. 8-9 - Arizona State Bankers convention, Phoenix.

Nov. 10-11-12 - American Women's Medical association convention, Tucson, Arizona.

Nov. 10-21--Open season on deer and wild turkey in most sections of New Mexico.

Nov. 11-12-State-wide square dance festival, Globe, Arizona.

Nov. 11-12-13-Clark County Gem Collectors Mineral and Gem show, U. S. Naval Reserve armory, Las Vegas, Nevada.

Nov. 12-Harvest dance at Jemez Indian pueblo, 45 miles north of Aubuquerque, New Mexico.

Nov. 12-Fiesta at Tesuque pueblo, Indian village seven miles north of Santa Fe, New Mexico.

Nov. 12-Arizona Engineering con-

vention, Phoenix.

Nov. 12-13 — Old Tucson days, in Tucson Mountain park, sponsored by Junior chamber of commerce. Includes reenactment of early-day life in Tucson, Arizona.

Nov. 12-16—Ogden Livestock show,

Ogden, Utah. Nov. 22—Season opens for hunting bear in New Mexico, with or without dogs. Season ends December

Nov. 24—First of weekly rodeos staged by Desert Sun ranches,

Wickenburg, Arizona. Nov. 28 - 29 — Twenty - ninth annual convention of New Mexico Farm and Livestock association, Albu-

querque, New Mexico. November—Navajo dances after the first frost, in various communities at unspecified dates. Arizona and New Mexico.

November-Winter guest ranch and resort season in Arizona desert opens.

DATE OF DEATH VALLEY CENTENNIAL IS CHANGED . . .

Because of conflict with other southern California events, date of the Death Valley Centennial pageant to be presented in Desolation canyon of the Funeral range has been changed from November 19 to December 3—a twoweek postponement.

Officials announced the shift in dates following a meeting of directors of Death Valley '49ers, Inc., sponsoring organization. The pageant will depict dramatic incidents in the journey of the Manly-Jayhawker parties through California's Death Valley just 100 years ago.



| Volume 13 | November, 1949 | N | lun | mber | | | |
|-------------|--|-----|-----|------|----|--|--|
| COVER | DEATH VALLEY MEMORIES, by Don Mo | hr | | | | | |
| CALENDAR | November events on the desert | | | | 3 | | |
| TRAVEL | New Gateway to Death Valley By PAT and GEORGE STURTEVANT | | | | 4 | | |
| WILDLIFE | Lure for Wildlife By ROBERT M. RIDDELL | | | | 9 | | |
| QUIZ | Test your desert knowledge | | | | 12 | | |
| FIELD TRIP | Grey Jewels of Bagdad By HAROLD O. WEIGHT | | | | 13 | | |
| EXPLORATION | 19 Days on Utah Trails By RANDALL HENDERSON | | | | 19 | | |
| POETRY | Calico, and other poems | | | | 26 | | |
| PHOTOGRAPHY | Contest winners in September | | | | 27 | | |
| MINING | Current news of desert mines | | | | 28 | | |
| LETTERS | Comment by Desert readers | | | | 29 | | |
| TRAGEDY | He Conquered the River— and Died in an Airplane | | | | 31 | | |
| HUMOR | Hard Rock Shorty of Death Valley | | | | 32 | | |
| CLOSE-UPS | About those who write for Desert | | | | 32 | | |
| NEWS | From here and there on the desert | | | | 33 | | |
| НОВВУ | Gems and Minerals | | | | 41 | | |
| LAPIDARY | Amateur Gem Cutter, by LELANDE QU | IIC | K | | 45 | | |
| COMMENT | Just Between You and Me, by the Editor | | | | 46 | | |
| BOOKS | Reviews of Southwest literature | | | | 47 | | |
| | | | | | | | |

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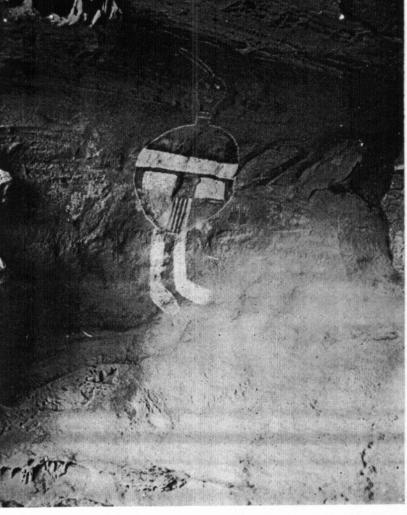
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Just inside the entrance of an almost inaccessible cave the riders found this grotesque life-size figure painted in blue and white and red—obviously put there by prehistoric artists.

The National Park service restored the ancient ladders to these ancient cliff dwellings, located in Bridges National Monument, so visitors could climb up and explore the ruins.

19 Days on Utah Trails . . .

For 19 days, Ross Musselman of the 4M ranch of Monticello, Utah, led a pack train with 12 riders along remote trails through the colorful sandstone country of southeastern Utah. The party explored little known canyons, visited prehistoric Indian dwellings, and camped each night at springs and waterholes along the trail. Randall Henderson's story of this wilderness adventure was told in part last month, and is concluded in this issue of Desert Magazine.

By RANDALL HENDERSON

Eighth Day

FTER CAMPING three nights on the slick rock at Squaw spring, we were eager to be riding off into the unknown country that lay ahead. In a region so vast and so varied there is no monotony. We had adjusted ourselves to the routine of camp chores, and found increased enjoyment in the ever-changing land-scape as the days passed.

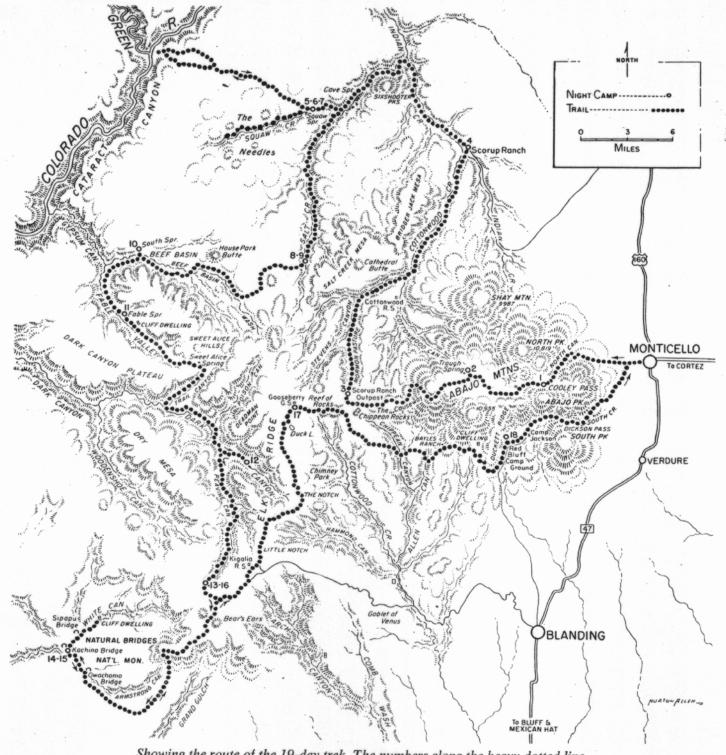
We were up at daybreak this morning, and while the packers were out

rounding up the animals, sleeping bags were rolled and breakfast prepared. We departed at 8:45.

For three miles we back-tracked along the trail by which we had come to Squaw spring, and then spent the rest of the day following the upstream course of Salt creek. I do not know the origin of its name. There were some salt cedars on the bars along the first mile or two, but the channel was dry. Further up we found water—but it carried no taint of salt.

Once when the creek made a great loop the trail took a shortcut over a ridge. There was a natural archway through the sandstone dike at the top of the ridge, and the walls were covered with Indian pictographs in white and red paint. One unusual feature of these picture writings - something I had never seen before—was the presence of numerous imprints of a human hand, as if the primitive artist had dipped his hand in a vessel of paint and then pressed it on the wall. He had well-shaped hands, and the imprint was sharp and clear. Marvin found a beautiful arrowhead at the base of the wall.

Our noon stop was at a spring that gushed from the sandy bank of the creek. Ross told us he had never heard a name for this spring—but it has one now. To members of our



Showing the route of the 19-day trek. The numbers along the heavy dotted line indicate the consecutive night camps—18 of them.

party it will always be Yellow-Jacket spring.

We tied our horses in a thicket of oak and went to fill our canteens. A moment later the horses started pawing and snorting. Obviously something was wrong. We rushed back to the animals and found ourselves in a swarm of angry yellow-jackets. Several of us were stung before we could move the stock to safer ground. For the information of those who have not been stung by a yellow-jacket, it is like

being punctured with a red-hot darning needle. The swelling in my ear did not go down for three days.

The canyon narrowed as we climbed higher, and the sandstone walls became more precipitous. Once Ross took us off the trail a short distance to an overhung sidewall where were painted four larger-than-life-size heads in brown and white pigment. The faces had distinctly oriental features, and were so skilfully done I was unwilling to believe until I made a care-

ful examination that they had been put there by primitive savages. I have examined thousands of petroglyphs (incised in the rock) and pictographs (painted on the rock) in my years in the Southwest, but never before had seen anything approaching the artistry with which these heads were sketched. Ross said they were there, just about as we saw them, 20 years ago when he first came this way.

Occasionally, far up on the sidewalls, we could glimpse the ruins of ancient cliff dwellings. We had no time to climb up to them, even when they were accessible. Some of them appeared to have no way of approach.

In a cliff that faced a little meadow far up toward the headwaters of the creek Ross detoured to a wide vertical crevice in the sidewall, and back in the semi-darkness of the cavern we could see the mud and stone of ancient walls. By careful hand and toe climbing some of us were able to gain entrance, and there on the wall just inside the crevice was the life-size painting of a fat Indian with a feather in his headband. The pictograph was done in blue and white and brown, and while the figure was grotesque, it was well preserved.

It was almost dusk when we reached our night camp at the edge of a meadow fringed with oaks. Our water came from a spring in the clay bank of the creek, and we had to cut steps to get down to it. The water was icy cold.

Today our supply of fresh bread was gone, and Ross got out the dutch ovens and gave Marvin his first lesson in the art of making camp biscuits. As in most other camp cooking, the regulation of the fire is the all-important factor in making good biscuits, especially in these days when prepared biscuit mix can be bought in boxes. Ross, however, clings to the good old flour and water and baking powder recipe, with a spoonful of grease and a pinch of salt and sugar. They were good biscuits.

Today we rode 24 miles.

Ninth Day

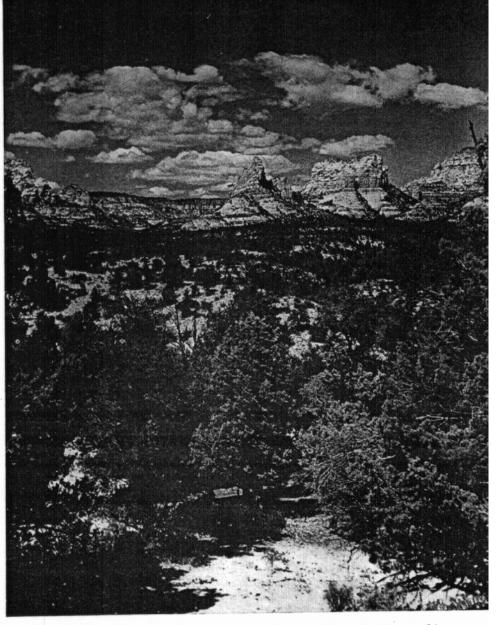
There was good pasture at this upper Salt Creek camp, and we let the horses graze while we spent the day exploring old Indian ruins in the vicinity. Some of us hiked two miles and climbed to a great natural arch which was discovered by Ross and his daughter, Nancy, in August 1940. Rough measurements indicated that arch had a span of 175 feet and a height about the same.

From beneath the arch we could see in the distance another that appeared to be equally large. The arches and bridges so common in this region, are the work of erosion through many ages.

Around our oak wood fire tonight we ate pinto beans, tamales, cheese, biscuits and jelly, with coffee. There were two nights on the trip when it was too warm to crawl inside the sleeping bags when we first went to bed—but we were always in them before morning.

Tenth Day

We left our upper Salt creek camp



Sandstone buttes and palisades in a setting of pinyon and juniper—this picture is typical of much of the area through which the trail led.

at 8:00 a. m. after a breakfast of oatmeal and raisins, and hotcakes with honey syrup.

We followed the creek two miles and then climbed a steep ridge and had rough going up and down grade through pinyon forests until mid-day when the trail led down into Beef Basin, a great meadowland of tumbleweeds.

Once we made a short detour to the site of an old Indian pueblo where the ground was covered with broken pottery. Ross told us that prehistoric pueblo sites are scattered over much of this area. Whether or not these mud and stone dwellings were built by cliff dwellers, or represent an earlier or later culture I do not know. Many of them have never been excavated by archeologists. There is nothing left except the foundations, and in some instances these are covered with sand.

The sites can be identified by potshards and loose stones.

Our night camp was at South spring where we spread our bedrolls on smooth sandstone ledges. A trickle of good water seeped from a crevice and our engineering department took an old tin can and made a serviceable faucet.

We have been out ten days, and have had at least a sprinkle of rain during seven of them. But today the sky was cloudless and Beef Basin was hot. It is good country for cattle, but lacks the scenic horizons to which we had become accustomed. But we had a clean campsite and a cooling breeze came up during the evening. Marvin's biscuits, cooked over a pinyon fire, were extra good tonight.

Today we rode 23 miles.

Eleventh Day

Beef Basin creek tumbles over a



The riders pause for a rest in a little cove surrounded by red and white sandstone buttes.

75-foot waterfall just below our South spring campsite, and from that point to its junction with the Colorado river is known as Gypsum canyon. We left camp at 8:30 this morning and climbed a precipitous trail to a pinyon-covered mesa from which we could look down on the colorful Gypsum canyon gorge. It is a Grand Canyon in miniature, in both color and form.

From the mesa we led our horses down a rocky trail into Fable valley where the cattlemen bring their stock for winter pasture. Here, as in many other valleys in this highly eroded land, flood waters are gouging deep gullies across the bottom pasture lands—and carrying the rich soil down to the Colorado and thence to Lake Mead. Before Hoover dam was built this area contributed millions of tons of silt to the building of Palo Verde and Yuma and Imperial valleys on the lower Colorado. As these gullies eat their way across the pasture lands the erosion takes place vertically—that is the banks cave off to form vertical walls 10 or 20 or 30 feet high. Ross told us that during the 20 years he has been following these trails a tremendous amount of rich soil has been washed away.

We camped tonight beside a little grove of Gambel oaks, and carried our water from a fine spring pouring into the creek a hundred yards away. Across a 30-foot-deep gully in the pasture, on the opposite skyline of the canyon, was a high butte with the ruins of what appeared to be an Indian watch tower at the top and the remains of a mud and stone fortress-like structure on a ledge half way up. These ancient ruins are inaccessible today, but several arrowheads were picked up by members of our party at the base of the cliff.

Many theories have been advanced as to why the prehistoric savages in this region abandoned their homes hundreds of years ago. They left long before the white man moved in. They may have been forced to leave by prolonged drouth, by epidemic or by the depredations of warring tribesmen. None of us can be sure of the answer. Ross Musselman has a theory of his own—that these Indians may have been carried off as slave laborers by raiding Aztecs at the time when Montezuma was building his great temples in central Mexico. Many archeologists probably would argue this point.

Generally we left camp ahead of the pack animals in the morning, but Don and Val with their train usually caught up with us before night. They arrived this evening without Ol' Jim. Jim was a big white horse, the veteran of the pack train. Soon after leaving camp in the morning he appeared suddenly to go loco, and raced off the trail with his load. When the packers tried to head him back he ran into bad rocks, fell off a huge boulder and broke a leg. In accordance with the unwritten law of the range, they ended his misery with a bullet. His pack saddle and load were shifted to the other animals.

Today we rode 12 miles.

Twelfth Day

We left camp at 9:15 this morning, heading up Fable valley. We saw a well-preserved cliff dwelling beneath an overhang high up on the sandstone wall. Marvin climbed up to it, but reported no artifacts were to be found.

Then we ascended a steep trail to the top of Dark Canyon mesa, contoured around the buttes known as Sweet Alice Hills, and took a wellworn cattle trail down Trail canyon to its junction with Dark canyon. Trail canyon is used by the cowboys to take their herds out of Dark canyon for winter pasture. It is a drop so precipitous we did not even try to lead the horses. We let them pick their way down over the rocks for a 1500-foot descent, while we were doing the same. Horses accustomed to the trails in this country follow well. Most of the time the smart rider will let them have a free head.

As far as I am concerned Dark canyon is the daddy of all the gorges in this region. I spent a week in 1946 packing down this creek to its junction with the Colorado river (Desert Magazine, Dec. '46.) It is an immense chasm bordered by serrated ridges in cream and tan and red sandstone. When the late afternoon sun strikes the sidewalls it brings out a hundred variations of exquisite shading. Against these brilliant walls the deep green of the pine trees which grow on the ledges and in cavities which pock the precipice provides the contrast for a picture beyond descrip-

It was 7:45 when we reached a log cabin near the head of the canyon, and here we camped by a noisy little waterfall, with a cool spring close by.

Today we rode 25 miles.

Thirteenth Day

For breakfast this morning we had oatmeal with raisins and creamed chipped beef with hotcakes. Ross uses dried milk for everything except coffee, and canned milk for that. For cereals and cooking the dried milk was very satisfactory.

There was an easy ride ahead today, and we did not leave camp until 9:50. Then we rode down Dark canyon to its junction with Peavine canyon, and up Peavine nearly to the top of Elk ridge where the cattlemen had piped water from a good spring.

Nancy Musselman met us here with the jeep, loaded with provisions for our commissary and grain for the horses. For nine days we had been living out of the packs carried by the horses, but Ross Musselman is an old hand at this business and we suffered from no shortages.

We were again above 8000 feet—in the land of aspens and big pines, columbines and Mariposa tulips. The Forestry service maintains a ranger station at Kigalia on Elk ridge, and a good road leads down to Blanding. Deer are plentiful in this area. In fact nearly all of San Juan county is deer country. We saw literally hundreds of antlers along the trails—the relics of the annual shedding period.

Both Nancy and Don Thomas play

the guitar, and she brought the instruments with her. Val Leavitt sings all the western songs. Thanks to Nancy and the wranglers we had a campfire program of music that was one of the highlights of the trip.

The sky was overcast when we went to bed, and we trenched our sleeping bags for a shower—but it did not come.

Today we rode 14 miles.

Fourteenth Day

Fresh eggs and fresh bread for breakfast this morning.

We left camp at 9:00 a. m. and an hour later reached the saddle between the Bear's Ears where our trail connected with the road that goes from Blanding to the Natural Bridges National Monument.

The Bear's Ears are two well known landmarks which rise several hundred feet above Elk ridge. They are shaped like volcanic craters with one side of each cone broken away. Actually they are sandstone buttes formed by some strange freak of erosion. They are covered with aspen and spruce trees.

From the saddle between them we could look far out across the pinyon flat which lay between us and the Natural Bridges Monument, which was our goal that day.

Part way down the grade we stopped at Maverick spring and then until late afternoon jogged along the road which motorists take into the Monument. Riding a smooth road became a little monotonous after the exciting trails of previous days.

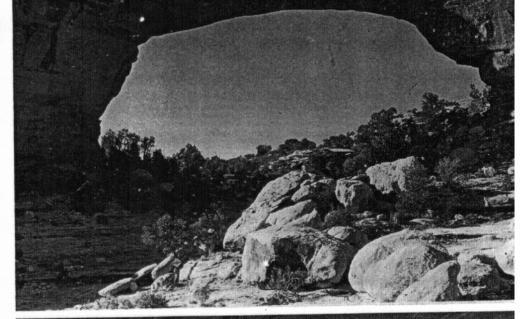
Mile after mile we rode along an almost level lane bordered by juniper and pinyon. We saw two Navajo hogans, used during the pinyon harvest when many of the Indians come north to gather nuts.

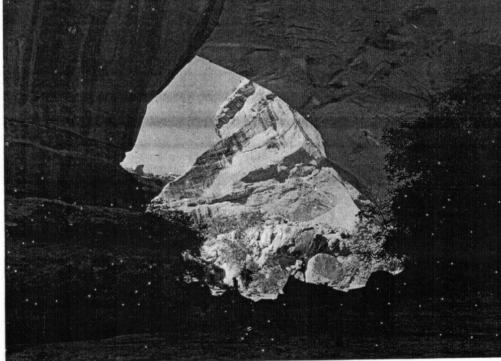
Late in the afternoon we reached the Monument headquarters where J. Wyley Redd, the custodian, and his wife live in a tent house and haul water from Maverick spring. Wyley has been custodian here for eight years. Al Scorup and his cowboy associates are credited with the original

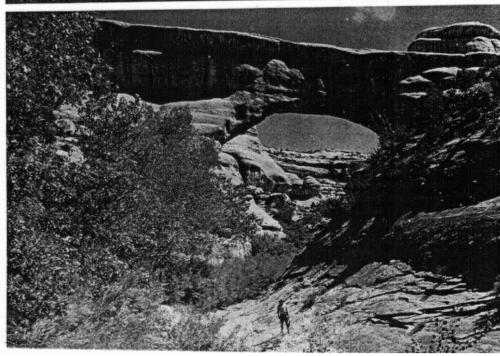
Top — Owachomo bridge in the Natural Bridges National Monument in Southeastern Utah.

Center — Katchina bridge, under which the riders camped two nights.

Bottom—Sipapu bridge, reached only by a foot trail.







discovery of these bridges. Later through the efforts of Zeke Johnson, they were set aside as a National Monument.

Owachomo bridge, formerly called Edwin, is in Armstrong canyon opposite Monument headquarters. This bridge may be seen by motorists at the end of the road. Katchina bridge (formerly Caroline) is three miles away at the junction of Armstrong and White canyons, and may be reached only by foot trail. It is another three miles up White canyon to Sipapu bridge (formerly Augusta).

Mrs. Redd told us Wyley was out searching for some Indian ruins, and we met him later along the trail. She served us ice water from the kerosene-burning Servel, and we took the trail for Katchina bridge where we were to camp for the night.

It was a rugged three-mile ride down the canyon, and we arrived at our campsite on a sandbar beneath the massive arch of Katchina just at dusk. There were no springs here, but we found drinkable water in holes along the creekbed.

White canyon would delight the heart of a rockhound. There were fine specimens of jasper in many colors, and chunks of what appeared to be black petrified wood. Ross told us this wood came down from Woodenshoe mountain where there are logs of it on the slopes.

There were old Indian ruins under an overhang near the bridge and many grinding holes in the rocks.

Today we rode 24 miles.

Fifteenth Day

During the night the horses wandered far up the canyon, and it was nearly noon when Don had rounded them up for the day's ride.

At 1:30 we took the trail for Sip-

apu bridge. We arrived there 45 minutes later, and then continued up the canyon to cliff dwellings reached by a 50-foot ladder the park service has maintained for visitors. No effort has been made to restore these dwellings, but the stick-in-the-mud granaries far back in the cave were well-preserved and of interesting composition, differing from the usual mud and rock construction of the cliff people.

White canyon is good hunting grounds for botanists as well as rock collectors and photographers. I saw squaw tea (ephedra) as high as my head. Indian paint brush was the predominant flower, and I counted 43 flower stalks on one root system. The trees included the usual pinyon and juniper plus maple, cottonwood, oak and boxelder.

Today we rode eight miles.

Sixteenth Day

Pete Spang and I left camp at 6:30 to hike up the canyon ahead of the others to take some pictures of petroglyphs we had seen on an overhead ledge previously. At eight o'clock the others caught up with us and we arrived back at Monument headquarters at 8:40.

Today we merely back-tracked over the road that brought us in to the Natural Bridges, and arrived at our previous camp in Peavine canyon in mid-afternoon.

Today we rode 24 miles.

Seventeenth Day

It rained intermittently during the night but we were well waterproofed. After one has lived much of his life on the desert it is a novel and pleasant sensation to lie out on the ground in a snug bag and hear the rain pattering on the tarpaulin that covers you.

After breakfast we headed out along the road past Kigalia ranger station toward a saddle at the head of Dark canyon known as The Notch.

Along the road we met Julian Thomas, forest ranger at this station. He told us they had been experimenting with aerial reseeding of the range. They had found the "pellet" method, seeding 1½ pounds to the acre, much less effective than the distribution from the air of 10 pounds of untreated seed. In places where cattle can be kept off the range for a period of two or three years, the aerial reseeding is bringing back a fine stand of grass and edible shrubs.

We passed over many sections of the range on this trip which obviously have been over-grazed. The main destruction caused by excessive feeding is not in the current loss of the grass, but in the destruction of flowers and seeds which would enable the range to reseed itself. Permanent damage is done by erosion which immediately starts when the grass dies. Our trail led along mile after mile where practically the only surviving plants were sage and tumbleweed. In the higher levels of Elk ridge snowberry replaced the usual sage.

I had seen the tiny plants of the Oregon grape, with leaves resembling mountain holly, many times along the trail, and finally discovered one with fruit. It grows a delicious looking purple berry—which is very very bitter.

In mid-afternoon we arrived at Gooseberry ranger station where we found a comfortable camp with a fine spring for ourselves, and good pasture for the horses.

Today we rode 22 miles.

Eighteenth Day

Gooseberry station was well named. Great patches of wild gooseberries grow here, and the fruit was ripe at this season. They are more palatable in pies than eaten raw, and we picked only a few of them.

Deer were grazing in the pasture when we awakened at five in the morning. The packers rounded up the horses and we were away at 8:30.

Our trail today was an endless succession of ups and downs. We were crossing the great canyon systems of San Juan county at right angles. One hour we would be following a trail among the pines at the top of a ridge, and the next we would be crossing a creek hundreds of feet below. I often walked on the downgrades, partly to make it easy on my horse, and partly for the exercise. I wore hiking shoes, rather than riding boots, for that purpose.

In mid-afternoon we rode across the

Invitation To Desert Visitors . . .

Palm Desert Art Gallery in the foyer of the Desert Magazine on Highway 111 between Indio and Palm Springs was opened for the season October 15.

The Gallery, exhibiting the work of 40 of the top-ranking painters of the desert scene, is open to visitors seven days a week from eight until five.

When visiting the Desert Magazine pueblo there is also the opportunity to browse in the book and crafts shop and inspect the publishing plant. We extend a cordial welcome to Desert's readers and their friends.

Desert Magazine Staff

Bayles ranch, where several hundred acres of grain were watered from a stream that comes down from the Abajo mountains. This was the second cultivated ranch we had seen in 18 days.

Near the ranch we passed thickets of choke-berries just ripening. It is luscious appearing fruit, but mostly seed, and not very appetizing. In the Abajo mountains we had seen wild strawberry and raspberry but they were not in fruit at this time.

On one of the ridges today we saw more Indian sites, and above the Bayles ranch was a great outcropping of chalcedony in many shades.

Just before dark we reached our night stop in the Red Bluff forestry camp on the side of Abajo mountain. The 4-H clubs of San Juan and Grants counties were having a camping field trip here, and 160 young people and their leaders were having a grand time. The noise of so many voices was in strange contrast with the stillness of the wilderness through which we had been riding. About the only sounds we had heard along the trail were the calls of the canyon wren and the pinyon jay, the swish of the wind in the trees, and the occasional jingle jangle of the pans and buckets tied on top of Kewpie's pack. Kewpie was such a little mule she had to trot to keep up with the long legged horses, and we always knew when the pack train was approaching by the rhythmic rattle of Kewpie's load.

We camped tonight on the edge of a little meadow of wild iris, now in seed, and cooked our biscuits on dry oak wood. This was our last night in camp.

Today we rode 28 miles.

Nineteenth Day

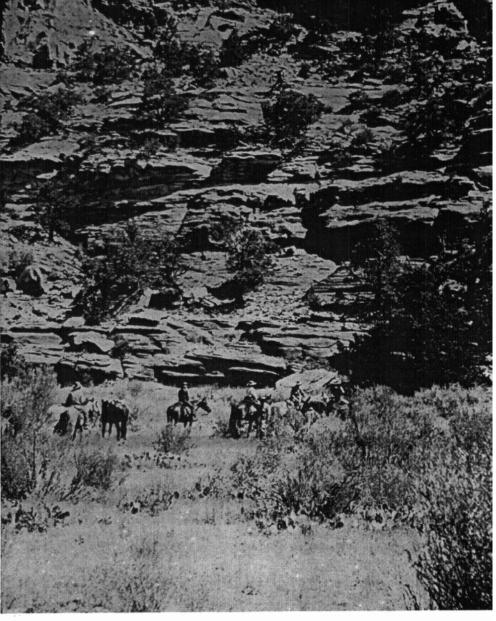
We were up at daybreak this morning, for we were rather glad after 18 days to be heading back to the land of milk shakes and hot baths.

We followed the Abajo mountain road two miles and then took off through a forest of aspen trees for the steep climb to Dickson pass, between Abajo peak and South peak.

From the summit we could look down again on the sage plain where Monticello stands. There were old mines near the summit—mines that never had produced much gold—and a good trail led down past them along South creek to the floor of the plateau below.

It was 18 miles to Monticello and there we completed our circuit, rode the last eight miles back to the ranch in cars that were waiting for us.

One of the members of the party



In the shadow of the overhang at the top of the picture is one of the many cliff dwellings seen on the 19-day trek.

expressed what I believe were the feelings of all of us: "I wouldn't do it again for a thousand dollars, and I wouldn't take ten thousand dollars for the experience."

For it was rugged. It was especially hard for folks who are not accustomed to riding regularly. Ross Musselman is one of those who believe that our civilization is having a softening effect on the human species. His trips are planned to make the riders hard and fit.

We rode on two meals a day. Generally breakfast was served before seven in the morning, and on two occasions it was nine in the evening before dinner was ready. Each rider cared for his own horse, except that the women's mounts were saddled for them. All of us lost weight on the

trip—but that was good for most of

Ross told me that not all his trips are as strenuous as this one. This fall his headquarters will be moved to another ranch near Moab, Utah, and next season he plans eight or ten-day pack trips with shorter rides for those who do not fancy the gruelling 19-day schedule.

San Juan county is a gorgeous country. It is comparatively poor in mineral and agricultural resources. But no region in the United States is richer in the intangible values of beauty and natural history. Its limited economic resources and sparse population may become an asset as more and more Americans seek the relaxation to be found only in the great silent spaces of the desert wilderness.

DESERT CALENDAR

June 28-July 1—Lehi Roundup, J. Ferrin Gurney, secretary, Lehi, Utah

July 1-3 — Three-day Rodeo, Silver City, New Mexico.

July 1-4—Desert Peaks section of Sierra club will climb Mt. DuBois and White Mountain peak in California.

July 1-2-3-4—Reno Rodeo. Parade, races, all rodeo events. Roy Peterson, chairman. Reno, Nevada.

July 1-4—Frontier Days and Rodeo. Parades, rodeo events, square dancing. Prescott, Arizona.

July 1-4—Seventeenth annual exhibition of Hopi craftsmanship. Museum of Northern Arizona, Flagstaff.

July 2-3-4 — Southwest All-Indian Pow-Wow, daily parades and nightly dances. Indian rodeo each afternoon. Photographers welcome. Flagstaff, Arizona.

July 2-5—Apache Devil dance, on the Mescalero Indian reservation northeast of Alamogordo, New Mexico.

July 3-4 — Bit and Spur Rodeo, Tooele, Utah.

July 4—North Ogden Cherry Days, North Ogden, Utah.

July 4—Cimarron Rodeo, sponsored by Maverick club, Cimarron, New Mexico.

July 4—Lions Club Rodeo, Gallup, New Mexico.

July 4 — Douglas celebration and Cavalcade, Douglas, Arizona.

July 4-5—Showlow Rodeo, Showlow, Arizona.

July 4-8—Annual Horse show, A. P. Fleming, manager, Ogden, Utah.

July 13-14-15—Harvest Days, Midvale Kiwanis bowl, Midvale, Utah.

July 13-15—Annual Ute Stampede, Nephi, Utah.

July 14 — Annual Feast Day and Corn dance at Cochiti pueblo, New Mexico.

July 15-16 — Round Valley Rodeo, Springerville, Arizona. J. L. Briggs, chairman.

July 19-24 — Annual Pioneer Days celebration, Ogden, Utah.

July 19-24—"Days of '47" observance, Salt Lake City, Utah.

July 21-22-24 — Fiesta Days, Clyde Hicken, secretary, Spanish Fork, Utah.

July 24—Mormon Pioneer celebration, Safford, Arizona.

July 25 — Santiago's Day at Santa Ana and Laguna pueblos; Corn dance at Acoma pueblo, New Mexico.

July 25-26—Annual Fiesta and Corn dance at Taos pueblo, New Mexico.

July 27-28-29 — Robbers' Roost Roundup, Price, Utah.



| Volume 13 | JULY, 1950 | Nu | mb | er 9 |
|---------------|--|----|----|------|
| COVER | "20-Mule Team," by FLOYD B. EVANS | | | |
| CALENDAR | July events on the desert | | | .3 |
| EXPLORATION | La Mora Canyon in Baja California By RANDALL HENDERSON | | | 4 |
| FIELD TRIP | Rocks Where the Rivers Meet By HAROLD WEIGHT | | | 9 |
| NATURE | Streamlined for Speed By GEORGE M. BRADT | | | 14 |
| FICTION | Without Pawn By MARGARET MOWER | | | 15 |
| QUIZ | Test your desert knowledge | | | 18 |
| ART OF LIVING | Diary of a Jackrabbit Homesteader By CATHERINE VENN | | | 19 |
| LOST MINE | Lost Mine of Coconino By GLADWELL RICHARDSON | | | 21 |
| POETRY | Selected poems | | | 24 |
| PHOTOGRAPHY | | | | |
| LETTERS | Views and comments of Desert readers . | | | |
| PERSONALITY | He Followed the Trails of the Desert Padres | | | |
| CLOSE-UPS | By HOPE GILBERT | | | |
| MINING | About those who write for Desert | | | 31 |
| NEWS | Current news of desert mines From here and there on the desert | | | 32 |
| HUMOR | II 1D 101 . (D 1 II | | | 33 |
| LAPIDARY | Amateur Gem Cutter, by LELANDE QUICK | | | 38 |
| HOBBY | Gems and Minerals | | | 40 |
| COMMENT | Just Between You and Me, by the Editor . | | • | 41 |
| | , and Dot week I ou and Me, by the Editor . | | | 46 |

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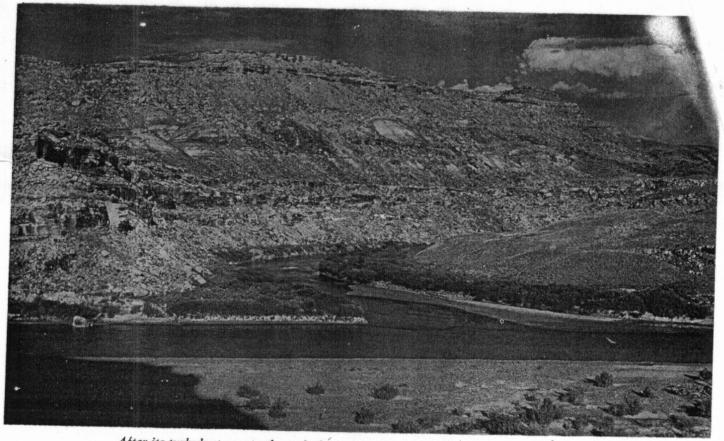
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After its turbulent course through the canyons and gashes of the Colorado plateaus, the Dolores flows quietly into the Colorado at this junction, one of the most beautiful spots along the great River of the West. Photo taken from Agate Hill.

