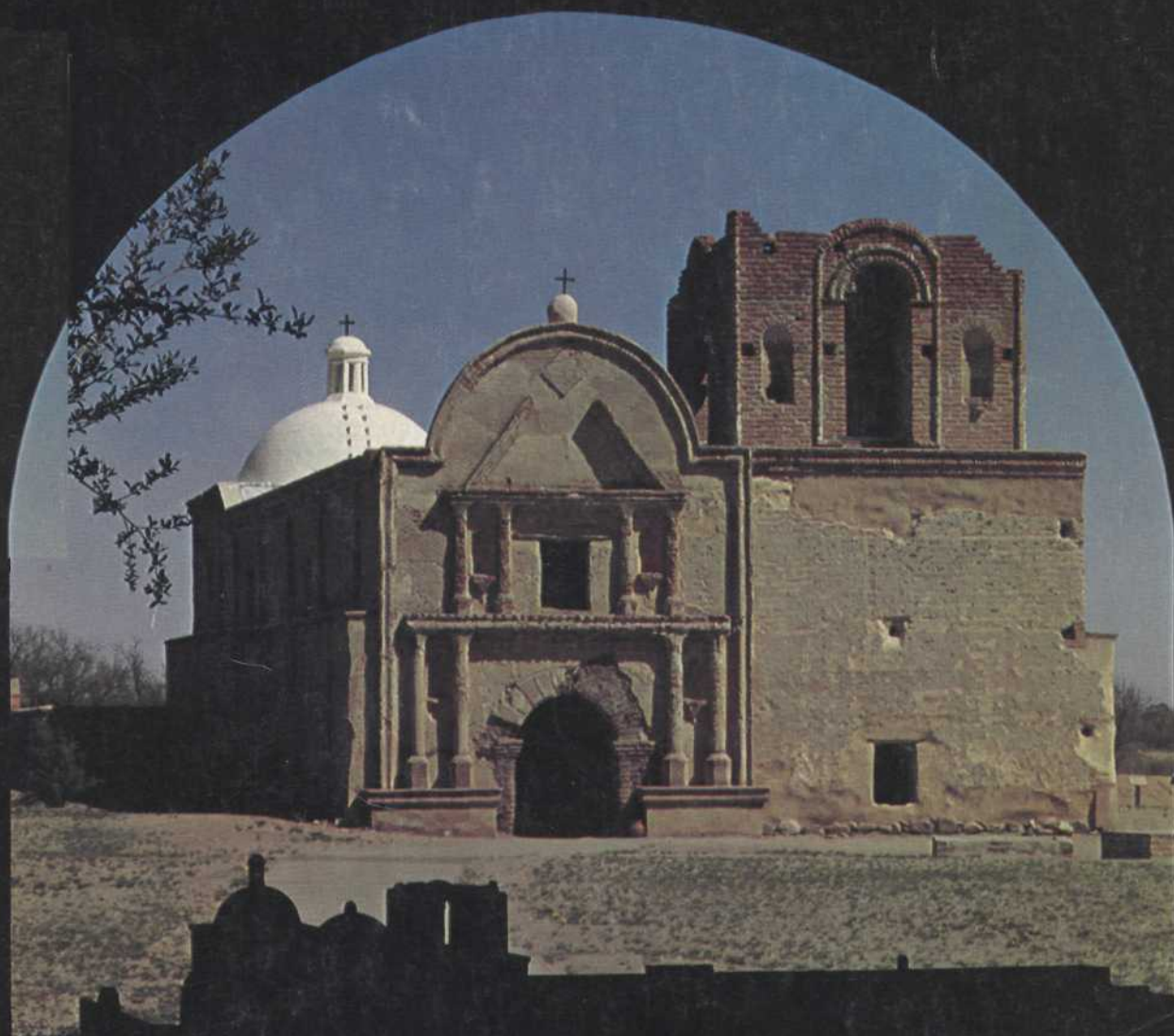


Desert

MAGAZINE OF THE SOUTHWEST

SEPTEMBER, 1974 75¢

ICD 08256





Contrasts

John Hilton

Painter of the Desert

Many art critics consider John Hilton the foremost painter of desert scenes of the West. His oils are hung in galleries throughout the United States and are constantly in demand. Desert Magazine has a limited supply of prints of his painting entitled "Contrasts" showing sand dunes covered with desert wildflowers and the Santa Rosa Mountains in the background.

This beautiful four-color print is 11x17 inches on high quality mat paper with two-inch margins, ideal for framing. Available to Desert Magazine readers, mailed rolled, in a tube, for only \$3.00, including tax and postage.

Send check to DESERT, Contrasts, Box 1318, Palm Desert, Calif. 92260.

WILLIAM KNYVETT, *Publisher-Editor*

GEORGE BRAGA, *Art Director*

MARY FRANCES STRONG, *Field Trip Editor*

ENID C. HOWARD, *Associate Editor*

F. A. BARNES, *Utah Associate Editor*

GLENN VARGAS, *Lapidary Editor*

K. L. BOYNTON, *Naturalist*

MARVEL BARRETT, *Circulation Manager*



Volume 37, Number 9

SEPTEMBER 1974

CONTENTS

FEATURES

- | | | |
|-----------------------------------|----|----------------------------|
| ARIZPE ADVENTURE | 8 | <i>Roger Mitchell</i> |
| THE ROCKHOUND AND THE DESERT PLAN | 12 | <i>Mary Frances Strong</i> |
| FLASH FLOOD! | 16 | <i>Clyde H. Smith</i> |
| A BIRD AND A BERRY | 20 | <i>K. L. Boynton</i> |
| LONELY MASONIC | 24 | <i>Larry Phillips</i> |
| ROCK ART IN THE COSO RANGE | 26 | <i>Helen Walker</i> |
| DEEP SPRINGS VALLEY | 32 | <i>Mary Frances Strong</i> |
| NANA'S FINEST PUT-ON | 36 | <i>John S. Southworth</i> |



THE COVER:
David Muench of Santa
Barbara, Calif., frames
the old mission at Tuma-
cacori National Monu-
ment, in southern Arizona

DEPARTMENTS

- | | | |
|------------------------------|----|--------------------------------|
| PEEK IN THE PUBLISHER'S POKE | 4 | <i>William Knyvett</i> |
| BOOKS FOR DESERT READERS | 6 | <i>Book Reviews</i> |
| DESERT LIFE | 30 | <i>Hans Baerwald</i> |
| RAMBLING ON ROCKS | 42 | <i>Glenn and Martha Vargas</i> |
| LETTERS TO THE EDITOR | 46 | <i>Readers' Comments</i> |
| CALENDAR OF WESTERN EVENTS | 46 | <i>Club Activities</i> |

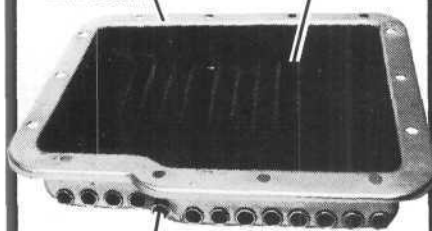
EDITORIAL, CIRCULATION AND ADVERTISING OFFICES: 74-109 Larrea St., Palm Desert, California 92260. Telephone Area Code 714 346-8144. Listed in Standard Rate and Data. SUBSCRIPTION RATES: United States, Canada and Mexico; 1 year, \$6.00; 2 years, \$11.00; 3 years, \$16.00. Other foreign subscribers add \$1.00 U. S. currency for each year. See Subscription Order Form in this issue. Allow five weeks for change of address and send both new and old addresses with zip codes. DESERT Magazine is published monthly. Second class postage paid at Palm Desert, California and at additional mailing offices under Act of March 3, 1879. Contents copyrighted 1974 by DESERT Magazine and permission to reproduce any or all contents must be secured in writing. Manuscripts and photographs will not be returned unless accompanied by a self-addressed, stamped envelope.

AVOID COSTLY TRANSMISSION REPAIRS!

New Concept ENDS Transmission Overheating.

KOOLER replaces original transmission pan quickly, easily. Heavier gauge steel than the original. New gasket free with each KOOLER.

Hot transmission fluid is exposed to 354 sq. ins. of additional cooling surface.



Cool air flows through the fluid in heat-conductive metal tubes, taking heat out with it.

You SAVE! No external parts or moving parts, so no expensive installation and maintenance costs.

If you tow anything...or occasionally drive off-road...you risk a \$300 transmission repair from overheating. Prevent it with the new INTEGRITY TRANSMISSION KOOLER. Replaces original pan. Install it yourself in 20 minutes without special tools or skill. New concept is more efficient than radiator-type coolers: Cool air flows through the fluid, providing 354 sq. ins. of cooling surface. No maintenance. Money-back guarantee of SATISFACTION.

Ask your auto parts dealer for the INTEGRITY KOOLER, or write for free catalog.

Integrity Transmission Coolers

Dept. DM, 2900 Zuni Street
Denver, Colorado 80211

A Peek in the Publisher's Poke

THIS MONTH'S issue has a variety of articles and one that should be of great interest to most readers is the analysis of the Interim Desert Management Plan by Mary Frances Strong. She has logged tens of thousands of miles traveling through the deserts of the West, and is an acknowledged writer who has for 22 years been extolling the great outdoors through her field trips in both *Gems and Minerals Magazine* and *Desert Magazine*. It is an important issue, not only for the rockhound but other recreationists as well.

K. L. Boynton tells us about the shiny black Phainopepla and the relationship it has with the desert mistletoe. Helen Walker does a thorough job on petroglyphs in the Coso Range, and John Southworth gives us a new slant on the "Lost Adams Diggings."

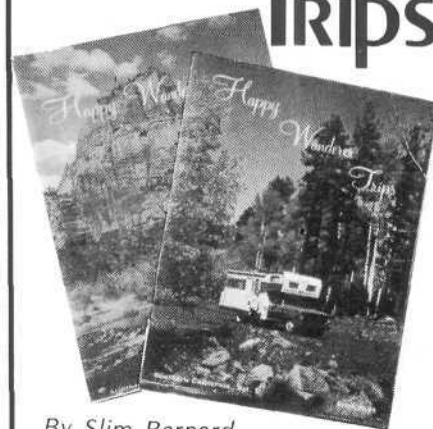
After an absence of several years, Roger Mitchell returns to *Desert* with a different trip to Sonora, Mexico, and Mary Frances Strong contributes a field trip for crystals in the White Mountains of California.

Two new authors are introduced with this issue. Larry Phillips does a nice job on Masonic, a little-visited mining camp, complete with a dramatic sunset photo. Clyde H. Smith, who has many, many credits on the East Coast, rounds out the month with his experiences of a flash flood.

I would like to note a minor proof-reading error in a photo caption that appeared in the July issue. On Page 23, the last line should have read "no vandals had apparently damaged the area since we photographed it in 1972!" This changes the meaning slightly.

William Knappe

Happy WANDERER Trips



By Slim Barnard

The tours by the Happy Wanderers contain excellent maps, mileage, history of the areas, costs of gasoline consumption, lodging meals, what to wear and the best time of the year to make the trips. A family can plan their trip and determine the exact amount of time and money required.

Volume Number One covers 52 tours throughout California's deserts, mountains, lakes and seashores. In Volume Number Two, Slim and Henrietta explore Arizona, Nevada and Old Mexico, with the areas ranging from modern resorts to ghost towns.

When ordering BE SURE to state Volume One or Volume Two. Both books are large format, heavy paperback with 150 pages.

\$2.95 each

Please add 25c for postage & handling

Calif. residents add 6% sales tax

Order from

Desert Magazine Book Shop

P. O. Box 1318, Palm Desert, Calif. 92260

Lowest Photo Print Prices Highest Quality

KODACOLOR FILM
DEVELOPED & PRINTED

Standard 12 Jumbo Prints.....1.93
Standard 12 Jumbo Prints and
New Roll of KODACOLOR.....2.84
Kodacolor Neg. Standard reprints......14

SEND FOR PRICE SHEETS
& ENVELOPES. All Photo
Prices are Comparably low.
No gimmicks.
No lies.

More than 50 years of continuous photo service guarantees your quality and our integrity.



MARKET BASKET PHOTO CO.

P. O. Box 370, Yuma, Arizona 85364 or
P. O. Box 2830, San Diego, Calif. 92112

**NO PRICE INCREASE
MONEY BACK GUARANTEE**



1933 **The Friendly Roadrunner**—Holiday Greetings and Best Wishes for the New Year—**Lau**



1025 **A Cowboy's Prayer**—May the Peace and Joy of Christmas be with you, etc.—**Snidow**



1859 **A Christmas Sampler**—May the warmth and friendliness of the Christmas Season, etc.—**Nicles**



1740 **"The wonder of Christmas fills the world."**—Merry Christmas and a Happy New Year—**Thomas**



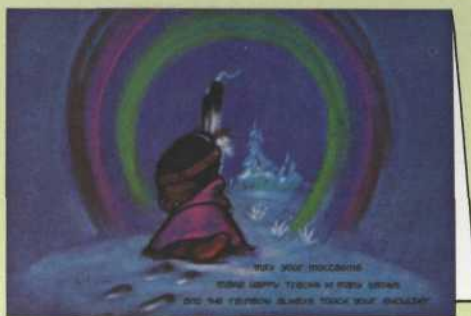
1944 **"Behold, He cometh with clouds"**—May the Peace and Happiness of Christmas, etc.—**Vannerson**



1026 **Heigh-Ho!**—It's Christmas again! May yours be a joyful one, etc.—**Baize**



1563 **Christmas Thanks**—Peace and Good Will at Christmas and through all the New Year—**Stahley**



T907 **"Happy Tracks"**—Merry Christmas and Happy New Year—**Christoffersen**

CHRISTMAS CARDS OF THE WEST



Send an honest-to-goodness "Western Merry Christmas" with these beautiful cards. They feature the finest in western art and thoughtful sentiment. Rich 5" x 7" cards can be printed with your name or name and brand, as well as your address on the deluxe white envelopes. Extras included. Try our "Stamper Service" from now 'til Christmas!

Leanin' Tree Cards—To Help You Touch Across the Miles



1008 **A Toast to Santa**—He sails thru the moonlit heavens to bring us joy... Merry Christmas—**Mitchell**



T200 **"Hoping your trail is a long one"**—Merry Christmas! Good friends, good times, etc.—**Russell**



T908 **"As a child loves"**—May the Peace and Joy of Christmas be with you, etc.—**V. Miller**



T107 **Tidings of Great Joy**—May the love that is all around us at Christmas time, etc.—**EchoHawk**



1050 **The Star that Stayed 'til Morning**—May the Peace and Joy of Christmas be with you, etc.—**Barks**

HOW TO ORDER: Write in total quantity and dollar amount remitted in proper spaces. Mix and assort at no extra cost. Order all of one kind or as many of each as desired. Fill out coupon, or order by letter, and mail with check or money order. Add postage and handling fee to price of order. Canadian residents remit in U.S. dollar values. Customs duty charged in Canada. Colorado residents add 3% sales tax. California residents add 6% use tax. No C.O.D. Thank you kindly!