Rocks Where the Rivers Meet . . .

With a veteran rock collector and lost mine hunter as a guide, Harold Weight followed a winding dirt road that led to Agate Hill in eastern Utah—and there found a precipitous mountainside covered with broken jasper of varied and beautiful coloring. They also found a perfect vacation campsite for those who like to loaf and fish. The locale of this story is the fabulous desert wilderness of southeastern Utah—a region featured in many past issues of Desert Magazine.

By HAROLD WEIGHT Photographs by the author

HAT ROCK comes from a pretty place," Bill Henneberger told us as we admired his pieces of bright jasper. "It is from Agate Hill in eastern Utah, where the Colorado and Dolores rivers come together. I collected it when I was down at Dewey bridge, repairing placer mining equipment."

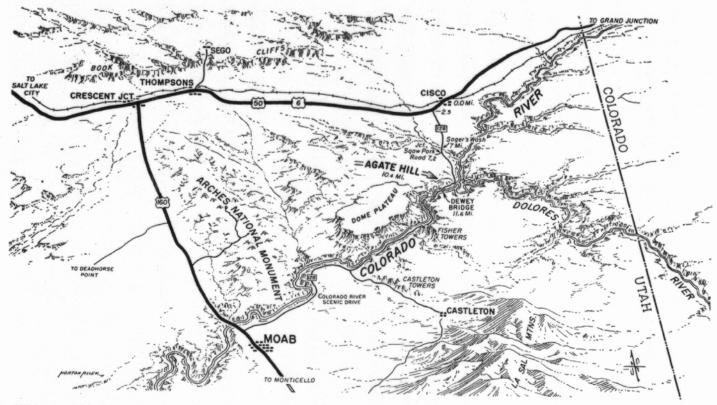
We were looking over Bill's rocks at his home in Grand Junction, Colorado, and planning possible field trips. Agate Hill sounded promising and Bill assured us there was plenty of the jasper. It was gratifying to know a good dirt road, used daily by the Cisco-Moab mail carrier, passed the field—but it was also disillusioning to me. I had always pictured the junction of the Colorado and the Dolores as remote and inaccessible.

While we drove along Highway 6 and 50 toward the Utah border, Bill Henneberger, who has prospected and hunted rocks as a hobby since he came West in 1916, told us of his first visit to Agate Hill. His present work as a machinist, including repair of mining and milling equipment, sometimes takes him on business to places

where rockhounds could spend happy vacations.

A broken winch which had been used to haul a placer gold recovery machine through the river brought him to the junction of the Colorado and Dolores in 1944. From Bill's description, it must have been quite a gadget. A cable had been anchored on either side of the Colorado, and a generator and electromagnets were dragged back and forth on the floor of the river on it. The generator was in a "sort of submarine" with pipes sticking above the water. Apparently the machine depended upon setting up magnetic fields which would attract the black iron sands, then trap the fine gold and other minerals of great specific gravity in the iron held by the magnetic fields.

If that sounds complicated you should see some equipment for recovery of fine and flour gold. Everyone with an inventive turn of mind seems to have worked on the problem. In 1936 the California Journal of Mining and Geology estimated 7000 such devices had been patented. Some are simple, others unbelievably complex. Some work fairly well, some are worthless. The Colorado River sands have been the testing ground—and graveyard—for many.



While repairing the winch, Bill saw the colorful jasper and agate chunks around the old cabins where the miners lived, and learned where they had been found. He stopped to collect some on the way out.

He has another hobby. He is an avid lost mine and buried treasure fan and has collected all available information about many of these bright legends of the West. He has searched for several-including Southern California's Lost Pegleg- sometimes with

the aid of his M-Scope.

"There's a railroad station called Sagers up ahead, about five miles west of Cisco," he said. "Once a Japanese cook worked there and according to the story he had a lot of money, all in silver coin. When he was alone, two Mexican workers tried to force him to give up his money. They killed him when he refused, but they didn't find his coin, and neither has anyone else. Folks think he must have buried it near by. But I went over every likely place with my detector and didn't get an indication."

I've been interested in these locators since the war when I operated a similar but more sensitive airborne device designed to spot submerged submarines. I had never seen one of the little metal detectors in actual service, so I questioned Bill regarding

their usefulness.

He grinned. "It certainly detects metal. About 44 years ago there was a train robbery near Grand Valley. A chest of gold coin was carried off by the robbers, lashed between the

saddle horn of two horses. They carried it across the Colorado River, and are supposed to have buried it by three big cottonwoods about 200 yards below the present bridge. I didn't find any gold coin when I tried my detector there, but I did locate stove plates, truck wheels and a lot of other scrap. Even the black iron sand in the river bars gave me strong indications!"

Our last chance to check gas, oil and supplies was at Cisco, Utah, about 55 miles from Grand Junction. Zeroing our speedometer there, we continued on the main highway west for 2.5 miles, then turned south on State Highway 128. This is the Colorado

DEWEY BRIDGE LOG

00.0 Cisco, Utah. Approx. 55 miles west of Grand Junction, Colorado and 236 miles east of Salt Lake City on U. S. 6 & 50. Follow U. S. 6 & 50 southwest

02.5 Junction with Utah State 128, the Colorado River road. Turn left (south) on 128. Dirt road, slippery in wet weather.

07.0 Cross Sagers wash, "Dangerous in flood.

07.2 Y. Road Keep left: Right branch goes to Squaw Park mining district, uranium and vanadium.

08.0 Abandoned log cabin (left) marks old Cato homestead.
10.4 Agate Hill collecting area,

right; junction of Colorado and Dolores rivers, left.

Dewey suspension bridge Limit four tons. (Moab (Moab 35 miles.)

River road, reaching the river north of the Dolores and following it to Moab along red cliffs and through green bottom-land.

Utah State Guide lists 128 as: "Not recommended for squeamish drivers or timid passengers, impassable in winter and during spring floods." The road has been improved since that was written, but wise motorists will check its condition at Moab or Cisco before attempting a through trip. However from the pavement to Dewey bridge it is an excellent desert road when dry.

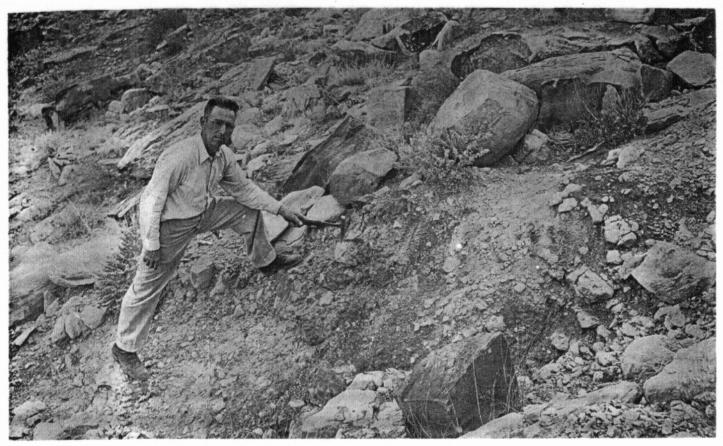
"But if it rains," Bill warned, "it gets as slick as grease." He added, comfortingly, "If it doesn't rain enough to soak through you might get out in a couple of hours." Anyone who has slid purposelessly—and apparently in at least four directions at once-on a wet Utah clay road will need no additional warning.

The road made its first branch just across Sagers wash—posted "Danger-ous in flood"—and 7.2 miles from Cisco. We kept left. This is in Utah's uranium boom country, and the right branch leads to Squaw Park mining district where carnotite and vanadium

claims are being worked.

As we neared the Colorado, Bill pointed out the picturesque ruins of a log cabin under cottonwoods to the left. "Quintus Cato homesteaded there in 1908," he said. "He was the one who started the placer mining down by Dewey bridge. Philip Mc-Carey owns that ranch now."

The Colorado river came in sight on our left and the road narrowed, wind-



William C. Henneberger, who first collected Agate Hill cutting material in 1944 after repairing mining equipment on the river below, points to an outcropping of the yellow-red-purple jasper.

ing between the water and high reddish cliffs. Tamarisk and arrowweed lined the stream edge and as we rounded a curve pheasants in the road scattered and took off in low whirring flight across the river. Driving the last twisting section before reaching Agate Hill, we were absorbed by the quiet beauty of the river and its canyon.

The occasional gravelly banks and small sand bars, the deep shadow of the shimmering green cottonwoods were so inviting we started planning a return trip when we could spend leisurely days here. We would hike up tributary canyons, fish in smooth flowing water, relax under trees or on sunny sand, and watch the wildlife that concentrates around water in the desert.

As we rounded a sharp bend, the canyon opened up and Bill said: "We're here! Look to the right. There's a bench mark at the back of that big boulder. Stop just beyond it and we'll climb that slope."

When Bill sets foot in a rock field, he soon disappears over the hill, leaving even seasoned rockhounds panting. He's also something of a mountain goat. So it was not too surprising that the "slope" was a precipitous mountainside where we looked up and up

at a series of striking formations.

Then we were scrambling up, over and around large boulders, apparently of limestone. Among them we found chunks and boulders of jasper matching that in Bill's collection. Red, yellow and purple was the predominate combination. The most distinctive patterns were yellow and purple with tendrils and feathers of Chinese red. The best specimens had all three colors in fine moss.

We were elated by the size of some pieces, but soon discovered that many of the bigger ones were fractured and that their centers often were not as good in color or texture as the smaller chunks. We continued to climb until we reached an overhang under which excavations apparently had been made. A good deal of the jasper had been removed here. Some of the ledge contained minute quartz crystals and calcite, and the quality did not seem as good as that below.

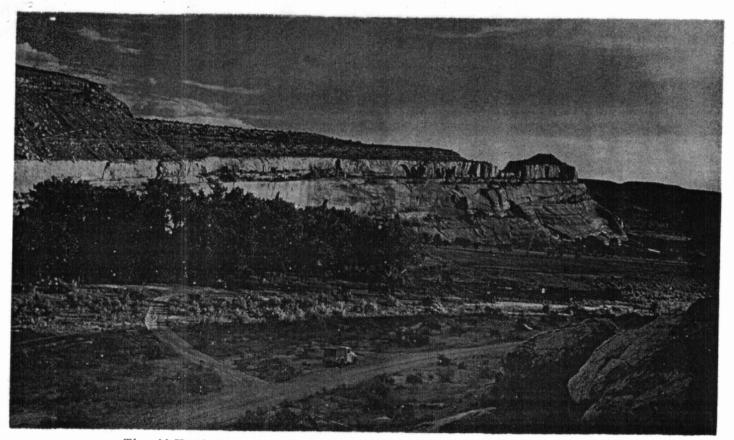
From our perch at the base of the overhang, Bill pointed to the valley below, where a cottonwood oasis sheltered weathered cabins. "That's the ranch where I stayed while fixing the winch. An old fellow named Parker lived there and operated the placer. It was originally homesteaded by Frank Hatch about 1900, and now it's owned

by Lester Taylor of Moab."

It seemed a perfect picture of frontier Utah—the old log cabins almost hidden under the cottonwoods, the green meadowland circled by towering reddish cliffs, the two rivers mingling smoothly into a great silver band at the cliff base. And over it all the crisp blue sky was alive with hurrying white clouds. Frank Hatch knew how to pick a homesite!

By the time we had sampled the jasper, the entire hillside was in shadow. We wanted to see and photograph the Dewey suspension bridge, so we drove on. Before we reached the slender span, Bill pointed out a gasoline power shovel across the river, recalling his second visit to the area a few months before.

A number of outfits have attempted to mine placer gold in this area. Quintus Cato is supposed to have been the first—in 1908—and also the most successful, having recovered \$10,000, most of it from one pocket. The latest is the Cisco Mining company, and they bought the power shovel from the S and M Supply company for which Bill works. The big shovel was hauled to the bridge on a low semitrailer, but obviously couldn't be carried across. So it forded the Colorado under its own power, but broke a



The old Hatch homestead—log cabins under the cottonwoods—is a landmark for the collecting field, right foreground. Dewey bridge is to the right of the sandstone headland, center right. Many attempts to reclaim fine placer gold have been made along this stretch of the Colorado.

clutch shaft part way up the opposite bank. Bill made a new part for the shovel, brought it down and installed it, then drove the big machine out of the river.

Bill learned the machinist's trade in Pennsylvania when he was 17 and first came to Grand Junction to work in the Denver and Rio Grande Western shops. When they put him in the round house, he quit in disgust and picked apples until he earned his fare back East. Once there he missed Colorado so much that he rode a freight from Chicago to get back. Enlisting from Grand Junction, he served through World War I in the navy as aviation mechanic.

He is especially fond of his present job because of the variety it affords. He has gone high into the Colorado mountains in the winter snows to dismantle old mills at Silverton and Leadville, and into the Utah desert heat to work on balky compressors in the carnotite mines. But this does not furnish enough outdoor life for Bill. In the winters he loads an old pickup, equipped with metal cabin, bed and stove, and takes off for a rockhunting and fishing expedition in the southern deserts.

When we reached the Dewey bridge and saw the four-ton limit, we estimated the truck's weight, our own and the load of rocks and camping equipment in the back. There seemed a fair margin of safety so we set the wheels on the single track. The bridge was a bit agitated by our passing, but didn't let us down.

This bridge is one of the two which cross the more than 400 miles of Colorado river separating what we call the Utah strip from the rest of the state. The other is at Moab. The Arizona strip, cut off by the Colorado river in the northwest corner of that state has been widely publicized. This southeastern corner of Utah, isolated by the same river, is just about as large and has a much greater population, including the towns of Blanding, Monticello and Moab.

There was little time to explore at Dewey and, having photographed the bridge, we turned back. It was nearly dark when we reached Agate Hill again, but I wanted to stop for a last look at the two rivers.

Only since 1921 has there been a junction of the Dolores and the Colorado. Before then, it was the Dolores and the Grand with the Colorado coming into existence where the Grand and the Green joined. The Grand, famous among early mountain men and explorers, was renamed the Colo-

rado by Congress and the states involved when stream measurements proved the Green to be tributary to it.

Probably mountain men camped and trapped beaver at this spot. But none of them-Bill Williams, Rubidoux, Fitzpatrick or the rest - left much more than a depleted beaver population to show where they had passed. The early westward travelers seemed to have missed the junction. Escalante and Dominguez, in 1776, crossed the Dolores miles above this point. Branches of the Old Spanish Trail, followed by New Mexican traders to California in the 1830s and 1840s, apparently forded the Colorado to the north and south. The later main routes of emigration were to the north.

The pioneer river adventurers favored the Green over this branch, and there is only one early trip on record down the Grand from Grand Junction through to the Green. That was made by F. C. Kendrick in 1889, when he surveyed for the railroad Frank M. Brown dreamed of constructing at river grade through the Grand Canyon to the Gulf. The Dolores resisted whitewater boatmen until 1948 when a trip from near its source to the junction was completed by Mr. and Mrs. Preston Walker of Grand Junction and

Otis and Margaret Marston of Berkeley. They used a cataract-type boat built by the late Norman Nevills and reported the Dolores more turbulent than the Snake or Colorado rivers.

As I watched from the slope of Agate Hill, dusk poured into the little valley and the rich black shadows of the cliffs were heavy on the bottom lands. The old log cabins vanished under the cottonwoods. The thread of road, last evidence of human workings, became indistinct. Across the valley the waters of the Dolores poured silently from the still wild, still mysterious plateaus and mountains to mingle with the Colorado in a shining silver Y.

In that last light the junction of the two rivers became as lonely and remote from the present-day world as I had first imagined it would be. Alien to man, yet neither friendly nor unfriendly. Disturbing yet peaceful. At the very edge of space and outside the fetters of time.

I said something about it to Bill as we drove back toward the paving. About the untamed, unknown country that here lay close to the towns and just beyond the roads. He took me up enthusiastically.

"Unknown is right! We've got a lost mine within a dozen miles of Grand Junction, the biggest city in this part of the country."

It's the Lost Pin Gold mine, and the

story seems to have started about 1924 with an old prospector who brought placer gold in little pin-shaped pieces into Grand Junction and sold it to a jeweler. When he died, efforts were made to find the source of his gold. They knew he had ridden out with a man cutting posts in the cedar breaks. This man took him up the south side of the Gunnison River past the Black Rock dam. Beyond that point they could not trace him.

Then in 1945 two men left Grand Junction, crossed the Gunnison river bridge and turned left up the river. They entered one of the many canyons there and hiked until sundown when they made camp. While looking for wood one of them noticed little metallic bits on a flat surface of rocks. They were tenderfeet, but it looked like gold so they picked up what they could find before dark.

The next day they returned to Grand Junction where a prospector named Smith identified their find as gold. The two men went on to California, but one of them returned in 1947 to relocate the gold. He was unsuccessful.

On his first hunt for the pin gold, Bill Henneberger found nothing. He tried again Labor Day 1949. With Charlie White he went up the big canyon east of one called No Thoroughfare. There are four main branches in this canyon and about a mile up one of them Bill and Charlie

found water trickling between deep holes worn in the solid rock.

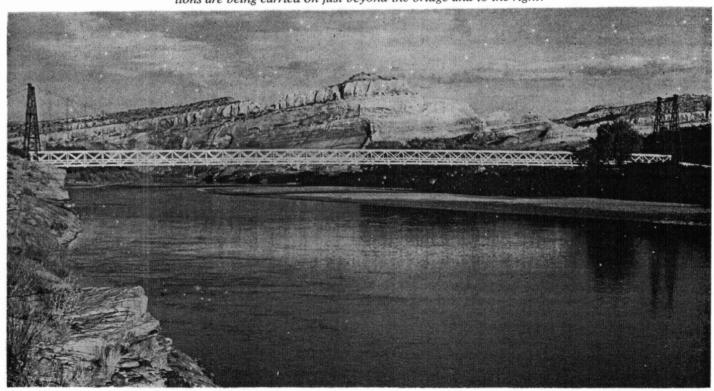
"I'd forgotten to bring a canteen," Bill explained, "and we had to have water or turn back. I told Charlie, 'Let's try this. If it was bad water, those frogs and tadpoles wouldn't be in it.' So we drank it and it sure tasted good."

They continued and about two miles up the branch found an old campsite on the edge of the wash. "Grass and shrubs had grown up in the wood ashes where the fire had been. And I found a cache with a shovel, axe, skillets, pans and tin cans. The bottoms were rusted out of pans and skillets and the axe and shovel handles were rotted. I took samples in likely places in the canyon, but never panned a color. But I put a new handle in the axe, and I'm using it today.

"That's all I've gotten out of the Lost Pin Gold mine so far. But I'm certain that was the old prospector's camp. I'm going back again, and next time I think I'll find it."

We hope Bill does find his Lost Pin Gold. But we doubt if he'll be really disappointed if he doesn't, because we think Bill is one of those people who like to be out in the desert wilderness, whatever the excuse. Who agree with that ancient chronicler of the Coronado expedition who said, in effect, that even if they hadn't found gold, they'd found a wonderful place to look for it.

Dewey suspension bridge—one of only two bridges which cross more than 400 miles of the Colorado River and tie the colorful and fairly populous "Utah Strip," the southeast corner of the state, to the rest of Utah. Present placer mining operations are being carried on just beyond the bridge and to the right.



DESERT CALENDAR

Sept. 1-2—Iron County Fair, Parowan, Utah.

Sept. 1-2—Box Elder County Fair, Tremonton, Utah.

Sept. 1-2—Morgan County Fair, Morgan, Utah.

Sept. 1-4-Nevada State Fair, Fallon.

Sept. 1-4 — Elko County Fair and Livestock show, Elko, Nev.

Sept. 1-4 — 238th annual Santa Fe Fiesta, Santa Fe, N. M.

Sept. 2—St. Stephen's Feast Day and Corn dance at Acoma pueblo, N. M.

Sept. 2-3-4 — Tooele County Fair, Tooele, Utah.

Sept. 2-3-4—Annual Nevada Rodeo, Winnemucca.

Sept. 2-3-4—16th annual Homecoming and Rodeo, Bishop, Calif.

Sept. 2-17 — Arizona Photographers eighth annual exhibition, Museum of Northern Arizona, Flagstaff.

Sept. 4 — Annual "Roaring Fifties" barbeque and dance, Barstow, Calif.

Sept. 4-Rodeo, Williams, Ariz.

Sept. 4 — Railroad Day celebration, Winslow, Ariz.

Sept. 4-6—American Meteoritics society convention, Flagstaff, Ariz.

Sept. 7-8-9—Annual Lincoln County Fair, Pioche, Nev.

Sept. 7-8-9—Southern Utah Livestock show, Cedar City, Utah.

Sept. 7-8-9 — Juab County Fair, Nephi, Utah.

Sept. 9-10—Annual Lucerne Valley Days celebration, Calif.

Sept. 15-17—Union County. Fair, Clayton, N. M.

Sept. 15-17—San Juan County Fair and Rodeo, Farmington, N. M.

Sept. 15-17—Yavapai County Fair, Prescott, Ariz.

Sept. 15-23—Utah State Fair, Salt Lake City.

Sept. 19-22—Roosevelt County Fair and Rodeo, Portales, N. M.

Sept. 23-24—Fourth annual Rodeo, Barstow, Calif.

Sept. 23-Oct. 1—New Mexico State Fair, Albuquerque.

Sept. 27-30—Quay County Fair, Tucumcari, N. M.

Sept. 29-Oct. 1—Coconino County Fair, Flagstaff, Ariz.



| Volume 13 | SEPTEMBER, 1950 | Number | 11 |
|---------------|---|----------|------|
| COVER | NEW MEXICO HARVEST, Photo by Loe Santa Fe, New Mexico | y Ringqu | ist, |
| CALENDAR | September events on the desert | | 3 |
| POETRY | Selected desert poems | | 4 |
| EXPLORATION | When the Boats Wouldn't Float—We Pu By RANDALL HENDERSON | lled 'em | 5 |
| QUIZ | Test your desert knowledge | | 13 |
| FIELD TRIP | "Volcanic Tears" on the Nevada Deser By HAROLD WEIGHT | | 14 |
| PERSONALITY | Gamble that Paid off in Contentment By WELDON F. HEALD | | 19 |
| ARCHEOLOGY | Pinto Man at Little Lake By M. R. HARRINGTON | | 22 |
| NATURE | They Prefer to Glide Away By GEORGE M. BRADT | | 28 |
| ART OF LIVING | Diary of a Jackrabbit Homesteader By CATHERINE VENN | | 29 |
| LOST MINE | Silver Mine of the Old Opata Indians By JOHN D. MITCHELL | | 31 |
| FICTION | Hard Rock Shorty of Death Valley | | 32 |
| MINING | Current news of desert mines | | 33 |
| LETTERS | Comment by Desert's readers | | 34 |
| CLOSE-UPS | About those who write for Desert | | 34 |
| NEWS | From here and there on the desert | | 35 |
| HOBBY | Gems and Minerals | | 41 |
| LAPIDARY | Amateur Gem Cutter, by LELANDE C | UICK . | 45 |
| COMMENT | Just Between You and Me, by the Editor | | 46 |
| BOOKS | Reviews of Southwest literature | | 47 |

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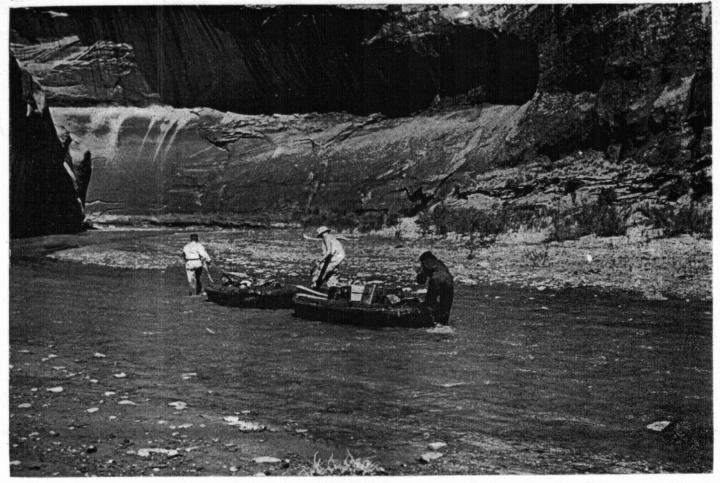
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On the 70-mile "boat trip" down the Escalante. Note the tapestried wall under the over-hanging cliff in the background.

When the Boats Wouldn't Float -- We Pulled 'em

This was scheduled to be a boat ride down Utah's Escalante River. But there wasn't enough water in the river—so the five members of this expedition spent eight days wrangling their rubber rafts over the shoals and rocks of a stream that just couldn't be navigated in the usual manner.

By RANDALL HENDERSON Map by Norton Allen

SIXTEEN years ago the 20-yearold artist and poet, Everett Ruess, vanished among the red sandstone bluffs in the Escalante region of southern Utah. Months later his burros were found corraled in Davis Canyon, a tributary of the Escalante River. But no clue to his fate has ever come to light.

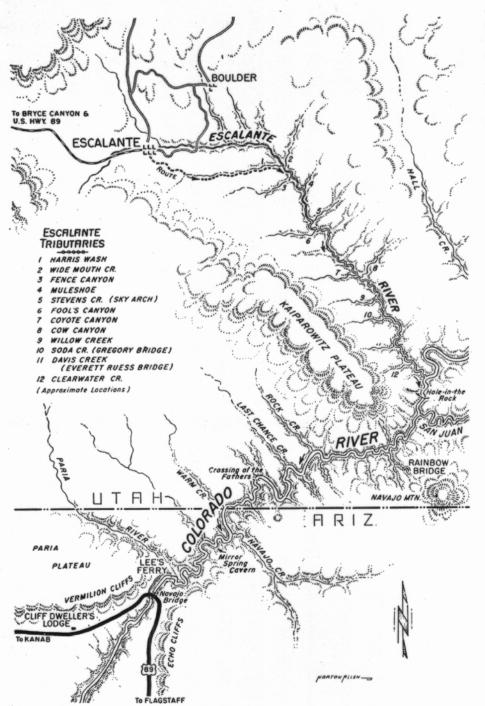
I never knew Everett personally, but I have learned much about him from his parents, Stella and Christopher Ruess of Los Angeles, and in 1938-1939 when Desert Magazine published many of the letters written by Everett during the years when he followed lone trails in the Indian country of Arizona and Utah I grew very fond of this young vagabond of the desert wilderness.

Like many others who are acquainted with the Ruess story, I have looked forward to the time when I could follow Everett's trail into that Utah country, and perhaps visualize more accurately the difficulties which have attended the search for him.

Charles Larabee and Harry Aleson, Colorado River boatmen, opened the way for such an opportunity early this year when they invited Cyria and me to accompany them on a boat trip down the Escalante River to its junction with the Colorado, and thence through Glen Canyon to Lee's Ferry.

The date was set for June 4, and we estimated it would require 11 days for a leisurely journey that would cover 158 miles—70 on the Escalante and 88 on the Colorado. At the last moment Larabee found it impossible for business reasons to accompany the expedition.

Our rendezvous was Art Greene's Cliff Dwellers' lodge on the North



Rim road of northern Arizona, nine miles west of Navajo bridge which spans the Colorado at Marble Canyon. Mr. and Mrs. Greene and members of their family for five years managed the Marble Canyon lodge at Navajo bridge for Ramon Hubbell. Their family group includes two daughters, Ruth and Irene, and their sons-in-law, Verne Baker and Earl Johnson.

When their contract with Hubbell expired the first of this year they decided to venture into business for themselves. They acquired a colorful site at the base of Vermillion Cliffs near the entrance to Houserock Valley—and during the intervening months they have converted it into

a popular stopping place for motorists. Four luxuriously furnished cabin rooms have been completed, and a dining room is under construction. In the meantime Mrs. Greene and the girls have improvised a little dining room under a great overhanging rock and the entire family is making a glorious adventure of their pioneering enterprise. Their nearest supply point is Flagstaff, 127 miles away.

In addition to Harry Aleson, skipper of our expedition, our party included Georgia White of Los Angeles, an athletic woman of remarkable stamina as a result of years of cycling, skiing and mountain climbing, and Charles Lindsay, medical student at the Se-

venth Day Adventists' La Sierra college near Riverside, California. "Chuck" was second boatman, big and willing and a competent oarsman. For the rugged river trail ahead I could not have picked more congenial companions.

Our equipment was two 7-man rubber landing rafts, each with seven air cells. They weighed 230 pounds each, and our food and camp equipment added up to a load of nearly 600 pounds. These rubber boats are reported to have cost Uncle Sam \$1000 each—and are now being sold as war surplus at less than one-tenth of that figure.

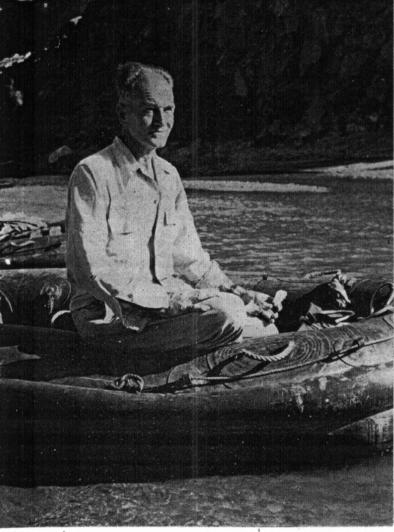
From Cliff Dwellers' lodge we drove north over highway 89 through Houserock Valley, Fredonia, Kanab and Glendale, and then followed a winding but well-graded road over the Escalante Mountains to the town of the same name. The elevation of the town is 5258 feet and the population slightly over 1000.

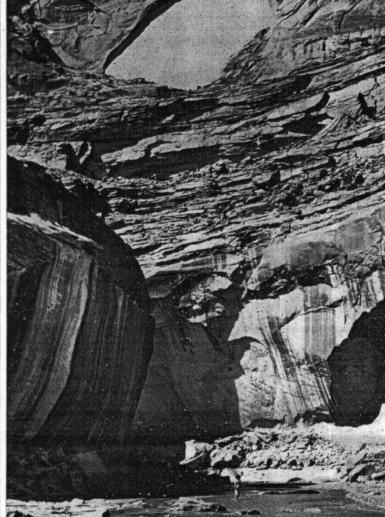
Escalante was colonized by the Mormons in 1875. Water was diverted from the Escalante River to irrigate a few hundred acres of the fertile land and the settlers grew abundant crops of potatoes. They called it Potato Valley, but later at the suggestion of A. H. Thompson, topographer of the second Powell expedition, the name was changed to Escalante, honoring the Franciscan padre, Silvestre Velez de Escalante, who came this way in 1776 in his quest for a new route from Santa Fe to the Pacific.

It was late in the afternoon when we reached Escalante and we found comfortable lodging in the home of Leslie George, assessor for Garfield County. There are about 5000 acres of land under cultivation here along the Escalante River, but the main industry of the community is livestock.

The cattlemen told us the stream flow in the Escalante was low this year due to lack of heavy snow in the mountains. The following day we drove down Harris Wash to its junction with Escalante River 32 miles east of town to see if there was enough water for the boats. The stream was disappointing but Harry Aleson expressed confidence that springs and tributary creeks below would add to the discharge as we continued downstream.

Another day was spent assembling food and other supplies for the expedition. The delay gave me an opportunity to talk with some local people who had become acquainted with Everett Ruess during the two days he spent here before he and his two burros plodded off into the canyon wilderness where he disappeared.





Harry Aleson—boatman in the summertime and lecturer during the winter months.

Skyarch—where countless years of erosion have created a window in the wall.

Everett was interested in the ancient cliff dwellings known to be located in many of the canyons in this region—Moqui Houses they are called by the local people. Some of them are now inaccessible due to erosion of the canyon walls below the overhanging recesses in which they are built. Everett was a fearless climber, and in his wanderings through the Indian country had more than once scaled walls which were regarded as impossible.

The young artist had camped on the river bank near town, and had taken some of the Escalante children to the picture show the night before he departed. On November 11, 1934, he wrote to his parents, "I promised you some pictures (water colors) and I am sending a few of them now as it will lighten the load, and they are getting travel-stained . . . I sold a few lately, but I hope you will like those I am sending. As I have more money than I need I am sending \$10, and I want each of you to spend five for something you have wished to have—books

or travel—but not for anything connected with any duty . . . Tomorrow I take the trail again. As I may not have a postoffice for a couple of months I am taking an ample supply of food with me."

He left the following day. A few day later he met a sheepherder and learned from him the directions for reaching Davis Creek. As far as is known that was the last time Everett was seen.

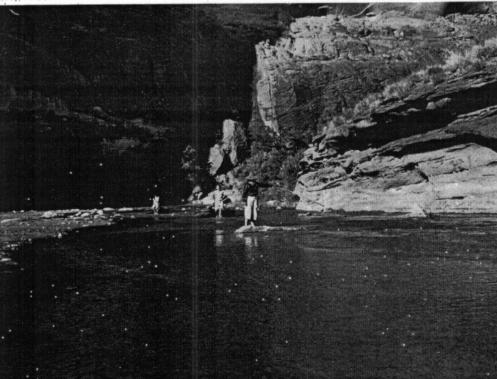
After two months had passed Everett's parents wrote to Mrs. Jennings Allen, postmistress at Escalante, and a widespread search was started by cattlemen and civic organizations in that part of Utah. Everett's burros were found along Davis Creek. The halters and pack-saddles were recovered. His bedroll, food, diary, paintings and artist's kit have not been found.

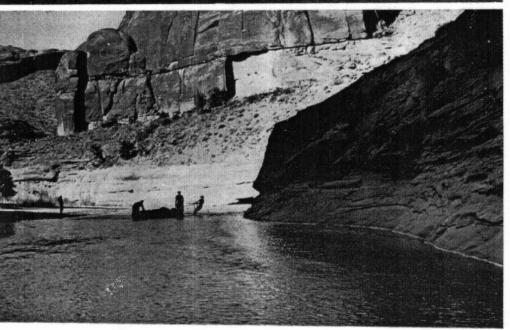
Mrs. Allen is still postmistress at Escalante. I talked with her and others who remembered the tall young artist who stopped for a few hours in their town. They are as much in the dark as are Everett's family and friends elsewhere as to the explanation for his disappearance. There was a hint that he may have met with foul play. More prevalent is the thought that he may have cached his outfit for a few days while he backpacked off for a lone jaunt into the neighboring canyons, and that he had fallen while attempting to scale the cliffs to a remote cliff dwelling, and that his outfit had been covered with drift sand.

The great expanse of Kaiparowitz Plateau and the broad mesa adjacent to it between Escalante and the Colorado River are so broken with canyons and escarpments, the water supply so limited, and the trails so few that one could spend a lifetime exploring this region without covering it thoroughly. Where water is available the cowmen run stock in this region. The cowboys are the only ones who have any knowledge of the country.

We trucked our boats and equipment down Harris Wash to the Escalante River, and early in the after-







noon of June 7 had the rafts inflated and loaded for the journey. Cyria and I were to ride with Harry in the lead boat, and Georgia White and Chuck Lindsay were to follow. Since there were three persons in our boat we carried only 250 pounds of the supplies, the other 350 pounds being loaded in the second boat.

Some of the stockmen, using the lower Escalante as summer range for their cattle, were there to wish us a good voyage, among them Wallace Roundy, Floyd Gates and Edson Alvey. Edson teaches school in winter and punches cattle during his vacation. He has explored many of the Moqui Houses and is a student of the ancient Indian life of this region.

We shoved out into the current—and 50 yards downstream the boat grounded in a rocky riffle. We got out to push and pull the rafts over the rocks—and never returned to the boats as passengers for eight days.

The water that was expected to swell the stream flow as we continued our journey never appeared. The springs and side canyons were dry or provided only a trickle of water.

With one person on the tow-line of each raft, and another pushing on the stern, we wrangled those two boats over shoals and rocks for 70 miles. Between riffles there was generally enough water to float the boats without passengers, but these spans of navigable water were so brief that one member of the party remained on each tow-line almost constantly, wading the stream and always seeking a channel with the six inches of water needed to float the rafts. The oars we carried were never unleashed until we reached the Colorado River.

In many places the stream spread out over sandbars and the water became so shallow it was necessary to man each boat with a crew of four—two on the tow-line and two pushing at the stern, and drag the boat 10 or 20 yards to the next channel. Then go back and pull the other boat across.

Cyria soon found a job for herself in this new and unorthodox method of navigating a river. She became the official pilot of the expedition—the

Top—Junction where Harris Wash creek enters the Escalante.
The boat trip started here.

Center—Cyria with her willow pole waded ahead to find the best channels for the boatmen.

Below—When the water spread out too thin over the bars, it was necessary to pull and push the boats across.

first woman pilot on the Escalante according to her boast. She waded ahead with a long willow pole, crossing and recrossing the stream to locate the best channel. Where the water spread over the bars, or trickled through the rocks in three or four or a half dozen channels, as it generally did, it became important for the boatwranglers following behind to know where the best course ahead would be.

Thus we continued downstream, averaging nine miles in an eight-hour day for eight days. It was hard work—but I do not want to give the impression that it was a terrible hardship. Harry had stocked the commissary well, and we always made two mid-day stops for cold lunch and fruit juice.

Until the last day or two, our hopes were buoyed high by the expectation that side canyons would bring more water into the stream. We passed scores of them-Wide Mouth, Fence Canyon, Muleshoe, Stephens Canyon, Fool's Creek, Coyote Creek, Cow, Willow, Soda Gulch, Davis Creek and Clearwater — these are the names given to some of them by the cowboys—and there were many unnamed ones. There was a trickle of water in some of them, but not much more than enough to compensate for the loss from our stream by evaporation. So, eventually we reached the Colorado with not much more water in the Escalante than when we started.

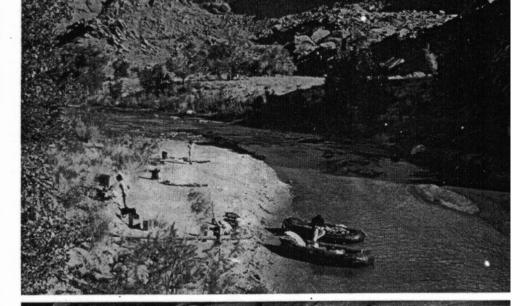
Four times along the way we made total portages. Great boulders blocked the way and we had to carry our supplies and equipment around or over the rocks, and then lift the boats out of the water and heave them over the barriers. There was some portaging at other places, but only four times were the boats taken from the water.

Perhaps in a less colorful setting the arduous labor of this journey would have made it a grim, dismal experience. But not in Escalante Canyon. The red Wingate and the Navajo sandstone walls which towered above us fringed with the deep green of junipers and pinyon were ever-changing backdrops of fantastic sculpturing,

Top—When evening came the voyagers beached their boats and unrolled their sleeping bags on a sandbar.

Center — Chuck Lindsay and Georgia White—after the party reached deep water at the mouth of the river.

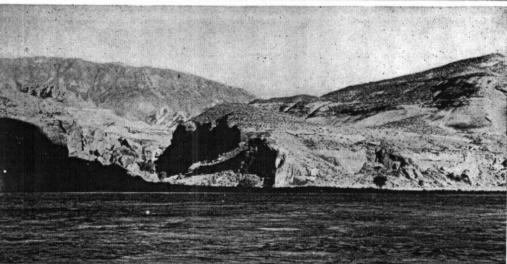
Below — Members of the expedition, left to right: Chuck Lindsay, Randall and Cyria Henderson, Georgia White and Harry Aleson.

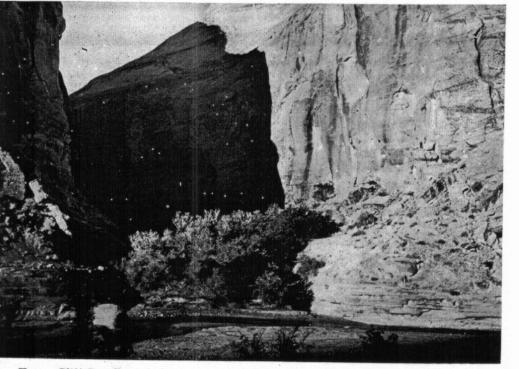












Top—Cliff Dwellers' lodge where Art Greene and his family are building accommodations for travelers.

Center—Entrance to Forbidden Canyon with Navajo Mountain in the background.

Lower—Entrance to Davis Creek canyon where Everett Ruess dropped from sight in 1934.

Occasionally we would see a small vertical oasis up on the sidewalls—and we soon learned that these splotches of vivid green marked the places where

little springs of cool water bubbled from the sandstone. Often we would stop and fill our canteens.

In such a setting, with congenial

companions—I never heard an unkind word, even when the going was very tough—we trudged along, dragging our boats and feeling that here was an experience which would leave pleasant memories long after the tired muscles had been forgotten.

At night we would spread our bedrolls on a sandbar. Daytime temperatures generally were above 90 degrees, but it was always cool enough at night to make us seek the warmth inside our sleeping bags. The temperature of the water when we waded out into the stream in the early morning averaged 54 degrees, but by five p.m. it would go up to 76 degrees.

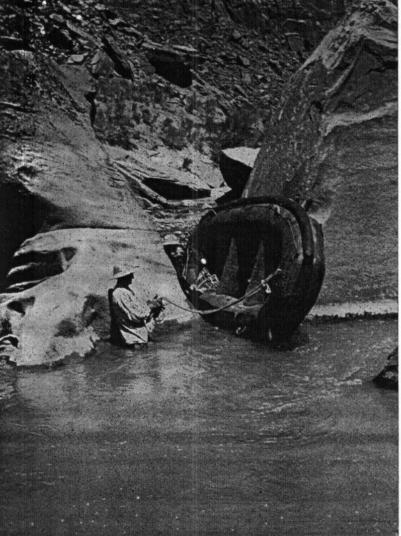
We wore tennis shoes, and had to stop three or four times a day to empty out the sand which had seeped into them as we waded the stream. Chuck solved the sand problem by cutting the toes out of his shoes—and was sorry later, for his shoes began to go to pieces, and the sharp rocks punished his feet painfully.

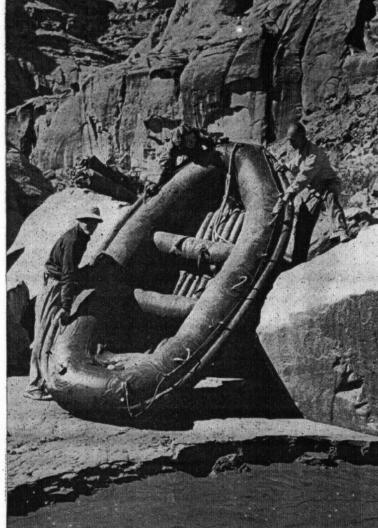
The Escalante is a very crooked river, cutting a great serpentine canyon across the southern Utah plateau. Herbert E. Gregory and Raymond C. Moore who made a geological survey of the Kaiparowitz Plateau region for the USGS in 1925-1928 (Professional Paper 164, now out of print) reported that just above its junction with the Colorado the Escalante meandered 35 miles to cover a direct distance of 14 miles.

At many of the bends the erosion of many thousands of years had gouged out great caverns in the side-walls, like huge domed amphitheaters. The vertical walls were streaked by the stain of soluble desert varnish to form great tapestries which ranged in color from black through a hundred shades of red and brown and tan to cream.

Occasionally we could see what appeared to be the ruins of old Moqui Houses high up in niches in the canyon walls. Like other cliff dwellers, the Moqui generally built of stone and mud, but with our field glasses we examined one well-preserved ruin 300 feet above us which appeared to be the stick-in-the-mud type of construction.

One morning, just below Fence Canyon tributary, we stopped to examine a wall the cowmen had told us about. It was covered with petroglyphs, the figures being similar to those found all through the Southwest. The Moqui are believed to be the ancestors of today's Hopi tribesmen. In fact the Hopis were known as Moquis to the frontiersmen who came West during the last century. One of the figures





Wrangling the rubber boats through and over the huge boulders which blocked the way.

I saw bore a close resemblance to one of today's Hopi kachina gods.

There was little evidence of wildlife, although deer are numerous in this region. We saw only one snake—a tiny rattler so young we could hardly hear the buzz of its two buttons. We saw one coyote and on two occasions were sure that birds soaring overhead were eagles. On the lower Escalante and later through Glen Canyon there was much sign of beaver, and once we caught sight of one of these animals as it ducked under the water. The warm water was full of minnows, but the only other fish we saw were suckers.

When we reached Stephens tributary we caught a glimpse of a great natural arch perhaps 500 feet above the river. On a previous trip Harry had given it the name Skyarch. Later when we reached Soda Gulch we beached the boats and hiked a mile up the tributary stream to Gregory Bridge, named in honor of Herbert E. Gregory who as a field scientist

for the USGS spent many years studying the geography and geology of this region.

Dr. Gregory had learned about this bridge from the cattlemen, but never saw it. He gave Norman Nevills directions for reaching it, and Norman and members of the Colorado River expedition of 1940 hiked up the Escalante River and found it. Since then a troop of Boy Scouts had placed a register under the giant arch. Aleson has made rough measurements, estimating the height of the span at 75 feet and the thickness of the arch at 114 feet.

The bridge is neither as large nor as spectacular as the famous Rainbow Bridge on the other side of the Colorado, and is very difficult to photograph due to the high sandstone walls which close in around it. We signed our names on the register and resumed our splashing journey down the channel of the Escalante.

At 5:30 that day we reached the mouth of Davis Creek. This is the

tributary where Everett Ruess' burros were found, 3½ miles upstream from the Escalante. Small cairns, placed on benches on both sides of the entrance by Harry Aleson, mark this creek.

I hiked up Davis Creek a short distance, and soon realized that Everett Ruess did not enter it from the Escalante River, for my way was blocked by great boulders which would have been impossible for a burro to surmount. Harry Aleson has spent much time exploring this region for some clue to Everett's fate. Two years ago he brought Stella Ruess, Everett's mother, into the canyon from the old Mormon Hole-in-the-Rock trail above.

Everett had gained access to Davis Creek by coming down over the slick-rock above on steps cut in the sand-stone by cowboys to get stray cattle out of the gulch. Following Everett's disappearance, searchers found the word "Nemo 1934" incised in the doorstep of an ancient Moqui House in the sidewall of the canyon, and

again in a cave which evidently had been occupied by prehistoric Indians. Everett's parents are of the opinion this inscription was left by their son.

I had wanted to spend a couple of days exploring this area with Aleson, but Ol' Man River had been so stingy with his water supply that we were two days behind schedule and provisions were running low.

At two o'clock the following afternoon we rounded a bend—and there before us was a sheet of water a quarter of a mile wide. We were still a half mile from the Colorado, and this was backwater from the river in flood stage.

We waded on until the the water came to our knees, then for the first time on this boat trip fitted the oars in their locks and took our seats in the boats. The days of pulling and and pushing were over, and what a relief it was! We were tired, but otherwise no worse for the labor of the 70-mile obstacle course. It was one of those tasks you wouldn't do again for a thousand dollars—and wouldn't take a thousand for the experience.

This was Harry Aleson's third boat trip down the Escalante. On previous excursions he had found enough water in the stream to make it a comparatively easy run. He had even thought of scheduling this as an annual river trip for passengers. But the water conditions are too uncertain—and Harry told me at the end of our outing he had given up any thought of commercializing the Escalante.

Harry has been boating on the Colorado for many years. One evening as we were lounging on a sandbar after the day's run I asked him why he had chosen the rugged life of a riverman on the Colorado. His answer was in the soft-spoken words with which he always addresses those around him.

Born in Waterville, Iowa, of Norwegian parents, 51 years ago, he took his advance training in the engineering school of the Iowa State Agricultural college at Ames. Then for 17 years he worked as a geo-physicist, most of the time in the oil fields of Texas and Kansas.

In the mid-thirties when he learned a great lake was being formed behind the newly constructed Hoover dam, he decided that on his first trip West he would take a boat trip to the headwaters of the new lake in lower Grand Canyon. Later he got a position with the California Edison company, working on the highline that was to carry Colorado river power to San Diego. Whenever there was an opportunity he went to Lake Mead

for boating, and eventually bought his own boat with an outboard motor.

Just before the war he secured a position with the U.S. Reclamation bureau operating a mail and supply boat between Boulder City and the Bridge Canyon damsite where borings were then being made for bedrock. Later he became a lake pilot for Grand Canyon Tours, and in 1940, 1941 and 1942 towed the Norman Nevills boats across Lake Mead after they had completed runs through the Grand Canyon rapids.

After the war Aleson decided to operate his own river expeditions and moved to Richfield, Utah, as a base for his activities. He first met Charles Larabee, wealthy oil man of Encinitas, California, when the latter was a member of the Nevills Grand Canyon Expedition in 1940. In 1948 he met Larabee again under Rainbow Bridge when by chance both of them arrived there on separate expeditions. A partnership was formed as they sat and talked beneath the great multi-colored span of stone which is Rainbow.

Charles Larabee likes the river, and accompanies the boat trips when his business affairs will permit, but Aleson is the managing partner who pilots the expeditions and arranges the thousand and one details involved in booking schedules and securing supplies.

River trips with passengers are limited to spring and summer months, and Aleson spends the winter season filling speaking engagements with his color films of the canyon country. Harry denies he is a professional lecturer, but during many years on the river he has taken thousands of feet of 16mm Kodachrome film, and is always glad to show his pictures when invited to do so.

We had reached the Colorado, but were still 88 miles from Lee's Ferry. The rest of the run was easy. With a 60,000 second foot river running, and some help from the oars, it would be possible to reach our destination in a long day and a half.

Four miles below the mouth of the Escalante we pulled in for lunch at Hole-in-the-Rock crossing. (Desert Magazine, May '47). Here in 1879 a Mormon wagon train with 80 wagons and 240 settlers, on their way to establish a new settlement on the San Juan River at Bluff, spent three months getting their outfit from a high bluff down to the river's edge for a ford across the Colorado. They had to dismantle their wagons and chisel steps in the slickrock for the colonists and their horses. It was one of the most difficult and amazing feats in the his-

tory of the Mormon colonization of the West.

There is a fine spring just above the edge of the river, and the Utah Historical Society has placed a plaque here to commemorate the episode.

Ten miles below the Escalante we passed the mouth of the San Juan River, and 14 miles below that we glided past the entrance to Forbidden Canyon where river voyagers put in and land for the six-mile hike to Rainbow Bridge. Navajo Mountain, that great landmark of northern Arizona and southern Utah around which many Navajo legends have been woven, loomed in the background.

This is the Glen Canyon sector of the Colorado River, and there are many lovely side canyons here which are well known to those who have taken river trips in past years with Norman Nevills, and more recently with the Larabee-Aleson expeditions and those fine rivermen, Don Harris, Frank Wright, Jim Riggs, Jack Brennan and their boatmen.

These boatmen invariably take their passengers on side excursions into Hidden Passage, Music Temple, Mystery Canyon, Twilight Canyon, Forbidden and Bridge Canyons. With the exception of the last two these places are accessible only from the river.

There is nothing very graceful about the lines of a rubber landing boat, but they provide very comfortable seats for their passengers, and we were so relaxed and at peace with the world after our strenuous eight days on the Escalante that we were content to cruise along with the current until 8:30 that evening when we pulled into an inlet at the mouth of Rock Creek for our last night on the sandbars. The indefatigable Georgia who had cooked for the expedition prepared a delicious dinner from the last cans in the grub box.

Rock Creek proved to be a little bird sanctuary, and we were awakened at daybreak by a chorus of bird calls from the willow trees. As we had done many nights on this trip, we had spread our bedrolls beneath the lavender plumes of the salt cedar which grows luxuriantly along the banks of the Colorado and its tributaries, wherever there is sand for its roots.

We had breakfast at daybreak and were away at 6:30 on our last day's boatride. At 9:30 we stopped at the mouth of Padre Creek and waded the shallow water for less than a quarter of a mile to where Father Escalante on his historic trek across Utah had cut steps in the slickrock for a river ford at this place. There was a cairn

and register at the foot of the steps, and a plaque on the sidewall of Glen Canyon just below the entrance to the creek.

Because we were behind schedule we had to pass most of the scenic side canyons without stopping, but Harry had planned one special treat for our last day on the river. At eleven o'clock he pulled out of the main current and maneuvered the boat into a narrow slot in the sidewall of Glen Canyon. It is a place he recently has discovered, and has never appeared on any map until this month in *Desert Magazine*.

Our tiny inlet ended in a gravel bank 200 feet from the river. With our lunch boxes we hiked another 100 feet to where the passageway ended in a lovely domed amphitheater with walls so symmetrical they might have been carved by hand. These walls were draped with hanging gardens of maidenhair ferns. Beneath the dome in the center of this cool cavern was a round pool perhaps 25 feet in diameter with a circular bench of sand running around it. Every detail of the cavern, including the ferns, was re-flected in sharp detail in this pool. Lighted only by reflected rays from the sun and unruffled by the wind, the pool, with a spring somewhere in its depths, was as perfect a mirror as one could imagine.

We ate lunch in this pretty spot, and then carefully picked up and carried away every scrap of waste, for it would be a sacrilege to leave any disfiguring thing in a place so exquisitely formed by Nature.

That afternoon we stopped at Sentinel Rock where it is possible to row in behind a great pinnacle that stands at the edge of the river and read the record where Bert Loper had incised in the rocks the dates of the many journeys he had made through Glen Canyon before his death in the rapids of the Colorado last year.

At five o'clock we saw the overhead cable over Lee's Ferry, where Jim Klohr, veteran engineer for the USGS, takes his daily ride over the river in a little tramcar and measures the stream flow. This information is important in the allotment of water to the states in the lower basin of the Colorado.

A half hour later we pulled in for a landing on the bank at Lee's Ferry, and the Escalante expedition of 1950 became for each of us another page in our book of experience—a page full of pleasant memories despite the arduous task of navigating a river that refused to be navigated in the conventional manner.

Desert Quiz

Desert Magazine gets many letters from the Quiz fans. Not many of the readers get top scores but all of them are learning. This

monthly quiz really is an interesting lesson in the geography, history, botany, mineralogy, archeology and general lore of the desert country. A score of 12 to 14 is fair, 15-16 is good, 18 is exceptional. The answers are on page 39.

- 1—According to the most commonly quoted version of the Lost Pegleg gold legend, the gold was located: In a deep canyon....... On top of one of three hills........ Cached in an old mine tunnel....... In the sand dunes........
- 2—Searchlight is the name of an old mining town in: Nevada....... California....... Arizona....... New Mexico........
- 3—Bill Williams and the Mountain Men of the last century came to the Southwest primarily in quest of: Gold....... Beaver skins....... Homesteads....... Indian scalps........
- 4—The City of Phoenix is located in: Imperial Valley....... San Pedro Valley....... Verde Valley....... Salt River Valley.......
- 5—The mineral most commonly sought by prospectors working at night with a fluorescent lamp is: Manganese....... Quicksilver....... As-bestos....... Scheelite.......
- 6—Common name for the desert shrub known as jojoba is: Rattle bush....... Goat nut....... Tumbleweed....... Crucifixion thorn.......
- 7—Most conspicuous species of cactus seen on the southern Arizona desert is: Saguaro....... Cholla....... Prickly pear...... Bisnaga.......
- 8—The Smoki people hold their annual snake dance at: Gallup.......

 Oraibi....... Flagstaff....... Prescott........
- 9—Palm Springs, California, is at the base of: Telescope peak....... San Jacinto peak....... Mt. Baldy....... San Gorgonio peak.......
- 10—The historian who translated and published the diaries of Juan Bautista de Anza was: Lockwood...... Hunt...... Bolton....... Kelly.......
- 11—Hopi Indians use the kisi as a place to: Conduct their underground ceremonies....... Store grain....... Bury their dead...... Confine their snakes for the annual snake dance........
- 12—The Kaibab squirrel found in the forest of the same name is identified by its: Black tail....... Brown tail....... White tail....... No tail........
- 13—Grand Falls is in the: Gila river...... Salt River...... Little Colorado....... Mojave River......
- 14—Survivors of the Cocopah tribe of Indians still reside near their original habitat: In Coachella Valley....... Along the lower Colorado river....... In Death Valley....... At the headwaters of the Gila River.......
- 15—Going from Monument Valley to Blanding or Monticello, Utah, the most important river you would cross would be the: San Juan........ Colorado....... Little Colorado....... Green.........
- 16—Most valuable product taken from the floor of the Salton Sink before water from the Colorado River submerged it in 1905-6-7 was: Gypsum....... Onyx....... Pottery clay....... Salt........
- 17—Indian tribesmen who live on the reservation at Mescalero, New Mexico, are: Navajos....... Paiutes....... Apaches....... Hualpais.......
- 18—Going from the South Rim to the North Rim of Grand Canyon by the most direct paved route you would cross the Colorado River on: Topock bridge....... Lee's Ferry....... Navajo bridge....... Top of Hoover dam.......
- 19—Obsidian was used by ancient Indians mainly for: Making ornamental jewelry....... Arrow and spearheads....... Metates for grinding seeds....... Building cliff houses.

DESERT CALENDAR

Sept. 30-Oct. 1—Desert Peaks section of Sierra club will climb Pleasant Mountain and Cerro Gordo peak above Keeler, California.

Oct. 1—Official opening of winter vacation season, Phoenix, Arizona. Oct. 1-Santa Cruz County Fair and

Rodeo, Sonoita, Arizona.

Oct. 1-7-Annual Navajo Indian Fair,

Shiprock, New Mexico.

Oct. 1-8—Aspen week, "Aspencade" tours into mountains around Taos, New Mexico.

Oct. 4-Feast Day of St. Francis of Assisi, patron Saint of Santa Fe. Celebrated on eve of St. Francis, Oct. 3, by procession from St. Francis cathedral, Santa Fe, New Mexico.

Oct. 4-Annual feast day and dance, Nambe pueblo, New Mexico.

Oct. 4 — Spanish-American fiesta, Rancho de Taos, near Taos, New Mexico.

Oct. 4-8-Eastern New Mexico State Fair, Roswell.

Oct. 5-6-7 - Nevada State Medical association annual conference, Las

Oct. 5-8-Graham County Fair, Safford, Arizona.

Oct. 6-8-Tri-State Fair and Sheriff's Posse Rodeo, Deming, New Mex-

Oct. 6-8 - Cochise County Fair, Douglas, Arizona.

Oct. 7-8-Mass field trip sponsored by the Clark County Gem Collectors, Las Vegas, Nevada. Camp ground at Boulder Beach on shore of Lake Mead.

Oct. 16-19-Southwestern Cattle Festival, Clovis, New Mexico.

Oct. 18-19-State Garden club gathering, Roswell, New Mexico.

Oct. 18-23-Pima County Fair, Tucson, Arizona.

Oct. 19-21 - Grand Chapter, Order of Eastern Star, Roswell, New Mexico.

Oct. 20-21-American Association of University Women fall Workshop, Prescott, Arizona.

Oct. 20-22-Gem and Mineral show sponsored by San Gorgonio Mineral and Gem society, at Cherry Festival building between Beaumont and Banning, California.

Oct. 20-22 - Annual Pioneer Days celebration, parade, contests. Twentynine Palms, California.

Oct. 21-22-Junior Rodeo, sponsored by 20-30 club, Phoenix, Arizona.

Oct. 26-27 - Fifth annual Aviation Conference, Tucson, Arizona.

Oct. 26-28 — Southwestern Medical association conference, Phoenix, Arizona.

Oct. 28-29 — Annual Papago Indian Rodeo and Arts and Crafts exhi-bition. Indian dances and games. Sells, Arizona.

Oct. 31-Annual Mardi Gras, sponsored by Kiwanis club, Barstow, California.



| Volume 13 | OCTOBER, 1950 |] | Nu | mb | er | 12 |
|---------------|--|------|----|----|----|-----|
| COVER | MAIN STREET, OLD CALICO, Photo Santa Barbara, California | by | Do | n | Ol | lis |
| CALENDAR | October events on the desert | | | | | 1 |
| POETRY | Selected desert poems | | | | | • |
| FIELD TRIP | Mining for Gunsights By JOHN HILTON | | | | | |
| SCIENCE | He Brands Snakes By OLIVE W. BURT | | | | | |
| LOST MINE | Gold Pockets in the Santa Rosas By HENRY E. W. WILSON | | | | | 1 |
| QUIZ | Test your desert knowledge | | | | | 1 |
| PERSONALITY | Boatman of Eldorado By GENE SEGERBLOM | | | | | 1 |
| HISTORY | Forgotten Trail of the Old West By CHARLES KELLY | | | | | 1 |
| NATURE | Mighty Mite of the Huachucas By VINITA BLEDSOE | | | | | 2 |
| LANDMARKS | Desert Signboards By RANDALL HENDERSON | | | | | 2 |
| MINING | Current news of desert mines | | | | | 2 |
| ART OF LIVING | Diary of a Jackrabbit Homesteader By CATHERINE VENN | | | | | 2 |
| LETTERS | Comment by Desert's readers | | | | | 2 |
| CLOSE-UPS | About those who write for Desert | | | | | 3 |
| FICTION | Hard Rock Shorty of Death Valley . | | | | | 3 |
| NEWS | From here and there on the desert. | | | | | 3 |
| НОВВУ | Gems and Minerals | | | | | 3 |
| LAPIDARY | Amateur Gem Cutter, by LELANDE C |)UI | CK | | | 4 |
| ANNUAL INDEX | | | | | | 4 |
| COMMENT | Just Between You and Me, by the Ed | itor | | | | 4 |
| BOOKS | Reviews of Southwest literature | | | | | 4 |

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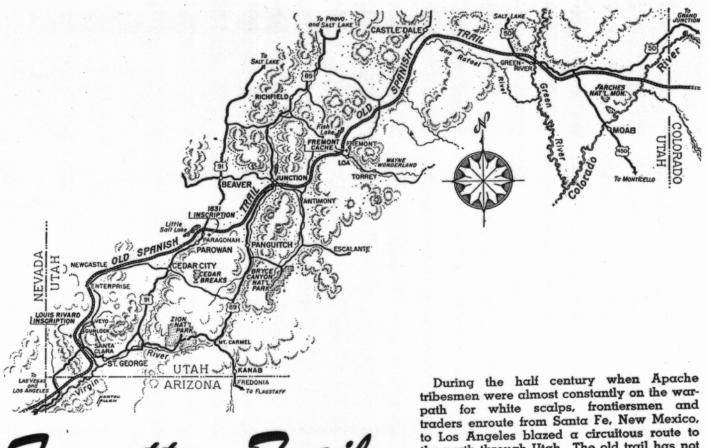
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Forgotten Trail of the Old West

tribesmen were almost constantly on the warpoth for white scalps, frontiersmen and traders enroute from Santa Fe, New Mexico, to Los Angeles blazed a circuitous route to the north through Utah. The old trail has not been used for nearly 100 years, and no map of the route was ever published. But Charles Kelly, explorer and historian, has pieced together what information he has found in old records—and here is the story, with as accurate a map as it is possible to compile today.

By CHARLES KELLY Map by Norton Allen

D. Brewerton were riding eastward from Los Angeles over the Old Spanish Trail with dispatches from Col. John C. Fremont in the spring of 1848 when they overtook a caravan on its way back to Santa Fe after a trading expedition to Los Angeles. Brewerton's description of that Mexican expedition is well worth quoting. He wrote:

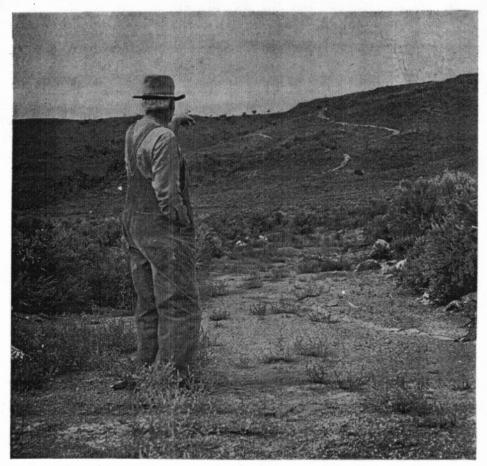
"Imagine upwards of 200 Mexicans dressed in every variety of costume, from the embroidered jacket of the wealthy Californian, with its silver bell-shaped buttons, to the scanty habiliments of the skin-clad Indian, and you may form some faint idea of their dress. Their caballada contained not only horses and mules, but here and there a stray burro. . . . The line of march of this strange cavalcade occupied an extent of more than a mile. . . . Many of these people had no firearms, being provided only with the short bow and arrows usually carried

by New Mexican herdsmen. Others were armed with old English muskets . . . which bid fair to do more damage at the stock than at the muzzle (and) old, worn out dragoon sabres, dull and rusty, at best a most useless arm in contending with an enemy . . . worthless even at close quarters."

A few days later, as Carson and Brewerton approached the future site of Parowan, Utah, they met Wakara (Walker), chief of all the Utah Indians, who was camped on the trail near where it entered the Wasatch Mountains, to collect toll from trading caravans. Being a good business man this famous chief realized it was much more profitable to collect toll from the traders than to kill them and take their goods, thus stopping all traffic through his country. Such tolls had made him rich. He also did a good business in selling Indian children captured from weaker tribes to the traders, which were disposed of in Santa Fe at a profit.

Spanish and Mexican traders had been using this trail between Santa Fe and Los Angeles for 18 years, and in such numbers that it had become a wide, well worn road. It was well known to every western trapper and explorer. Since 1830 it had been the only road between California and New Mexico, and the most important commercial highway in the Southwest. Yet not one traveler over this route ever kept a day-by-day journal of his experiences to guide modern researchers. Although it was the earliest trail used by white men in Utah, it was the last to be definitely located.

Spanish expeditions from Santa Fe had explored as far north as the mouth of Gunnison River (Grand Junction, Colorado) previous to 1776. In the latter year Father Escalante attempted to continue a route from that place to Monterey, California, and his party was the first group of white men to enter Utah. His route was through the Uintah Basin in northeastern Utah to



Howard Blackburn, a pioneer of 1879, points out the Old Spanish Trail just west of Fremont, Utah. He remembered when it was a well beaten road. At the base of this ridge Fremont cached his goods in the winter of 1853.

Utah Lake, then south to Lee's Ferry, northeast to Crossing of the Fathers where he crossed Colorado River and finally back to Santa Fe. It is not known when his trail was first used by traders, but annual caravans were being sent to Utah Lake before the year 1813.

In 1830 William Wolfskill and a group of ten trappers from Santa Fe decided to continue this trail into California, as Escalante had planned. Eliminating the long northern detour through Uintah Basin, they crossed Green River at what is now the town of Greenriver, Utah, worked their way through the Wasatch Mountains to what is now Parowan, passed down Santa Clara river, crossed the desert to Las Vegas, Nevada, and so into California. Beginning in 1831 their trail was used annually by trading expeditions until it became a well beaten road, continuing in use until 1852.

During the last thirty years I have traced out all early trails through Utah, from Escalante in 1776 to the Donner party in 1846, guided by journals and records which made determination of their routes reasonably certain; but the Old Spanish Trail remained more or less a mystery. It is mentioned in numerous journals of early travelers

but no day-by-day record could be found to furnish detailed information. From Parowan, Utah, to San Bernardino, California, it was accurately described by Fremont and followed in general by modern highways; but through the mountainous country between Greenriver and Parowan its route was unknown.

In the winter of 1853 John Charles Fremont made a journey through Utah to explore a route for a railroad. His tragic experiences were recorded by S. N. Carvalho, photographer for the expedition, in a book called *Perilous Adventures in the Far West*. Due to deep snow, frigid weather, starvation rations and loss of equipment, Carvalho failed to give details of his route, and omitted any mention of the Old Spanish Trail. Fremont's notes were lost; in any case he wished to convey the impression that he was exploring a new route.

Earlier that same year Lieut. Gunnison had brought the first wagons to Utah over the Old Spanish Trail, and Carvalho speaks of following Gunnison's wagon tracks until they were buried in deep snow. Fremont also had as guides two Mexicans who had often traveled the old trail with caravans. When caught in the snow with-

out food supplies, they naturally guided the expedition over the easiest trail, one they knew well, rather than an unknown route arbitrarily selected by Fremont, as has been supposed. But just where it passed through the mountains was a mystery.

About three years ago I was talking with the late Howard Blackburn in Loa, Utah, about pioneer days. He was 8 years old when his family founded that town. While describing the country as he remembered it in 1879 he said:

"When I first came here a wide, well beaten Indian trail came out of the mountains from the north and passed just west of town. It was as plain as any modern road, visible for miles in either direction. Indians were still using it then. After they left we used it to trail cattle into the mountains to Fish Lake and on north. It continued south through Grass Valley to Antimony and beyond, I have traveled it hundreds of times with cattle."