TOTAL QUANTITY	12	25	37	50	75	100	125	150	200	300	500
WITHOUT NAME	\$2.75	\$4.75	\$ 7.15	\$ 9.50	\$14.00	\$18.00	\$22.25	\$28.50	\$35.00	\$52.00	\$84.50
WITH NAME	4.25	6.50	9.15	11.75	16.50	20.75	25.25	29.75	38.75	58.75	91.25
NAME AND BRAND	6.00	8.25	10.90	13.50	18.25	22.50	27.00	31.50	40.50	58.50	93.00
ADDRESS ON ENV.	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	4.00	5.00	7.00

Postage and Handling Fee: Orders to \$7.99 add 60¢ • \$8.00 to \$23.99 add 80¢ • \$24.00 and up add \$1.00

FILL IN QUANTITY DESIRED OF EACH CARD BESIDE CARD NUMBER AT RIGHT	T107	T933	1025	1563
	T200	T944	1026	1740
	T907	1008	1050	1845
	T908	1019	1552	1859
	T912	RUSH FREE SAMPLE AND CATALOG		

Write in Total Cards Ordered _____ Write in Total Payment Enclosed \$ _____

NAMES TO BE PRINTED ON CHRISTMAS CARDS (ENCLOSE DRAWING OF BRAND) _____
SEND CARDS AND/OR CATALOG TO: _____ R-S002

Rte., St., or Box No. _____
City _____ State _____ Zip _____

IF YOU WANT ENVELOPES IMPRINTED, CHECK HERE. ☐
SEE ADDITIONAL COST ABOVE.

THE LEANIN' TREE RANCH
BOX 1500, BOULDER, COLORADO 80302

ORDER DIRECT FROM THIS AD OR SEND FOR FREE SAMPLE AND CATALOG

**Christmas is a time for remembering friends
with Leanin' Tree Cards.**

Books for Desert Readers

All books reviewed are available through the Desert Magazine Book Shop. Please add 25c per order for handling and California residents must include 6% state sales tax.



AMERICAN INDIAN FOOD AND LORE By Carolyn Neithammer

DESERT feels this is one of the most interesting, unusual and necessary books of our time, and the answer to the queries of our readers who have written or dropped by our Book Shop desiring to become more knowledgeable of the original Indian plants used for foods, medicinal purposes, etc.

An excellent introduction is given of the Aboriginal Territories of the South-

western Indians, explaining why the Hopis, for instance, used almost every wild plant that grows on their mesas, while the Navajos, in contrast, use some, but not all, that grow in their areas, and why the Zunis have fully adopted their plants, considering them a part of themselves. The various customs of the Indian Tribes of gathering, harvesting, cooking, foods used for courtship and marriage, gifts and festivals are explicitly explained. The author states, "The land was the Indians' supermarket—supplying all their needs, groceries, medicines, eating utensils, clothing, tools, home-building materials and so on. Many of the plants were used in a number of ways. After the recipes of each plant, I have listed other uses of the plant, including medicinal purposes."

And, indeed, she has. Starting with the chapter on Cactus and Cactus-like Plants, Carolyn Neithammer gives the plant listed in alphabetical order under its most-often-used common name. Other common names and the scientific name for each plant is also given. Because of the importance of identifying the desired plants when out in the field, she has included a description of each plant used and, in addition, these descriptions have been supplemented by line drawings of Jenean Thomson which add an important visual dimension. Importance is stressed to learn the common poisonous plants to be found in your favorite hunting grounds.

There are recipes for the Agave, Barrel Cactus, Cholla, Ocotillo, Prickly Pear, Saguaro and Yucca Cactus, followed by chapters on Nuts and Seeds, Grapes, Berries and Cherries; Foods of Marsh and Mesa; Greens, and a most interesting chapter on Agriculture of their domesticated crops which include recipes for their beans, corn, chili, breads, squash, pumpkin and pumpkin seeds.

FREE 1974

156 Page

CATALOG OF

DETECTORS—BOOKS—MAPS

General Electronic Detection Co.

16238 Lakewood Blvd.
Bellflower, California 90706

HIATT'S INDIAN TRADING

Company



Locations at —

Highway 163, 1/2 mile
south of Moab, Utah

31808 Camino Capistrano,
San Juan Capistrano, California

NOW TAKING RESERVATIONS

for

Fall and Winter Trips to Death Valley

Write for our brochure describing
our 7-day camping tours.

DESERT EXPEDITIONS, INC.



Box 1404D,
Palm Desert, California 92260

San Diego County Council of Gem & Mineral Societies Present

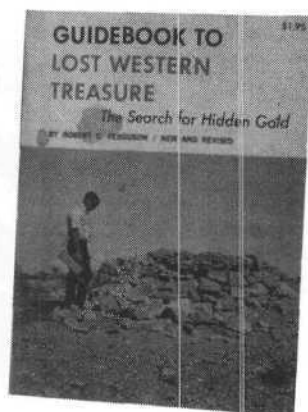
ANNUAL GEMBOREE, 1974 OCTOBER 26-27

10-10 Saturday, 10-6 Sunday

LOCATION: San Diego, Calif., at Al Bahr Shrine Temple, intersection of Clairemont Mesa Blvd. & Highway 163 (395): Alongside Sands Hotel. Opposite Kearny Mesa Plant of G.D./Convair.
NASA Moon Rock Display—free, in lobby.
"Last of Herd" buffalo skull in turquoise. Intarsia, gems, minerals, artifacts, art, special exhibits, dealers, rock swap, entertainment, demonstrations, refreshment, prizes.

In this economy-minded world of today, DESERT would like to recommend this new publication as not only a link to the past, but as an important phase of the future for man to once again return to the land.

Large format, profusely illustrated, 191 pages, \$4.95.



GUIDEBOOK TO LOST WESTERN TREASURE
By Robert G. Ferguson

Are you a treasure buff? Do you like spending countless hours delving through the history of lost mines, treasures, etc.? Well, so does author Robert Ferguson, who is a real honest-to-goodness treasure hunter who has faith he will find that treasure tomorrow.

This accumulation of stories was not assembled to be published, but rather are the personal notes of a treasure hunter, made up for his own use. So if you are looking for: Shorty Harris' Lost Mines; The Sunken Pirate Ship; The Adams Diggings; The Lost Ship on the Desert; The Lost Mines of Death Valley; The Lost Peg Leg Mine, just to name a few, then this guidebook should be included in your collection.

Paperback, 128 pages, \$1.95.

DESERT SURVIVAL!
AT LAST! A complete illustrated manual of desert mobility. A must for the Recreational Vehicle driver! Includes:- Desert Driving Techniques • First-Aid tips • Details of desert critters & varmints • Desert Navigation • Finding water.
Write for your copy of
"TO HELL ON WHEELS"
by Alan H. Siebert
Send \$2.95 per copy (check or M.O.) to BROWN BURRO PRESS, Box 2863-D, Pasadena, Ca. 91105
(Calif. residents please include 6% Sales Tax)

A VERY AMATEUR GUIDE TO ANTIQUE BOTTLE COLLECTING

Bea Boynton

The ghost towns, the old cattle trails, the stagecoach stops and the wagon-train routes have come alive with today's pioneers. People are digging and collecting from Maine to California. Even scuba divers along the Florida coast have joined in the hobby.

Here is a hobby which needs only enthusiasm to pursue. It is great for a vacation, or for a weekend with the family. Go alone, or take man's best friend!

Paperback \$1.00

It's Great to Own a Dog! THAT HILARIOUS FIRST YEAR

Bea Boynton

Everything you've ever wanted to know about your dog, but didn't know where to ask.

Bea has the answers to your questions on dogs. Accurate information, easy to read, told with humor. A reference book for your puppy, equally important for his entire life. Many photographs. A MUST for the dog lover who cares.

Paperback \$2.50



The CAXTON PRINTERS, Ltd.

P.O. Box 700

Caldwell, Idaho 83605



Back in Print

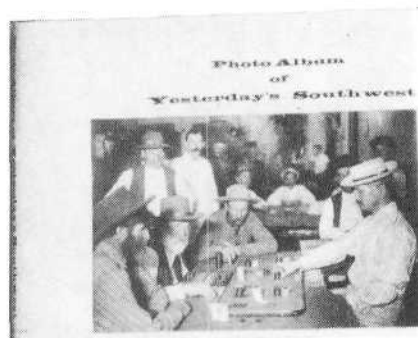


Photo Album of Yesterday's Southwest

195 early day pictures of the Desert Southwest from 1862 to 1912.

Printed on 80# coated stock.

Hardcover with dust jacket.

9"x12" format. 185 pages

\$12⁵⁰

Please add 25c for postage & handling

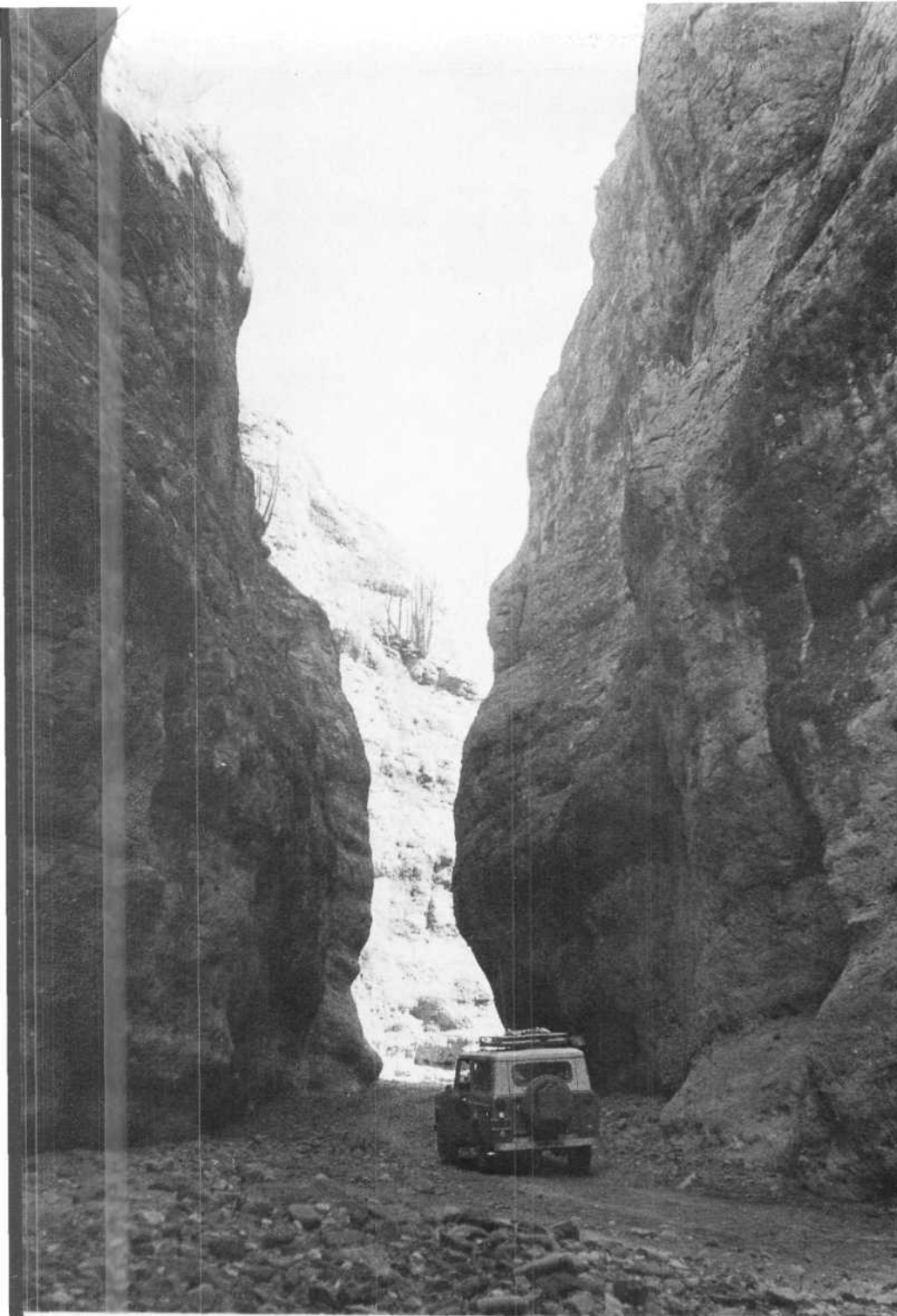
SEND CHECK OR MONEY ORDER TO:

California residents please add 6% sales tax.

Desert Magazine Book Shop

P. O. Box 1318

Palm Desert, Calif. 92260



Author of "Eastern Sierra Jeep Trails," "Inyo Mono Jeep Trails," "Exploring Joshua Tree" and "Western Nevada Jeep Trails," Roger Mitchell tells of a relatively unpublicized area of Sonora, Mexico.

ARE YOU AN *aficionado* of Mexico's back roads looking for an interesting trip not too far from the border? If so, the road to Arizpe has a little something to offer everyone. There is history, scenery, back road challenge and adventure all coupled with the decided flavor of a foreign country.

The road south to Arizpe starts at the copper mining town of Cananea just below the Arizona/Sonora border. Cananea is on Mexican Highway 2 some 50 miles west of Douglas-Agua Prieta, or 95 miles east of Nogales via Imuris. Cananea is a bustling mining town with an American-style motel and several good restaurants. Last-minute supplies can be picked up there. You should also top off your gas tank for it is 55 miles to the next gas station in Arizpe.

The road to Arizpe heads south from Cananea, but there is no easy way to describe how to find it. You are simply going to have to inquire locally. Ask for the road to Bacanuchi. In Spanish you would say, "*Donde esta el camino a Bacanuchi?*" Be careful not to confuse Bacanuchi with Bacoachi. The road to the latter heads east out of Cananea and you can return that way on the second half of this loop trip.

By Mexican dirt road standards, the road from Cananea to Bacanuchi isn't

ARIZPE ADVENTURE

by ROGER MITCHELL

Opposite page: Winding through eroded canyons adds to the interest of the trip to Arizpe.