It occurred to me that this broad "Indian Trail" seen by Blackburn must certainly be the Old Spanish Trail, since due to the geography of the country it had to pass somewhere in that vicinity. The proof came a short time later when I found an old journal written by George Washington Bean, another pioneer of Wayne County, Utah.

After crossing a high mountain in deep snow, Fremont had been compelled to cache all of his goods so the pack animals could be eaten to prevent starvation. The location of that cache could not be determined from Carvalho's record. But Bean's journal stated that after Fremont left Utah, one of his Mexican guides took Chief Wakara's brother back to lift the cache, which was found "near the present town of Fremont."

The old trail pointed out by Blackburn passed just west of Fremont (5 miles north of Loa), and the circumstances of finding Fremont's cache there explained its name, the origin of which had been forgotten. Realizing that it was certainly the Old Span-ish Trail I persuaded Blackburn to accompany me over part of it, still plainly visible where it comes down a steep hogback into the valley. He also told me just where it passed through the mountains and described relics of a battle or massacre he had seen in early days at Seven Mile Creek, probably the same one seen by Brewerton in 1848.

On one of our expeditions to hunt Indian petroglyphs, Frank Beckwith and I had been directed to Braffet Canyon, near Paragonah, Utah. While photographing these we were amazed to discover, carved on a rock, a cross with the initials "A. W. L. B." and the date 1831. Searching further we found other initials with the same date and on a large boulder the word "GOLD" cut in reversed lettering. This spot was a beautiful campsite, with good grass and water, just south of where the old trail came out of the mountains above Little Salt Lake. There is no written history of this party of 1831 and none of the initials can be identified. The whole canyon, we learned later, had been dug up in a search for the gold supposed to have been buried there.

On another expedition of the same kind Frank and I were searching for petroglyphs on the walls of Santa Člara Canyon, south of Mountain Meadows and west of St. George, when we found the name "Louis Rivard" cut in old style lettering, without date. We knew the Old Spanish Trail ran through that canyon and suspected Rivard to have been one of the French trappers who passed that way between Santa Fe and Los Angeles; but there was no record of such a man in trapper journals. Eventually we found his name listed on two different payrolls. First, he appeared with the Astorians outbound from St. Louis, who spent the winter of 1810-11 on Nishnabotny River. During that winter he deserted with Caleb Greenwood, another trapper, and may have gone to Santa Fe. Later his name occurs as a member of Capt. Stansbury's expedition of 1849-50, which made the first survey of Great Salt Lake. Just when he cut his name in Santa Clara Canyon is not known.

With such bits of information it is now possible to identify most of the Old Spanish Trail through Utah, although certain parts of it are still a mystery. There were several variants of the route, due to conditions of weather, water and grass. Some old maps show a "winter route" which crossed Colorado River just below its junction with the Green and continued west through a broken country now known as Wayne Wonderland, a section where it would have been impossible to travel in summer due to lack of water. In May, 1949, Dr. A. L. Inglesby visited "Spanish Bottoms" where the trail crossed and observed large stone slabs laid up as steps where the trail left the river on the west side, thus proving the old maps correct.

However, the principal trail can now be identified with reasonable certainty from Greenriver, Utah, to the mouth of Santa Clara Canyon. From the Green River crossing it went west across a desert to the head of San



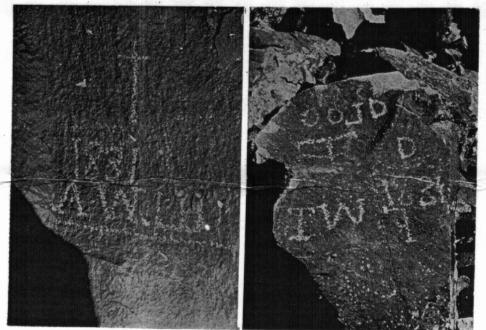
S. N. Carvalho, from a photograph made late in life. (Courtesy Claire Carvalho, Hermosa Beach, Calif.)

S. N. Carvalho, artist with Fremont's expedition of 1853, who wrote a book describing his experiences on the Old Spanish Trail. Photo from Robert Taft's "Photography and the American Scene."

Rafael River, then south and southwest past the sites of Castle Dale and Emery; followed along the east base of Thousand Lake Mountain to a creek and up that stream to the summit near the head of Salina Canyon; then across the mountain and down the south slope to the present site of Fremont, passing just east of Fish Lake. Continuing west of Loa it passed down Grass Valley to present Antimony, then turned west through Kingston Canyon to Junction. Then it turned south following what is now

U.S. 89 to within 10 miles of Panguitch, when it went west across Bear Valley (where one of Fremont's men died of starvation) and emerged on U.S. 91 a few miles north of Paragonah. It then went south through Parowan, past Little Salt Lake to Enterprise, through Mountain Meadows and down Santa Clara Canyon to Virgin River.

Inscriptions found along this old trail have been very helpful in determining the route, but they are too rare. More may be found by careful search.



Dim inscriptions in Braffet Canyon near Paragonah, Utah, left here by unidentified travelers in 1831.

In general the whole route may be followed closely in a car, although parts of it are mere sheep trails.

It is to be hoped that this old trail, so important in the early history of the Southwest, will some day be carefully traced all the way through and adequately described and photographed. Over it, at one time or another, passed most of the men whose names are famous in the West's early history: Father Escalante and William Wolfskill, the pioneers; Kit Carson with dispatches for the president;

Fremont on various exploring expeditions; Pegleg Smith, Joe Walker and Chief Wakara on horse stealing expeditions to California; Antoine Robidoux, trapper and trader; Miles Goodyear, to stock the first ranch in Utah; Marcus Whitman on his "ride to save Oregon"; Antoine Leroux, trapper and guide; Lieut. Gunnison with the first wagons; and many others whose names are familiar to students of western history. Although it was the first trail into Utah, the Old Spanish Trail remains, strangely enough, still the least known.

WILDLIFE CONSERVATION ON RESERVATIONS EXPANDED

Reestablishment and conservation of game and fish resources on Indian reservations to provide food and sport for the tribesmen and also a source of income from sale of hunting and fishing privileges is the object of an expanded program announced by Interior Secretary Oscar L. Chapman.

Among projects in the arid Southwest are:

Reestablishment of the once important wild fowl nesting area in and around Burford Lake on the Jicarilla Apache reservation in New Mexico. This area is on the central north-south flyway of migratory waterfowl.

Predator and rodent control on Indian lands in the Southwest.

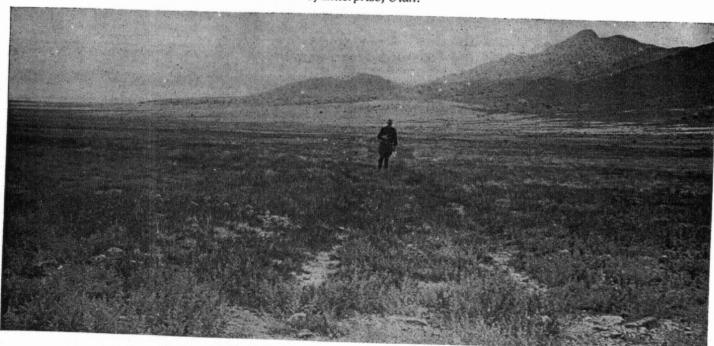
A fish hatchery at Fort Apache reservation in northern Arizona, to stock reservation streams. On this reservation wild turkeys are also being protected.

TRENCH-DIGGING OPERATIONS UNCOVER ANCIENT ARTIFACTS

Ancient tribesmen found Safford, Arizona, to their liking. Further evidence of prehistoric dwellers was uncovered recently when a trench was being dug for a sewer line.

One large piece of pottery was identified by Ray D. Crandall, Safford, close student of early Southwestern life, as being of advanced pueblo culture. He cleaned the urn, found in it the bones of an adult who had evidently been cremated. The artifacts, it is believed, date back as far as the thirteenth century.

J. Roderic Korns standing in faint traces of the Old Spanish Trail still visible north of Enterprise, Utah.



DESERT CALENDAR

Nov. 2-5—World Symposium on Applied Solar Energy, Phoenix, Arizona.

Nov. 4-13-Arizona State Fair, Phoe-

nix, Arizona. Nov. 5-6 — Ryder Cup Matches, Thunderbird Country Club, Palm Springs, California. Nov. 5-6—Sierra Club hike to con-

cretion forest near Truckhaven, 30 miles south of Indio, California, on Highway 99.

Nov. 5-6 — Cotton Carnival, Casa Grande, Arizona.

Nov. 7-8—New Mexico Cattlemen's Association Fall Show and Sale,

Raton, New Mexico.

Nov. 10-13 — Annual Death Valley Encampment, sponsored by Death Valley '49ers, Death Valley, California.

Nov. 11—Good Neighbor Day festivities, Bisbee, Arizona.

Nov. 11-16 — Annual Golden Spike National Livestock Show, Ogden,

Nov. 12—St. James Day Corn Har-vest Dance, Tesuque, New Mexico (photography permitted by approval

and fee payment).

Nov. 12 — San Diego's Day Corn
Harvest Dance, Jemez Pueblo, New Mexico (photography prohibited).

Nov. 12-13 — Annual Weed Show sponsored by the Woman's Club, Twentynine Palms, California.

Nov. 18-27—Arizona State Bowling Association

Association Tournament, Yuma, Arizona.

Nov. 19-20 -Annual Elks Rodeo. Victorville, California.

Nov. 24—Desert Sun Ranchers Ro-deo, Wickenburg, Arizona. Nov. 24-27—Sierra Club Kofa Range hike, campsite at Palm Canyon, 17 miles south of Quartzsite, Arizona.

Nov. 25-27 - New Mexico and El Paso Stamp Clubs Convention, Hotel Paso del Norte, El Paso,

Nov. 26-27-Junior Parade and Rodeo, Florence, Arizona.

Nov. 26-27-Sierra Club Telescope Peak hike, meet at cafe near Wild Rose Station, 40 miles north of Trona, California, for tour of Aguereberry Point and Skidoo.

November and December—Peruvian Weaving Exhibit, Museum of Northern Arizona, Flagstaff, Ari-

Late November or early December— Zuni Pueblo House Dedication ceremonies, Santa Fe, New Mexico (photography prohibited).

After First Frost — Navajo Fire Dance, Navajo Reservation.

About the Cover . . .

The outstretched arm of this Giant Saguaro Cactus has lost its halo of waxy white flowers and in its place waxy white flowers and in its place has grown a ring of brilliant scarlet fruit—the delight of desert dwellers and desert birds alike. Indians skillfully reach 30—often 40—feet into the hot summer sky with their long kuibits to knock the dark red pulpy centers to the ground, leaving the green and unopened fruit untouched to ripen in its own time.



| Volume 18 | NOVEMBER, 1955 | Nu | ımber | 11 |
|---------------|---|------|-------|----|
| COVER | Saguaro Cactus fruit (see story on Photo by Charles W. Herbert | page | 14) | |
| POETRY | Lizard, Beware! and other poems . | | | 2 |
| CALENDAR | November events on the desert | | | 3 |
| PERSONALITY | Kelly of Capitol Reef By RANDALL HENDERSON | | | 4 |
| LOST MINE | A Skeleton Guards the Lost Gold of By NELL MURBARGER | | | 7 |
| HISTORY | Hassayampa Dam Disaster—1890 By I. H. PARKMAN | | | 11 |
| GARDENING | Tamarisk in the Back Yard By RUTH REYNOLDS | | | |
| INDIANS | Saguaro Harvest in the Land of Paper By CHARLES W. HERBERT | agos | | 14 |
| FIELD TRIP | Rock Trails in Chemehuevi-Land By HAROLD O. WEIGHT | | | 18 |
| EXPERIENCE | Rare Bird of the Santa Ritas By DOROTHY W. ALLEN | | | 23 |
| CONTEST | Picture of the Month Contest announce | | | 24 |
| CLOSE-UPS | About those who write for Desert | | | 24 |
| | Pictures of the Month | | | |
| NATURE | Desert Hunter—Shy and Deadly By EDMUND C. JAEGER | | | 26 |
| LETTERS | Comment from Desert's readers | | | 28 |
| TRUE OR FALSE | A test of your desert knowledge | | | 29 |
| NEWS | From here and there on the Desert. | | | 30 |
| FICTION | Hard Rock Shorty of Death Valley . | | | 31 |
| URANIUM | Progress of the mining boom | | | 35 |
| MINING | Current news of desert mines | | | 39 |
| LAPIDARY | Amateur Gem Cutter, by LELANDE Q | | | 40 |
| HOBBY | Gems and Minerals | | | 41 |
| COMMENT | Just Between You and Me, by the Edi | | | 46 |
| BOOKS | Reviews of Southwestern Literature. | | | 47 |
| | | | | |

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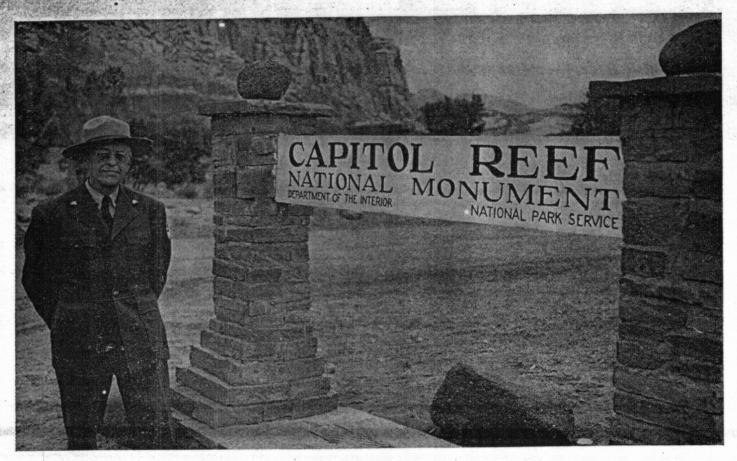
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Address Correspondence to Desert Magazine, Palm Desert, California



Charles Kelly, printer, musician, explorer, writer—and now he is superintendent of one of the most colorful national monuments in the West.

Kelly of Capitol Reef...

If you visit the Capitol Reef National Monument in southwestern Utah, the courteous ranger on duty there more than likely will be Charles Kelly—for the Park Service custodianship at Capitol Reef is a one man job—and Kelly is the man. He is superintendent of 33,000 acres of the most gorgeous scenery in Uncle Sam's domain—and he loves to share his knowledge of and enthusiasm for The Reef with all who come to his door.

By RANDALL HENDERSON

"7'VE GOT a whole bale of stories about desert rats if you want 'em—never been able to find anyone who would use the material."

This sentence in a letter from Charles Kelly in March, 1938 — five months after Desert Magazine had been launched on its 18-year career—was my introduction to a man who has been one of Desert's most valued contributors down through the years. Kelly was a partner in a printing business in Salt Lake City when he first wrote me.

Accompanying the letter was a manuscript from his "bale of stories" about desert rats. It was the story of Harry Goulding and his wife Mike, whose Indian trading post in a little cove at the base of the cliffs in Monument Valley, Utah, was then known only to a few of the more venturesome travelers.

It was an interesting story—about a young cowboy and his wife who had recognized Monument Valley as one of the scenic wonderlands of the Southwest, and had envisioned the day when increasing numbers of motorists would be attracted to this desert land of red sandstone monoliths, and would need provisions and accommodations and guide service.

It was the kind of story the newly organized editorial staff of *Desert* was seeking—and is still seeking, and it was published in July that year.

Since then, Charles Kelly has written 51 illustrated feature stories for Desert, mostly about the interesting people he has met in his exploration of Utah, Nevada and Arizona deserts, extending over a period of 30 years.

Although I have been buying Kelly's manuscripts and reviewing his books for more than 17 years, and have a huge file of correspondence carried on during that period, it was not until last summer that I first had the opportunity to meet him personally. Our trails have crossed many times, but always we missed each other by a few miles or a few hours.

Then one day in June I parked my station wagon in front of the little frame building which is the headquarters of the Capitol Reef National Monument at Fruita, Utah, and introduced myself to the scholarly man in the ranger's uniform who was on duty in the office.

That day, and in subsequent meetings, I learned much about the man who is a recognized authority on the history, geology, archeology and geography of the great central desert plateau where he has spent much of his mature life, always exploring, reading and writing.

Kelly was born in Cedar Springs, Michigan, in 1889. His father was a minister, and soon after Charles' birth the family moved to a new pastorate in Ohio, and a few years later to Chicago.

His mother, a cultured woman, gave him his elementary schooling at home, and laid the foundations for a life of study and research. It was not until he was 15 that he was enrolled in the public schools, and his academic studies ended with three years at Valparaiso University in Indiana.

In the meantime he had been learning the printing trade in the little shop where his father printed religious tracts in Cottonwood Falls, Kansas.

At 25, with his classroom work and his printing apprenticeship behind him, he went to Pendleton, Oregon as a Linotype operator, and soon became the foreman of the newspaper composing room there. Then he moved to Great Falls, Montana, where he spent three years in a commercial printing plant.

When World War I was declared he enlisted in the infantry, and was in officer's training school when the Armistice was signed.

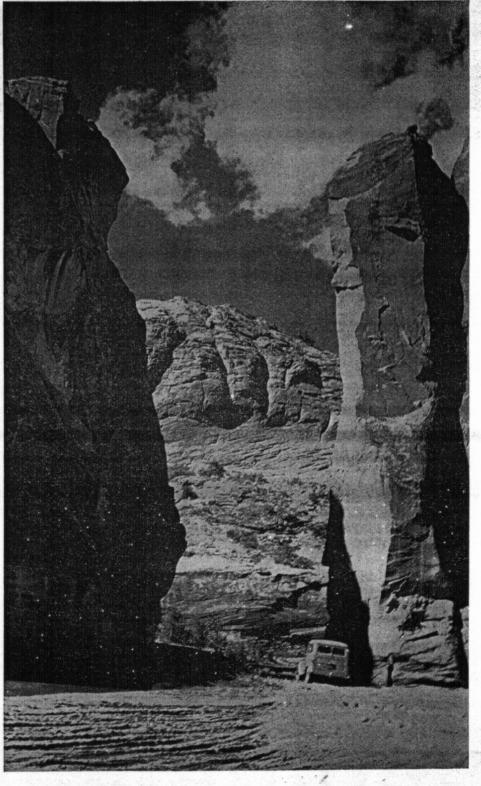
His parents had encouraged him to practice on the violin and cornet. Later he played in school and community orchestras, and when he received his discharge at the end of the war he decided to follow music rather than printing as a career.

He went to Salt Lake City because he felt the opportunities for a musician were better there than in a small community. But full time employment for a musician was not easy to find, and he now had a wife, and a home to maintain. He and Harriett were married in 1919.

Under the circumstances it was easy to turn back to the printing business. where employment was dependable and wages good. He took a job as Linotype operator, and a year later became a partner in a commercial printing business in Salt Lake City. He remained in this business 19 years.

In the meantime he had taken up hobbies which were taking more and more of his time and interest. His brother, also working in Salt Lake City, had acquired a Model T Ford, and he asked Kelly to suggest some weekend trips they could take together in the new car.

Charles had always been curious about the great blank space on the Utah map marked "Great Salt Desert" and they scheduled that for their first



Capitol Gorge in the Capitol Reef National Monument.

trip. At the edge of the desert where they stopped for information a garage man told about the Donnor party which had crossed that way in 1846.

Kelly was intrigued by the meager information given by the garage man, and when he returned to Salt Lake City he went to the library to read what he could find about the Donnor party.

In his quest for information about

the tragic Donnor episode he found recurring references to other men and incidents in the historical background of Utah and the Southwest. He became an eager student of western history, especially that of the great Lahontan Basin and the plateau that extends from the Rockies westward across Utah and Nevada.

Before long, all his spare time was

devoted to historical research, and the weekend and vacation trips of exploration along historic trails where bits of evidence—old wagon ruts, inscriptions on rocks and campsites marked by discards from the wagon trains a hundred years ago—were to be found.

It was inevitable that Kelly should make the acquaintance of Frank Beckwith, editor of the weekly Chronicle at Delta, Utah, who for many years had been engaged in similar pursuits. In association with Beckwith, Kelly's interests were expanded to include archeological research. Together they sought prehistoric campsites, artifacts and petroglyphs which might throw light on the character and habits of the prehistoric people who had dwelt in this desert region.

Then Kelly began to write. There was only a limited market for short articles in the fields in which he was interested, and since he had his own facilities for the printing of books, he began to compile book-length manuscripts. During the 10 years from 1930 to 1940 he completed the following volumes:

Salt Lake Trails.

Holy Murder, a Biography of Porter Rockwell.

Old Greenwood, the story of a trapper.

Miles Goodyear, the biography of the man who founded Ogden, Utah, before the Mormons came.

Outlaw Trails, the story of Butch Cassidy and other outlaws.

Journals of John D. Lee.

All of these books, printed in limited edition, are now out of print and some of them are collector's items of rare value.

Kelly found the demands of a highly competitive business enterprise interfering more and more with the things he wanted to do—study and write. It was not easy after a long and hectic day attending the infinite details of the printing business—selling letterheads, keeping the presses rolling, meeting payrolls and collecting bills—to devote a relaxed evening in the library or at the typewriter.

One of the places Kelly had visited in his exploration of Utah was the Wayne Wonderland, a vast scenic region in Wayne County. He had gone there first to see the Pectol collection of Indian artifacts, one of the finest private collections in the state.

One of his friends in Salt Lake City was Dr. A. L. Inglesby, a dentist who had taken up rock collecting and lapidary as a hobby. Dr. Inglesby had re-

tired and moved to Fruita in the Wayne Wonderland to devote all his time to his hobby. He suggested that the peaceful valley at the base of the colorful Capitol Reef would be an ideal place for a writer to live and work.

The urge was strong, and in 1940 Kelly sold his interest in the Salt Lake printing business and moved to Fruita. He was not ready to retire, and his limited book editions had never been highly profitable. He would buy a fruit ranch, and divide his time between the orchard and his study.

But something was taking place in Europe which interfered with his plans. The inflation of the economy which followed Hitler's invasion of France and Uncle Sam's feverish effort to rearm, had created a ready market at high prices for food, including fruit. Orchard lands were in demand and fruit acreage had advanced sharply in selling price. Kelly decided to mark time until conditions were back to normal again. He is still waiting to buy a fruit ranch at a price he can afford to pay.

By presidential proclamation of Franklin D. Roosevelt in 1937, 33,-068.74 acres of the Wayne Wonderland had been set aside as Capitol Reef National Monument. When Kelly moved to Fruita three years later no resident custodian had yet been named for the Monument. However, in order to obtain water rights, the Park Service had invested in a house and a small tract in the orchard area along Sulphur Creek.

The Monument was under the jurisdiction of Paul Franke, superintendent of Zion Canyon and Bryce National Parks. On one of his visits to Capitol Reef Franke met Kelly, and suggested that he assume sort of a dollar-a-year custodianship of the Monument, his compensation to be the rental value of the dilapidated old house which the Park Service had acquired.

For Kelly, this proposal solved the problem of housing pending the purchase of a fruit ranch and he accepted it, although much time and some investment was required to make the house livable.

Although no budget had been set up in Washington for the administration of Capitol Reef Monument, Franke at various times was able to spare limited sums from his own budget for preliminary surveys and road work, and for some part time work for Kelly. A small headquarters building had been erected as a WPA project.

It was not until 1950 that the Park Service authorized the employment of a superintendent for the Monument, and Kelly was given full-time pay for a job to which he had been devoting much of his time for many years.

Kelly had found everything he wanted at Capitol Reef — a land of fantastic beauty with unlimited opportunity to explore, and to study the subjects in which he was most interested — history, geology, archeology, botany and zoology. And now he was custodian of this 33,000-acre domain for Uncle Sam.

The Park budget for Capitol Reef was very limited, but that did not dim Kelly's enthusiasm. Much of the time he was without a ranger assistant—which meant that the office would be closed on his weekly day off. But tourists never take a recess, and when Kelly was not at park headquarters they sought him at his home. Virtually, it has been a seven-days-a-week job.

But Kelly does not complain about that. As far as he is concerned, Capitol Reef is not merely the end of the rainbow, it is the whole rainbow. It has the gorgeous coloring of Death Valley Monument plus the fantastic formations of Bryce—and Kelly wants to share the beauty of this land with all who come to his door.

Capitol Reef is uranium country. One of the first discoveries of this ore was made here many years ago, before the Monument was established. Until last May the Atomic Energy Commission, under the authority of an emergency provision, was issuing permits to prospect for uranium within the Monument. However, the area has now been thoroughly prospected, and no new permits are to be issued. While the outstanding permits are good for a year, and for continuing operation on the few claims where pay ore had been found, the mass invasion of the Geiger counter clan is about over-and Kelly looks forward to the opportunity to restore and maintain his national monument for the purposes for which parks and monuments were created-to serve the cultural and recreational, rather than the commercial, purposes of American citizens.

There has been little time for writing since Kelly assumed the superintendent's position at Capitol Reef. Desert Magazine's staff would welcome more of his stories. But he is still a student—and in his present position is accumulating a vast store of new material for the day when he and Harriett can resume the way of life they dreamed about when they moved to the lovely valley of orchards at the base of the great stone cliff—a quiet study where the walls are lined with books, and apples and pears and peaches growing in their own little orchard outside.

DESERT CALENDAR

Feb. 23-March 1-11th Annual Cactus Show, Desert Botanical Gardens, Phoenix.

Feb. 28-March 1 - 11th Annual Square Dance Jamboree, Phoenix. March 1—Junior Solar Symposium, Tempe, Arizona.

March 1-9 - California Mid-Winter

Fair, Imperial.

March 1-23-R. Brownell McGrew show at Palm Desert, Calif., Art Gallery. (See page 22) March 2—Dons Club Trek for Lost

Gold in the Superstition Mountains, from Phoenix.

March 4-30-Frank Mason show at Phoenix Art Center.

March 5-6 - All-Breed Dog Show, Phoenix.

March 6-Cattle Rustlers Ball, Wick-

enburg, Arizona. March 8-9—Sierra Club Desert Peaks Section hike to Rabbit Peak near Indio, Calif. For information phone ED 9-3144, Covina.

March 9 — Ninth Annual Almond Blossom Festival, Quartz Hill, Cal.

March 9 and 23—Desert Sun Ranchers Rodeo, Wickenburg, Arizona.

March 11-12—Malpi-Angus Breeders Show and Sale, Clayton, N. M.

March 12-16—22nd Annual Desert Circus, Palm Springs, California. Circus, Palm Springs, California. March 13-16—World's Championship

March 15-16—World's Championship Rodeo, Phoenix. March 15-16—Sierra Club camping trip to Ord Mt. petroglyphs. Meet at Lucerne Valley, Calif., P.O., at 9 a.m. on the 15th. March 15-16—National Alpine Ski

Championships, Snow Basin, Ogden, Utah. March 16 — Out Wickenburg Way

Style Show, Wickenburg, Arizona. March 16-23 — 23rd Annual Palm Springs, Calif., Men's Invitational Golf Tournament.

March 17-St. Patrick's Day Celebration, Socorro, New Mexico. March 19—Miniature Parade, Mesa,

March 19 -- Fiesta and Ceremonial Dances, Laguna Pueblo, N. M. March 19-23—Maricopa County Fair,

Mesa, Arizona. March 21-23—Dons Club Bus Tour

to Hopi Villages, from Phoenix.

March 22-23—10th Annual De Anza Jeep Cavalcade, from Hemet, Cal. March 23-24—Invitational Golf Tour-

nament, Wickenburg, Arizona. March 23-25 — New Mexico Cattle Growers Association Convention, Albuquerque.

March 23-30—Home Show, Phoenix. March 28-29—Valley Garden Center

March 28-29—Valley Garden Center Flower Show, Phoenix.
March 29-30 — Sierra Club Desert Peaks Section Providence Mt. climb. Meet at Mitchell's Caverns, Calif. For information phone ED 9-3144, Covina.
March 29-30 — Silver Dollar Ski Derby. Reno.

Derby, Reno.

March 29-30 — Dons Club Grand
Canyon Bus Tour, from Phoenix. March 30-April 6 — Yaqui Indian

Ceremonials, Pasqua Village, Ariz. Late March — Opening of acequias (irrigation ditches) with colorful ceremonies at various New Mexico pueblos

Ute Indian Bear Dances probably will be held in March. Send inquiries to Roosevelt, Utah, C of C.



| Volume 21 | MARCH, 1958 | N | uml | oer 3 |
|-------------|---|----|-----|----------|
| COVER | High Desert in Spring, by DARWIN VAN | C | AN | (PEN |
| POETRY | Zion Canyon and other poems | | | . 2 |
| CALENDAR | March events on the desert | | | . 3 |
| PHOTOGRAPHY | | | | . 4 |
| FIELD TRIP | Rockhound Bonanza at Boron By EUGENE L. CONROTTO | | | . 5 |
| DESERT QUIZ | A test of your desert knowledge | | | . 8 |
| WILDFLOWERS | Flowering predictions for March | | | 11 |
| PERSONALITY | He Became a Mountaineer at 70 By LOUISE WERNER | | | 11 |
| CRAFTS | Jewelry from the Cholla By RONALD J. CRISTY | | | 12 |
| ADVENTURE | Over the Top of Landscape Arch By CECIL M. OUELLETTE | | | 13 |
| FICTION | Hard Rock Shorty of Death Valley | | | 16 |
| LOST MINE | Papuan's Lost Placer Mine By DOROTHY ROBERTSON | | | 17 |
| FORECAST | Southwest river runoff predictions | | | 18 |
| SERVICE | Minute Men In Jeeps! By NELL MURBARGER | | | 19 |
| HISTORY | Crossing of the Fathers By JOSEF and JOYCE MUENCH | | | 23 |
| CONTEST | Life on the Desert winners | | | 24 |
| EXPERIENCE | Lennie Begay's Priceless Gift By ALPHINE RENSLOW | | | 24 |
| CONTEST | Picture-of-the-Month contest announcement | it | | 25 |
| NATURE | He Discovered a Rare Cactus in the Chuck By EDMUND C. JAEGER | | | as 26 |
| LETTERS | Comment from Desert's readers | | | 28 |
| CLOSE-UPS | About those who write for Desert | | | 28 |
| NEWS | From here and there on the desert | | | 29 |
| MINING | Current news of desert mines | | | 33 |
| LAPIDARY | Amateur Gem Cutter, by DR. H. C. DAKE | | | 36 |
| HOBBY | Gems and Minerals | | | 37 |
| COMMENT | Just Between You and Me, by the Editor . | | | 42 |
| BOOKS | Reviews of Southwestern literature | | | |

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Address Correspondence to Desert Magazine, Palm Desert, California



Landscape Arch in the Devil's Garden of Arches National Monument, Utah. The slender span is 291 feet long and 118 feet high. Photo by Hubert A. Lowman.

Over the Top of Landscape Arch ...

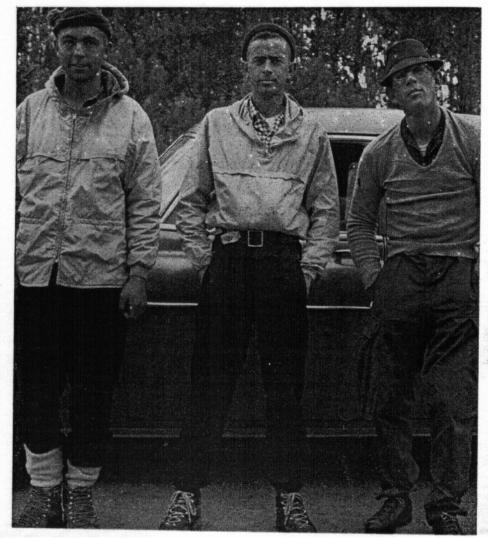
Rockclimbing is an adventurous sport calling for the utmost in physical fitness, climbing skill and team cooperation. Here is the story of how three young men made the second known ascent and traverse of Utah's Landscape Arch, the world's longest natural bridge and one of its most challenging climbs.

By CECIL M. OUELLETTE Map by Norton Allen

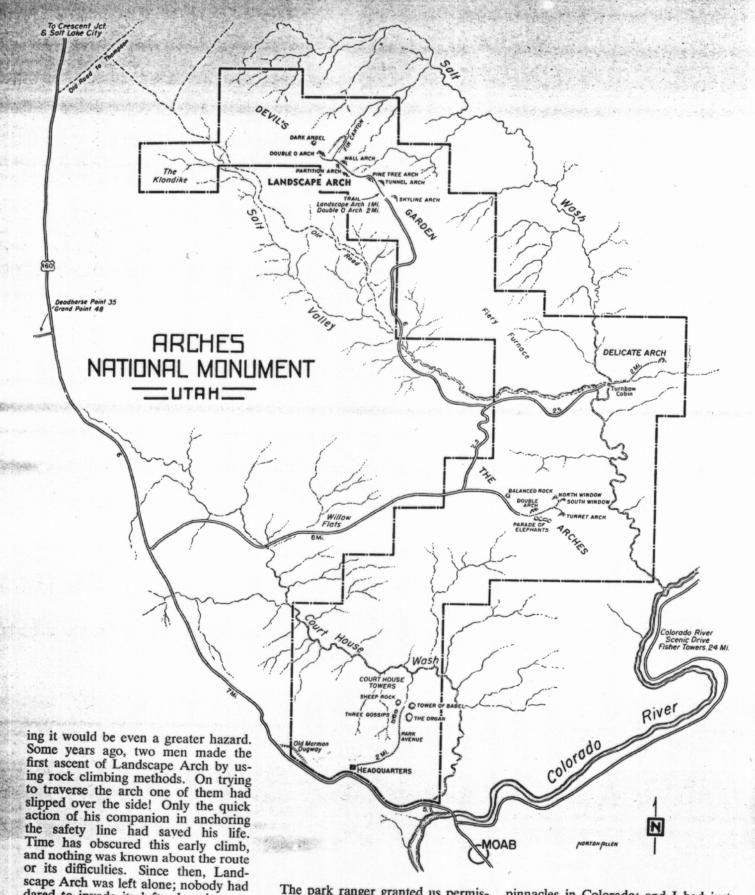
"T LOOKS impossible!" exclaimed Mike Borghoff. Jim Eslinger and I nodded agreement. We were huddled around a pamphlet on Arches National Monument which the ranger had just given us. On an inside page was a picture of one of the most fantastic formations on earth: Landscape Arch—and to a trio of ardent rock climbers the photograph was electrifying.

Believed to be the longest natural stone span in the world, Landscape Arch has a length of 291 feet. To get up to the arch would be difficult and dangerous, the ranger said, and travers-

The author, center, and fellow rockclimbers Jim Eslinger, left, and Mike Borghoff.



MARCH, 1958



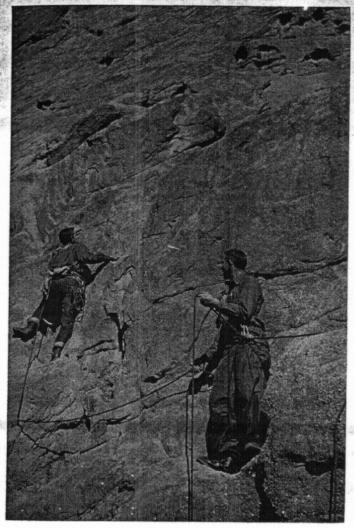
dared to invade its lofty domain.

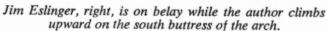
My intended question was unnecessary, for I could feel the excitement building up within my two companions. We were going to attempt the challenge of Landscape!

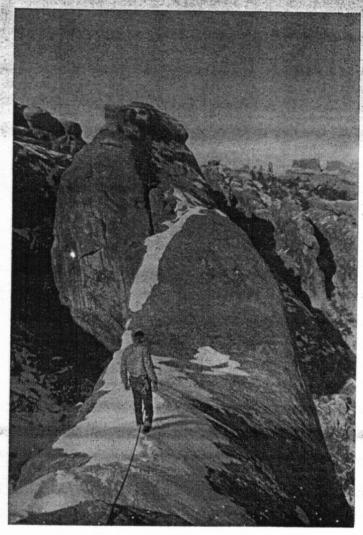
The park ranger granted us permission to climb in the monument for we were well experienced in the art of mountaineering. Jim Eslinger had made many ascents of high peaks in the Sierras; Mike Borghoff had climbed in the Alps, Tetons and on precipitous

pinnacles in Colorado; and I had just finished a summer of good rock climbing in three states.

The sun was setting behind a huge sandstone cliff as we left ranger headquarters and headed for the Devils Garden in the northern end of the







The author starts off across the snow-spotted arch. At the far end the passage narrows dangerously.

monument. It is in this area that Landscape is located. In the oncoming dusk of this early December day I noticed small patches of snow lying in the sheltered spots.

We continued north from Moab, Utah, on U.S. 160 for 12 miles, then turned east on State Route 93. After an hour's drive over a dirt road, we entered the Devils Garden and found a bivouac site.

We were shouldering our climbing packs as the morning sun flooded the sandstone country with its light. In the packs were two nylon climbing ropes, karabiners (oblong steel rings with spring openings), pitons (thin wedge-shaped spikes with a circular hole or ring at the driving end through which the rope is passed, or to which a karabiner carrying a rope is attached), piton hammers, expansion bolts (small bolts placed in a drilled hole in the rock, with the same function as pitons) and a small amount of food and water.

A trail marker near the end of the road points the way to Landscape Arch. The narrow mile-long trail passes through a weird wonderland of gigantic formations, and down avenues dwarfed by pinnacles that towered over us like huge skyscrapers. Pinyon and juniper trees dotted the rugged region. At our feet were bits of flint chipped from stone implements which prehistoric Indians fashioned here. Deer tracks cut across our path. The Devil's Garden is an enchanting wonderland!

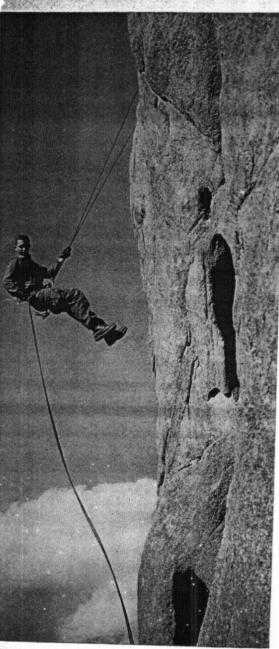
Then looming above us was a strip of sandstone that seemed suspended in mid-air! It was the massive structure of Landscape Arch, resembling a huge thread across the sky. We turned off the trail and passed under its thin shadow. Looking upward, the stone bridge towering above us seemed remote and far away.

To attempt an ascent of the right side of the arch appeared futile, so we moved to the left and searched the buttress for a route to the summit. We tried going up a crack or rift in the rock face, but it became too treacherous to climb. Moving around to the south face, we found what seemed to be a feasible route to the top.

We tied on to the common line and Mike led up a short crack. He climbed with perfect rhythm and balance to a small platform 35 feet above us. We were keeping the distances between us short because of the inadequate protection found in climbing sandstone which, because of its softness, does not always offer a secure hold for pitons.

Mike and Jim belayed me as I climbed upward, then I stemmed up another crack on the next lead and found a drilled hole for an expansion bolt. We were on the same route used by the first party years before. Slowly I inched my way higher up the south face, using the lone expansion bolt for protection. I stopped on a ledge that was large enough for my feet and went on belay.

Mike brought Jim up, then climbed past me on the third and longest lead. I watched as he searched for hand and footholds, clinging like a fly to a smooth wall as he worked skyward. He wriggled up through a tight chimney, hammered in a piton and attached the rope with a karabiner, then



Coming down was easier. Jim Eslinger rappels down the north buttress of Landscape Arch.

scurried over a 30-foot friction pitch and past an overhang to the summit of the buttress. He belayed me up, and Jim followed.

Surrounding us was a sculptured country of beautiful natural creations. Coves carved in the rock, arches, colored cliffs and balanced rocks filled the sweeping panorama. In the distance the massive white towers of the La Sal Mountains glistened in the sunlight. And Landscape Arch shot away from the buttress across a 300-foot expanse of dizzy depth. Here before us was the long traverse — a traverse across the sky. It was only 300 feet long, but from our airy perch it seemed like miles over that void.

A gentle breeze tugged at our heels

as I started across the arch. The passage was covered with crusted snow in a few places, and the walking space was scarce. Half way out on the arch, I sat down and belayed Jim who was second on the rope. He moved slowly and delicately to my belay spot. Then I started on the last leg of that long and suspended traverse. Snow dotted the top of the arch which narrowed considerably. I hesitated before a place on the ridge where its width evaporated to a mere six inches. One side was a shear drop, the other sloped dangerously away into space. I adjusted my rucksack and tip-toed across the narrow 10 feet of stone. The passage was only wide enough for my boots. The lead was finished—I was standing on the far end of the arch.

I signalled to Mike and Jim, and they moved into action. Mike climbed down from the far buttress and carefully tested every footstep in the snow. Suddenly his right leg shot over the side of the arch! Mike threw his weight on his left knee as he fell and miraculously held his balance. He had slipped on verglas, a thin coating of ice hidden beneath snow which is dreaded by all climbers.

Jim waited for Mike's signal and then edged forward to the narrow pitch, wavered uncertainly, collected himself, and spurted across.

Mike went off belay and started toward us. He halted before the 10-foot tightrope near the end of the arch and stomped his boots to knock the snow off the narrow passage. The sound echoed like a clap of thunder. Then quickly he moved across.

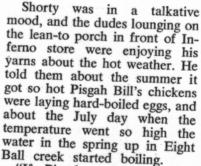
The next few minutes were taken up with handshakes, backslapping and verbal congratulations. We were the second party to climb and traverse Landscape Arch, and we had done it safely.

We ate a meager lunch and sipped some water from the canteen while the tension of the last few hours drained from our systems.

Then we set up a piton anchor and descended off the side in one long 110-foot rappel. I looked back at Landscape Arch, now glowing in the soft light of late afternoon. In my imagination I saw the three of us on that long and suspenseful traverse, and I felt again the freedom of that two-point contact on rock.

As we walked back to the car our spirits were as free as companions to the wind. The conquest of Landscape Arch had been an exciting and thrilling adventure.

Hard Rock Shorty of Death Valley



"If Pisgah and me hadn't stretched a tarp over that pool to keep the sun from hittin' it the thing probably would o' boiled dry and we might o' died of thirst," Shorty explained.

"But doesn't it ever get cold here in Death Valley?" one of the tenderfeet asked.

"Sure it gets cold," Hard Rock replied. "I remember the winter a flock o' ducks landed on that little pond where we water the burros. Next morning it was froze solid an' them birds couldn't

fly away. Their feet wuz in a cake o' ice. We had duck meat in camp all the rest o' the winter.

"The coldest spell we ever seen was back in '93. Really got cold that winter. Pisgah started a bonfire near the pool so we could get water fer makin' coffee. But it got so cold them flames froze right there in the air.

"Then Bill got one o' them smart ideas o' his'n. He got the sledge hammer and started bust-in' 'em up. 'They'll make good kindlin' wood fer the cabin,' he explained.

"So he stacked 'em in one corner of the shack 'til they thawed out. But one day in March it suddenly turned warm, and while Bill and me was down in the mine shaft they started burnin' again — and when we came outta the hole that evenin' we had no cabin."

DESERT CALENDAR

Jan. 30-Feb. 2-Open Golf Tournaments at Phoenix and Tucson.

Jan. 31-Feb. 2 — Parada del Sol, Scottsdale, Arizona.

Feb. 1 — Far West Ski Association Giant Slalom Races, Flagstaff.

Feb. 1-2-18th Annual Rodeo, Palm Springs, California.

Feb. 1-2-Western Saddle Club Pony Express Ride from Prescott to Phoenix.

Feb. 1-2—Dons Club Tour of Chiri-cahua National Monument and Southern Arizona, from Phoenix.

Feb. 2—Candlemas Day Ceremonial Dances at San Felipe, Cochiti and Santo Domingo pueblos, N. M.

Feb. 3-9 — Southwestern Livestock Show and Rodeo, El Paso, Texas. Feb. 4-State Pancake Race, Clay-

ton, New Mexico.

Feb. 7-9-18th Annual Imperial Valley Tomato Festival, Niland, Calif. Feb. 8-Festival of Fashion, Tucson. Feb. 8-9-Jaycee Silver Spur Rodeo,

Yuma, Arizona. Feb. 8-9—Western Saddle Club Stampede, Phoenix.

Feb. 9-Buffalo Barbecue, Chandler, Arizona.

Feb. 9 - Dons Club Apache Trail Tour, from Phoenix.

Feb. 9-11-New Mexico Wool Growers Association Convention, Albu-

Feb. 9 and 23-Desert Sun Ranchers Rodeo, Wickenburg, Arizona.

Feb. 12-13 — Tri-State Hereford Breeders Show, Clayton, N. M.

Feb. 13-16 — 11th Annual Carrot Carnival, Holtville, California. Feb. 14-15-Dons Club Bus Tour of Death Valley National Monument,

from Phoenix. Feb. 14-16-Gold Rush Days, Wick-

enburg, Arizona. Feb. 14-23 - Riverside County Fair and National Date Festival, Indio, California. (See facing page.)

Feb. 15 - Ceremonial Dances, San

Juan Pueblo, New Mexico. Feb. 15-16—Mid-Winter Ski Carnival, Taos, New Mexico.

Feb. 16-23 — Arizona Sports, Vacation, Boat and Trailer Show, Phoenix.

Feb. 20—Dried Arrangements Flower Show, Garfield Garden Club, Phoe-

Feb. 20-23-33rd Annual Fiesta de los Vaqueros Parade (on 20th) and Rodeo, Tucson.

Feb. 22-23 — Arabian Horse Show, Scottsdale, Arizona.

Feb. 22-23-Arizona Cup Ski Races, Flagstaff.

Feb. 23—Dons Club Tour of Jerome and Montezuma National Monument, from Phoenix.

Feb. 23-March 1-11th Annual Cactus Show, Desert Botanical Gardens, Phoenix.

Feb. 28-March 1 11th Annual Square Dance Jamboree, Phoenix. Month of February-Oriental Paint-

ings Art Exhibit at Phoenix Art Center.

Month of February-Fred D. Penney Exhibit at Desert Magazine Art Gallery, Palm Desert, California.



| Volume 21 | FEBRUARY, 1958 Number | 2 |
|---------------|---|---|
| COVER | Wildflower Corden by HADDY VIDOMAN | |
| PROGRAM | Wildflower Garden, by HARRY VROMAN | 2 |
| | | |
| CALENDAR | | 3 |
| POETRY | | 4 |
| RECREATION | The Water Was Rough in Cataract Canyon By RANDALL HENDERSON | 5 |
| FORECAST | February Wildflower Predictions | 2 |
| TRUE OR FALSE | A test of your desert knowledge | 2 |
| MINING | Open Pit Miners at Goldacres By NELL MURBARGER | 3 |
| HISTORY | Territorial Prison By JOSEF and JOYCE MUENCH 1 | 7 |
| DEVELOPMENT | Progress Report on Upper Basin Dams 1 | 8 |
| FICTION | Hard Rock Shorty of Death Valley 1 | 8 |
| FIELD TRIP | Loop Trip Through the El Pasos By EUGENE L. CONROTTO | 9 |
| CONTEST | Picture-of-the-Month contest announcement 2 | 2 |
| PHOTOGRAPHY | Pictures of the Month 2 | 3 |
| NATURE | Life on an Ancient Moiave Playa By EDMUND C. JAEGER 2 | 4 |
| EXPERIENCE | The Desert Gave Us a Way to Live By DOROTHY ROBERTSON 2 | 7 |
| LETTERS | Comment from Desert's readers | 8 |
| CLOSE-UPS | About those who write for Desert | 8 |
| NEWS | From here and there on the desert | 9 |
| MINING | Current news of desert mines | |
| LAPIDARY | Amateur Gem Cutter, by DR. H. C. DAKE 3 | |
| HOBBY | Gems and Minerals | |
| COMMENT | Just Between You and Me, by the Editor 42 | 2 |
| BOOKS | Reviews of Southwestern literature | B |
| | | |

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These are the two neoprene barges on which Georgie White piloted the 23 boatmen and passengers on her 1957 expedition through Cataract Canyon.

The Water Was Rough in Cataract Canyon ...

All Colorado River boatmen have a wholesome respect for Cataract Canyon where the stream drops 415 feet in 41 miles—and you will understand the reason for Cataract's bad reputation when you read this story of a trip through the rapids in rubber rafts during the high flood season of 1957. Here is a day by day record of what one of Georgie White's river expeditions encountered in this treacherous sector of the Colorado.

By RANDALL HENDERSON Map by Norton Allen

HE RAPIDS in Cataract Canyon of the Colorado River are no rougher than many of those in Grand Canyon, farther downstream, but there are more of them to the mile. Frederick S. Dellenbaugh, who accompanied the second Powell expedition in 1871, recorded 62 rapids in 41 miles, and some of them are thrillers.

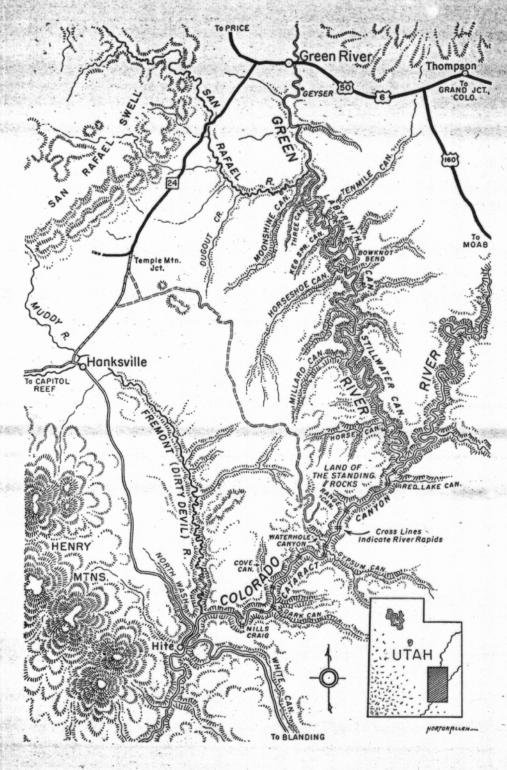
Thanks to the invitation of Georgie White, famed woman pilot of the western rivers, I spent three wet days riding over and through the tumultuous waters of Cataract last June. Most of the time we were on top of the waves, but not always. There were occasions when my experience was much like the sensation of diving through the high breakers at the beach. I soon learned that the best technique for riding that kind of water was to duck my head and hang onto the ropes which were strung around the perimeter of the rubber rafts on which we were riding.

Our voyage started at Greenriver,

Utah—not to be confused with the town of Greenriver farther north along the river in Wyoming.

Throughout the day, June 9, prospective voyagers who had signed for the trip were arriving at Robbers' Roost Motel, our rendezvous in Greenriver. A majority of the 21 passengers who with Skipper Georgie White and two boatmen made up the party, were from California, but the list also included midwesterners from Chicago, Milwaukee, St. Louis and Cicero, Illinois.

The evening preceding our departure was spent in getting acquainted with the passengers who were to be our companions on the trip, and in repacking clothing, bedrolls and equipment. Everything must be enclosed in water-proofing, and for this purpose Georgie had provided a quantity of neoprene rubber packing cases — war surplus items. There were big containers for



clothing and bedding, and small ones for camera equipment and personal items. In addition to the neoprene cases, a kapok life jacket and plastic cup and bowl were issued to each of us. The latter items were to be our eating vessels for the next six days.

Early next morning we got our first glimpse of the river craft which were to earry us through Labyrinth and Stillwater Canyons of the Green, and Cataract Canyon of the Colorado, to our destination at Hite Ferry crossing. The boats were moored along the river bank just below Greenriver. Georgie White has her own system for operating the rubber rafts she uses for river transportation. For this trip she provided two neoprene barges, one composed of three 13-ton towing rafts lashed together with nylon rope, making a deck approximately 21x28 feet, and the other composed of three 10-man neoprene landing rafts each 15 feet long with a seven and one-half-foot beam, also tied together side by side with nylon.

The 13-ton rafts are similar to the rubber pontoons used by army engineers during the last war for bridge

work, except that our rafts have a longitudinal tube down the center. The outer tube has eight air cells and the center tube two.

Luggage is tied to the ropes on top of the barge, and in quiet water the passengers may move over the deck at will.

Since the large barge is too unwieldy for oars to be effective, its center raft is equipped with an 18 horsepower Johnson outboard motor to facilitate landing and maneuvering in the current. Georgie was motorman and pilot throughout the trip. The smaller barge has an oarsman on each of the outside tubes.

The skipper's instructions were simple: "Tie your luggage on securely," she said, "and wear your life jackets." Actually there was little need for life jackets in the smooth-flowing current of the Green River, but evidently Georgie wanted us to become accustomed to wearing them, for the day when they might be needed.

At 10 a.m. we shoved off in a drizzling rain. A mile downstream we passed under the cable of the USGS gauging station, and the hydrographer in his cab overhead told us the river was flowing 38,000 second feet of water. This is a big discharge for the Green River, and the abundant driftwood floating with the current indicated the stream was still rising.

I started the trip in the big barge. With the help of the motor we were making 10 miles an hour. We were in the Morrison formation with low cliffs and hills on both sides and a belt of willow, tamarisk and mesquite along the shore lines.

Seven miles downstream Georgie pulled to the shore just in time for us to witness a fountain of water spouting from the limestone mesa, an intermittent geyser which came into action several years ago when drillers put down a well here, and then abandoned it because of the highly mineralized hot water they tapped. The geyser gave warning of its impending discharge by sputtering for a few seconds, and then sent a fountain of water 30 feet into the air. Three minutes later it had subsided.

As we continued downstream hundreds of cliff swallows darted around us. They feed on the wing, diving down to the surface of the water for a morsal of food and then zooming away, apparently undisturbed by the big rubber barges floating with the current. In places we could see their mud nests on the almost vertical cliff walls.

We pulled ashore for lunch where there was a little grove of cottonwoods, and saw where beaver had been cutting down some of the smaller trees. Later on the trip we saw an occasional beaver swimming close to the shore.

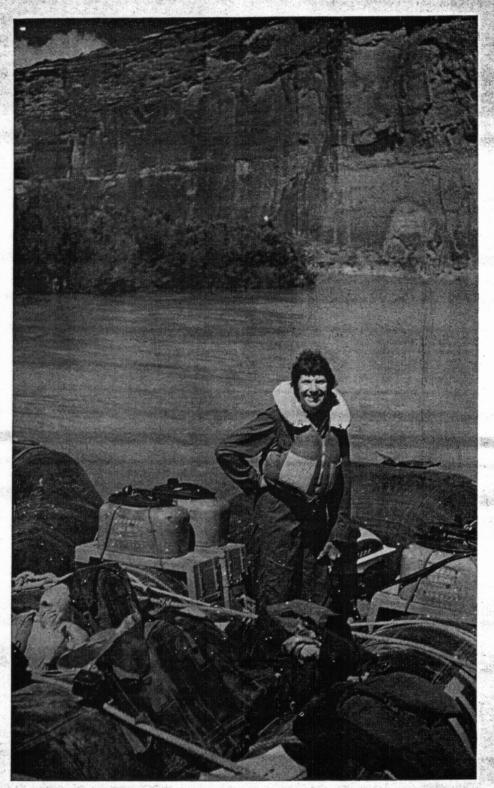
Georgie White has reduced her commissary operation on these trips to utter simplicity. She carries one of those six-feet-in-diameter octagonal plastic wading pools. Preparing lunch consists of inflating the tubular rim of the pool, placing it on the ground, and then filling the basin with an appetizing assortment of cold meats, cheese, jam, honey, fruit and fruit juice, and canned nut bread. We had buffet lunch—or as one member of the party termed it, "Cataract Canyon smorgas-bord."

For evening meals and breakfasts, there were three two-burner Coleman stoves and a generous supply of Revere kettles—one stove for hot water to make instant coffee or chocolate, one for a hot canned meat and a vegetable, and one with kettles for washing and rinsing those plastic cups and bowls. We found it no hardship to eat an entire meal from soup to dessert in a bowl, with a plastic cup and teaspoon and then wash them ourselves in readiness for the next meal. Hot cakes or beef stew taste just as good in a porridge bowl as on a fine dinner plate, when one is camping out.

It requires careful advance planning to feed 24 people in this manner. Much of the food, such as breakfast cereals and canned fruits, were in individual containers. Preparing for a river trip, Georgie and her shore crew pack a complete day's ration for 10 people in one neoprene case, with the breakfast items on top. Then the cases are numbered in bold letters, and when mealtime comes the boatmen simply offload the right cases and the stoves and the meal is served with a minimum of effort.

During the afternoon we passed from Morrison to the Entrada formation, and camped that evening just below the mouth of San Rafael River on an embankment of red sand. There had been generous rains earlier in the season and the sandy floor of our campsite was covered with a profusion of lupine, fiddleneck, phacelia, salmon mallow and what appeared to be a species of white sand verbena. The most conspicuous shrub on the hillside was squaw bush.

The river rose three inches during the night and was carrying great floats of drift when we embarked at 7:15 in the morning. The canyon walls began to close in, and later in the morning the Entrada formation gave way to Navajo sandstone. Here the creamy walls along the stream revealed lovely tapestries — patterns formed by the minerals carried down the sidewalls by rainwater. Generally these stains are caused by manganese in solution—



Georgie White, three times through Grand Canyon in 1957.

and are not true desert varnish. Far up on one hillside we saw a crew of men working a uranium mine.

Since leaving San Rafael River we had been in a sector of Green River which Powell named Labyrinth Canyon. Stillwater Canyon is a continuation of Labyrinth with no well defined dividing line. Viewed from the river Labyrinth and Stillwater Canyons present an ever changing panorama of beauty and majesty — equal in my

opinion to the beauty of Glen Canyon in the Colorado which later will be submerged in the reservoir behind Glen Canyon dam.

We passed Three Canyons, tributaries which come together and merge into the Green River gorge. We made the great sweep around Bowknot Bend where the river almost doubles back on itself. We passed the mouth of the great Horseshoe gorge where earlier in the year I had photographed



Georgie White, fast water skipper. Photo by Cliff Seferblom.

some of the most amazing pictographs in the Southwest (Desert Magazine, Oct. '57). This is a land of multicolored sandstone, of turrets and domes and spires sculptured by millions of years of erosion. One feels very humble in such a setting.

We camped that night near one of the newly discovered uranium mines, where a caretaker was temporarily in charge.

In landing the big barge we got a puncture. This neoprene rubber is almost impervious to the battering it gets on rocks—but it could not withstand the dagger-like point of a huge dead cottonwood root which protruded from the bank. Georgie, piloting the raft from the stern, did not see the root, and we hit it at five or six miles an hour. There was a phuff—and the cell went flat.

It was only a minor accident. The boatmen patched it up that evening, but lacking equipment for a vulcanizing job that must be done from the outside, the cell finished the run through the canyons a bit flabby, but it affected our journey not at all. There were still fine air-tight cells in the raft—29 in the barge.

There had been rain back in the hills, and we passed two chocolate-colored waterfalls pouring over the cliffs along the river on this second day of our voyage.

We were away at 8:15 the third morning—in a new type of geology. We had passed out of the Navajo sandstone, and the cliffs during much of the morning revealed other sedimentary deposits so common in Southern Utah. At the top was Wingate, often almost white. Below was a stratum of Chinle, the formation which yields so much fossil material to the paleontologists, then Shinarump and below that Moencopi. Uranium prospectors have learned that uranium ores often are found at the contact between Chinle and Shinarump sandstones, and we saw the "coyote holes" of miners in many places.

The old-timers in this region have their own vocabulary for place names. Every cove along the river spacious enough for grazing or farming is a "bottom." During the trip we passed Horsethief Bottom, Tidwell Bottom, Potato Bottom, Beaver Bottom, Queen Anne Bottom and Anderson Bottom. Toward noon we entered a new formation—Cutler sandstone.

For lunch we pulled ashore to the shade of a huge block of stone which had fallen from the cliff above. On the back side of the rock I discovered some Indian petroglyphs, and the ground along the base of the nearby cliff was strewn with the discarded chert chips of prehistoric arrowmakers.

The river continued smooth all day and our camp that night was on a wide sandy ledge just above the river. I spread my bedroll in a lovely natural garden of salmon Mallow in full blossom — careful not to disturb these colorful wildings of the Utah desert.

In my log of this day's trib I again find the notation, "Stillwater is a lovely canvon—no less so than Glen Canyon of the Colorado."

That evening at our campfire gathering, the women staged a little ritual in which Bill Slamp, our companion from Chicago, was presented with some improvised bits of attire in celebration of his birthday. The delightful companionship of such a trip — among people who until three days ago were strangers—is a refreshing experience. Somehow, close association in such an environment brings out the best in humans.

The Green River at this point flows through the Robbers' Roost country, one of the hideaways for Butch Cassidy and his outlaws. The story is recorded in much detail in Charles Kelly's Outlaw Trails, now out of print.

We shoved off at 7:40 the next morning, and at 10:40 reached the confluence of the Green and Colorado Rivers. The Colorado above this point is shown on old maps as the Grand River. They come together in the heart of an almost inaccessible jumble of cliffs and buttes. Eight years ago I came overland to this junction with

a party guided by Ross Musselman of Moab. A quarter of a mile away it became too rough for our horses, and we finished the trip on foot.

At 11:30 we stopped for lunch at a cove known as Spanish Bottom, where an old Spanish trail comes down from the Land of the Standing Rocks to a place that could be forded in low water.

Soon after we departed from Spanish Bottom we could hear the roar of water. We were in Cataract Canyon, with the river in flood discharge, and we knew there was rough boating ahead.

I had exchanged seats with one of the passengers on the small barge. We were down close to the water and for the next two days I spent much of my time either hanging onto the ropes or bailing.

Then we came to the first of the rapids. Beneath the surface, and completely submerged at this stage of the river, were great boulders over which the water poured in mad whirlpools. The oarsmen strove to miss these holes, and generally were successful, but there was no way of avoiding the series of huge lateral waves which curled up in quick succession below. Sometimes the lead raft would be wallowing at the bottom of the pit between the breakers as the rear raft came over the top of the last one. And immediately their positions were reversed. It was a violent roller-coaster and a very wet one. Inevitably, some of the waves broke over the rafts and the ropes creaked and groaned as the tremendous power of the water tried to jerk the rafts apart.

It was rough going, but we had

PERSONNEL

Cataract Canyon Expedition, June 10-16, 1957

Georgie White, Los Angeles, pilot-leader.
Fred B. Eiseman, St. Louis, boatman. Harold Smithson, accompanied by his wife Carma, boatman. A. Gregory Bader, Los Angeles. Wm. B. Barnhill, Roswell, N. M. A. B. Cadman, Jr., Alhambra, Calif. Nathan C. Clark, Los Angeles. Tallulah Le Conte Elston, Carmel, Calif. Randall Henderson, Desert Magazine. G. D. Hitchcock, Pasadena, Calif. Marion R. Jones, San Francisco. Ed. J. Karveolet, Long Beach, Calif. John T. Lonk, Cicero, Ill.

Ed. J. Karveolet, Long Beach, Calif.
John T. Lonk, Cicero, Ill.
L. C. B. McCulloch, San Francisco.
Carl R. Peterson, Los Angeles.
Frank Rich, Jr., Culver City, Calif.
Tora M. Ringdahl, San Francisco.
Joel Sayre, Santa Monica, Calif.
Bill Slamp, Chicago.
Richard and Marion Smith, West Covina, Calif.

Walter Szedziewski, Milwaukee. Dorothy Wullich, San Diego. complete confidence in our boats, and as we emerged from each dousing the passengers would cheer their triumph over Ol' Man River.

Once a wave caught Marion Jones, who was riding in the lead craft, and washed her overboard. But she hung onto the ropes and Boatman Fred Eiseman dropped his oars and pulled her back to safety. She shook the water out of her hair, resumed her seat in the boat, and grinned. Of course we were all wearing our kapok jackets, and had no feeling of personal hazard.

The big barge with its 18 horsepower to help it along, was always ahead of our smaller barge. In mid-morning we caught up with the leaders as they were trying to figure some way to salvage a neat little fibre-glass skiff they found tied to the willows along the shore in a sector of comparatively still water.

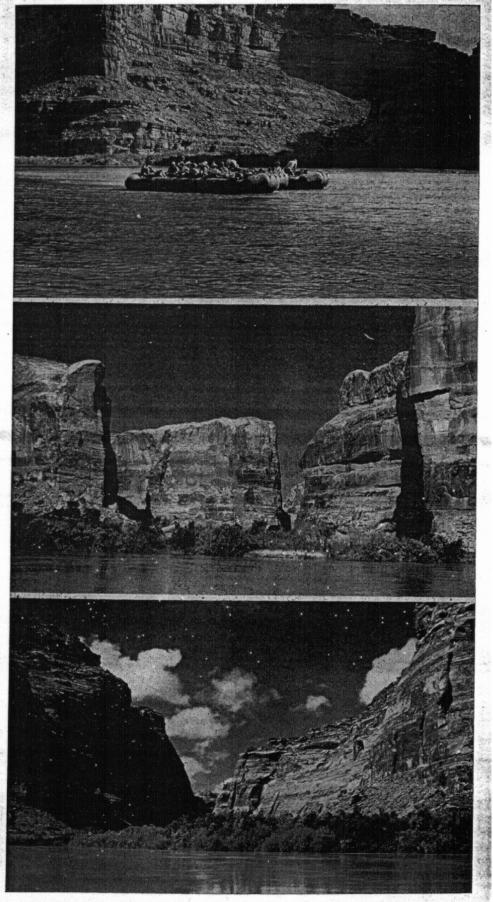
This boat, I learned later from a letter (Desert, Oct. '57) belonged to Burton G. Odell of Amarillo, Texas. Running the western rivers is his vacation hobby. He had left Greenriver alone in the little boat with two outboard motors, expecting to float down to the junction with the Colorado, and then return upstream to Moab. But his motors were not powerful enough for the upstream pull in this flood stage and he decided to continue through Cataract Canyon to Hite, knowing little about the treacherous water ahead.

He navigated the first three rapids, then in the fourth one collided with a rock, lost one motor and sheared off an oarlock. He realized he could not continue through such rough water with a partially disabled boat. He tied the craft to the willows and hiked out of the canyon. It was a difficult trek and he suffered from lack of water. Several days later he stumbled into a survey camp in Beef Basin in San Juan County.

Georgie White considered loading the boat on her big barge, and also towing it downstream. But it was too heavy to be taken out of the water, and a tow job in such a river would be too hazardous. When we left, the skiff was again tied to the willows with its remaining motor lashed in the bottom. Since then Odell has made an effort to retrieve his boat, but at last report it was still moored there.

At 3:30 in the afternoon we arrived at a grassy bottom where there was ample space and abundant driftwood for a night camp, and Georgie headed the big barge for a landing. We all welcomed the opportunity to dry out and get warm again.

During the four days we had been on the river together I had acquired



Labyrinth and Stillwater Canyons, in the opinion of the author are no less scenic than Glen Canyon of the Colorado River.

a great admiration for the competent manner in which our leader had managed the details of the expedition. This evening as we lounged around a blazing campfire I asked Georgie some of the questions in my mind. She talked candidly of her early life.

Of course it is taboo to ask a woman her age, but I would guess she is 47, a slender bronzed woman with a tremendous capacity for hard work.

She was born in a tenement district in Chicago. Her father, of French descent, was an artist, often out of work. Her mother was an industrious woman who toiled as a breadwinner during the day and often worked late hours into the night to keep the home tidy and to make sure the children went to school next day with their meager clothes freshly washed and starched.

Georgie is a vegetarian—not as a fad but simply because she does not care for meat. "We did not have much meat in the house when I was a kid," she says, "and it wasn't too good. I quit eating meat as a youngster, and have never cared for it." Her staple item of food is tomato juice and this with other vegetable items gives her tremendous energy. Years ago, on a trip down the Escalante River with her, when the water was shallow and we had to do much portaging, I saw her on more than one occasion shoulder two 40-pound neoprene cases of food and trudge through the sand with them.

After her school days were over she wanted to get away from her tenement district surroundings, and went to Florida seeking work. Those were depression days and when Florida failed to yield an adequate job she went to New York where she was employed by a florist.

On off days she would spend hours walking in Central Park—just because she liked the outdoors. In the Park she became acquainted with members of a cycling club, and soon was an enthusiastic rider. In 1936 she was married and she and her husband later crossed the continent to Los Angeles on their bicycles.

As soon as her daughter Sommona was old enough, she became her mother's companion on bicycle trips that occupied many of their weekends.

When World War II came, Georgie obtained a job in the security staff of Douglas Aircraft, but her tremendous vitality always was calling for more activity than any ordinary 8-hour job would provide. "I never stayed on one job long enough to earn a paid vacation," she explains.

At the Douglas plant she became interested in aviation, and a ferry pilot's job was her next goal. When she learned that 35 hours of flying experience was necessary to qualify for the training school the Ferry Command had set up, she gave up her job and invested her savings in pilot training at a private aviation school at Quartzsite, Arizona. She was an apt student, and soon qualified for Ferry training. But by the time she had completed the 500 hours preparatory to a Ferry assignment, the war was nearing an end and the Ferry Command was deactivated.