Right: A stream is forded frequently and makes visiting the area dependent upon the seasonal rainfall.



too bad. It is wide enough for two trucks to pass and the dirt surface even sees a blade occasionally. You can travel much of it in high gear, although slower speeds and caution should be exercised on curves and when passing other vehicles. At a point 14.7 from the outskirts of Cananea the graded road forks. Keep left here. The right fork will take you back to Route 2 near the village of Cuicatana.

Bacanuchi, a rather nondescript and historically insignificant village, is 16.8 miles south of this fork. Pemex Super-Mex (80 octane gasoline) is usually available here, but I would not recommend using anything less than the "Gasol-mex" (90 octane) if you can last another 24 miles until you reach Arizpe.

From Bacanuchi the road and countryside becomes more rugged and interesting. A half a mile beyond the village center the Rio Bacanuchi is forded. This stream crossing usually represents no problems to vehicles. Beyond the ford, however, the road deteriorates as it starts across the lava-covered plain to-

wards the distant hills. While four-wheel-drive is not required, high clearance vehicles such as pickup trucks are a must. I would not recommend this road for the low-slung passenger car of today.

Although a few ranches are passed, the signs of civilization become fewer and fewer as you go farther south. The road winds its way into the hills, and in the vicinity of the Km 250 signpost crosses a low pass. The road soon descends into a canyon which usually has a small stream in the bottom of it. For the next couple of miles, the road crisscrosses back and forth across the stream as it winds its way down the colorful arroyo eroded out of red rock. Again, the stream crossings usually present no particular problems for vehicles. The stream is the life-blood for a large and diverse arid country ecosystem. A great variety of wildlife depend on it. Dove and quail are often seen in great numbers around dusk. I once had the rare treat of watching a family of coatimundi here, frolicking in the water quite oblivious to my hiding place behind some nearby wil-

lows. For those looking for a wilderness campsite, this canyon would be a good choice for once you leave it you will soon be in Arizpe.

Finally, Arizpe is reached some 55 miles south of Cananea. Arizpe may not be the oldest community in Sonora, but it nevertheless has a respectable old history. Situated on the bank of the upper Rio Sonora, the area attracted the early Indians long before the arrival of the Spaniards in the New World. The first European in the area was probably a Franciscan missionary, Father Juan Suarez in 1642, although he did not stay. Suarez was followed by a Jesuit missionary, Geronimo de la Canal two years later. By 1650, Arizpe had its first resident priest, Father Felipe Esgracho. With the padres came conversion to Catholicism and an agricultural-based lifestyle for the Indians. Adequately rich soil and a dependable source of water caused the community to grow and prosper over the years.

When Father Juan Zapata visited Arizpe in 1678, he reported finding 416



The old church in Arizpe where the body of explorer Juan Bautista de Anza is buried.

people living there, and they had built a large, beautiful, and well-equipped church. By 1778, a century later, the population of Arizpe had more than tripled to 1534 people, of whom 514 were of European origin, and the remaining 1020 were Indian. In the middle part of the 19th century, however, as many as 13,000 people may have lived in the area. The 1960 Mexican census shows 4108 people living in the Municipality of Arizpe which covers an area of some 2806 square kilometers around the town. The 1969 census recorded an increase of 1150 more people in the Municipality.

In 1776, Arizpe was made the capital of Provincias Internas De Occidente under Governor-General Teodoro de Croix. During this colonial period, Arizpe was the seat of government for an enormous area which stretched from the Gulf of Mexico to the Pacific Ocean and included

what is now the States of Baja California, California, Sonora, Chihuahua, Arizona, New Mexico and Texas. In later times, Arizpe served as the capital of Sonora. Arizpe is also noted as being the birthplace of three Mexican patriots, Pedro Garcia Conde (1806-1851), Ignacio Pesqueira (1818-1886) and Jesus Garcia Morales (1824-1883).

It is hard to believe this rich heritage when driving into this picturesque, but sleepy little village out in the middle of nowhere. Arizpe today has one foot in the 20th century and one foot in the past. With the paved road coming closer from the south every year, it seems only a matter of time until the nature of the community will be altered forever. Arizpe already has locally generated electricity and a Pemex gas station with two grades of gasoline. There is also a new government building and several mod-

ern homes. Like all traditional Mexican villages, however, the life of the community still centers around the neatly maintained plaza, or town square. Arizpe's plaza comes complete with bell-tower.

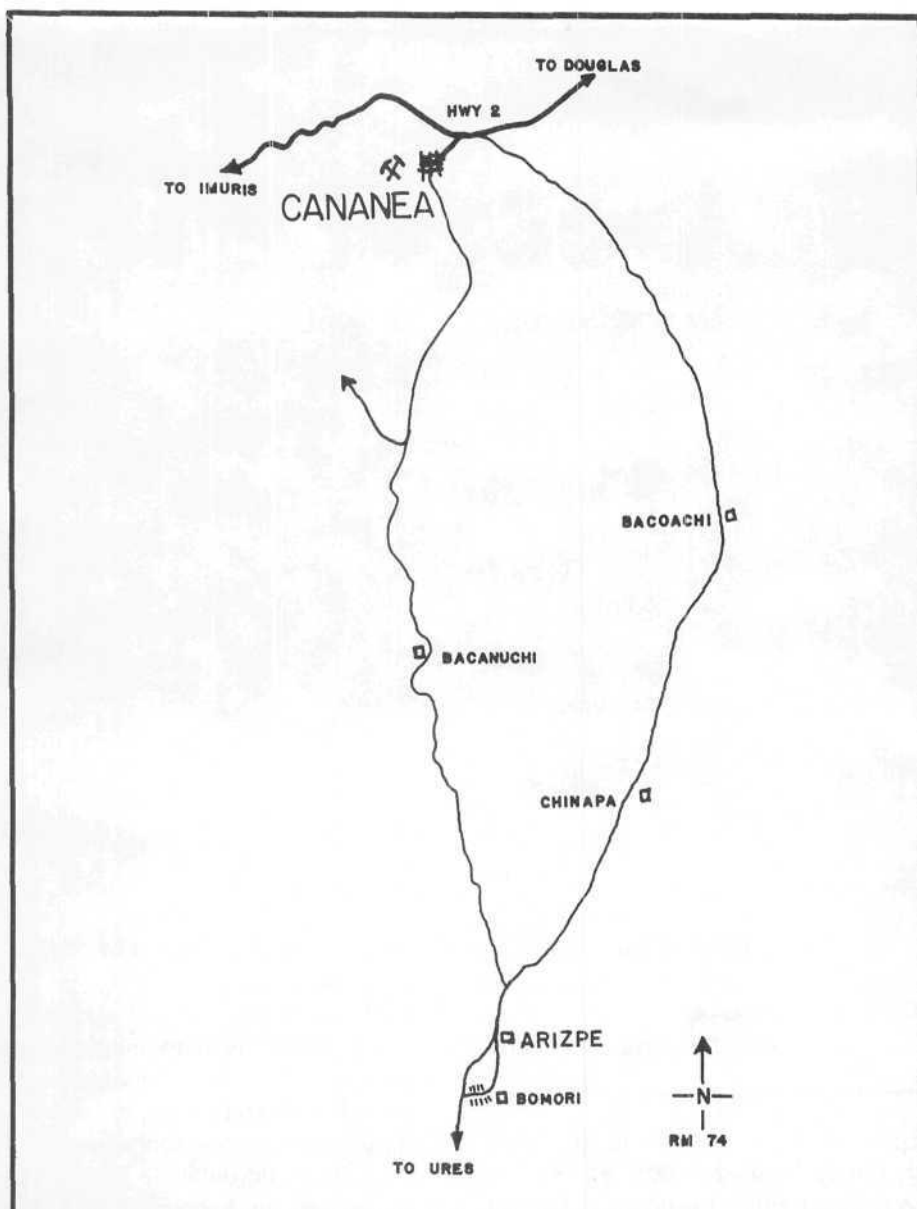
While Arizpe may be changing, it is not difficult to find the past. Only a block away from the plaza stands the enormous cathedral which dominates the town. The church was started in 1756 by Father Carlos Roja when the town of Arizpe was moved to its present location on higher ground away from the river. The church in Arizpe is the oldest Jesuit church still standing in Sonora, and certainly the most impressive. Visitors are welcome inside, but remember it is still a church in daily use.

The altars are richly decorated with enormous centuries-old paintings. But it is not the picturesque old bells, the gilded artwork, or the church's ancient library which makes the cathedral famous. Buried beneath the floor of the church lies the body of Juan Bautista de Anza, the renowned Spanish explorer of early California fame who first colonized San Francisco in 1775. De Anza died in Arizpe in December of 1788.

Famous persons are commonly buried in great cathedrals, so de Anza's final resting place is not particularly unique in itself. But what makes the church at Arizpe so unusual is that de Anza's grave has been opened and covered with glass. Today's visitor can look down into the casket at his grinning bones, still partially covered with the remnants of his uniform.

Those wishing to continue south down the Rio Sonora can do so, visiting the historic mission towns of Sinoquipe, Banamichi, Huepac, Aconchi, Baviacora and Ures. The road is dirt but in fair condition the 37 miles from Arizpe to Huepac where the pavement starts and continues all the way to Hermosillo. For those with limited time, I would recommend continuing south from Arizpe at least five miles. At a point 3.3 miles south of Arizpe, the village of Bomori is reached. Here the road leaves the Rio Sonora and for a mile or so winds its way through an incredibly eroded grotto. This side trip is worthwhile.

To return directly to the border by a different route, leave Arizpe on the same road you came in on. At a point 2.5 miles north of the plaza the road forks. Here a sign points the way right to Bacoachi and



Cananea, some 66 and 137 kilometers away respectively. Keep right. This route is 20 miles longer than the route you came in on, but the road is probably a little better. A shade short of halfway in the 36 miles between Arizpe and Bacoachi is the small but historic village of Chinapa. This community dates back to the Franciscan era around 1648.

The road north continues up the Rio Sonora and, in fact, is often in the Rio Sonora. Fortunately, there is no quicksand and the water is usually low enough to make fording possible.

Father Juan Suarez was in Bacoachi as early as 1642. There is no record of when the first church was built, but a well-decorated church was reported here in 1678. The foundations of this first church may rest under the impressive edifice found here today. Today's church was greatly remodeled after a disastrous

earthquake in 1887 nearly destroyed it.

Unlike its better protected sister city of Arizpe, Bacoachi did not have so many inhabitants and was subject to an occasional raid by the fierce Apache. For this reason, a detachment of Spanish troops was often garrisoned in Bacoachi to protect the town and outlying ranches.

From Bacoachi it is about 40 miles north to Cananea and the paved highway. The road is graded, however, and the trip can be made in less than two hours.

The best time to visit Arizpe is anytime except July, August and September when temperatures are at their highest and rainfall the greatest. The rainy season should be avoided because rising waters can often make the roads impassable. Whether you make this trip in a week or a weekend, it is one you will remember. ☐

PROSPECTING TREASURE HUNTING



SEND FOR FREE 1974 CATALOG

KEENE ENGINEERING Dept. D
11483 Vanowen St., North Hollywood, CA 91605
(213) 764-6114 — (213) 877-7240

**GEM & CRAFT
SUPPLIES AT
RIGHT
PRICES!**

**DeLuxe
Gem Tumbler**

Rugged, compact for pros
and beginners. Mod. 250D
DeLuxe Tumbler **\$53.40**

**8" & 10" Koolerant Kontrollled
Trim Saws** Heavy duty
throughout. Complete with
Power Feed and Cut-Out
Switch & Motor. Mod. 157D-10" **\$244.00**

**Diamond Drill, Carver
& Buffer**

Special design saves diamond drills.
Ready to go—
less drills. Mod. 605D **\$49.90**

★ **FREE CATALOG** ★

ORDER BLANK

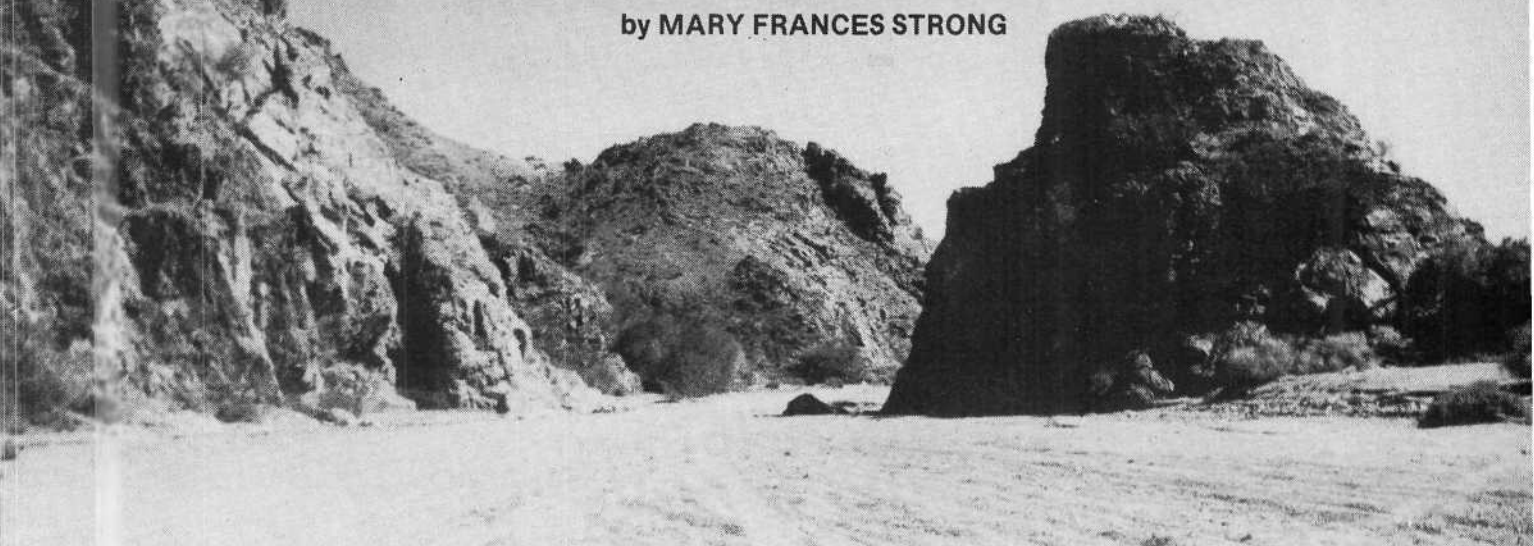
Covington Engineering Corp.
P.O. Box 35D, Redlands, CA 92373
All Items Shipped Freight Collect For
Better Service. Amt. Enclosed

☐ GEM TUMBLER ☐ TRIM SAW
☐ DRILL ☐ FREE CATALOG

Name _____
Address _____
City _____ State _____
Zip _____

The Rockhound and the Desert Plan

by MARY FRANCES STRONG



A LONG AND UNEASY wait for the "Interim Critical Management Program," to be used on the Mojave and Colorado Deserts, is over. The Bureau of Land Management (B.L.M.) has delineated 71 areas in California's vast desert region, the use of which will fall into one of five "designations"—Closed, Open, Special Design, Designated Roads and Trails and Existing Roads and Trails. This strict management program of our Public Lands went into effect November 1, 1973.

The first season of Federal Management of California's Desert Region has been concluded. The changes are many. On land we have roamed and camped at will, explored, enjoyed our hobbies and come to love, we are now merely visitors who must take heed and follow the rules laid down by the B.L.M. Where we can go, what we can do, where we can camp is being decided by a governmental agency. When people have heretofore enjoyed the freedom to use their Public Lands, restriction and loss of choice is a bitter pill to swallow.

The B.L.M. has made detailed maps available which show the boundaries of the 71 areas affected. Careful study and comparison with U.S.G.S. topographical maps indicate quite clearly what affect

The popular 4WD trail up scenic Salt Wash is in an "Open" designation. This is also the route used to reach a bloodstone site in the Orocopia Mountains.

Although this article is directed primarily to rockhounds, all recreationists should study this Desert Plan report and its ramifications.

the Management Plan will have on the rock collector. The "Interim Critical Management Program," put in force last November, was one with which the rockhound could live. Unfortunately, the Plan is already undergoing radical changes.

While complete freedom is most desirable, we must expect and accept change. Tremendous population growth and rapidly increasing use of the desert as a recreational region has brought about the need for some control of land use and protection of antiquities. Most outdoor people are in agreement that scenic geological formations, rare and unusual flora and fauna, records left by prehistoric man and later desert dwellers be preserved. However, a sensible plan which will protect yet allow the multiple

use of desert land is desired by the majority of the people.

Man, living tightly-packed in cities of steel and cement, is in an unnatural environment. If he is to survive, he must have land on which to roam, to get away from constant noise and confusion, to refresh his soul and untangle taut nerves as he pursues his hobbies. Our Public Land must be used for "Man today, as well as saving it for tomorrow."

When the overall map was made public showing 16 "Closed" areas which included Amargosa Canyon, Turtle Mountains Interior, Clark Mountain, Orocopia and Whipple Mountains, rumors ran rampant concerning the loss of many fine collecting locales within these areas. Study of the detail maps and plotting of boundaries discloses only two collecting sites have been affected.

Causing the most consternation was the Closed Designation for the Turtle Mountains Interior (Area 34). Most thinking people will agree the closure was justifiable, since it would probably save a small band of fast-declining Desert Bighorn Sheep. According to the boundary lines given by B.L.M., only one minor collecting locale, near Coffin Spring, lies within the closure. (This site is Area "E" in Desert Gem Trails, page

69.) It is still possible to drive within one-half-mile of the site and then make a short hike up the wash. The remaining Turtle Mountains collecting locales come under "Designated Roads and Trails."

The boundary lines given for the Orocopia Mountains, (Area 51) Closure, indicate the bloodstone deposit (Desert, Feb. 1972) either lies about on the line or possibly one-tenth-of-a-mile within it. Should the latter be the case, it will only be a very short hike from the parking area.

More pertinent to the use of this locale was the inclusion of Sec. 2, T. 8 S., R. 11 E. in the Closure of Salt Creek (Area 54). Access to the bloodstone deposit is via the canal road which crosses the N.E. corner of Section 2. A phone call to Gordon Flint, B.L.M., Riverside, California revealed they would not be closing the road, since it is an easement. However, he said he had been told the roadway was posted "No Trespassing."

Since the canal and road are under the jurisdiction of the Coachella Valley County Water District, I talked with Kerby Hester, their Administrative Engineer.

"Rockhounds and Four-Wheelers have been using the county road for years. We have no objections. It is not posted—only the canal and its pertinent structures," Mr. Hester told me. This means there is still access to the deposit via the canal road and the 4WD trail up Salt Wash.

Closure of Amargosa Canyon (Area 17) does not include Sperry Wash Road leading to the wood area several miles south of Tecopa. Nor is the Copper World Mine within the Closure of Clark Mountain (Area 22).

Well over a hundred remaining collecting locales fall under a "Restricted" designation which has been subdivided into three categories—Special Design, Designated Roads and Trails, Existing Roads and Trails. It would seem that the rock collector had not fared too badly. However, it is the "Restricted Designation," appearing innocent on the surface, that is capable of bringing regulations the rock collector would find untenable. You might say, it is a bone thrown to pacify us temporarily.

Under the Restricted Designation, "Special Design" means a detailed plan has yet to be prepared in cooperation with other governmental agencies and



Long before the Desert Management Program began, steps were taken to protect precious antiquities such as the Cottonwood Charcoal Kilns. Weather is the greatest vandal here. Since this photograph was taken, a roof has reportedly been constructed over the kilns.

public interest groups to provide a variety of vehicle use together with related recreation facilities such as camping areas, use boundaries and access roads.

"Designated Roads and Trails" means recreation vehicle travel will be permitted only upon those roads and trails designated for use by B.L.M. These two categories are not yet in effect and the current plan states "until such plans and designation is completed and adopted, recreation vehicle use is permitted only on existing roads and trails."

In other words, *the majority of our collecting areas are not yet categorized.* The roads we may travel and where we will be allowed to collect have not been decided. Governmental agencies and public interest groups will make these important decisions. It is imperative that the rock collecting hobby be represented at future sessions dealing with the use of areas under the "Restricted" designations.

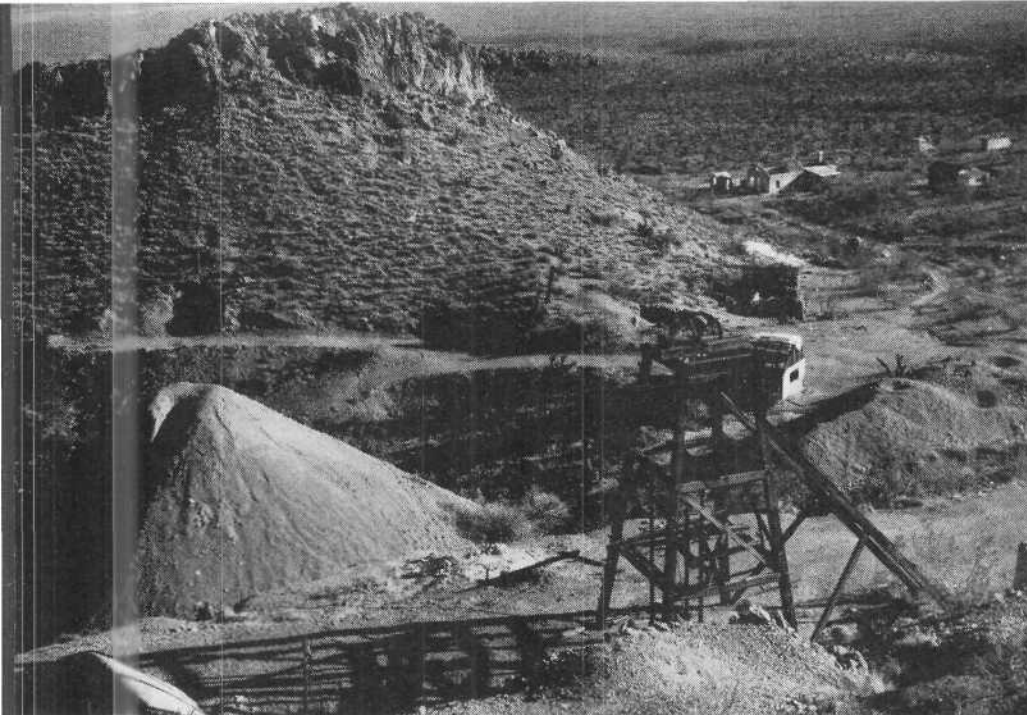
While our local B.L.M. offices have seemingly been sympathetic to the rock collector, we must remember they are a government agency and, like politicians, come under the influence of pressure groups and lobbyists. They must listen to the fanatical preservationists who seek to close the desert to all vehicular use, as well as their opposing counter-

parts who wish the desert region to be left entirely without control of its resources.

You will recall I stated earlier, "The Plan presented and put in force Nov. 1, 1973, is one with which the rockhound could live." Though in force less than four months, changes were being made which would seriously affect group and club field trips. Also, there is currently a bill before Congress which proposes to transfer two million acres of desert land containing at least two dozen prime collecting areas. It is not important now whether or not the Interim Management Plan is acceptable. These proposed changes are not!

Let us discuss them separately. In February, 1974, B.L.M.'s National Director, Curt Berklund, issued Instruction Memorandum 74-60, effective immediately. It directed all field officials to issue special land use permits on National Resources Land—this is the new name given to our Public Lands. Six months earlier, the local B.L.M. had assured rockhounds that, despite the wording in Executive Order 11644 for the control of off-road vehicles, permits and fees would not apply to rockhound field trips and similar activities!

The requirements for obtaining permits were absurd. You had to know 80 days in advance when you wished to



A Bill pending in Congress provides for the transfer of two million acres of desert land to the California Park System. It would not only close many prime collecting areas, but also restrict access to old mines and ghost towns such as Providence.

drive out into the desert to collect rocks with friends. A detailed application form was to be filled out, two topographical maps marked with the route to be taken, where you would meet and camp. A \$10.00 non-returnable filing fee was to be included.

IF, your permit was granted, a minimum \$10.00 land-rental fee was to be charged and certain conditions of usage be imposed such as *insurance requirements and a cash bond!* Though your party might be composed only of family and friends totaling 25 or more, the trip

would be subject to the above regulations. Such planned control and regimentation of our private lives is frightening!

Fortunately, this memorandum was *rescinded due to the protests of recreationists*. But, the question is, what next? This is the second time that the Washington office has sent out highly objectionable regulations concerning outdoor recreation. In February, 1973, a set of rules for off-road vehicles was issued which met so many objections that it was recalled for revision. It looks as though

Collecting in Turtle Mountain Basin is still permitted but is under "Designated Roads and Trails." This designation means very little since B.L.M. has yet to decide what roads and collecting locales its final plan will allow the rockhound to use. The "Closed Turtle Mountain Interior Boundary" runs along the base of the mountains in the background.



we are going to have to be constantly on guard to keep something from being slipped by us.

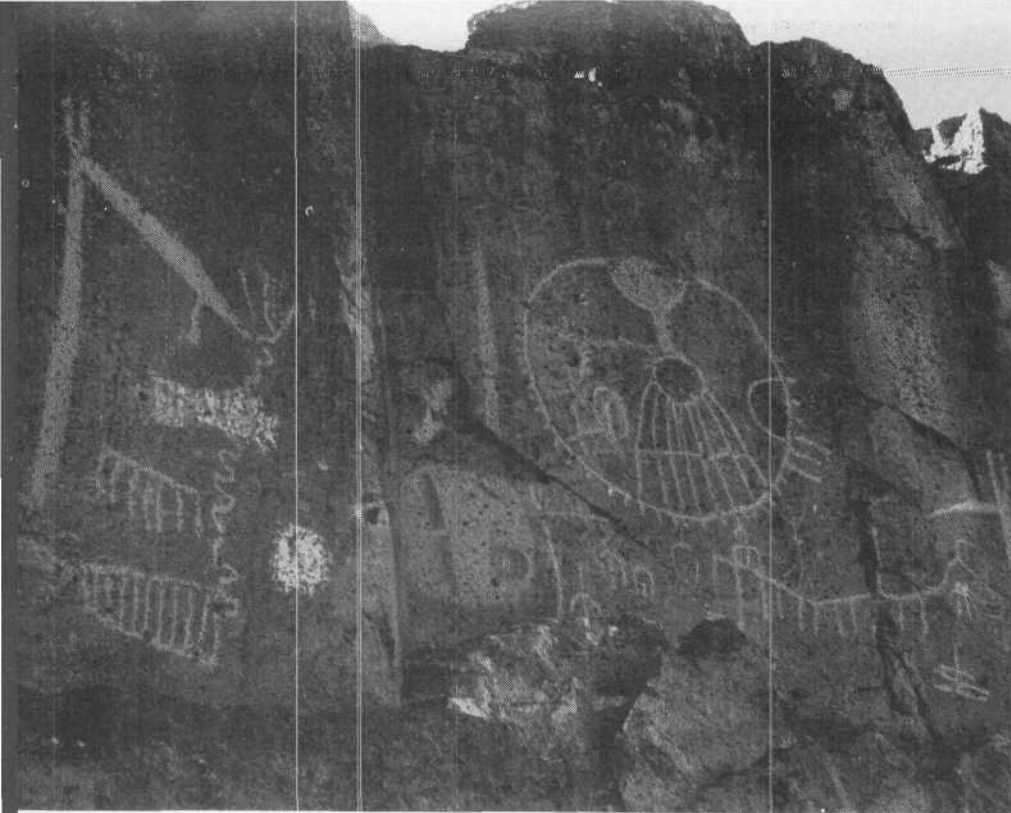
The seriousness of Instruction Memorandum 74-60 was not the requirement of permit and fee, but the way the rules were set up. Rockhound field trips are camping trips with family and friends, not competitive recreation events. While a club field trip chairman could possibly plan 80 days in advance, individual trips with friends are generally spontaneous and not planned very far ahead.

Group permits could lead to individual permits or no permits except for groups. The next step could be permits and reservations which would radically limit the number of people who would be allowed to use the desert land. Let's project a bit further into the future. Rangers would be needed to check permits and the next move could be to allow collecting in only a few designated locales. Next, the preservationist could cry "over-use" and have the land closed "to rest." These possibilities are not as far-fetched as you might think. It would seem that every means legally possible will be used to eventually stop vehicular use on desert land by recreationists — rockhounds included.

Dark clouds are hovering over two million acres of Mojave Desert land between Highways 15 and 40, extending from the Cady Mountains east to the Colorado River. Representative William M. Ketchum (R-Calif.) has introduced a bill, H.R. 14369, which, if passed, would transfer this land to the State of California for use as a State Park. This region contains over 20 of our finest rock collecting locales, which would be lost to us. Should the bill be passed, it could sound the death knell to rock collecting in California's Desert Region. Such success would be sure to quickly bring other bills and closures.

Another major change in the Interim Critical Management Plan is now in the offing. The B.L.M. is trying to draft a working definition of *Existing Roads and Trails*. Consider the importance of this matter. The recording of a few words will determine whether favorite collecting areas will be accessible or not.