Back in civilian life she took out a real estate license. She wanted work that would allow plenty of free time for her hiking and cycling. Then in 1944 her daughter was struck by a drunken auto driver, and killed. Georgie became more restless than ever, and she asked the Los Angeles chamber of commerce if there were any hiking clubs in the city. They referred her to the Sierra club. She became a Sierra member and has been on many of the climbs of the Desert Peaks section.

At the home of friends in Los Angeles she met Harry Aleson who was showing kodachrome pictures of the canyon country where he was a boatman. When she learned that Harry shared her interest in cross-country hiking, they arranged a backpack trip together. Other long jaunts with their bedrolls and food in their knapsacks followed. They conceived the idea of swimming the Grand Canyon with their gear on their backs in knapsacks. On two river excursions they paddled many miles of the Grand in their swimming trunks.

In association with Harry Aleson it was only natural that she should become interested in fast water boating, and she accompanied Aleson as helper on some of his expeditions.

In 1951 she bought her first neoprene raft from a war surplus store and that was the beginning of her career as a river pilot. In 1954 she took a party through the Grand Canyon—in a year when the river was so low other boatmen cancelled out their trips. There was much portaging at the rapids, and Georgie was turning over in her mind plans for relieving her passengers of this back-tiring chore.

It was following that trip that she conceived the idea of lashing three rafts together side by side. The theory is that the push of the rafts behind, or the pull of the rafts ahead, will force the flat-bottomed boats over rock obstructions which would bar the way to a single raft. Actually the tremendous power of the cascading water is the factor that makes the method effective.

Georgie's 1957 schedule is evidence of her tremendous capacity for organization and work. Here are the trips she booked for the season:

Two Easter week trips on the lower Colorado for the Sierra Club and Boy Scouts—81 passengers.

April and May, charter trips through

April and May, charter trips through Grand Canyon from Lee's Ferry to Lake Mead—4 passengers. May, down the San Juan from

May, down the San Juan from Mexican Hat to Kane Creek — 33 passengers.

June, Cataract Canyon—23 passengers and boatmen.

June and July, another Grand Canyon trip—70 passengers.

July and August, down the Middle Fork of the Salmon River, two groups —33 passengers.

August, Salmon River run — 35 passengers.

August, Hell's Canyon on the Snake River—37 passengers.

September, two trips through Glen Canyon with Sierra Club and Boy Scouts — 85 passengers. Total 401 passengers.

In addition to her boatmen, Georgie has two faithful associates who do much of the shore work. Her sister, Rose Marie DeRose in Los Angeles, carries the office work and correspondence involved in booking the trips and keeping contact with passengers. Her husband, "Whitey," whom she married in 1942, is a tower of strength on shore duty. He trucks in the boats and supplies for the start of each trip, inflates the neoprenes, and with Georgie, does the critical roping job required to keep the 3-raft barges intact in all kinds of water. Last season they used a ton of nylon rope.

The schedule requires a small fleet of neoprene rafts of various sizes and at the end of each expedition Whitey deflates them and hauls them off to a new start on some other river. On occasion Whitey has taken to the river as a boatman, but his shore duties keep him so busy there is little time for the rapids.

Friday, June 14, was our wettest day. From 7:30 a.m. to 3:30 in the afternoon we ran one rapid after another, and spent the minutes between cataracts bailing water out of the rafts.

Once the torrent swept us into a deep hole. We rode to the top of the first 12-foot wave below, but our timing was wrong—the breakers were too close together for our clumsy craft. The next wave caught the barge as it was rising, and neatly curled the lead boat upside down on top of the middle raft in which I was riding. The oarsman and his two passengers landed on top of the three of us in the center section. The dilemma was easily solved. The six of us simply lifted the raft off our heads and flopped it back in its proper place and the pas-

sengers returned to their seats. This rapid was the daddy of them all, but we emerged from the experience with only minor scratches and bruises.

The character of the river, and especially the rapids, changes at every stage of the water. In a discharge of 100,000 second feet or more, most of the boulders that normally give trouble to boatmen are submerged. Some of the low water rapids disappear entirely. For instance the rapid at the mouth of Dark Canyon was reputed to be one of the worst in the canyon but when we arrived there it was only a heavy riffle.

But while high water smooths out some of the rough places, the velocity and power of the stream at flood stage creates new problems. Boatmen generally prefer to navigate the fast water streams of the West at a lower level. The veteran pilot, Norman Nevills, regarded 25,000 to 30,000 second feet as the ideal stage.

Later, when we reached the USGS gauging station at Hite we learned we came through Cataract on a discharge between 108,000 and 110,000 second feet.

At 3:30 in the afternoon we had passed all the rapids in Cataract. We had lost 415 feet of elevation in 41 miles compared with a fall of two feet to the mile in Labyrinth and Stillwater Canyons.

We camped that night at the mouth of the Fremont River, which Jack Sumner on the first Powell expedition in 1869 had dubbed the "Dirty Devil."

We spread our bedrolls on the same slick rock bench where Powell had camped 87 years ago. I climbed the low hill back of our camp and found it to be a rockhound's hunting ground. The ground was strewn with good specimens of agate, jasper and petrified wood which obviously had not yet been discovered by the collecting fraternity.

Fremont River virtually marked the end of our excursion. It was a smooth water ride of but an hour and a half next morning downstream to Hite Ferry crossing where Wayne Nielsen of Richfield was waiting with a truck to carry us back to Greenriver.

We had navigated Cataract rapids at their worst and had gained a whole-some respect both for the canyon of the cataracts, and for the leadership and skill with which Georgie White had brought us through. Within three hours after we landed, Georgie had taken off in a chartered plane for Lee's Ferry where another group of passengers was assembling for a ride through the turbulent waters of Grand Canyon, Georgie's third trip through the Grand in one season.



Above—the Fremont (Dirty Devil) River enters the Colorado at the left. Center—We got a puncture.

Below—When driftwood was running, passengers took turns at the bow of the big barge to keep it from fouling the propellor.

DESERT

CONTENTS

Volume 26

Number 5

MAY, 1963

This Month's Cover

For years, the wide and windy Mojave Desert was an important - almost exclusive center for the sport of soaring in the Southwest. The glider was and is a familiar sight on the flat dry-lakes (those wonderful natural landing strips) or in the constant air currents high above the desert mountains. When Fred Harris, who operates a soaring school in Tehachapi, decided to establish winter operations in Palm Springs, glider flying moved to the Low Desert with him. Soaring has accounted for a remarkable change in the attitude of at least some Low Desert residents in regard to the approach of summer - they are looking forward to the hot weather! The scorching desert floor will provide the thermal lift necessary to keep the gliders aloft for hours at a time. The cover photo, which shows one of Harris' gliders over Palm Springs, was taken by Dennis Holmes.

3 Letters From Our Readers

4 The Desert In May

6 Field Trip For Actinolite

By MARY FRANCES BERKHOLZ. A mud-flow at Wrightwood, Calif., deposited some beautiful green crystals for gem collectors.

8 New Ideas for Desert Living

By DAN LEE. Industry's May offerings.

10 Rawhide Scrapbook

By DONALD BOONE. The rough, rich camp of Rawhide, Nevada, is dead—but the memory lingers on.

12 Southern Utah's Guides

A run-down on the entrepreneurs who are opening-up the fantastic Utah wilderness to tourists.

14 Llano's Withered Dream

By DAVID P. BAILEY. A group of socialists tried a cooperative living experiment in the Antelope Valley, but Karl Marx was no match for the desert.

19 Spring Madness: A Poetry Page

20 Saguaro Cactus Pollinators

Among whom are the birds and the bees . . . and the bats.

23 The Monstrous Vinegarone

By WILLIAM A. HILTON. The harmless solpugid, more commonly known as the vinegarone, doesn't look harmless.

27 Robbers Roost Was Home

By PEARL BAKER. A cowgirl recalls the tough, but good, life in the remote heart of Utah.

32 Financing A Trailer

By AL BERNSOHN. What you should know before you buy.

32 Towing A Trailer

By V. LEE OERTLE. What you should know after you buy.

37 New Southwest Books

By CHARLES E. SHELTON. Reviews of four mining books.

38 Desert Detours

By OREN ARNOLD. Wit and wisdom.



MAKING CAMP IN THE OROCOPIAS. Photo by Del Cox.

THE DESERT IN MAY . . .

FAST CAMELS. On May 4-5, 500 four-wheel-drive enthusiasts will take to the hills (Orocopia Mountains) on the north flank of Salton Sea for what is becoming a top Southern California outdoor attraction — the Sidewinder Jeep Cruise. The event—the ninth annual affair—is sponsored by the Sareea Al Jamel four-wheel-drive Club of Indio. Sareea Al Jamel, in Arabic, means "fast camels." But, no one is expected or encouraged to speed it up on the rugged backtrails especially scratched-out for this year's event. Registration fee is \$2 per vehicle; the big Saturday night pit barbecue costs \$2 per person; the enchantment of the Orocopias is free. Full details, reservations from Sareea Al Jamel 4wd Club, Box 1157, Indio, Calif.

LAND SWINDLES. The Department of Interior announced that under terms of new regulations, swindlers who cheat elderly Easterners out of their savings with land selling frauds in the West will find it tougher to pull off their racket. The changes permit automatic rejection of applications for small tracts of Federal lands unless the land has been opened to application. The regulation removes one of the major selling points which illegitimate promoters have used to defraud victims. "We want people to be aware that there are sharp dealers who charge sizable fees for filing useless applications for public land which the victims don't have any chance whatsoever of obtaining," said Secretary Udall.

MORE CAMPGROUNDS. The California State Public Works Board has allocated \$466,750 for the purchase of approximately 500 acres in the

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| A pril 1 - Oct. 31 | GLEN CANYON | Hite (or Wahweap) | \$25 |
| March - September | YAMPA-GREEN RIVERS Cataract Canyon. | write for information | \$25-\$50 |
| June - early July (Yampa, Green); April- mid-June (Colorado) | YAMPA-GREEN RIVERS Cataract Canyon, Glen Canyon. | Vernal | \$15 (½ for children) |
| | GLEN CANYON | Hite (or Kane Creek or Wahweap) | \$25.20 (charter: \$30-\$35) |
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The Hard, Good Life at Robbers Roost ...

By Pearl Baker

ONTRARY TO popular belief, cowpunching is hard work. Riding a horse all day in routine range work takes all the privilege out of the sport; a scrawny old cowpoke's legs don't get bowed that way overnight.

The life does have its rewards, however. After the hot dusty activity of the day, the cool evenings around the campfire resting and renewing touch with humanity, give a cowboy more pleasure than far more exciting recreation provides people who have better social advantages. These campfire sessions have true meaning and lasting values to him, and he adds his part in stories "weak in moral, rank in wit" to the colorful fabric of range lore.

The hard part was brought to my attention at a very early age, but as the years went by the other side of the coin more than made up for it. I made my first trip into the Roost at age 1 year on a pillow stuffed into the saddle in front of Mama. She was supposed to bring up the drag, following along behind the cattle and prodding the laggards and tired calves along. Papa rode point and kept the cattle turned in at the sides, riding back and forth through the leaders, doing two men's work.

Mama could set me off on a sandbump and dismount, but in getting back on, she had to re-mount, settle the pillow and reach for me. She couldn't lean over far enough to pick me up unless I held up my arms to her. When Papa came back one time and found her encouraging my cooperation with the snapping ends of the bridle reins, he tried to stay closer and help her more.

Robbers Roost, the entire eastern end of Wayne County in Utah, was, that year of 1909, the wildest place left in the West. Not 10 years before, Butch Cassidy's Wild Bunch had found sanctuary there between daring holdups, and it was no cinch that these boys were really gone. This



THE AUTHOR IN 1932, WHEN SHE WAS OWNER-OPERATOR OF THE RANCH IN THE ROOST

didn't bother Joe Biddlecome; he was a cowhand of such competence that he had been invited to leave western Colorado, where his cows always had two calves and sometimes his bulls showed up with calves following.

My father didn't have any sons, but he didn't miss them—my sister (born the year after we moved our cattle to the Roost) and I were expected to take our places in the crew wherever needed—from shoveling out a waterhole to branding a bull. We were known far and wide as good hands, which we were. We roped, rastled calves, took our turns at branding, wrangled the horses and neither asked for nor were given the short circle on roundup.

The high point of the year for us was the week-long cattle drive to market at the railroad at Greenriver. For this we "topped our string," rid-

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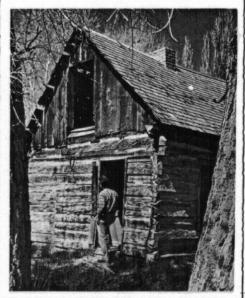
EARL NEEL

3255 E. Palm Canyon Drive Palm Springs Calif ing the best horses in the country. We rode magnificently around the streets or stepped down the sidewalks elegantly in our tight levis and handmade boots. We were a generation ahead with levis, and the pride with which we wore these well-earned badges of proficiency made us the envy of the town kids. We had it made and we knew it.

During our early days at the Roost, all the cowboys who worked for us or rode in to visit had known the Wild Bunch well. Bill Tomlinson had lived at the Roost; the Gillies boys were cousins to Butch Cassidy; Neil and Carl Hanks had ridden the range, stirrup to stirrup, with the outlaws, and Charles Gibbons had served them often at his store and hotel in Hanksville. When the owl-hooters were in Hanksville, they wouldn't sleep in the hotel, but bedded down in the nearby cottonwood grove lest someone be too tempted by the generous rewards always posted for them.

We heard stories about these knights of the dim trails—stories not of their outlawry as such, but of their competence, their self-reliance, their resourcefulness, and their Robin Hood kindness to the ranchers poor in money and starved for companion-ship.

Out on the range, good camping spots are always limited by water and horse feed; thus we heard these stories around campfires built, in most cases, on the very ashes of the cookfires of those romantic riders—Butch Cassidy, Elzy Lay, Jack Moore, Flatnose George and the Curry Boys, Blue John, Indian Ed, Silver Tip, Joe Walker, Tom Dilley, Grimes and



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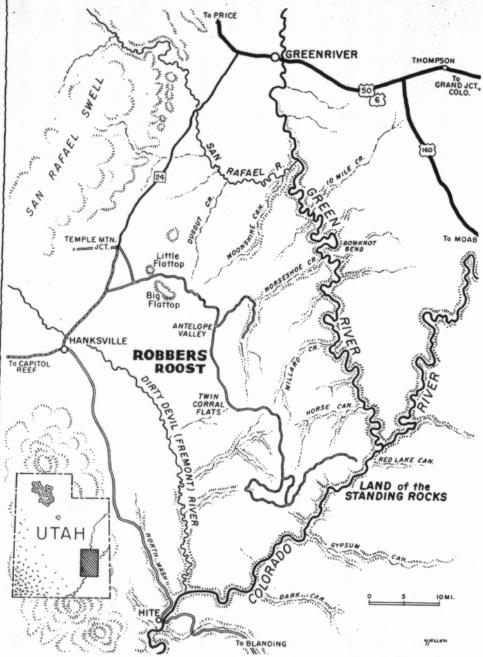
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Ricker and dozens of others whose real names no one knew.

During the day's work, we rode across the same Roost Flats they had crossed, followed the trails they had probably laid out in the cedars, dodging the same limbs they had leaned to miss. The cedars, sage, sand-puffs and pennyroyal probably smelled about the same spicy way to those first riders as they did to us. We drank from the same hidden springs they had found only a few short years before, as we worked our way over the rugged trails, the Angel Trail, North and Middle Trails and the Rock Slide into Millard Canyonways they had picked out in this jumble of cedar ridges, rolling grassy flats, canyon mazes and upthrust rock buttes.

These outlaws were very real to us. We enjoyed the stories of the exciting bank robberies and payroll holdups, but we came also to know the men, their little human peculiarities, and even their horses' names. We learned that Jack Moore was a famous wit who was fond of saying: "They sure liked me in Texas. In fact a bunch of them followed me clear across the state to get me to go back and if Minnie hadn't been faster than any horse they had, they'd have caught me, too." We would have recognized Jack Moore because he always rode with his hat pulled low, his head down looking for tracks; and he was better than an Indian at unraveling a cold trail.

We learned that Butch Cassidy was friendly and good natured, and a



THE OLD STOPPING PLACE AT HANKSVILLE ON THE EDGE OF THE ROBBERS ROOST COUNTRY

fine horseman; that Blue John had one brown and one blue eye; that Indian Ed Newcomb was educated, wrote a fine hand and was an artist. While talking to a man he would sometimes pick up a twig, smooth off a place in the sand and draw the man's likeness. This won many a man's friendship that he wouldn't have had otherwise because he was taciturn and reserved.

Elzy Lay, we were told, was capable and smart, the brains of the Bunch; and we often visited the camp he had set up in The Pastures in Horseshoe Canyon where he brought his wife to spend the winter.

We learned how much these men liked and depended on their horses, and we sometimes called our horses the same names they had used—Kid, Bay Pete, Gray Eagle, Babe, Minnie, Spotlight, Bedwagon, Major and Turk.

The name "Robbers Roost" predates the Wild Bunch. One Cap Brown used to bring in horses stolen in western Utah, rest them for several months, then take them on into Colorado where there was a ready market at the mines. Dead Man's Hill was where one of his crew had been shot by a following posse.

And Cap Brown probably built the Twin Corrals on the long grassy flats over the ridge from the Roost.

We used these names, misunderstanding them now and then. We learned many years later that what we called the "Gordons" were originally the "French Gardens" because of their lush grass and beautiful flowers. We still wonder about Gybex Point.

Crow Seep, the ranch headquarters, was named for a little black mustang that was pawing a hole in the wet sand of a wash to get himself a drink. Remembering that Mama had said she wouldn't live down in one of the canyons where the water was usually located, Papa looked at the sheltering ridge to the north and

east, then down across the long, level flat to the west, across the breaks to the Dirty Devil River and up the long slope of the Burr Flats to the flowing panorama of the Henry Mountains flung along the entire western horizon, and while he built a loop to catch the thirsty horse, decided this place would satisfy his helpmate. It did, and became a well-loved home to us all.

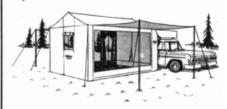
The Roost is almost as isolated today at it was when my family moved there. After my father died, I bought out my sister and my mother's interests and ran the Roost for several years, then sold it to my sister and her husband, a grandson of Charles Gibbons, and they, Mr. and Mrs. Arthur Ekker, own it today. It is still a valuable cattle ranch, but the richest part of the heritage lies in stories we tell our children of when, at their ages, we listened to the wonderful tales of the Wild Bunch around a campfire burning "right where this one is tonight."

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CONTENTS

Volume 29

Number 5

MAY, 1966

This Month's Cover

Looking at Utah's New Canyonlands National Park from Dead Horse Point State Park By FRANK JENSEN

- 4 New Books for Desert Readers
- 6 Ghosts of Silver Reef
 By EARL SPENDLOVE
- 8 Safari Afloat By PAT CAPSON
- 10 Back Country Pop Art By RELL E. FRANCIS
- 12 Trial by Fire

 By GEORGE THOMPSON
- 16 New Road to Zion
 By FRANK JENSEN
- 17 Utah Map
- 18 The Outlaw Trail By FRANK MASLAND, JR.
- 20 Sentinels of the Cache
 By JOHN D. HUNT
- 23 The Anasazi Trail
 By MEL LEWIS
- 24 Four Corners Country Photo
 By ESTHER HENDERSON
- 28 Family Adventure

 By RAYE PRICE
- 29 Arches National Monument Photo
- 32 The Monster Maker
 By, BOB HYATT
- 34 Drifting Down Desolation
 By KEITH WRIGHT
- 36 Flaming Gorge
 By RAYE PRICE
- 40 Ghost Town

 By LAMBERT FLORIN
- 42 DESERT Cookery

 By LUCILLE IREDALE CARLESON
- 43 Hints to Desert Travelers

 By BRUCE BARRON
- 46 Letters from our Readers

Catenaar of Evenis

UTAH

Intermountain School Annual Indian Pow-wow, displays and exhibit representing 21 tribes, Brigham City, May 14; Green River Cowboy Day and Rodeo, Green River, (no date set);* Annual Re-enactment of Golde Spike Ceremony commemorating completion of America's first tran continental railroad, Promontory, May 10; Black and White Days Hors show, Richmond, May 20-21; Cache County Dairy Festival, Loga May 27-28; Annual Friendship Boating Cruise from Green River Moab, May 28-29. *For date of Green River Cowboys Days and othe events during 1966 write to Utah Travel Council, Council Hall, Capit Hill, Salt Lake City, Utah 84114.

OTHER EVENTS

Annual Fiestas de Mayo Celebration, Nogales, Ariz., May 1-5; 10 Annual Tucson Festival Art Show, Tucson, Ariz., May 1-14; Ear Science Study Group and Rock Swap, San Bernardino County Museur Bloomington, Calif., May 1; Joshua Tree National Turtle Races, Joshu Tree, Calif., May 7-8; 40th Annual Wildflower Show, Julian, Calif. May 7-22; East Bay Gem and Mineral Festival, Scottish Rite Templ Oakland, Calif., May 21-22.

EDITOR'S NOTE: Some dates are subject to change. If you plan a trip to attend a specific event, we suggest checking first with their local Chamber of Commerce. EVENTS DEADLINE: Information relative to forthcoming events in the West must be received TWO MONTHS prior to the event. Address envelopes to Events Editor, Desert Magazine, Palm Desert, California 92260.

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Brigham Young discouraged mining among his followers, so it wasn't until the end of 1868 that the first claim was filed in what later became known as the Park City Mining District. This claim was the Young American Lode and a year later its first shipment consisted of 40 tons of ore.

In 1872 Rector Steen, Augustus Dawell, James Kane and Herman Budan made camp where they'd been prospecting west of Lake Flat. By a spring near camp, Steen discovered an outcrop of ore, later said to be so small it could be covered with a hankerchief. Steen located this outcrop as the Ontario No. 37. At the same time, George Hearst, \a San Francisco mining engineer and father of William Randolph Hearst, was in McHenry Canyon examining some claims. Hearst decided against buying these because of difficulties encountered with underground water flows. However, he noticed Steen's camp as he crossed into Ontario Canyon from Lake Flat and stopped to visit. Steen showed Hearst his ore outcrop and when Hearst expressed interest the two entered into negotiations. Within a month the sale was consummated for \$27,000. After that the Ontario produced more than \$50 million and paid divi-dends in excess of \$15 million. This small outcropping was one of the few ore outcrops in the Park City district and the story illustrates what an important part chance played in the establishment of the camp.

As its fame spread, miners moved in from other areas. Cabins were built against canyon walls and shacks were erected along Silver Creek for several miles. A group of Scotch miners built a small settlement around the shores of Lake Flat. Each home had a pier from which residents rowed rafts across the lake to visit neighbors. This lake has since been drained by underground mining operations and now contains water only when snow melts in the spring.

As miners and prospectors congregated, the settlement became loosely known as Parley's Park City, later abbreviated to Park City. The number of miners increased as new claims were developed and new homes were built near the mouths of the canyons in which the mines were located. These were the first permanent establishments in Park City.

In 1879 George Snyder's daughter died. The miners had made no provision for a burial site so Snyder presented the new camp with a 40-acre cemetery. The city was incorporated in 1880 and a newspaper, the Park Mining Record, was

It is now published as the Park Record and is Utah's oldest weekly newspaper. In 1881 a telephone communication was instituted and two years later the first school was built by the Ontario Company to accommodate children living in the canyon. Following that a number of parochial schools sprung up below the canyon, as the Mormon influence ran second to the high percentage of Irish-Catholic miners.

The Ontario Company encountered serious water problems right from the start. In 1888 a three-mile tunnel was started to connect with the 1500 foot level of the shaft. Work was started from both ends, the surface end called Camp Florence. It was completed when the workings met six years later. It was so straight that daylight shone from the

portal to the shaft.

Before the tunnel was completed, the Ontario installed what was not only one of the world's largest pumps, but also a marvel of engineering. This pump, known as the Cornish pump for the Cornish men who built it, had a flywheel 30 feet in diameter which weighed 70 tons and had a connecting rod 1060 feet long, built of Oregon pine with each section joined by bolted iron plates. The connecting rod hung suspended in the shaft and operated the pump. The pump had a single piston 20 inches in diameter and a 10-foot stroke. Power was supplied by steam boilers whose fires consumed most of the timber on surrounding hills. After they were denuded, teamsters hauled wood from Strawberry Valley, some 50 miles distant, by wagon and team. The initial cost of the pump was \$110,000 with installation charges raising the overall cost to \$250,000!

In 1889 Thomas Kearns and David Keith leased a group of claims which were later to become the fabulous Silver King Mine. It is said that Kearns walked into Park City without a cent to his name. He met Keith, an old friend he'd known in Nevada, who was foreman for the Ontario, and the two leased several claims. One of these became the Silver King and it was reported that from a hole only 200 feet deep, over two million dollars was recovered in high grade silver. Since that time the Silver King has produced ore valued in the hundreds of millions of dollars and paid dividends of more than \$35 million. Kearns was later elected U.S. Senator from Utah.

Some two dozen millionaires were made by the mines at Park City. The Mitch Williams'

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The Outlaw Trail of Robbers Roost

A ROUND THE turn of the century the "Wild Bunch," led by Butch Cassidy, rode the Outlaw Trail from Hanksville to the Green River and, when the posses were close, on beyond. The trail across Hell Hole leads to a sand slide that drops down to the Dirty Devil and, after half a dozen quicksand crossings, comes out through Roost Canyon. At the head of the canyon, where the eroded mesa drops away, a lone chimney marks the site of Robbers' Roost, between Hanksville, Utah and the Green River.

At a horse's walk, it is two hours from the Robbers' Roost to the Roost. It is there that Art and Hazel Ekker and their son, A. C., live and run a ranch that spreads over 136 square miles of mesas, buttes and arroyos and rims the canyons that mark the western bank of the Green. It was there also that Hazel and Pearl Biddlecome learned to ride and rope with the best of them and to regard the visits of the Wild Bunch and the posses as equally exciting and equally welcome. Pearl married and moved on to another world. Hazel married Art and together they have turned a few waterholes and an occasional clump of grass into a successful spread. Art and I met in 1963 when we rode and jeeped together on an exploratory trip in land we hoped would one day be a national park. It was then, along about the fourth or fifth

evening cup of coffee, that Art mentioned the Outlaw Trail. To one who needs but the slightest excuse to fly from Pennsylvania to that empty land of blue sky and far off horizons, the most casual reference to anything as romantic as an Outlaw Trail provided more than adequate excuse.

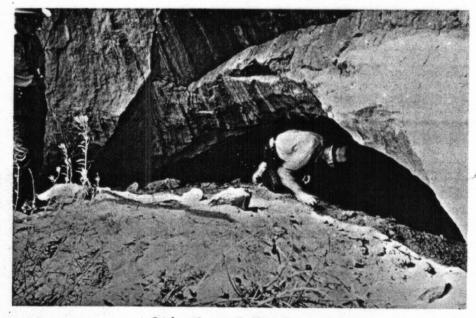
We met in Hanksville, Dock Marston, Oliver Johnson and I. Dock and I have spent many nights at the head of the great rapids of the Colorado River, our minds filled with the thrill of the day to follow. When we come together we bring excitement with us for we know that the morrow will find us following new trails. So now we saddled and took off on a new adventure.

I was mounted on a horse I soon knew I would thoroughly enjoy. "Old Red" they called him, though he was only eight years old, a rich red color, 16 hands with plenty of bone and an intelligent eye. It means a lot on a nine day trip to like the horse you will be living with. We were all well mounted. Art is justifiably proud of his remuda.

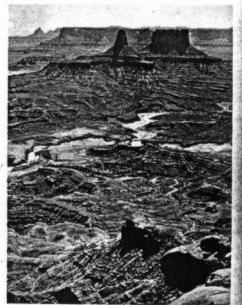
Our first drop from the flat mesa country was into Dry Valley Wash. From there we crossed Meadow Gulch and, rising again, rode the mesa across Hell Hole to the Dirty Devil. Dropping down the sand slide, we found it still lives up to the name the Major gave it. The Old Trail follows the river for many miles, crossing and re-crossing, each time through muddy water that hid the treacherous sandy bottom. Art's long experience enabled him to pick the riffles and we crossed without seriously bogging down in the sucking sand. It is always interesting to watch the ground begin to wave under the weight of slowly walking horses. Experienced animals know what it means and move quickly before the hard shell breaks.

It was cold, with a strong wind, and we shivered under our jackets. Anticipating rain, we made camp early in Roost Canyon. By 4:30, with dinner over, the rain descended. Rain gives movement and life to sun-baked, slumbering slickrock. But rain isn't only a thing of beauty. As we watched, it followed the roof of our overhang, inching its way closer and closer to where we huddled. Soon we lost all interest in its aesthetic qualities. Sometime during the night, it stopped.

After a typical Ekker trail breakfast—2 eggs, four pancakes, three or four slices of bacon and black coffee, we saddled and rode down Roost Canyon almost to the Dirty Devil, then climbed out and followed the rim of the South bank. Where Roost Canyon joins the river, there stands a Navajo sandstone



Outlaw Cave at Robbers Roost



Cleopatra's Chair and Elaterite Butte.

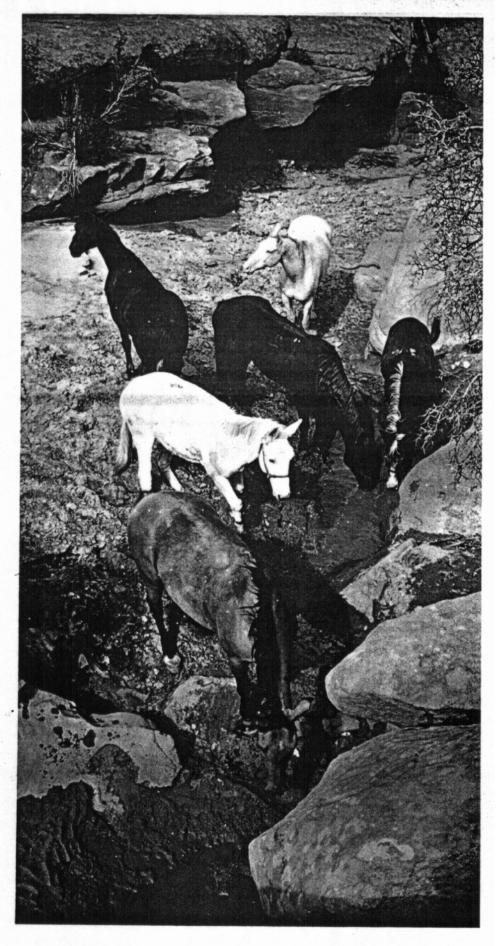
By Frank Masland, Jr.

formation, its red wall rising 500 feet, its graceful curve shaped by the bend of the river. Gradually we worked our way over intricately cross-bedded, slickrock and up through several gravel chimneys. We climbed the Angel Trail, so named because some ancient wit remarked that wings were needed, to where it peaks out on the flat mesa range on which Art's cattle graze and over which we rode to Art's Roost Ranch, our home for the night—another 15 miles behind us.

Sunsets and sunrises at the Roost Ranch are sights long to be remembered. Far off in the Northwest there is just a shining glimpse of a rosy stream that seems maligned by the name of Dirty Devil, until you try to hike it. Straight out from the ranch, across a vast expanse of mesa country dotted with occasional buttes, loom the snowy peaks of the Henrys, each wearing a pink nightcap. It was still cold. With reluctance we tore ourselves from the warmth of the Roost the next morning and rode out again around bald knobs and over slickrock to the junction of Clyde Canyon with Horseshoe. Clyde isn't much of a canyon, but just over the rim there is a small cave and in that cave are interesting petroglyphs and a prehistoric stone box. Precariously and inhospitably situated, we wondered what motivated its ancient artist to choose that site.

There is a live stream in Horseshoe Canyon and we followed its sandy bottom a mile or so to a group of excellent Freemont Culture petroglyphs. The primitive artist's stone canvas stretches for a 100 feet above a ledge that was easily reached from the Canyon floor. Ascending from Horseshoe to the Upper Pasture, we rode for an hour and a half before making camp on a juniper studded hill. Sand gave way to slickrock, which sloped off in undulating waves and disappeared into the canyon. On the high mesa it had been so cold that we were glad to walk our horses, or drop into an arroyo out of the wind. Later, as I lay in my bed under the arms of a juniper, the overcast sky melted away and one by one stars peeked through. This was the end of the grey, cold days. From then on the nights would

Continued on page 38



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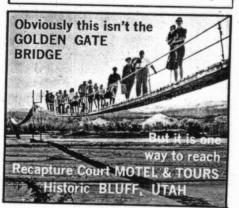
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Continued from Page 19

be gorgeous, the days just warm enough and the sky Utah blue.

With three pack mules and six riding horses and creaky joints, it takes a bit of time to get underway in the mornings. Someone usually rolled out between 5:30 and 6:00. Whoever did, built a fire and put the coffee on while Art's son, A. C., rounded up the stock. Usually he returned in time to hear the cook sing, "Chineago," the white man's version of the Indian's "come and get it."

Our ride this day presented us with outstanding vistas. From the head of Horseshoe Canyon we overlooked an infinite number of buttes and spires of that vast eroded land that falls away to the Green. Early visitors to this mystic land named it well. From all angles, Cleopatra's Chair sits atop the world-even as did the lady. Junction Butte marks the wedding of the Green and the Grand. Panorama Point provides just that—a seemingly endless 250 degree view. Jack and His Family is a great lonely butte and standing on its top are one large spire and one not quite so large, surrounded by a population explosion.

That night, after crossing the great flat stretch of the Spur, one of the best pastures on Roost Ranch, we camped at the upper end of Horsethief Canyon. Though the weather was perfect, we laid our fire near an overhanging ledge. A pack rat had found it equally enticing and built a nest some four feet square. With so little building material lying loose on the slickrock it must have represented years of effort. Below, storms of centuries had cut through the soft rock to form a basin and there, protected from evaporation, was a large pool where the horses watered. Above the drop-off on the slickrock were numerous shallow pools where we humans watered and where we had our first good wash since leaving the Roost. Shallow, tank water, subject to evaporation, may be muddy and

populated with wriggly things, but it is always cold and refreshing, internally and externally.

After an early dinner, Art and A. C. rode down the canyon to check on the trail. From camp to the Green was "unknown territory." They returned at sundown to report they believed we could get through. By the time the next night rolled around we knew we were in the hands of optimists.

Horsethief has two drop-offs of major proportions. The first is traversed over a long steep sand slide. Deep sand on a steep slope can be tricky. Horses bog down to their knees. It is necessary to lead them and, since we too bog down, it isn't easy to keep a step ahead of the horse. Some horses are careful and some are not. I had no trouble with Old Red. He was always willing to go where I went and instantly slowed when I raised the hand that held the reins.