Just what is an *Existing Road or Trail*? You can be sure that the definition submitted by a preservationist will differ from that of a recreationist. If an adverse definition is drafted, many of the roads



Inyo County has elected to share its beautiful Chalfant Valley Petroglyphs with visitors. The Bishop Chamber of Commerce provides free guide folders with maps and text of "Petroglyph Tour." Most of the damage to the glyphs was done before the self-guided tour was established.

and trails we have used for years could be declared non-existent and closed.

Rockhound groups and other recreational organizations have been asked to aid in the formulation of the definition. B.L.M. will receive suggestions from groups and individuals between August 15th and October 1st. For further information, contact your district B.L.M. office.

It is not a secret that a very active movement is underway to make the Desert Region a place where man may only walk. Preservationists are hard at work and using "no holds barred" schemes to take Public Land away from 97 percent of the people. Only through the personal commitment of every rock collector and recreationist can we insure the continued use of our Public Lands. We must all write letters of protest to our Senators, Congressmen and Chairman of Committees such as the Committee of Interior and Insular Affairs, National Parks and Recreation, Environment, etc., We must also advise our State Senators and Assemblymen of our desires.

If you value your hobby and your right to use Public Land, the changes in the Interim Critical Management Plan will not be acceptable. Though the future looks dark, we can save our recreational

lands by taking action at once. Representative William Ketchum, who introduced the bill for a two-million-acre desert land giveaway, is said to close his newsletter to constituents as follows: "No King ever wielded a sceptre more powerful than a 10 cent pencil in the hands of an American Citizen when he sits down to write his Representative." *How right he is!*

We cannot rely on the assurances and promises of the B.L.M. Though their intentions may be good, they fluctuate and yield under the influence of various pressures put upon them. Only the concerned recreationist can save our rightful heritage to use Public Lands.

The Interim Critical Management Plan can be compared to the tip of an iceberg. Submerged underneath and hidden from view, is a large mountain of restrictions and closures. Fellow rock collectors and other desert enthusiasts, you have been alerted. The future of your recreational hobby lies solely in your hands. It is hoped you will act quickly and wisely.

Note: If you do not know to whom to send your letters, just send a self-addressed, stamped envelope to: Desert Committee List, Rt. 1, Box 18, Valyermo, California 93563. □

JEWELRY CRAFTS CATALOG

FREE!

196 pages

Lapidary - rockhounding
jewelry making... add up to
a fascinating creative art!

SEND FOR FREE CATALOG

World's largest selection - over 10,000 items
offered... imports from all parts of the world.

GET CRAFT'S BIGGEST CATALOG

STONES - JEWELRY MATERIALS - MOUNTINGS
BOOKS - CRAFT TOOLS - MACHINERY - SUPPLIES - ETC.

GRIEGER'S, INC. Dept. 52
900 So. Arroyo Pkwy., Pasadena, CA 91109

STOP THAT THIEF WITH LOCKSTRAP

A revolutionary new design
secures all G.I. cans to your
carrier. Attaches to rear slot.
If for 4" high rear panel
state if 1" slot or 1½" slot.
All steel construction, bright
zinc plated.

Type D Only \$7.50

PLUS POSTAGE, 2 LBS.

DEALER INQUIRIES INVITED. Send for FREE Brochure Showing Other Models to Fit Any Vehicle.

1141 Wiltsey Rd. S.E., Salem, OR 97302

The New, Powerful

2 inch Gold Dredge, Model 100

— weighs less than 30 lbs., and has many outstanding advantages over conventional models.

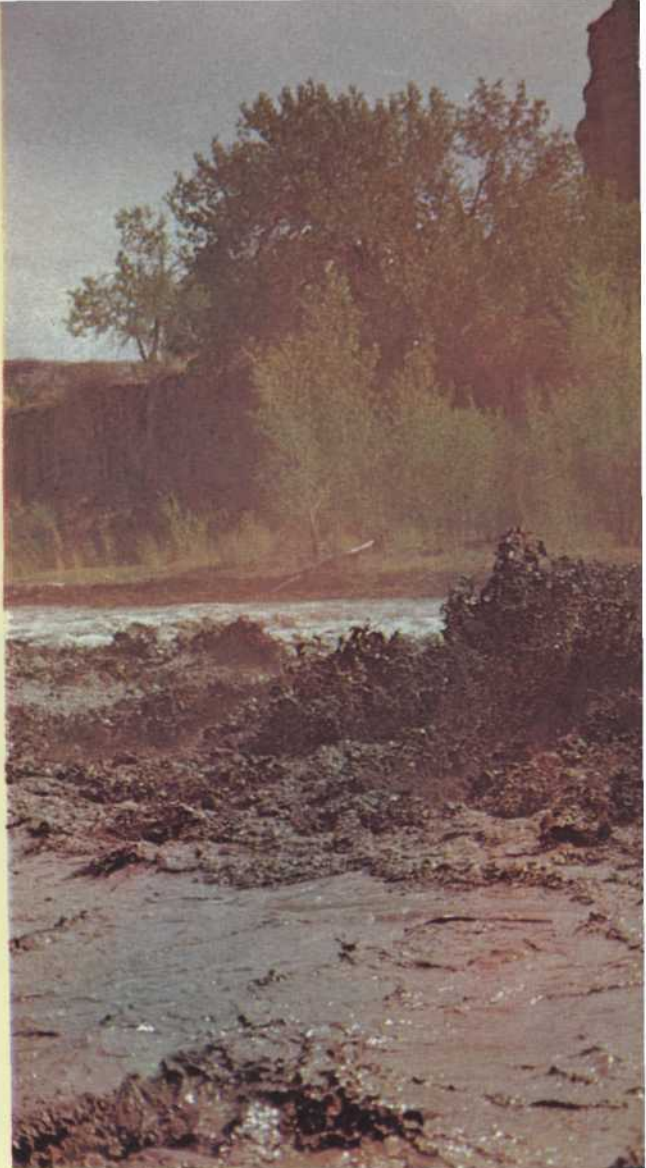
— A specially designed high pressure pump mounted on a gas stingy 2 Cycle 1.6 h.p. O & R engine that delivers 70 psi when restricted to 1/4" orifice. Comes equipped with a take apart enclosed impeller.

— A new type jet that accepts the suction hose internally and becomes larger in I.D. rather than restricts.

For further information write:
OREGON GOLD DREDGE
Mohawk Star Route 1A
Springfield, Oregon 97477
Phone (503) 747-6069

Flash Flood!

by CLYDE H. SMITH



IT WAS MID-DAY in late August and unbearably hot. My companion, Dr. Homer Dodge, and I were exploring a sizzling dry wash east of Capitol Reef National Park, Utah, by Jeep. Homer is twice my senior at age 85 and a veteran of many excursions in these parts. He seems to enjoy the heat but my Eastern blood is too thick for the desert's 110 degrees—in the shade.

Somewhere to the west, about 20 miles or so, a violent storm was battering Capitol Reef's craggy Waterpocket Fold. From down in the wash we caught an occasional glimpse of black thunderheads and jagged streaks of lightning—followed by long continuous rumbles that resembled an artillery duel. Half-heartedly, I wished some of the clouds and rain would come our way and cool us, but it seemed highly unlikely since the storm had remained stationary all morning.

"Better have a look at that soft area just ahead," cautioned Homer, "we

don't want to get stuck out here!" I stopped the Jeep and stepped down to the ground. It was like landing on hot coals as the scorching sand penetrated my sneakers. Nearby, a tiny trickle of super-heated water was the only semblance of "Big Muddy"—which was the name designated on the USGS map for our present location.

"Homer, I think you're right," I said, "this stuff looks unstable and we'd have a heck of a time getting out of here if we ever stalled." I scanned the far side for some way to detour up the bank. It looked rather steep and much too soft and I was about to suggest we turn around when a faint noise from somewhere up the wash caught my attention. At first it was muffled and hard to distinguish from the distant thunder, but its volume increased measurably within moments.

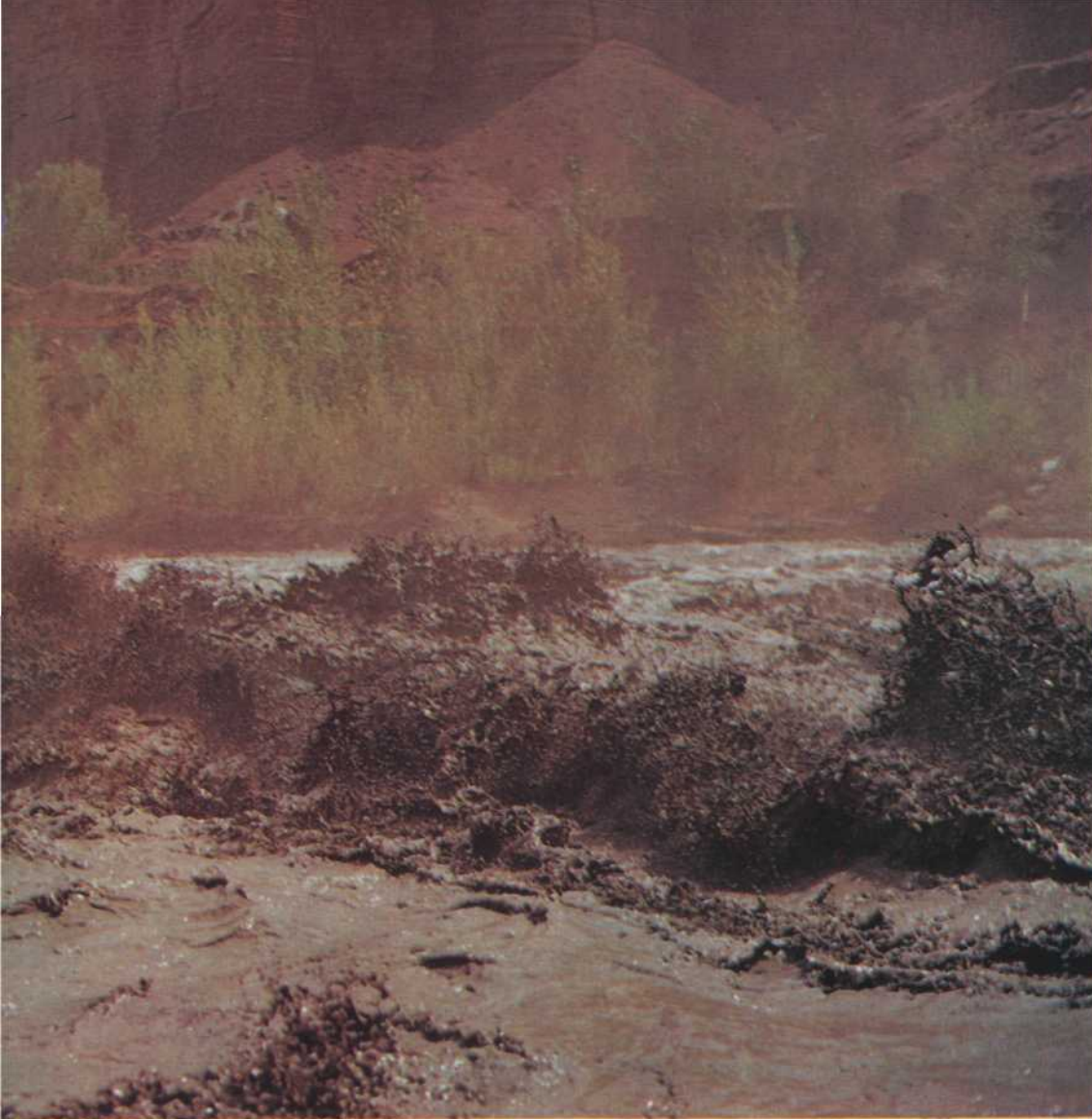
Licking my parched lips, I squinted into the shimmering heat. Suddenly, a strange, spiny object appeared around a

bend in the wash, looking for all the world like a giant porcupine—something reborn from a prehistoric age. It bounded along at a frightening speed . . . hissing and grinding . . . right toward us!

Homer leaned out the window and yelled, "Let's get out of here, that thing's a FLASH FLOOD!"

For a split-second my feet felt as though they were anchored to the desert floor. I thought the sand's fiery flames surely must have fused my sneakers to the ground. Then Homer bellowed again, "Let's go! FLASH FLOOD!"

In two giant leaps I reached the Jeep and floored the accelerator as I landed in the seat. As we sped toward the far bank, I could see from the corner of my eye what I had imagined as a giant porky was actually the leading edge of the flood—a wall of dirty water bristling with sticks, brush, trees and debris. In its wild plunge, it threatened to engulf us,



This is an account of an Easterner's first experience with one of the desert's most treacherous phenomena. Much publicized for its arid, barren wastelands, where the importance of a supply of water is paramount, the desert can turn things around suddenly and create a devastating threat to life and limb!

vehicle and all!

"Give 'er gas," cried Homer, "that thing will overturn us and grind us to pieces!" All four wheels were screaming at full tilt as we reached the bank and charged up the dizzy angle of loose sand. Dirt flew in all directions and the roar of the flood was now like an express train bearing down upon us.

The front wheels reached the top of the bank and for a few agonizing moments we seemed to hang there, suspended, while our rear wheels dug helplessly in the sliding sand. So close and yet so far—perhaps a whisker from oblivion—then the wildly clawing front wheels found solid ground and in one shuddering lunge pulled us from certain doom! Glancing out my open window, I could see the flood pouring below like chocolate syrup! It was "Big Muddy" all in one instant—a mighty river of frothing brown waves.

Following the leading wave was an im-

mense volume of water, rising at an incredible rate. Parts of the bank began to crumble as the churning current raced along tearing at everything. We moved to a higher level where we could look back on the surging monster below.

Upon reaching the rim above the wash, we were faced with a new threat. The vicious storm which had been around Capitol Reef all morning was now barreling toward us with all the fury of a tornado! An ugly column of swirling dirt preceded a billowing black thunderhead, raked by streamers of rain and hail. Fierce forks of lightning zig-zagged in all directions like the lashing head of a serpent.

"We'll never make it to the highway," advised Homer. "Every little wash will be a roaring torrent within minutes."

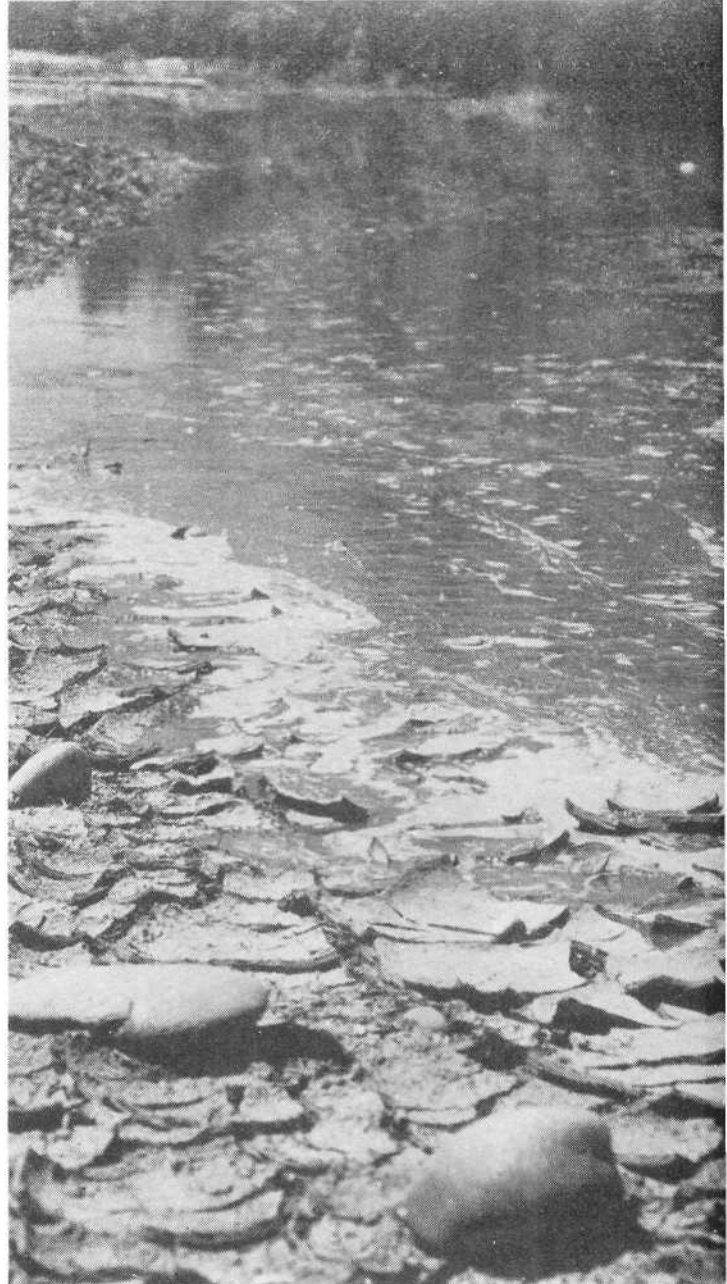
Wind began to buffet us as the leading edge of the storm swooped in upon us. "Let's make a try for the highway," I said to Homer. "Sure doesn't seem like

anything could be worse than what we've just come through."

In a few moments, the full force of the scouring dirt cloud hit us with all its fury. We could feel the Jeep lifted off the ground at times as we inched along on our blind course. How ironic, I thought, to have just escaped from drowning and now to be blown away in the wind, or perhaps smothered in sand!

My mind wandered back over the events that had led us to our present predicament. We were both Easterners, but Homer's first love seemed to be the West where he had trekked for many years through its canyons and deserts. But above all else, he enjoyed canoeing most and included among his accomplishments was a trip in which he retraced all of John Wesley Powell's original route down the Green and Colorado Rivers—in an open canoe!

Enticed by Homer's tales of adven-



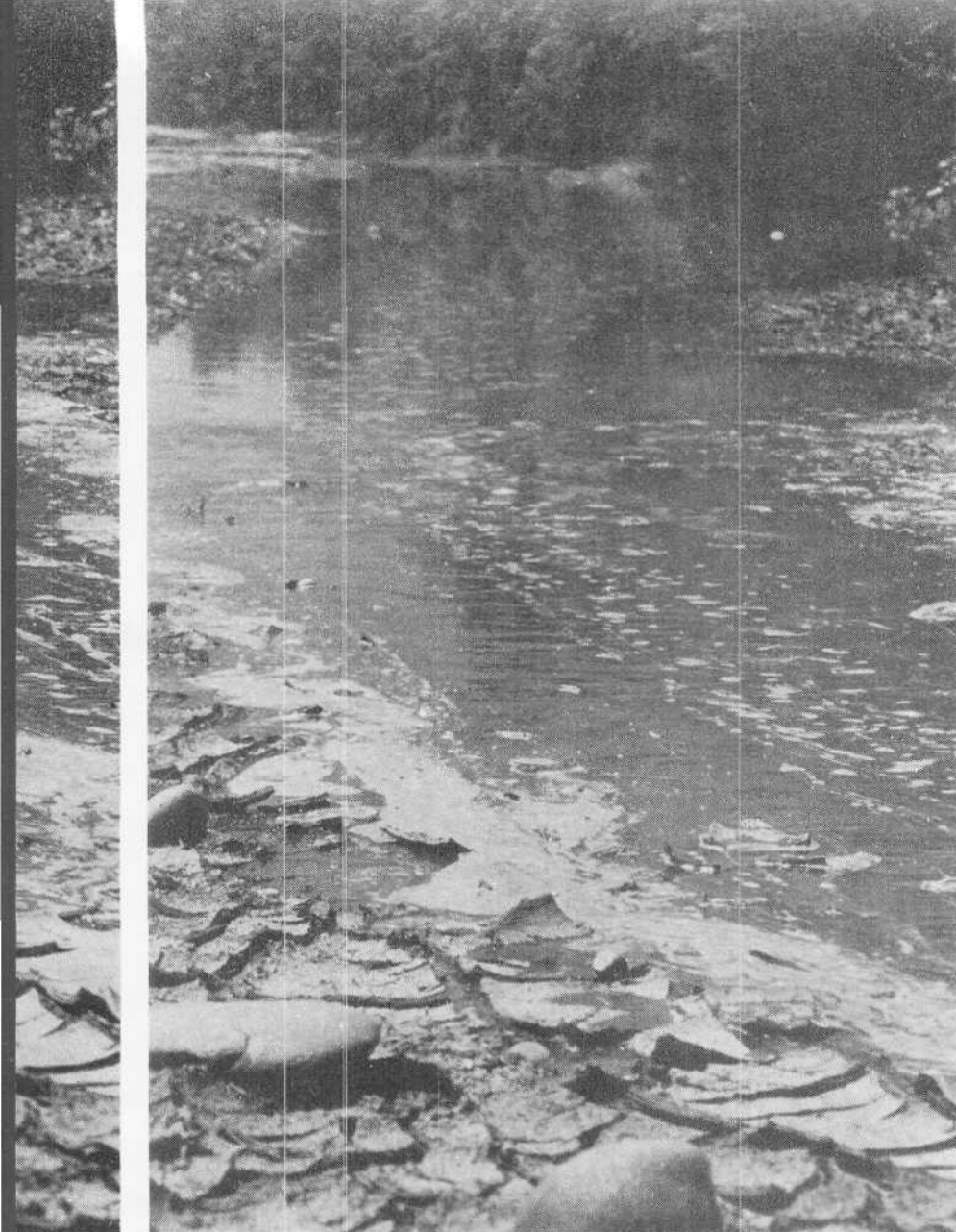
The birth of a flash flood showing the suddenness of its fury. Sun-dried desert topsoil, with its hard-baked surface, cannot absorb the volume of water that occurs during heavy rains. This water builds up with amazing swiftness and within minutes a quiet desert wash can become a roaring wall of water and debris. This photo sequence [l to r] was taken at five-second intervals.

ture, I was persuaded to join him for a month in Canyonlands and Arches National Park, Utah, where we penetrated some of the most fascinating country I had ever seen by Jeep. The maze of monumental formations, deep canyons and natural stone sculptures were far removed from anything I'd seen in a New England landscape.

Day after day we watched enormous thunderstorms build around us, but none ever came our way. A few times dark clouds collected over our heads and I could see streamers of rain reaching downward—but none ever touched the ground—it evaporated in the heat long before it got to us! Jokingly, I kept wishing for a rain storm—anything to cool the desert's melting furnace. But we'd gone through a whole month without so much as a drop, and so it was

on our very last day before returning East that we decided to make a short run up "Big Muddy" wash. It was almost dry as a bone, and after all, the storm was miles away—but it just shows, one must never underestimate the desert. Evidently the cloudburst at Capitol Reef had built into gigantic proportions, forcing virtual tidal waves down all the washes in the immediate areas.

"Looks like we're finally going to get some rain." Homer's remarks jolted me back to reality as big splotches began hitting the windshield. The sand storm had diminished and now sheets of rain were driving toward us. The drops were a combination of dirt and water and landed on the Jeep like tiny mud bombs. For some reason, the Jeep started to slide around like it was on a greased platter—and the wheels felt funny.



I stopped and got out in the driving rain. Huge flaps of mud clung to the tires—and everywhere I stepped, great clods stuck to my sneakers. It was like growing snowshoes! We were crossing a section of soil that had just enough clay in it which, when mixed with water, turned to gumbo mud! Cautiously, I oozed the Jeep along on lumpy tires through the torrential rain, slipping and sliding while flaps of mud flew off like jettisoned retreads. Hail the size of moth balls began coming down—its deafening clatter sounded like a million hammers going all at once. Visibility was cut to zero, so we came to a grinding halt!

Then, quite suddenly, it was all over. It was almost as if someone had turned off a faucet—everything opened before us while the wall of rain and hail moved east. Within minutes, a brilliant burst of

sunlight followed, turning the desert into an eerie sea of swirling mist as the rapidly diminishing runoff evaporated from its surface.

I decided to walk ahead a little ways to check the ground. I had gone only a few dozen yards when I came to the lip of a bluff—and there, almost 300 feet straight down was the Fremont Valley! The main highway was directly below, while paralleling it in a gigantic serpentine course, was the awesome Fremont River—normally a tiny placid stream—now swollen to enormous flood proportions.

Off to one side we found a nice easy grade leading from the bluff, and in a short time we were safely back on the highway—two Easterners who would take home wonderful memories of the West—and a flash flood! ☐

BACK ISSUE SPECIAL

Complete
'65 '66 '67 '68
VOLUMES
\$2.50
EACH

Complete
'70 '71 '72
VOLUMES
\$3.00
EACH

1973
VOLUME
\$4.00

"Rain Barrel"
Assorted issues
1959 to 1965
\$4.00
Package of 20

Mail all orders to: DEPT. T
DESERT Magazine
Palm Desert, Calif. 92260

Personal check or money order must
accompany your order.

Be sure to include your zip code.



A Bird and a Berry

by K. L. BOYNTON

© 1974

VERY MUCH at home in the driest and hottest of desert scrub and foothills is a dapper little black bird with a big Greek name which fits him so well it has become the one by which he is known to one and all. This is none other than the *phainopepla nitens* ('black shining robe') or the Phainopepla for short. Arayed in his glossy black plumage, he is a very good looking bird, what with his high head crest and bright red eyes, and those classy white wing patches that flash out when he flies. He is also a bird of parts, being an accomplished nest builder, a good provider and an exceedingly vigilant sentinel.

He is, furthermore, a bird of more than passing interest to scientists, flourishing as he does under adverse desert conditions. Investigations into how he does it have turned up some interesting sidelights on this bird and his affairs, and even more importantly, it has produced some new facts about plant-animal relationships—in this case a balance in nature that makes year around survival in the desert possible for him.

The Phainopepla, being a flycatcher by trade, captures insects in the air, a feat requiring complicated wing work—a flight style marked by bursts of speed, quick turns, sudden brakes to slow wing beats—all useful in the pursuit of dodging insects. Like many a flycatcher, the Phainopepla also has a faceful of bristles around his bill. Sticking out in all directions when he opens his mouth, they greatly increase its trap-area, thus making the catching of larger insects a cinch. They also act as a net for scooping up billfuls of those swarming insects too tiny to be grabbed individually.

Naturally enough, such high protein groceries as insects are not available in sufficient quantities in the desert during the winter months, so the Phainopepla shifts over to berries for his staple food, mainly those of the mistletoe. And herein lies a tale of plant-animal partnership where both mutually profit.

Mistletoe, as all desert hands know, is to be found in clumps and clusters in the branches of tall shrubs and trees. Long adapted to killing heat and arid living, the desert species of mistletoe has only scale-like leaves, but its stems are green. Since they contain chlorophyll, the plant can manufacture part of its own food. It is, however, dependent on its host tree for water and soil minerals, and hence while it is not completely a parasite, it is partially so. Its white berries are plump and full of sticky juice, and while NOT for human consumption, are free from the usual bitter or pungent repellents usually found in desert plants. Inside are many very hard seeds.

What happens is that the Phainopepla, after stuffing himself on berries, flies to a favorite tree perch. As he cleans his bill along the limb, some seeds caught in his mouth adhere to the limb with their sticky coating. But this is not all, for the bird sits quietly digesting his meal and in due time his feces drops onto limbs below with more of the hard seeds which have made the long journey through his insides intact. Once on the host tree, the seeds in time germinate, thrusting root-like extensions through the bark to connect with the tree's vascular tissue and the water and minerals carried there. Now the mistletoe is all set to go on growing—planted, as it were, by the Phainopepla.

In turn, the mistletoe's fruiting schedule is timed nicely, taking care of the in-



This ironwood tree shows masses of desert mistletoe that owes so much of their existence to the Phainopepla.

sect-lean months for the desert birds. Not all maturing at once, mistletoe's berries are to be found somewhere in the desert six months of the year—November to April—a remarkable long fruiting season—and it is upon these berries that wandering bands of Phainopeplas live, and upon which, at family raising time, much of their domestic economy is based. This is a matter of importance since the Phainopeplas, with a way of their own when it comes to affairs of the heart, further complicate matters in local populations by apparent differences of opinion on exact protocol. Around the Tucson desert region, for instance, the team of ornithologists A. L. Rand and R. M. Rand, found it went like this:

By the end of February, gentlemen Phainopeplas have staked out their territories and are ready for love. But do they sit around singing while awaiting the arrival of ladies also in the same frame of mind? They do not. They get right at their nest building, with the main push well underway by the middle of March.

One energetic builder observed by the Rands seized a twig fragment, and making a high circular flight to the mesquite he selected, installed the twig on a limb. Then, with much showy flying, he returned with a wisp of tent caterpillar web to bind it into place. Work proceeded apace, each piece being brought via a showy flight detour. A cup was well on the way to being formed, when a female (dressed demurely in a dark grey with white edgings) came into view. The nest work ceased abruptly. By dint of fast wing work, the gentleman caught up with her and, flying in a pattern of circles over his territory, invited her to join in a courtship flight. No sale. The lady continued on her way, and the gentleman went back to his nest building.