The second jump is a big one, several hundred feet high-or rather downfrom where we were and with sheer walls. We rimmed it, following the trail to a "fall-off" that can't be described with any other word. Not only steep, the footing was rough, loose rock and it had been unused so long that in a number of places it was blocked by slides. It was, in fact, an abrupt talus slope, the rocks varying in size from pebbles to boulders. Art went first. The others strung out behind with the pack animals, hopefully, in the rear. I say hopefully, since bunched stock on a narrow cliff-side trail can mean bones at the bottom and here we found plenty of bleached bones deposited by sheep and cattle that had failed to make

I spent many hours leading my horse on slickrock trails in Navajo Country, but I never had to achieve such agility as I did to stay on this two-foot trail ahead of the horse. You don't really walk on a trail like this—you leap from rock to rock, shifting the reins from hand to hand to keep the horse and yourself where you hope both will be. That



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Prehistoric Indian box in cave in Clyde Canyon.



we got down with no troubles was due to the trail building skill of Art and A. C. and the experience and intelligence of Art's stock. At the bottom we camped by a seep which we converted into a spring by means of a willow stick sliced in half to form a trough. It was only when finally I stretched out that I was sure both legs were still the same length.

The following day we rode the Horsethief to the Green. The junction is marked by a thin, ragged fin. This day and in this canyon we rode through pages of geologic history, through red Navajo, Kayenta and Wingate sandstones, on down through the Chinle and Shinarump formations and at the bottom, the Moencopi. But then we had to retrace the fearsome trail back to Horsethief—only this time we went up instead of down. It's better that way!

From Horsethief we rode the rim of Millard Canyon. The two forks of Millard soon join to form one of the largest of the Green River's tributary canyons. Walls are abrupt, too sheer for any trail and talus at their foot gives way to a vast sea of undulating rock sweeping for miles across a series of beaches to the distant, tamarisk and willow-covered banks of the Green. We climbed a mesa to feast our eyes on one of the finest views anywhere in the land.

When finally time ran out, we found a tank in the slickrock that held enough water to carry us over for the night. Then the next day we rode on to the Roost Ranch, where beds felt good under our saddle-weary bones.

But we hadn't quite covered the Out-

law Trail. There was still-the hideout to see, the notorious Robber's Roost. After a hearty breakfast, we again mounted our horses and rode seven miles over a slickrock trail that led down from the mesa rim to the outlaw's hideout. Nature had provided them with a fortress. A live spring oozed from the ground, flowed through a grove of cottonwood and then disappeared into the flat floor of the basin where the outlaws had built a corral. The stone chimney of what was once a building still stands. At the end of a narrow fork are two well-hidden caves and past them flows enough water to meet the needs of a man and to camouflage the cave entrances with stands of willow, hawthorne and mesquite.

It was the habit of the Wild Bunch to hole up here while their stolen horses grazed on pasture land above and they vented their brands. A guard was posted on Deadman Mesa. Anyone approaching could be spotted in time for the horses to be rounded up and moved, or for the Wild Bunch to take cover in their impregnable fortress.

Legend suggests that the posse was never too anxious to tangle with the outlaws. They usually arrived a few days after the Wild Bunch had departed. On one occasion their timing was off and they appeared on the rim while the Bunch were in the Basin. A few wild shots were exchanged and one of the Bunch shot through the leg, a minor discomfort from which he recovered. Butch Cassidy, their 20-year-old leader, completed his brief career of train and bank robber and horse thief without inflicting any human fatalities. The law saw no reason to follow him when he decided to retire south of the border.

After climbing out of the Basin, we were met by a truck from the ranch, so here we unsaddled and turned loose our horses. While watching them race toward the Roost we were so loath to leave, we couldn't help but be grateful that "good won out" and the Wild Bunch left this land untainted.

It would be hard to cover the entire Outlaw Trail afoot, and impossible by vehicle, but the trails to Robbers Roost, to the Dirty Devil, Horseshoe Canyon with its magnificent primitive art gallery, and to other spectacular points are traversed by parties led by various Utah guides who arrange such expeditions each summer. Some combine 4-wheel drive vehicles with hiking, others use pack horses or, like Roost Ranch, accommodate expeditions of varying lengths entirely by horseback.

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Number 5

MAY, 1967

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CONTENTS

- 4 New Books for Desert Readers
- 5 Going to Ruin
 By RALPH FISHER
- 6 Canyonlands Adventure
 By BILL BARNARD
- 9 New Rock Park in New Mexico By IRENE MITCHELL
- 10 Little Bit of Fact About a Little Bit of Horse By CHORAL PEPPER
- 12 The Pothole Placers

 By JOHN MITCHELL
- 14 Paul Bunyan's Wood Pile By EARL SPENDLOVE
- 17 What-ho Southern Nevada!

 By DORIS CERVER!
- 21 Along an Ancient Trail
 By WALTER FORD
- Photo, Carrizo Wash By CLOYD SORENSEN, JR.
- 25 Hon-dah, Friend By LEE LUCAS
- 28 Trip of the Month
 By JACK PEPPER
- 31 Ancient Arts are Bargains
 By SHIRLEY ROSE HIGGINS
- 33 Chinese Camp

 By LAMBERT FLORIN
- 34 The Bloodstained Sidewalk By KEN MARQUISS
- 36 One-day Trek to Old Mexico
 By JACK DELANEY
- 38 Back Country Travel

 By JACK PEPPER
- 42 DESERT Cookery

 By LUCILLE I. CARLESON
- 43 Letters from our Readers

THE COVER

Al Morton, of Salt Lake City, Utah calls this spectacular scene in the New Canyonlands National Park (see article on page 6) "In The Shadow of the Needles".

INSIDE COLOR

Smoke Tree in the Carrizo Wash along the old Butterfield Stage Route in California's San Diego County with the Carrizo Badlands in the background was taken by Cloyd Sorensen, Vista, Calif. Linhof, 150mm lens.

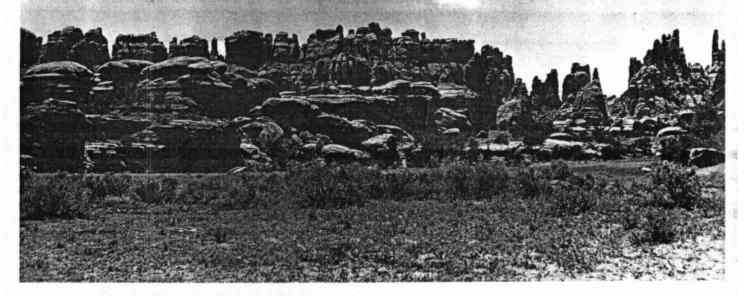
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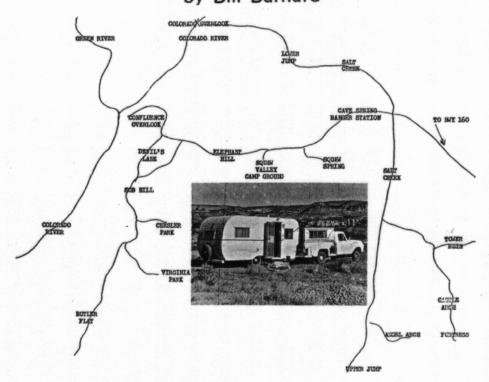
UTTAR'S CANYONLANDS HUERN REVARA



Plan now for the CANYONLANDS



by Bill Barnard





ANYONLANDS, the newest addition to the National Park System, is still a paradise for those who appreciate uncrowded, remote wilderness areas.

However, route stakes for paved roads forecast a different future. An opportunity to visit the area while it is still primitive may be drawing to an end.

The Park is divided into three parts by the confluence of the Colorado and Green Rivers. The northern section in the triangle created by the joining of the Green and Colorado Rivers is known as the Island in the Sky and is reached via Moab, Utah. The roads are improved dirt to most of the points of interest and usually passable in passenger vehicles. The southern section, known as the Needles, is east of the Colorado River and is entered via a 36-mile improved dirt road heading west from Highway 160 at Church Rock about 15 miles north of Monticello, Utah. The third area is known as the Maze or Land of Standing

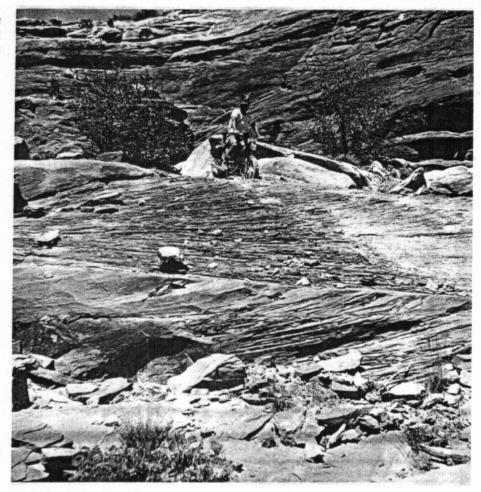
Rocks and is west of the Colorado River. This area is the most rugged, inaccessible of any part within the Park boundary and requires back-country equipment and lots of time.

We drove a 4-wheel drive Ford half-ton truck pulling an 18-foot house trailer. The road to the Park, though rough for a trailer, can be negotiated in any standard vehicle. However, once inside the Park, 4-wheel drive or a trail bike is mandatory. A short distance past the Squaw Valley Camp Ground is Elephant Hill, an incline which cannot be traversed in a standard car. This hill must be negotiated in order to reach the most scenic points within the Park. The east slope is not overly difficult, but the west slope is narrow and has turns too sharp to negotiate, so you must drive in reverse part of the way down. At the top of the hill, the Park Service has placed a steel axle in a boulder for a winch point, should you need it. According to legend Elephant Hill was named by a pioneer who decided the only way to cross it was like Hannibal crossed the Alps, on an elephant.

Our method for exploring the area was to establish a headquarters at the Squaw Valley Camp Ground, east of Elephant Hill, and take trips into the back country from there. To conserve on gas, we made good use of our trail bikes, as the nearest supplies are at Monticello, Utah, some 50 miles distant. There is no firewood in the Park, nor is there water at the camp ground; however, water may be obtained at the ranger station or at Squaw Spring. The rest rooms are of the pit variety. There are few, if any, commercial maps of the area that are adequate; however, for 30¢ each, the following U.S. Geodetic Survey maps of Utah may be obtained from the U.S. Geological Survey, Denver Distribution Center, Denver, Colorado: Upheavel Dome, The Needles, Hart's Point, The Spur, Orange Cliffs, and Hatch Point. These maps will give literally every trail, creek, and prominence of the areas they cover. Below are the chief points of interest accessible from Squaw Valley Campground.

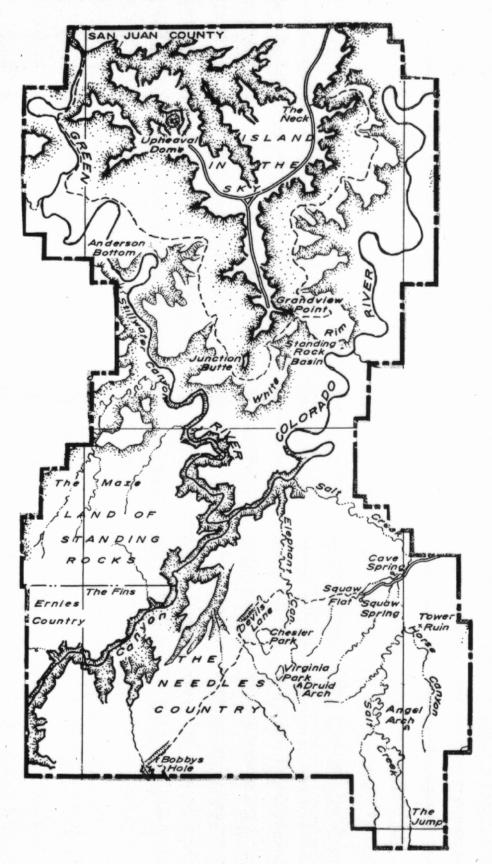
Confluence Outlook is located west of the "Hill" where it overlooks the junction of the Green and Colorado Rivers at the north end of treacherous Cataract Canyon, graveyard of many boats. At the confluence, where the Green and Colorado Rivers meet, their decidedly contrasting colors produce an interesting delineation.

Colorado Overlook is reached via a jeep trail leading in a northerly direction to Salt Creek Lower Jump. The "jump" is a waterfall and it is not named "lower"



Four-wheel drive vehicles and trail bikes are best for getting around in the Canyon-lands. Below is a Colorado River overlook above a 1500-foot vertical drop.





due to its reduced height, but because of the fact that it is downstream from other jumps on the Creek. The trail from the main dirt road in the Park to the jump can be negotiated in standard drive vehicles. Beyond that point you need 4wheel drive. At the overlook it is possible to see the Colorado from a great height and watch its meanderings.

Chesler and Virginia Parks are located west of the "Hill" in the Needles Section to the south. The Needles are named for the erosive effect which has caused vertical stone spires to remain standing, much as needles in a pin cushion.

The Salt Creek Jeep Trail follows the creek bed for approximately 15 miles. It passes the Paul Bunyan Potty, a rock formation with an obvious resemblance to its name, and continues on to the Tower Ruins. These old Indian cliff dwellings were probably abandoned about the same time as those of the Mesa Verde area, about 1200 AD. If you continue up Salt Creek, you may visit Angel Arch and the Upper Jump.

Temperatures here are said to range from -20° to 120°. However, these are guestimates, as at no time has the area been thickly populated. It was, and is still, used for grazing range cattle. The average altitude is 5,000 feet. Precipitation is generally rain in the late fall, which could amount to several inches and render dirt roads impassable.

According to Park Service officials, the present proposals are that for every mile of paved road in the park, there will be an equal distance of jeep roads. Concessionaires are supposed to be located outside of the park, as well as the rangers' residences. The only proposed buildings within the park will be a visitors' center and service area for government vehicles. However, even with these careful plans, paved roads will increase the visitors and reduce the solitude of the area.

For persons living in Southern California, an interesting itinerary to reach the Park is via Grand Canyon, Monument Valley, through Four Corners, up to Mesa Verde National Park in Colorado, to Canyonlands and home via Moab, Capital Reef, Bryce and Zion Canyons, and Las Vegas. The roads inside the park are rugged and should not be attempted by any but an experienced driver. There are a few four-wheel drive trips conducted by guides whose vehicles are air-conditioned and comfortable and who will furnish all gear necessary for a one-day or several-day expedition into the most scenic and rugged parts of the park area. These may be contacted through their advertisements in DESERT Magazine.

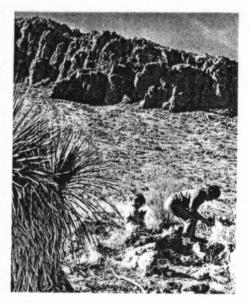
New Rock Park in New Mexico



hunting ground for rock collectors in the Southwest, thanks to the State of New Mexico. Rockhound State Park near

Deming in southern New Mexico encompasses 240 acres of rocky land on the western slope of the Little Florida Mountains. It is designed specifically for mineral collectors who are encouraged to take home samples of the many kinds of rocks that lie in profusion about the park's semi-arid landscape.

Agate is the most common stone at Rockhound Park and it is found in red, brown, light blue, green, blue-red, and lavender. Larger rocks may be cut and polished for specimens. The agate occurs in several forms, including black sagenite agate, fortification agate, and tippage agate nodules. Quartz occurs in varied form, also, and the careful searcher may find amethyst, quartz crystals, and brec-



ciated jasper. Also available are perlite, kaolin, psilomelane, blue opal, pink opal, and geodes.

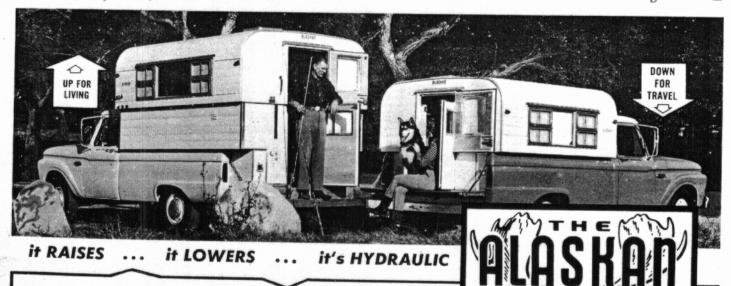
New Mexico's Parks Commission has

by Irene Mitchell

scarified the area to make the rocks more accessible. If the surface supply should ever become depleted, though at first glance this seems unlikely, the state plans to remove another layer of soil to expose more rocks.

Rockhound State Park is six miles south of U.S. highway 70-80-120 and is a pleasant side trip for travelers going through Deming or Las Cruces. N.M. 11, an easy, unpaved road, turns off the main highway and leads directly to the park. The state has provided 25 camping-picnicking shelters with benches and tables, drinking water, and toilets. There is a \$1.00 fee for overnight camping.

The lazy collector will find that he has only to walk a few feet from his car to find interesting stones. Those who want to work can hike up the mountainside. They will be rewarded with a panoramic view of the Big Florida Mountains and the basin in which Deming lies.



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THE COVER:

Spring is popping up all over—and so are

the wild flowers. Darwin Van Campen cap-

tures the spirit of spring in his cover photograph at the Ton-

to National Monument taken from the Apache

Trail overlooking Arizona's Roosevelt Lake.



Volume 32, Number 6

JUNE, 1969

CONTENTS

FEATURES

DIG THOSE CRAZY GEODES 6 by Jack Pepper

PLAYING IT BY EAR | by K. L. Boynton

HANDS ACROSS THE BORDER by Jack Delaney

SOURDOUGH IS THE YEAST OF MY WORRIES by Richard W. Brooks

FIFTY MILES OF FURY 18 by Al Pearce

BILLY THE KID 20 by Phyllis Heald

WHEN A FORTUNE WAS A DROP IN THE BUCKET 222 by Bill Knyvett

DOWN UTAH'S SAN JUAN RIVER 26 by Walter Ford

COLORFUL CLARAVILLE by Mike Engle

TRIP TO TICK CANYON 34 by Dorothy Robertson

DEPARTMENTS

BOOK REVIEWS by Jack Pepper

A PEEK IN THE PUBLISHER'S POKE by Bill Knyvett

BACK COUNTRY TRAVEL 38 by Bill Bryan

CALENDAR OF WESTERN EVENTS 39 Club Activities

WOMAN'S VIEW POINT 42 Feminine Facts

LETTERS 43 Readers' Comments

ELTA SHIVELY, Executive Secretary

LLOYD SHIVELY, Circulation

MARVEL BARRETT, Business

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fortune was a drop in the handkot

A wagon that once carried equipment through the Utah deserts is now covered with sand — mute testimony to our early day pioneers. Giant cores (opposite page) were discarded by the uranium engineers as they drilled the 200-foot deep shaft. Photo by author.

A dinner conversation led me into an interesting area of southeastern Utah's now rejuvenated uranium fields.

We had spent a delightful day in Capitol Reef National Monument photographing the breathtaking red-rock country that has to be seen to be fully appreciated and had returned to the Sleeping Rainbow Guest Ranch, right in the middle of Capitol Reef. After a hearty meal with our hosts, Lurt and Alice Knee, we adjourned to the comforts of a log fire and soft chairs. It was then that Lurt mentioned an old mining operation where the miners were lowered to the tunnel area more than 200 feet below the surface through a vertica shaft only 36 inches wide! On hearing this I had only two words:

"Show me!"

by Bill Knyvett

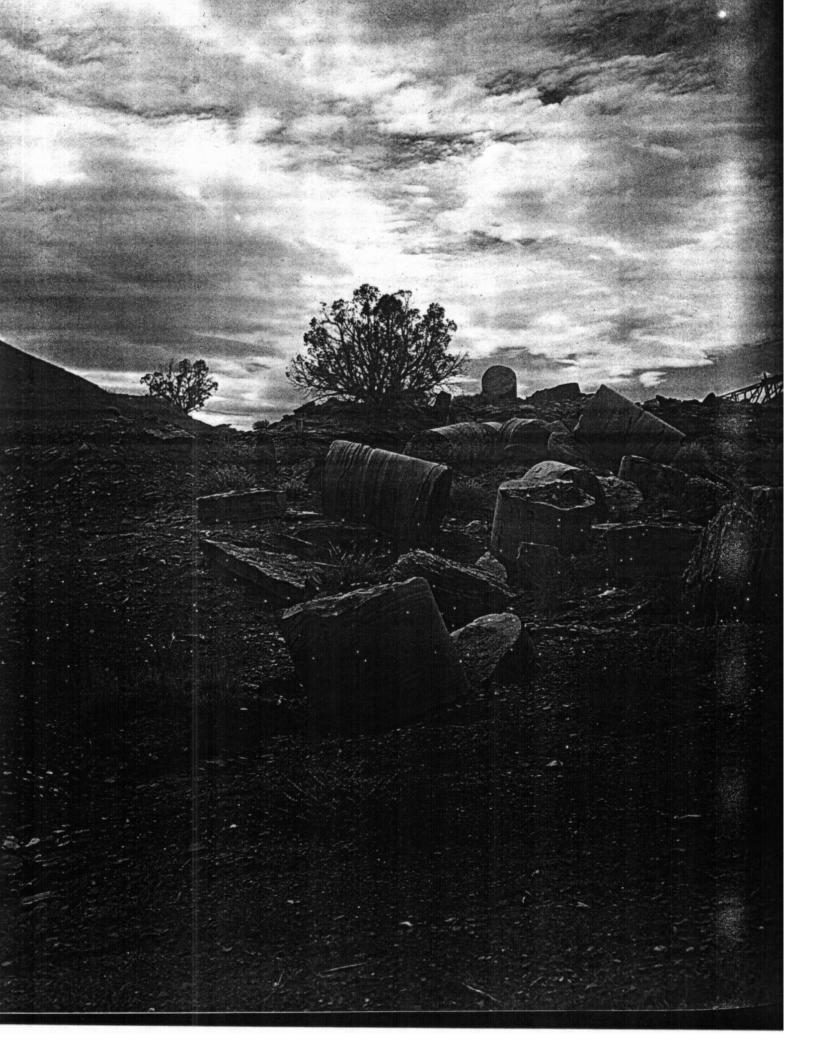
The next morning our small party con sisting of my wife Joy, Edward Porter o Fairview, South Carolina, an excellen black-and-white photographer who vaca tions each year at Sleeping Rainbow, Lur and myself left for a day-long tour o the old mining area.

Driving the 11 miles of dirt roa from the ranch to the main highway ou guide gave us a lesson in geology, esplaining the different stratas and colora ations and described the changes that had taken place in eons passed to caus all these different formations.

As we reached the Capitol Reef Vistor Center and park headquarters the pavement began and we turned east on U24 which follows the Fremont River formany miles. We passed through the litt community of Hanksville which we settled by the Mormons in 1883 and named after Ebenezer Hanks, one of the founders of the village. It is a rust little town as yet untouched by the commercialization of modern day.

Past Hanksville the road turns nor and enters the Green River Dese area. Approximately 12 miles north Luput the big eight-passenger station wagginto low gear and took off across the pink-colored entrada dunes. The trail was barely visible and the drifting sands hapiled up in the center of the ruts, making passage difficult. The area on either single of us was sweeping fields of wildflower Lurt told us this was a grazing area fandered of approximately 30 antelog

Continu





We kept our cameras ready but the herd must have been elsewhere.

We came to Molly's Castle, a sandstone butte rising some 175 feet above the desert floor, and on past Wild Horse Butte where a gravel road makes a short six-mile detour to Goblin Valley (DES-ERT, Oct. '67). The valley defies description and everyone interprets the naturally formed "goblins" to his own liking. Lurt pointed out this was one area devoid of artifacts, not even an arrowhead or point, which leads many to believe the Indians of years gone by gave this area a wide berth—being superstitious perhaps they thought it was a valley of goblins. Retracing our trail north again we passed Wild Horse Butte and Buckskin Springs where small outcroppings of coal are visible along the banks of the road.

The gravel gave way to pavement as we picked up the Temple Wash Road and turned west. Only a short distance up this road we came upon some prehistoric Indian pictographs. The elements have worn many of the figures away, but what remains are very vivid having been dated as old as 1200 to 1400 years.

A mile up the road from the pictographs Lurt made a right turn and we came upon evidence of the old mining operations. It was at this point I got my first lesson in the advantage of a fluid transmission in a 4-wheel-drive vehicle. The road leading up to the mesa above had been subjected to heavy rains and was in very bad shape. We literally inched up this road. Although Lurt stopped several times to point out various features, there was no roll-back at all. Joy ordinarily would have been extremely

aware of the sharp drop-off but she came through smiling.

As we topped the hill the reason for the whole trip was apparent. When uranium was first mined the conventional use of a tunnel directly into the side of a mountain was used and various lateral tunnels were dug as the veins were followed. In drilling the sample cores from the surface it was decided that a large vertical shaft could be drilled to the desired level and the uranium ore mined from this shaft. As the drill cores were normally 4 inches in diameter, something much larger was required to facilitate the removal of both workmen and ore.

A special 36-inch core drill was made and the drilling begun. The cores were brought to the surface in 12-foot sections and lay scattered around the area like pieces of jelly roll with the different colorations appearing as multi-colored bands. At a depth of 200 feet a good grade of ore was discovered and the mining operation began. A crew of Navajo Indians was brought in and lowered down in ore buckets. These same buckets were then loaded with ore and





Lurt Knee examines the 36-inch cores which look like jelly rolls. Old mine entrance (right) shows ore-loading shute.

taken to the surface to be dumped into waiting trucks. A system was arranged where two bells meant ore was in the bucket and three bells signaled a bucketfull of miners!

After the working area was enlarged it became evident that more mechanization was necessary. This was solved very simply! A small bulldozer was taken apart and all the pieces were lowered to the cavern below. A crew of mechanics was then sent down the shaft and the dozer completely reassembled — and as far as I could determine is still down there!

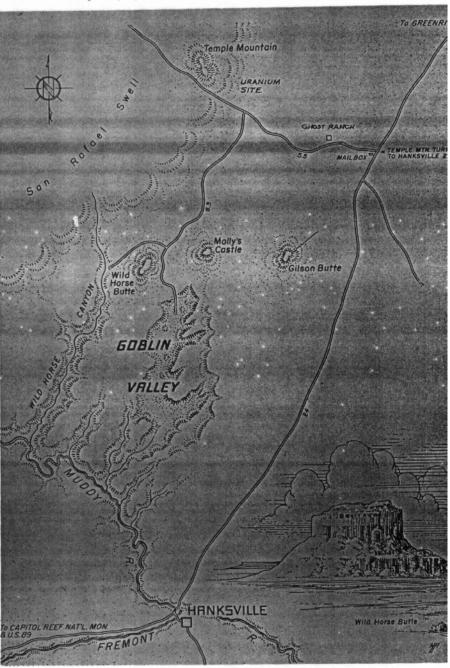
Lurt told of a funny incident that happened while the bucket operation was going full blast. He had taken a tour of shutter bugs to the area and they all assembled around the shaft head, poised to photograph the ore being dumped into the trucks. Their expressions were hilarious when up popped several smiling Indians! Someone had forgotten to tell the group that the little ore cars served a dual purpose.

That the uranium search is being reborn is evident everywhere in this area. Continued on Page 39





En route to the uranium site the author and party stopped to photograph f historic Indian pictographs painted on a canyon wall. There are many in Ut



DROP IN THE BUCKET

Continued from Page 25

The numerous claims all appear to have been restaked and new roads are being made in all directions. We continued up the mesa and stopped at the base of Temple Mountain for our lunch. What a sight! The sun broke through an overcast day and we could see for miles across the San Rafael Reef. Turning, we gazed out across the Green River Desert where the Gilson Buttes stood out in relief against the skyline.

On our return trip we visited a "ghost ranch" which lay to the north of the Temple Wash Road and a half mile or less from where it junctions with Utah 24. The ranch had apparently been of fair size at one time but the main ranch house was completely gone except for the fireplace. Several outbuildings are standing, one in particular was interesting. It had been papered with newspapers dating back to 1925. Ed had a particularly good time shooting some of the old automobile and fashion ads.

The corral area still shows sign of use but the whole scene is desolate with a huge wagon that at one time held some kind of machinery buried to the hubs in drifting sand. This area could provide some interesting finds for anyone with a metal detector. It appears relatively clear of any signs of recent activity.

We stopped at the junction store for a cool drink and were fascinated by the old cash register being used. The proprietor said that it had come from the old Crystal Palace in Greenriver which had been a favorite hangout of the famous outlaw Butch Cassidy.

Traveling south on U-24 we passed the entrance gate to a military base and it made us all wonder at the things we had seen in one day. The ancient rock formations, the pictographs, the uranium mines, now being rekindled, the ghost ranch and the advanced technology of our defense system. Where will the next century find us!

We arrived back at the ranch in the late afternoon healthily weary and when Lurt asked what I thought now of that part of Utah that he loves so well, I replied: "Good Reef!"

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Calendar of Western Events

Information on Western Events must be received at DESERT two months prior to their scheduled date.

MAY 24, ALABAMA HILLS RECREATION LANDS PARK DEDICATON, just north of the Whitney Portal Road leading out of Lone Pine, California. Public invited to barbecue, Old West events, Indian dancing and other entertainment.

MY 25, TURTLE AND TORTOISE RACE sponsored by the California Turtle and Tortoise Club, Brookside Park, Pasadena, Calif. Public invited to enter their turtles and tortoises in competition. Free entries. Trophies and ribbon awards.

MAY THROUGH NOVEMBER, MEXICAN ARTISANS DEMONSTRATE skills in silvermaking, leather, woodcarving, jewelry, weaving and glass blowing, Old Town, San Diego. Calif. Artisans work and sell their producted daily in connection with "Fiesta 200" the celebration of the 200th birthday of San Diego.

MAY 24 & 25, AMERICAN RIVER GEM AND MINERAL SOCIETY'S FIESTA OF GEMS, Rancho Cordova Community Center 2197 Chase Drive, Rancho Cordova, (Sacra mento) Calif. Non-competitive, free admission and parking. Complete rockhound and lapidary show.

MAY 25, FLEA MARKET sponsored by the Fresno Gem and Mineral Society, Fresno County Fairgrounds, Fresno, Calif. Parking and admission free.

MAY 30 MEMORIAL DAY WEEKEND THE RANDSBURG ROUNDUP sponsored be the Southern Area of the California Associa tion of Four Wheel Drive Clubs, Randsburg Calif. All types of events for all members of family.

MAY 30-JUNE 1, GOLD COUNTRY 4WI CLASSIC sponsored by Sacramento Jeeper: Family event for 4WD vehicles held a Georgetown, California.

MAY 31 & JUNE 1, WESTERN GEMBOR EE, sponsored by the Riverside Gem and Min eral Society, Alessandro Junior High School Sunnymead, Calif. Complete show, free ad mission.

JUNE 7 & 8, ANNUAL ROCK SHOV sponsored by the South Bay Lapidary an Mineral Society, Torrance Recreation Cente 3341 Torrance Blvd., Torrance, Calif. Con plete show, free parking and admission.

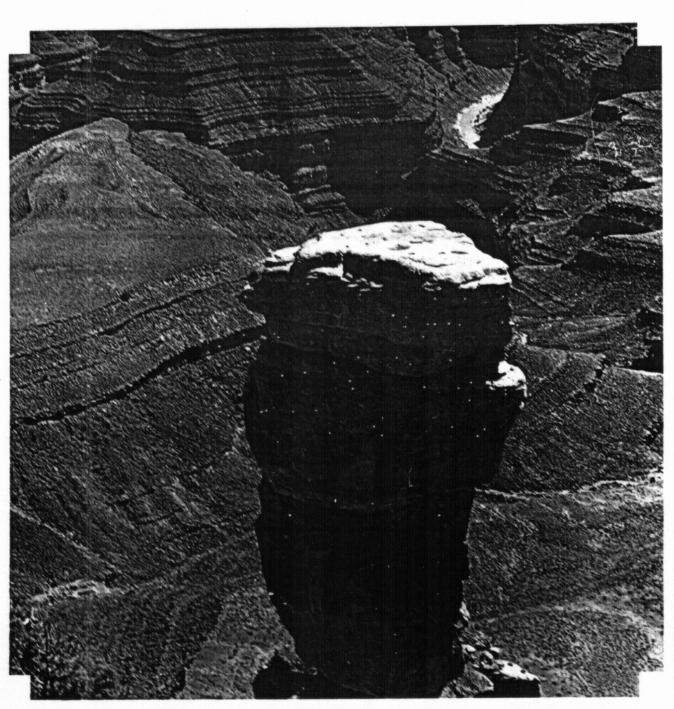
JUNE 21 & 22, THIRD ANNUAL COLOM. STAMPEDE, Coloma, Calif. 4WDSA santioned. For further information write Camelli City Broncos, P. O. Box 15685, Sacrament Calif. 15813.

JUNE 22-28, ALASKAN CAMPER CLUB' Second Annual International Encampmen Flying W Ranch, Colorado Springs, Colorado All Alaskan Camper owners are welcom Write P. O. Box 926, Arleta, Calif. 91331.

JULY 25-27. SAN DIEGO CABRILLO JUBILEE OF GEMS sponsored by the California Federation of Mineralogical Society, Sa Diego Community Concourse, San Diego Calif. Admission \$1.25, children under 1: free.

DOWN UTAH'S





From Muley Point (left) the San Juan River is seen below as it winds through The Goosenecks.

THE TALLANT TOO THE TOO THE TOO

by Walter Ford

I F A RIVER voyage where you examine ancient petroglyphs, visit prehistoric Indian ruins, gather quarter billion year old fossils, and shoot exciting rapids appeals to your spirit of adventure, this trip is made to order for you.

Over the years, when passing through Utah, I often thought about traveling down the San Juan River, but it never got beyond that stage. Then I read an advertisement in Desert Magazine which read: "One day river trips with Ken Ross—tranquil San Juan River valley." Two days later, along with two companions, I was on my way to Bluff, Utah.

Ken uses inflatable rubber rafts on his river expeditions which meet the rigid requirements of the Utah State Park and Recreation Commission. His river experience dates back to the early 30s when he served with archeological reconnaissance parties on the Yukon and San Juan Rivers. Later he became director of Southwest Explorations and set up geological river trips as part of their summer program. In 1957 he started running on his own and has been at it ever since.

In 1959 Ken was engaged to handle the boating location for filming of Major Powell's 1869 expedition on the Colc rado River. At the start of the production the director note that Ken bore such a strong resemblence to John Beale, who starred as Major Powell, that he was asked to double fo Beale in all of the boating scenes. The film was shown unde the title, "Ten Who Dared," during the early 60s and re leased for television on Easter Sunday, 1968, under, "Won derful World of Color."

The morning after our arrival Ken met us at our Recap ture Lodge diggings and took us to the take-off point a shor distance west of town. Fifteen minutes later the rafts were launched and ready to go. My party included Baylor Brooks geologist, and Charlie Crytser, a retired mechanical engineer Charlie had passed his eighty-second year and we wondered about his being able to make the river journey. Our concern was unnecessary as he came through in excellent shape. Ac

Continuea



The community of Mexican Hat is named after the rock formation (above) carved over thousands of years.