But not for too long. Catching sight of another traveling lady, he shot off on his circular flight again, and this one not only flew his circle with him, but came and inspected his nest. She also stayed for lunch, dining on four mistletoe berries he picked and fed her. Things looked very good, indeed. But, at this point—



A female Phainopepla. Photo by Jim Cornett.

obviously rested and refreshed, she suddenly took wing—and kept right on going.

Nest No. 1, with its cup formed of bark and twig fragments bound so neatly with cobweb, was all completed, and Nest No. 2 well underway before another candidate showed up. Dropping everything, the gentleman went into his courtship flight pattern, and this time proved that, indeed, advertising by flying and diligent nest building does pay off. This lady indicated that she was seriously interested in setting up housekeeping.

So he went back to his nest building.

Tearing down Nest Nos. 1 and 2, he set about building a brand new one in a location that pleased the lady, she, meanwhile, sitting in the shade eating mistletoe berries which he stopped work to feed her.

As *Phainopepla* romances go, this was a whirlwind affair. One bird, with a patch of dull feathers on his flank, built three nests in March. No success. He finally started singing as an added attraction. Another, although showing he could make better than 30 trips per hour

with building materials, paused often in the midst of his labors and sat for long periods just looking far, far off into space. Was he pondering the percentages, and wondering how in hades this whole thing got started?

Despite the apparent meditations of this non-conformer, *Phainopepla* courtship etiquette produces results, with so many households set up that the working nests may only be about 75 feet apart. The normal clutch size is two, the eggs being rather pretty, grayish or greenish-white with spots of brown, black or even lilac. Incubation starts with the first one, with both parents sharing the sitting detail. The thing is done in style, with changes of the guard taking place at intervals of 7 to 20 minutes, the sitter calling KUK-KUK for a shift end, and both CRU-EEing politely as they change places.

Fourteen to 17 days later, the youngsters make their debut, and as it is now spring, insects are becoming more abundant, so the proper protein is on hand for chick-stuffing, supplemented by the waning supply of succulent and highly

nutritious mistletoe berries. After some 19 days in the nest, the young birds are ready for their first flight, and parental chores begin to taper off.

When not nesting, the *Phainopeplas* are a gregarious lot, traveling in small flocks, their wanderings during the winter dictated by the availability of mistletoe berries. As biologist James Crouch's fine work showed, they do little else during this time but gorge themselves on berries and then go perch and digest them. What with such assured seed dispersal thus going on, it would seem that the desert would be overgrown with mistletoe, particularly since bluebirds, robins, quail, linnets, mocking birds, thrashers and some warblers also dine on them from time to time. Since most of these are perchers and digesters too, they also add to the planting brigade.

Botanist R. B. Cowles got interested in this seed dispersal situation and wondered, since it seemed so sure-shot, why the plant had to produce so many seeds unless the survival rate must be low. Checking only deepened the mystery, for he found that most of the big crop of

seeds was indeed fertile, and thanks mainly to the Phainopeplas, enormous numbers of these seeds were successfully placed on host plants and put forth that bright brownish red root-like radicle for attachment. So why didn't more of them go on and grow to be adult parasitic plants?

After more Sherlocking, Cowles decided that one of the biggest mistletoe losses occurs because the Phainopepla, the self-advertiser, dearly loves to sit on the topmost branches of a tree. In the desert region, this may be a dead twig, life being rough on growing things as it is, and in fact may be located over masses of dead twigs killed perhaps by previous heavy mistletoe growth. So, when the seed lands, it may indeed fall on dead wood. This, of course, is bad news to the seed, for while it goes ahead and germinates and puts out its radicle, it finds no living plant tissue to fasten to, no free supply of water and minerals. So, of course, it withers and dies.

It also seems that while trees weakened from temperature-aridity, or insect attack, fall easier victims to the mistletoe, certain species put up an active defense. The desert ironwood, for instance, is not one to take the mistletoe onslaught lying down. The seed indeed may land, compliments of a perching Phainopepla, and put out its radicle and pierce the bark. But, at this point, the ironwood begins exuding a gum and pushing the seed away. More and more gum comes out and hardens until it eventually breaks the mistletoe's connection, and the hard gum wad and seed simply fall off. The tree shuts off the gum flow and business goes on as usual. Cowles also found that certain desert rodents, not interested in the mistletoe berries, climb the ironwood for its seeds and pods, and scrambling about dislodge and knock off geminating seeds, a fine assistance to the tree.

Like everything else, however, enough mistletoe makes it on mesquites and cottonwoods and palo verdes to stock the Phainopepla's winter larder. Their succulent berries, plus the summer diet of insects provide the bird with all the moisture he needs, freeing him to live the year around in the desert—provided he goes on with the "planting" as scheduled. And being a Phainopepla—old berry bird that he is—that is exactly what he is going to do. □

Desert/September 1974

A FAMILY VACATION

Cruise Lake Powell

as . . . Captain, First Mate and Crew of a twin-engine 43' Luxuriously equipped Boatel Aqua Sports Paradise! A Change of Pace!



Unmatched Beauty with clean air, sunny days, and starlit nights.

FREE BROCHURES

Call collect or write:
714 466-5316

Hite Marina Inc.

P.O. Box 218
La Mesa,
California 92041

SUBSCRIPTIONS NOW BEING TAKEN

FOR

Christmas Gift Giving

Use Form on Page 45



GORDON'S Gem & Mineral

1741 Cherry Ave., Long Beach, Calif.

Phone (213) 591-8956

Open Monday thru Friday, 9:30 to 6 Saturday, 9:30 to 5

Headquarters for:

- Lapidary Supplies • Jewelry Making • Rockhound Supplies
- Silver & Gold Casting Machines • Cut Stones • Rough Rock

Write for FREE ALL NEW GEM SHOPPER

"TRY THE NEW ONE"



United

Campgrounds of Green River

Location:

- One mile east of Green River, beside the river
- Gateway to western Canyonlands and Lake Powell

Facilities:

- Level, shaded sites
- 150 full hookups
- Large swimming pool
- Store and laundry
- Slide show & campfire programs

In cooperation
with . . .



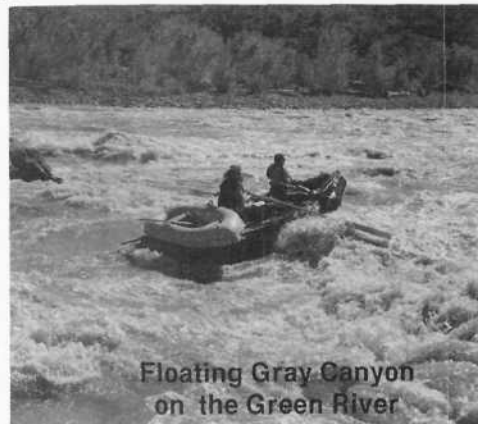
Specializing in one-day float trips through Gray Canyon. Write Moki Mac River Expeditions, Box 116, Green River, Utah 84525 for brochure describing longer river trips.

For campground brochure or reservations, write or call . . .

UNITED CAMPGROUNDS

OF GREEN RIVER

Box G, Green River, Utah 84525
[801] 564-3212



Floating Gray Canyon
on the Green River

Lonely

THE LONELY SOLITUDE of the aging headframe, an obvious intruder on nature left by man from a by-gone era, stood boldly outlined against the distant snow-capped Sierra Nevadas, highlighted by the deep blue springtime sky. Beneath the headframe, the yawning chasm of the still-open vertical mine-shaft, with its crumbling timbers, beckoned to the unwary adventurer.

A short distance away, an old weathered miner's shack, showing effects of the relentless onslaught by Mother Nature in her attempt to remove the intruder, still managed to maintain a semblance of its former self.

In sharp contrast to these abandoned remains, the natural surrounding of green bunch grass and colorful wildflowers springing from the red earth add to the serene setting a feeling of warmth and involvement, a mood constantly changing with the late afternoon hour. The quietness, as deafening as the unexpected clap of nearby thunder, supplies the catalyst which triggers the imagination.

As the sun sets and the gentle breeze settles to the valley far below, one cannot help but visualize, while gazing upon these ghostly remnants, the miners of the past as they slowly trudged from the mine toward the shack where a lone window emitted a warm yellow glow from the lantern within, a welcome relief after a long day deep in the bowels of the earth beneath.

Who were these men? Where had they come from? What were their dreams, their ideals? What successes did they find here or was it agonies of defeat and frustration? One can only speculate. These men were among the last of a dying breed of miners. The boom towns of the West were rapidly dwindling away.

We were high in the mountains east of Bridgeport, California, a hub of outdoor recreation, enroute to the relatively little-known and seldom-visited ghost town of Masonic. Due to its lack of modern day popularity, considerable remnants

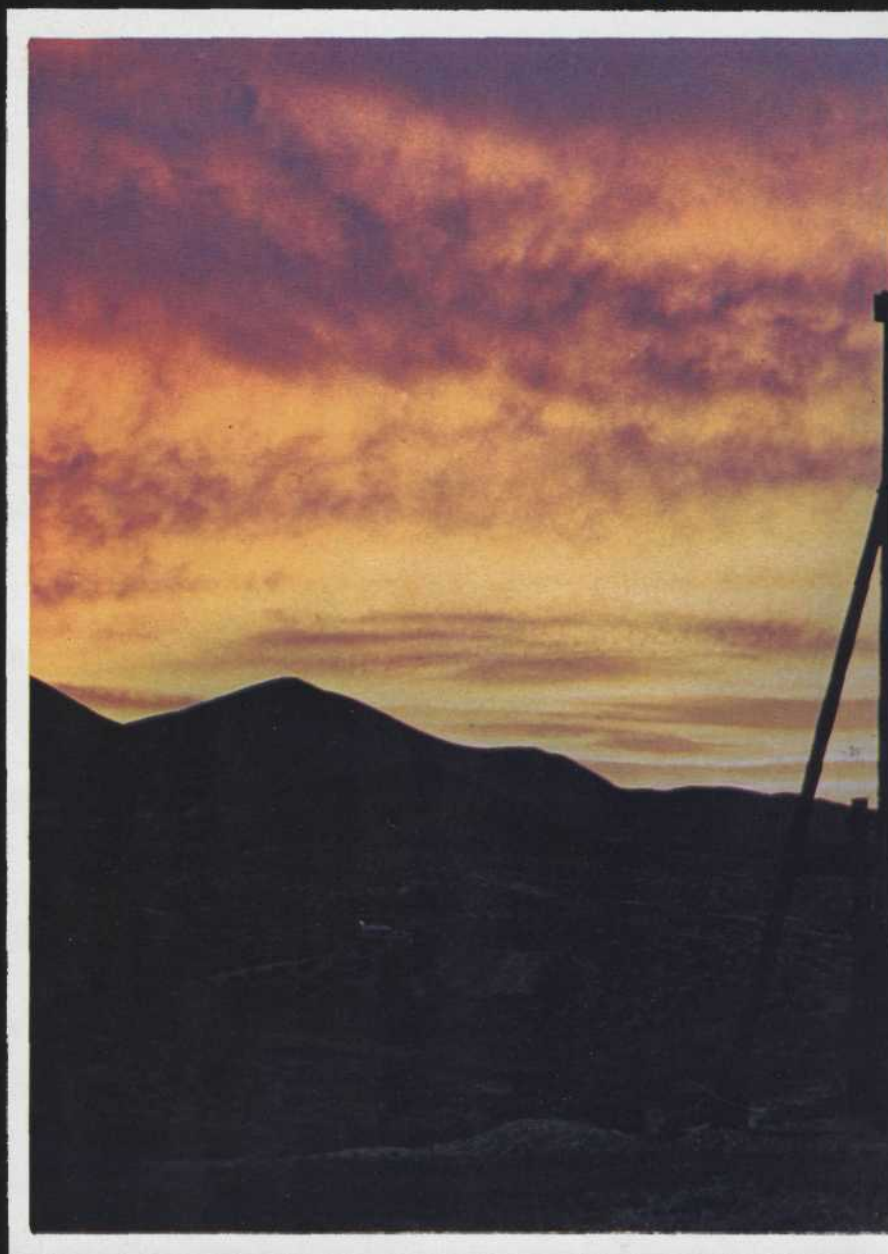
remain untouched except by the erosion processes of nature.

Masonic enjoyed two separate short-lived eras. Originally springing to existence just after the turn of the century with the discovery of gold, it was never highly profitable. The ten-stamp mill was shut down around 1910. There, all but forgotten, Masonic lay in a state of dormancy. In the depression years of the Thirties, it once again attracted hardy

souls in their quest for survival and ultimate hopes of making the big strike while the rest of America was entrenched in the grips of economic chaos.

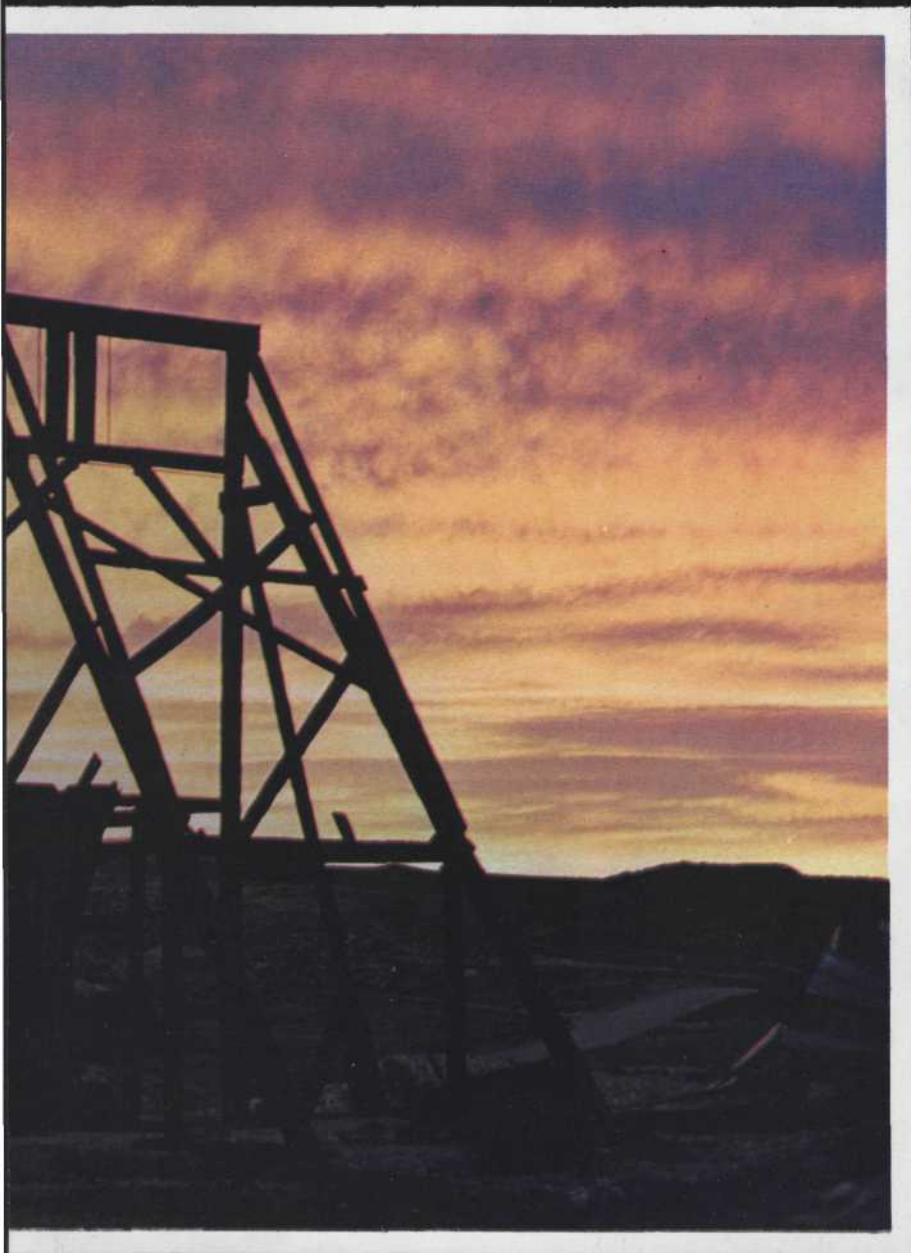
In 1938, the last of Masonic hopefuls rejoined the outside world, leaving their meager source of life behind. Little did they realize their leavings would become treasures in themselves for present-day adventurers and historians.