SAN JUAN BIVEB

companying us in a smaller raft was Orson Anderson, geologist, and his teen-age son, who was helping Ken during the summer.

During the early part of our journey we floated smoothly downstream on tranquil water. At our first stop we examined a large display of petroglyphs on a sheer cliff near the river. There were numerous designs representing reptiles, birds, and animals, but what was most interesting were several nearly full-size human figures with exaggerated shoulders which look like a modern football player in full regalia. I had seen a few similar figures in the Salt Creek area of Utah's Canyonlands and wondered about their significance. Do they represent a race of supermen whose culture predates the Cliff Dwellers or perhaps some armored Spanish invaders?

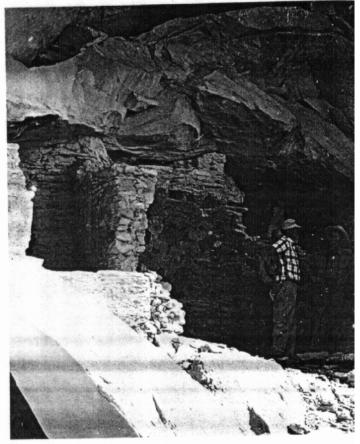
Farther along the river we stopped to explore ancient Indian cliff dwellings, easily accessible—only 30 or so feet above the river. Since most of the cliff dwellings in the canyons along the Colorado Plateau were built high above ground level—which archeologists say was done to forestall hostile attacks—the most formidable enemy the low-level dwellers along the San Juan had to fear may have been the flood-water of the river.

We stopped for lunch where a student of paleontology would have had a field day. We found fossilized remains, imbedded in the canyon walls, of creatures which are considered to have lived around two hundred and fifty million years ago. Gastropods, which looked like the common garden snail, and Brachiopods, which resembled small clam shells, were the most numerous, but there were many other varieties available to anyone with the patience to dig them out.

A short distance beyond our lunch stop the river entered the gorge and there we traded the tranquility of the first stage of our journey for the excitement of riding the rapids. With complete confidence in our guide's boatmanship, all we did was hold on and enjoy the thrills and fun. In the other raft, Ken's young protege handled his craft like a professional river runner.

The flow of the San Juan River may vary widely from season to season. In 1927 the maximum flow was around 70,000 cubic feet per second. Dead tree trunks still visible along the gorge indicate the river reached a record height of 40 feet at that time. In 1934, the river ceased to flow. This fluctuating water level caused a tragedy that has become a legend in the San Juan country.

Around 1910 James Douglas, who had earlier gone broke prospecting for oil near Mexican Hat, found a bonanza of gold in a San Juan River sand bar. Before he could recover it the river rose and covered the bar. He waited patiently, year after year, for his bonanza to reappear but the river remained



During their trip down the San Juan River the river-runners stopped to explore ancient Indian cliff dwellings. Why the prehis-



SAN JUAN MIVEM

high. He kept up his vigil for 18 years, then, old and his patience exhausted, he jumped off the Mexican Hat bridge. He left this note:

"When this you see, my old body in the river will be. There is no one else to blame for this, only me."

A few years later the river went dry. Out of respect to his memory dwellers in the area named nearby Douglas Mesa for him, but it never gained official recognition from mapmakers.

As you travel down the gorge you become so engrossed in the profusion of scenic shots you may exhaust your supply of film before you reach the two most outstanding formations of the trip near the end of the journey. These are Mexican Hat Rock and the Raplee Anticline.

Mexican Hat Rock resembles a 65-feet-wide inverted Mexican sombrero with its crown resting on a 400-foot mound of red shale. Although it may be photographed from Highway 47, the setting is drab compared with the blend of colors provided by water, vegetation, and sky from the river side of the monument.

The Raplee Anticline consists of a number of vari-colored layers of sediment that have been arched upward through the ages by side pressure to form what geologists term "anticlines." A simple demonstration of how they were formed may be made by placing a sheet of paper on a flat surface and applying pressure toward the center from the ends of the sheet. The top of the loop thus formed may be considered to be somewhat comparable to a geological "anticline." The Raplee Anticline has gained much prominence for its unusual symmetry and photographs of it are frequently used for illustrations in geology textbooks.

About a mile downstream from the anticline formations, our river adventure came to an end. Two of Ken's assistants were waiting on shore to take the voyagers and rafts back to Bluff.

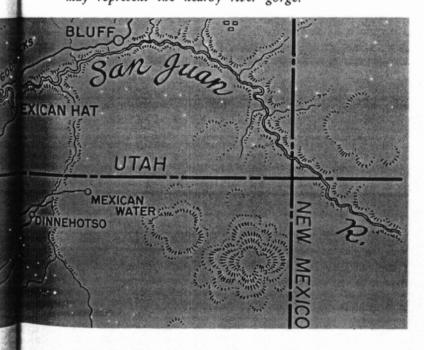
Before returning to Southern California we decided to visit the Valley of the Gods and Muley Point, just north of Mexican Hat. We followed Highway 47 westward from Bluff to its intersection with Highway 261, four miles north of Mexican Hat bridge, where we turned right and continued to the base of Cedar Mesa. The road to the Valley of the Gods leads off to the right here, but we decided to proceed up the grade and visit Muley Point first. A short distance beyond the top of the grade a road branches left to Muley Point, five miles away.

Old-timers say that Muley Point takes its name from the fact that it is shy of vegetation, like a Muley cow is shy of horns. Almost directly below, you glimpse a section of the river as it winds through the Goosenecks, while far in the distance you see the formations of Monument Valley rising above

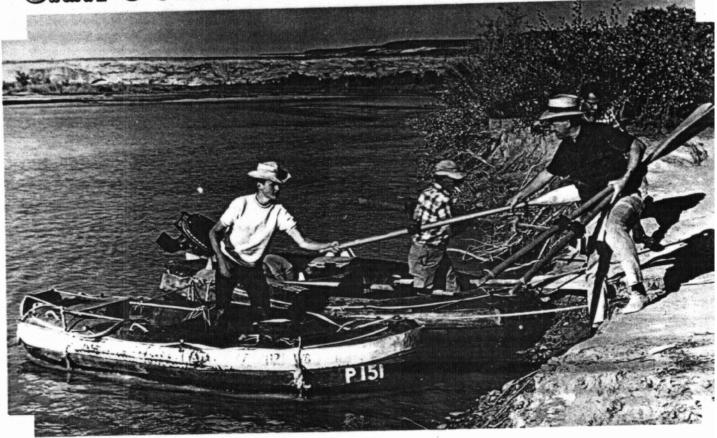
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toric communities were abandoned is a mystery. Snake-like drawings above column may represent the nearby river gorge.



SAN JUAN MIVEM



the horizon to form a captivating background for your camera

The first you see when you enter the Valley of the Gods is the abandoned X-Bar-L Guest Ranch. Built by Bill and Clarence Lee, grandsons of John D. Lee, who operated the first ferry across the Colorado River, it was operated as a guest ranch from 1929 to 1943. Constructed with native sandstone and huge beams, the lodge contained guest rooms with fireplaces, a shower and tub, and a living room with large picture windows that provided breathtaking views of the valley below it. Today it stands silent and deserted, visited only by infrequent travelers and wandering tumbleweeds.

Although the setting is somewhat similar, it is not easy to compare the Valley of the Gods with neighboring Monument Valley. The structures in the latter run mostly to pinnacles and buttes, but in the Valley of the Gods, Nature worked with a freer hand to produce a variety of figures, which in some cases defy description. Most of them carry local titles that in some instances might require imagination to interpret. However, you are free to describe them as you see them. They don't mind.

A 17-mile graded road winds through the valley and passes within camera range of nearly every photogenic structure. We spent nearly five hours traveling the course during which we did not see another car.

Before heading homeward we stopped at the Mexican Hat Trading Post so Baylor could examine a Navajo rug he had seen earlier when we were on our way to Bluff. Over a leisurely cup of coffee with Jim Hunt, Baylor learned the rug's history and acquired it for his collection.

Jim and his brother Emery grew up in the Valley of the Gods area and are thoroughly acquainted with its archeological, geological, and botanical features. They are happy to supply information to travelers through the region by mail which should be addressed: San Juan Trading Post, Box 155, Mexican Hat, Utah 84531.

For those interested in the San Juan River trip these are the rates for the 1969 season: one day trip for two persons, \$35; for three or more, up to ten, \$15 each; ten or more, \$13 each. He also features a two-day trip this season, which he states will more than double the enjoyment of the one day trip. The charge for a minimum of three on the two-day trip with food furnished will be \$40 each. Further information may be obtained by writing to Ken Ross, Box 110, Bluff, Utah 84512.

Not only are the river ride and junkets to nearby places of interest well worth the time, the trip to Bluff takes you through some of the most colorful country of the "Wonderfu World of Utah."

WILLIAM and JOY KNYVETT Co-Publishers/Editors

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GLENN VARGAS, Lapidary Editor
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MARVEL BARRETT, Circulation Manager

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DEBERT

THE COVER:

Grayish-tan bentonite formations in Cathedral Gorge State Park, Nevada. Photo by Robert F. Campbell, Concord, California.

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JUNE 1977

CONTENTS

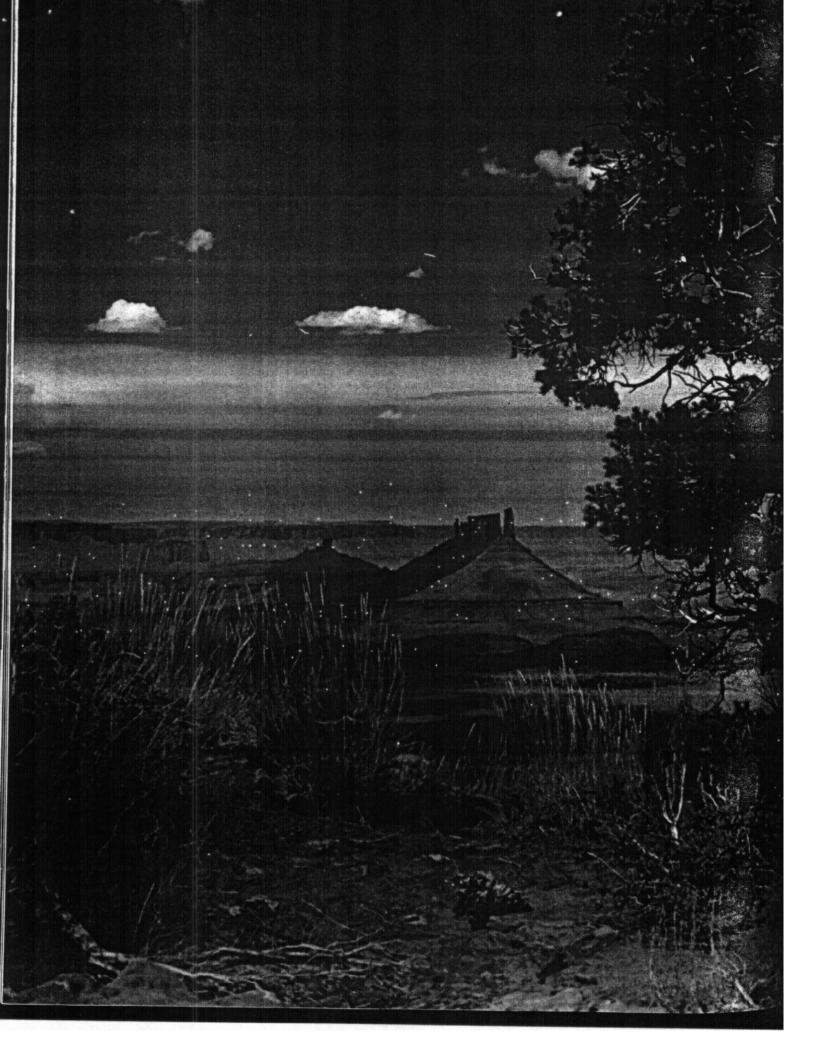
FEATURES

| 8 | Mary Frances Strong |
|----|--|
| 12 | Roger Mitchell |
| 16 | Frank Taylor |
| 20 | Dick Bloomquist |
| 22 | Julia Murphy |
| 24 | Bill Jennings |
| 28 | Lucile Weight |
| 32 | F. A. Barnes |
| 36 | Eric N.Moody |
| | 12 16 20 22 24 28 32 |

DEPARTMENTS

| A PEEK IN THE PUBLISHER'S POKE | 4 | William Knyvett |
|--------------------------------|----|-------------------------|
| NEW BOOKS FOR DESERT READERS | 6 | Book Reviews |
| RAMBLING ON ROCKS | 40 | Glenn and Martha Vargas |
| TRADING, POST | 42 | Classified Listings |
| BOOKS OF THE WEST | 44 | Mail Order Items |
| LETTERS TO THE EDITOR | 47 | Readers' Comments |
| CALENDAR OF WESTERN EVENTS | 47 | Club Activities |

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Porcupine

Rim

FOUR-WHEELING IN UTAH

by FRAN BARNES

LINE OF 11 four-wheel-drive vehicles strung out behind the one I was riding in. The Grand Mesa Jeep Club, from Grand Junction, Colorado, was on its annual field trip into the wild country of southeastern Utah and, as happens now and then, they had asked me to guide them along some tough trail of my choice that was new to the group.

I had decided to take them into an area quite close to the prosperous little town of Moab, but so isolated by terribly broken terrain that it is entered only occasionally by stockmen and prospectors, and rarely by anyone for the sole purpose of enjoying its rugged, challenging trails and outstanding scenic beauty.

The driver of the vehicle in which I rode was a woman, a plucky and competent young nurse who saw nothing unusual at all about a single woman fighting a tough-to-handle four-wheel-drive machine along trails that often presented problems for men with years of driving experience.

As she drove, I used her CB to tell the others in our backcountry safari about the wild country through which we were traveling. Between my comments, the CB channel we were using crackled with cheerful banter between the various vehicles. To minimize the dust problem, each vehicle kept well back from the next one ahead, but the CB radios made a cohesive, unified group out of the caravan, even though they were strung out over a mile of dusty, sandy trail called the Sand Flats Road.

Above: Some years, the only vehicle trail to isolated Porcupine Rim is still covered with snow along one stretch, even in late spring. Left: Porcupine Rim, Castle Valley and Castle Tower.

I had planned a route that would add still another rough but scenic two miles to the basic trail to Porcupine Rim, so I watched carefully for an inconspicuous side trail that would not even be noticed in this rough terrain of sand and slickrock by anyone not specifically looking for it.

There it was, just ahead. I signalled the driver to stop, then thumbed the mike on her CB. "Short stop here for putting in hubs, for those who need to. You're going to need all four from here on."

This announcement brought a burst of answering wise-cracks about the terrible driving capabilities of various men in the group. This was just one more phase of the continuous friendly competition between the club members to see who could get into trouble on the trail the least, and who had to be pushed or winched out of some bad spot. It is always fun to travel with the Grand Mesa Jeep Club.

On our way again, the safari proceeded onto a rough but easy trail that crossed a mile or so of sand flats broken by outcroppings of eroding sandstone slickrock. We paused at one point to open a wire gate in a cattle-control fence, then signalled by CB for the last vehicle to close the gate.

Not far beyond the fence, I chose another branching trail that soon approached a steep slope dropping off sharply toward the rim of a sheerwalled canyon that twisted through a tortured landscape of broken, eroding sandstone that had few parallels this side of the surface of Mars. The trail down to this rocky rim descended an immense dune of shifting sand at an angle and grade so steep it was doubtful that even a four-wheel-drive vehicle could ascend it.

But down we went, one by one, in what might be described as a controlled slide. At the canyon rim, we turned up-canyon, and the trail became very rough. Within a short distance, I noticed a big gap in our caravan. My young driver, with just a hint now and then on how to approach a bad spot in the trail, was having no real trouble, but chatter on the radio told me someone else was.

Not for long, however, and within another mile the safari came to a stop, right where the trail hugged the canyon rim it paralleled. The view down into the deep, sheer-walled chasm was breathtaking, and the several children with the group were cautioned about the dangerous drop, even though most were quite accustomed to being wary of dangerous terrain.

Our safari struggled steeply upward for another mile or so, with the rough trail totally preoccupying the drivers, and the woods too dense for much scenic viewing by passengers. I watched for a certain outcropping of rock as the trail finally leveled off a little. As I signalled for a halt, it was possible to get glimpses through the trees toward our left of the great canyon system we had just skirted, but a steep slope of tree-studded slickrock on our right gave no hint of what lay in that direction.

As people piled out, presumably for a stretch after that last bad length of trail, I shouted for everyone to follow me, then started climbing up the slope to the right of the trail. After about 50 feet, the climb topped out, and I paused to let the others catch up.

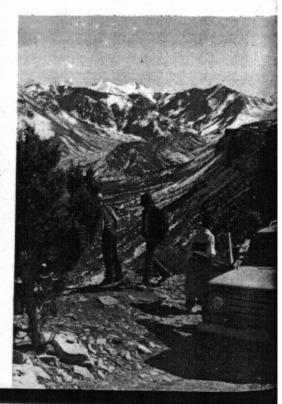
As they did, a few at a time, a chorus

of gasps broke out, because we stood on the very rim of a broad and spectacularly beautiful valley—we stood on Porcupine Rim, high above lovely, unique Castle Valley.

Below us, the solid sandstone rim fell away in a sheer cliff for a hundred feet or more, then continued downward for another 1,500 feet as a monstrous, steep talus slope. This sparsely wooded slope eventually blended into the valley floor far below. Jutting up from that floor not far from us was an immense, rocky upthrust — Round Mountain, seemingly a solitary peak, lost from the high La Sal mountain range that sprawled across the upper end of Castle Valley.



Left: One end of Porcupine Rim ends in the high slopes of the La Sal Mountains, which add to the beauty of the broad panorama visible from this lofty, isolated ridge.





Right: With few promontories or breaks, lofty Porcupine Rim is almost perfectly straight for 12 miles Left: The trail to Porcupine Rim parallels the branching Negro Bill Canyon system for several miles,



The far side of the broad valley, some three and one-half miles from where we stood, rivaled the La Sals for scenic beauty, but in a completely different way. A huge, sheer-walled peninsula of salmon-hued sandstone jutted out from the mountain slopes toward the distant Colorado River gorge that Castle Valley joined far to our left.

Eons of erosion had left this great wall of sandstone broken into segments. The intact upper peninsula was called Adobe Mesa, and once I had stood upon its lofty, lonely and remote tip, overlooking Castle Valley from that rarely-seen viewpoint. A great gap separated the tip of Adobe Mesa from the nearby spire of

Castle Tower, a tall and slender finger of monolithic sandstone standing on a gigantic, layered pyramid of dark red sandstone deposits.

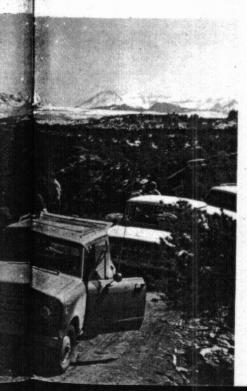
Next in line on the far side of Castle Valley was a huge fin of sandstone, fully as tall as Castle Tower and standing on a similarly laminated base of ancient red rock. One end of this fin was broken into immense jagged spurs of rock that looked like human figures in a familiar tableau. The group had been named the "Priest and Nuns," and bore a startling resemblance to a robed priest, standing before two kneeling and cowled nuns.

Castle Valley — in all of its unmatched splendor — lay below, as our little group stood in stunned silence of Porcupine Rim, partly awed by the sheet beauty of the half-circle panorama that stretched out below, and partly shocke by the surprise of coming upon it is suddenly, so unexpectedly, after tough, blind stretch of vehicle trail.

After many pictures had been taker we headed along our trail and within th next several miles, the trail actuall traveled right on the edge of Porcupin Rim in a few places, affording excellen views even from the vehicles, and closel parallel to the rim the rest of the time

Then, slashing gorges forced the trait to leave the rim. As we descended into

Continued on Page 3



Left: In several places, the Porcupine Rim off-road vehicle trail approaches very closely to its rocky edge, affording unparalleled scenic views. Right: What more spectacular place for a picnic lunch than right on the edge of Porcupine Rim, with Castle Valley below!



PORCUPINE RIM

Continued from Page 35

the vast sandstone wilderness to the west, my guidance became even more necessary, because old prospecting trails branched off in all directions. Most of these trail spurs soon dead-ended at some steep drop, or against a sheer bluff, but I led the safari along a route I had discovered earlier by the simple but time-consuming method of trying every trail until I found what I wanted.

The route we took soon became easier to follow as it crossed open areas, then got difficult and rough once again as it descended a series of gigantic terraces toward the distant outcropping of sandstone that was my goal. As we neared that huge quarter-mile-long fin of upjutting rock, I led the safari up onto the broad expanse of solid slickrock that served as a base for the great monolith. We crossed this rock base, then dropped down onto a slightly lower terrace of stone where everyone gathered for a picnic lunch.

After we had eaten, I took the group on foot along the canyon rim we had parked beside. As we walked, that canyon fell sharply away below us to join a gorge that had not been visible from our lunch site. Soon we stopped, all struck by the beauty and majesty of what lay below us — a great bend in the majestic Colorado River gorge, with that siltladen, green-bordered river winding ribbon-like at the bottom of its deep and narrow canyon.

After another half-hour of picturetaking, hiking around and rockhounding among some curious minerals just back from the canyon rim, I headed the group back along the long, rough trail. After several miles of steady travel, I again called a halt, and took up the CB mike.

"Would anyone care to follow my lead on a spur trail I have been wanting to explore — with no guarantees as to its passability or destination?

After some discussion, about half the group decided to wait, as the more adventurous followed my lead into unknown territory. To give my driver a well-earned rest, I took over the wheel of the lead vehicle.

Down we went, into a rugged, wooded canyon, then across a rocky wash bottom that contained a tiny flowing stream.

Here, one of the following vehicles got hung up for a time on a rocky ledge. Beyond the stream, the trail climbed very steeply, and was extremely eroded. After a time, the trail became obscure as it crossed an area of slickrock.

There, I climbed out and walked ahead to find the way, signalling my co-driver in her four-wheel-drive. As I found a suitable route and walked ahead up the steep slope of almost solid rock, I became excited. Although I could see nothing ahead of me but an ascending slope of sandstone, there were indications that Porcupine Rim was not far ahead. Abruptly, the slope leveled off, I walked through a small copse of trees and there—spread out below me like a gigantic, three-dimensional map—was lower Castle Valley, from a viewpoint seldom seen by anyone.

Soon, I was joined by the rest of the group, and once again the magic of this incomparable area held us in awe. After we had scrambled around seeking the best picture angles, we reluctantly headed back toward the other half of our group, already telling them over the radio about the successful exploration they had missed.

As our trail finally left Porcupine Rim and headed down toward the great canyon system that blocked all but one access route to a whole rugged sandstone wilderness region, the group's CB radios were kept busy with chatter about the day's adventures, and misadventures, and compliments were passed up to my driver for her stellar performance as group-leader-for-the-day.

After rounding the canyon head, I watched for a side trail that would lead out to the Sand Flats Road by a shorter route than the one we had followed that morning, thus bypassing about three miles of tortuous trail.

As we topped out of the steep shortcut trail and joined the graded dirt Sand Flats Road, then headed down this fairly easy road toward distant Moab, the radio chatter grew less and less frequent.

It had been a full day and a long, rough trip — but only by taking such a trip, guided by someone who knows that piece of rugged sandstone wilderness, can you reach and enjoy the magnificent scenic splendor of Porcupine Rim, the lofty southwestern rim of spectacular Castle Valley, in the canyon country of colorful southeastern Utah.

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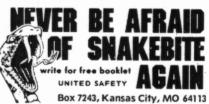
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Mary Frances Strong

Howard Neal

Michele Methvin

Ruth Armstrong

Bill Jennings

Bill Knyvett

Dale Maharidge

K. L. Boynton

Jim Smullen

Dick Bloomquist

CONTENTS

FEATURES

12

14

16

20

24

28

32

36

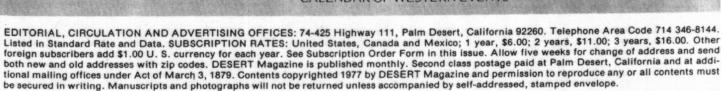
40

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DEPARTMENTS

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|--------------------------------|-----------|---|
| A PEEK IN THE PUBLISHER'S POKE | 4 | William Knyvett |
| NEW BOOKS FOR DESERT READERS | 6 | Book Reviews |
| THE TRADING POST | 42 | Classified Listings |
| BOOKS OF THE WEST | 44 | Mail Order Items |
| RAMBLING ON ROCKS | 46 | Glenn and Martha Vargas |
| LETTERS TO THE EDITOR | 47 | Readers' Comments |
| CALENDAR OF WESTERN EVENTS | 47 | Club Activities |

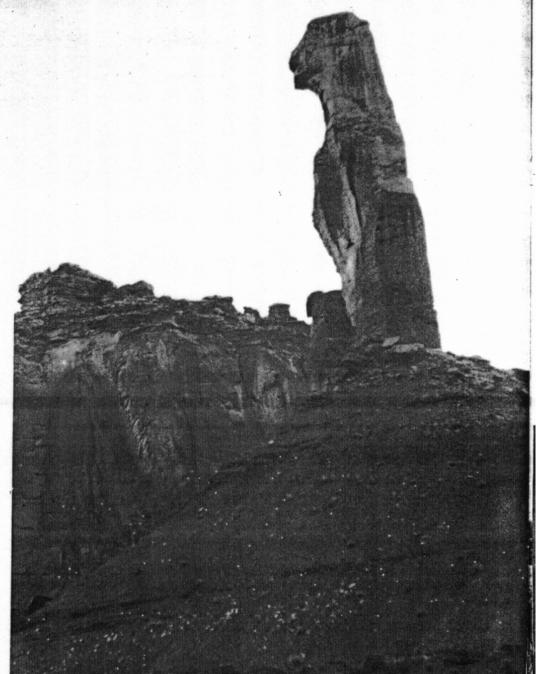


TRAILING THE "PONY" ACROSS NEVADA

TARAHUMARAS - THE FASTEST HUMANS

TWENTYNINE PALMS OASIS

THE COVER: Tarahumara Man," 16" x 20" oil, by Charles La Monk of Palmdale, California, this month's feature artist. Courtesy of Mr. and Mrs. James Smullen, Pasadena, California.



VERY ONE of 186-mile-long Lake Powell's countless hundreds of remote slickrock side canyons is totally different and unique than any other one in the sprawling redrock recreation area of southern Utah-like fingerprints, no two are exactly alike. They can differ in character and be as close as one mile apart. Some are desolate dry washes that only contain water during rare thunderstorms in the form of furious flash floods. Others are open and wide, ending in lonely box canyons that are accessible only to lizards and mountain lions. A very few-the exceptions-are well-watered edens, isolated paradises that invite casual exploration by investigative hikers.

One of these exceptions is Trachyte

TRACHYTE CREEK

by DALE MAHARIDGE

Creek Canyon. It flows from its source in the lofty Henry Mountains south into Lake Powell about eight miles below the present location of the Hite Marina. This interesting canyon can easily be reached from Lake Powell—or by hiking into it, following the deepening canyon from its juncture with Utah 276, a paved road that leads south from Utah 95 to the Bullfrog Marina further down on Lake Powell.

Visitors to this watered canyon can find shaded groves of cottonwood and tamarisk-studded sandbanks nestled in rocky alcoves that offer plenty of excellent campsites. The rounded, unscalable red canyon walls are splashed with the electric purple hues of ancient desert

Left: The sphinx-like form of Hoskinnini Monument awaits hikers who venture up Swett Creek, a tributary in lower Trachyte Canyon. Below: Towering canyon walls overshadow hikers in Trachyte Creek Canyon. Sandbars and cottonwood groves offer plenty of ideal campsites.

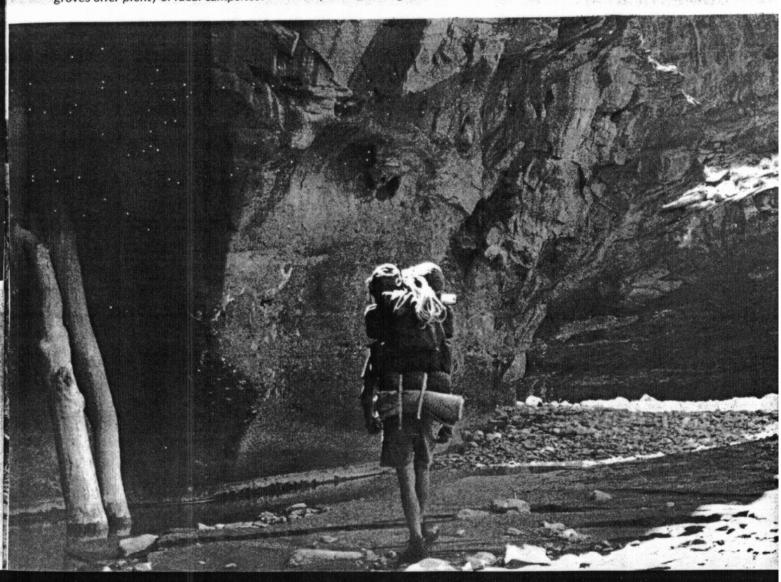
varnish, and are broken only where occasional side canyons enter. Hikers can explore these invitingly narrow branch canyons that snake back into the rimrock and end in huge, vaulted amphitheaters that usually have dozens of dripping, tinny-tuned springs harboring miniature jungle-like gardens of maidenhair ferns at their bases. In Swett Creek, a large tributary canyon in the lower reaches of Trachyte, is the sphinx-like towering butte called Hoskinnini Monument—an easy, worthwhile destination to see.

Trachyte Creek was named by the first white men to see it, a group of Major John Wesley Powell's men. They had already come down the Green and Colorado Rivers from Wyoming, on Powell's second river trek in 1872, and were spending the winter in Kanab, Utah, before continuing down through the Grand Canyon. Making use of their idle time, they searched for an overland route from Kanab to the mouth of the Dirty Devil River where they had hidden a boat to float down Glen Canyon. On June 20th, after having crossed the Henry

Mountains, they reached a small canyon that they had thought to be the present-day North Wash. Realizing their mistake, Professor Thompson (leader of the expedition) decided to christen it Trachyte Creek, according to Frederick Dellenbaugh in his historic book, A Canyon Voyage, that gives an excellent account about his participation on the second Colorado River journey.

Later, the canyon served for a short period of time as a wagon route from Hanksville to the old settlement of Hite on the Colorado River.

Trachyte Creek begins high up in the Henry Mountains as a series of small washes in between the 11,000-foot summits of Mount Pennell and Mount Hillers. It doesn't form much of a formidable canyon until after it crosses the Bullfrog road and turns south toward Lake Powell, where it incises its way into a deep trench as it circumvents the very rugged and southernmost range of the Henry Mountains known as the "Little Rockies"—Mount Holmes and Mount Ellsworth—so called after their fierce





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Sweet Creek, above Hoskinnini Monument, Trachyte Creek in the distance.



and impregnable disposition on their eastern flanks.

The Henry Mountains were the last "discovered" range in the United States. They extend south of Hanksville to Lake Powell, ending in the Little Rockies. Much of the Henry's wilderness character has been lost through the building of roads through the heart of the mountains, but some official protection has finally been given to at least a portion of these strange desert mountains. Recently, the Little Rockies have been set aside as the Henry Mountains National Natural Landmark, preserving for all time at least a significant section of these rugged peaks. The boundaries of the newly created area extend from east of Utah 276 to the edge of the Glen Canyon National Recreation Area, and from the north on Swett Creek to the southern flanks of Mount Ellsworth.

The National Park Service, which administers the Glen Canyon National Recreation Area that encompasses all of the desert land surrounding Lake Powell, is considering adding much of Trachyte Creek for inclusion as wilderness under its jurisdiction. Their proposal would cover approximately 16,000 acres, extending from Ticaboo Canyon north to Trachyte Creek.

The streambed of Trachyte is littered with cobblestone-sized, water-polished igneous boulders, a stark contrast from what you would expect to find in a sandstone canyon. This oddity is a result of the laccolithic nature of the Henry Mountains-that is, they were formed when rock layers from deep within the earth broke through the Mesozoic sedimentary surface strata thrusting the mountains skyward-thus exposing the blackened cinder-colored rocks to erosion. As the mountains have been broken down, they've deposited the weather-rounded boulders in the canyon bottoms.

The most convenient access point to the canyon for a casual visitor is from Lake Powell. Hikers have only a short distance to walk to reach Swett Creek, which enters from the western side of Mount Holmes. About one mile up Swett Creek, past turquoise-tinted waterfalls, is Hoskinnini Monument-formed where three small canyons come together in one place. The monument is a needlelike spire that from certain angles looks like a sphinx, and from others, a giant winged gargoyle. The canyons above the monument are especially rough as they are chock full of car-sized slabs of rock fallen down from the steep mountainside. Lake Powell has yet another 40 feet to rise above its present elevation of 3.660 feet from sea level. When the lake reaches 3,700 feet, the mouth of Sweet Creek will be inundated.

The side canyons that flow into Trachyte from the east almost extend to the rim of the 1000-foot cliffs of North Wash. Most of them are passable only for a

short distance before you are stopped by cryptic narrow canyon walls that defy entrance—sometimes the convoluting ramparts are so close that you may touch both walls with your outstretched arms. In one unnamed canyon, flash floods have burrowed their way so deeply that this wash occasionally "goes underground" in sections, forming short tunnels and little natural bridges. Other side canyons end in unscalable cirques, or where building-sized rocks have rolled into the main channel, blocking these washes from rim to rim.

Except for cows that are pastured down in the canyon bottoms, Trachyte Creek remains an almost untouched wilderness—a pristine canyon that has been formed over the centuries by the slow but steady action of the endless cycles of wind, sun, rain and frost chiseling away at the seemingly unc angeable sandstones. Here you will fin the simple pleasure of casual unhurring walking by day, and the sweet silence of a stellar night, broken only by the chirping voice of tiny Trachyte Creek that will put you to sleep like the singing of a thousand lullabies.

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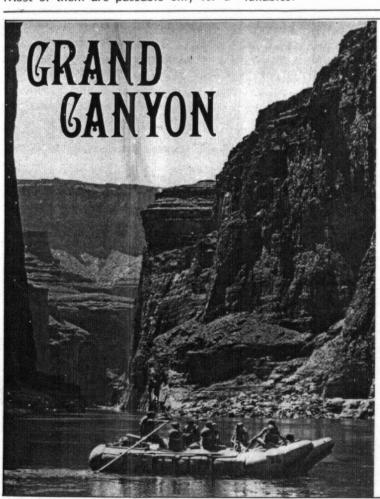
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