Remnants of Masonic are concentrat-



Masonic

by LARRY PHILLIPS



ed in three settlements, as was the case originally: Uppertown, middletown and the mill area. From any one of these sites, heavy mining activities of the past are still much in evidence on the surrounding hillsides with an occasional miner's shack still standing near the tailings in sheltered areas and groves of aspen.

The hardships these men and women must have endured during the severe

winters at this high altitude settlement are easily envisioned as you stand among the decaying remnants of their cabins and crude shelters.

The excursion to Masonic can be a very memorable affair for the entire family. One could spend days exploring and not cover the entire area. The upper canyon floor offers good unimproved camping sites withing short walking distances of numerous mining activities. This is in

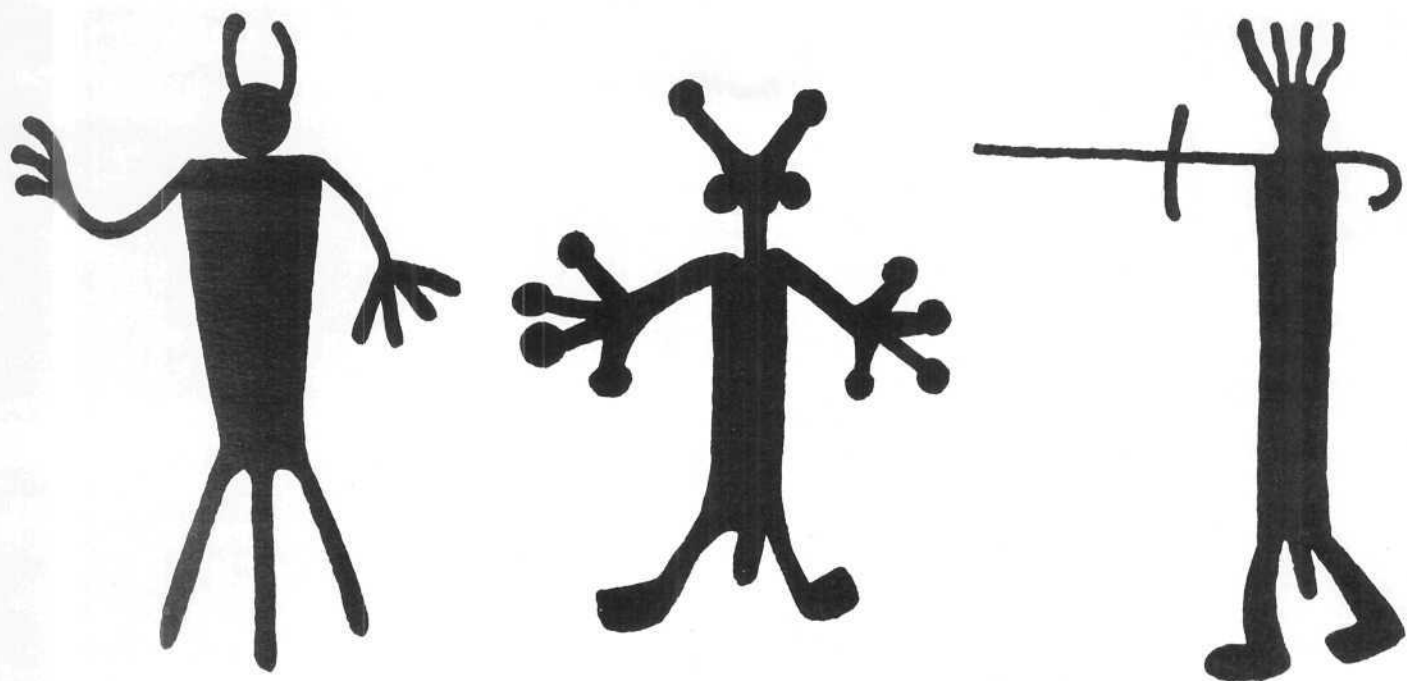
the area of uppertown. Extreme caution must be exercised while exploring due to the still-open mining shafts with their rotting support timbers and not to mention, of course, the oft-present rattlesnake.

Because of the high altitude, trips to Masonic are best confined to late spring and summer after the snow melts and boggy roads dry out. Roads are normally readily passable for pickups and campers or other high-clearance vehicles. While not necessary, a 4WD vehicle would make available additional side excursions to surrounding areas.

Located near the Nevada border, Masonic lies approximately 15 miles north of the famous ghost town of Bodie via a dirt mountain road. It is, however, most easily reached from Bridgeport. From Bridgeport, take Highway 22 north for approximately four miles. Watching carefully you will see a small road sign marked "Masonic Mountain Road." Turning east on this normally well-maintained dirt road for about seven miles will find you dropping into a large canyon basin on the other side of the mountain. Continuing to the bottom, at the point where the road forks, will bring you to the old site of "uppertown" as evidenced by a few remaining shacks. Take the turn to the left marked by a Forest Service sign "Masonic Spring—4 miles," and this will take you to middletown and the mill area.

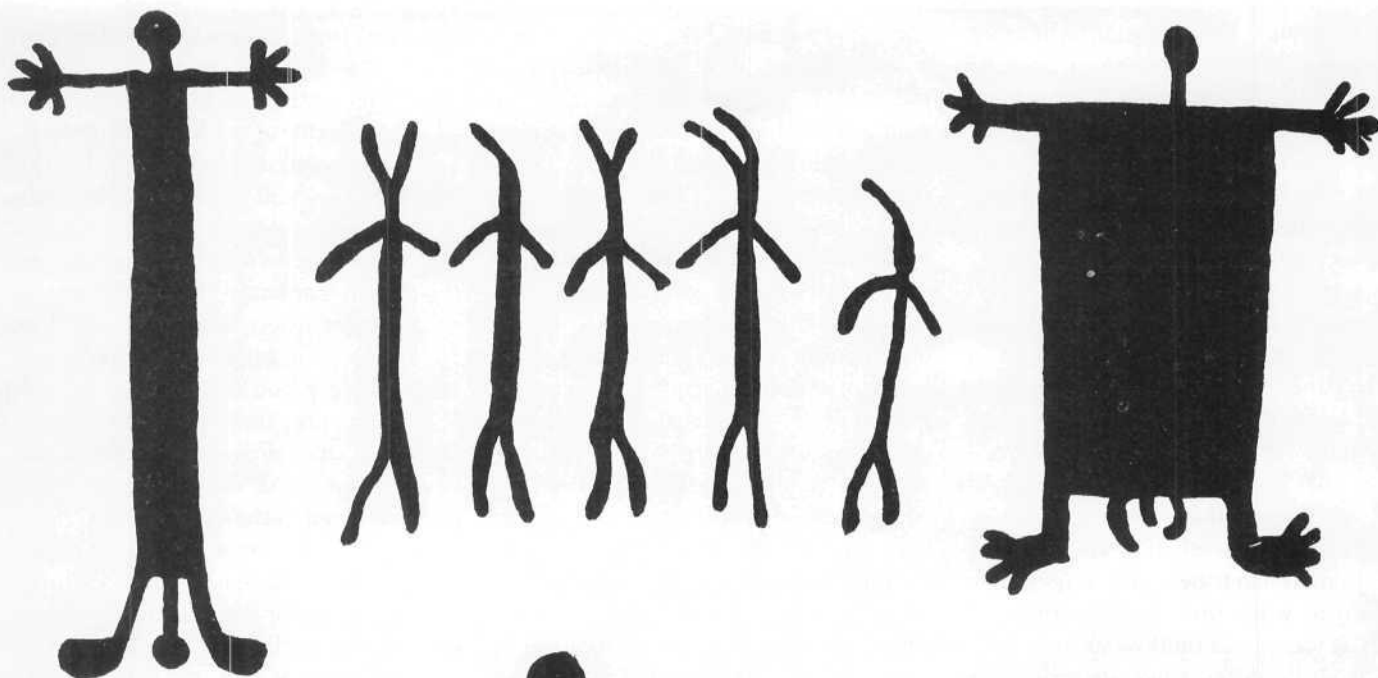
Prior to your arrival at the uppertown junction, numerous mines, cabins and other early remnants will be visible along the road for the last few miles. Distance from the turn-off on Highway 22 to the forks at uppertown is about eight miles.

It is best to check with residents of Bridgeport as to current road conditions. Don't be discouraged if you find it necessary to make several inquiries before finding someone familiar with the way to Masonic. As mentioned earlier, it is not widely known or visited, even by local Bridgeport residents. □

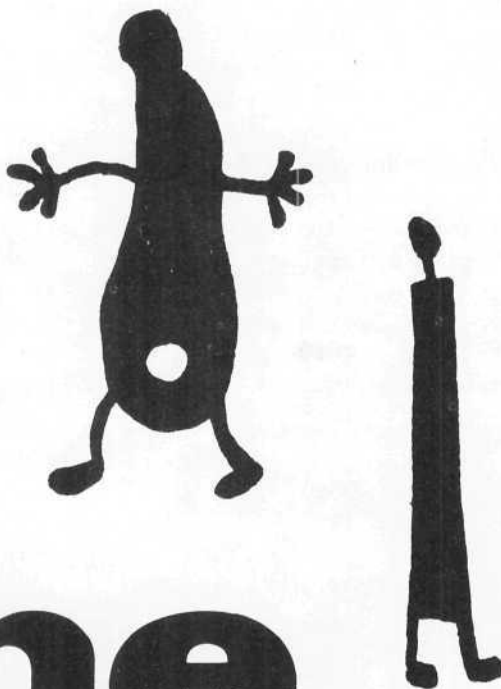


Rock Art





of the Coso



by HELEN WALKER

The solid body anthropomorphs and a group of stickmen across the upper pages are from "Rock Drawings of the Coso Range" by Grant-Baird-Pringle. Opposite page: Photo by Jack Walker shows an assortment of sheep, medicine bags and shields.

GEOGRAPHICALLY SPEAKING, California's Coso Range lies west of Death Valley, and east of the Sierra Nevada Mountains. Its arid climate of today is in sharp contrast to the weather patterns of past historic eras.

A great pluvial, or rainy season, extended into this area after the last Ice Age, some 10,000 years ago. The rain filled the natural depressions in the land, forming a series of great lakes known as the Pliocene Lakes. When Owens Lake reached capacity, water overflowed into a stream at the southern end, sending water into the Searles and China Lake basins. Years of drought followed the pluvial periods, and today these overflow lakes are marked by glistening salt playas and dry mosaic lake beds.

The sun-parched land was once again relieved by a smaller pluvial period as recently as 5,000 years ago. Water again flowed in the stream beds, vegetation flourished, game again roamed the land and man migrated to the area. The actual dates that man first occupied the Coso Range is still a matter of theorization, but from the dating of the artifacts he left behind, we hope someday to have the answers we seek.

The discovery of early man's residence in the Coso Range is accredited to a sheep rancher by the name of John Carricut. In the early 1920s, Carricut and his flock weathered a two-day blizzard in a narrow gorge that we know today as Petroglyph Canyon. When the storm cleared, Carricut discovered the rock walls above his flock were covered with

rock drawings. He marveled at it, then forgot it for the moment. Years later, he showed his discovery to Vernon Smith, who wrote of the rock drawings for *Desert Magazine*, in March of 1944.

Interest in the drawings, and the people who made them, has been escalated in recent years. Under supervised research, the drawings have been indexed at more than 14,000, and are thought to be the largest display of rock art in North America. They offer a key to early occupation of the Coso Range, and are our window to the lives of the early residents that migrated to the area.

It is believed that early residents of this range were people of the Western Shoshoni Indian tribes. They migrated to the Cosos when their homeland in central California and southwestern Nevada no longer produced adequate vegetation to support their families. They brought with them only meager belongings and an instinct to find land upon which they could survive.

In their new land, they were quick to take advantage of the natural resources—making camp near the running streams of the narrow gorges, and near the hot springs that bubbled their vapors

above the surface. No evidence of permanent villages have been located, but rock rings support the fact that pit houses were built as protection against winter cold. The name "Coso" was given to the land by these Shoshoni people—it is a word in their language meaning hot, and it is thought to have been an association with the natural hot springs.

Even in this new land of their choosing, life was not easy, and food was not plentiful. Seasonal trips were made to gather nuts and seeds, and trapping game was a daily chore. In mid-summer, groups traveled to Death Valley to collect mesquite seeds which were ground into flour. Late summer was the time to climb the higher elevations of the Coso mountains to collect pinyon nuts. Seeds of various other plants were harvested as seasonal crops became available. Fresh game was taken where and when it was available. Owens Lake provided ducks and water fowl in the early fall. Rabbits were plentiful and easily trapped or snagged on demand. Large game, it is believed, were taken chiefly by organized hunts—perhaps the only communal effort that was participated in.

When families had returned from seed

collecting trips, women and children prepared the food for storage, and the men's thoughts turned to the big sheep hunt. A director of the hunt was chosen, or self-appointed, and work begun. Blinds were built on cliffs above the gorges, and at one end of the gorge a fence was erected to prevent escape of the captured animals. Rocks were stacked at points where shadows would silhouette dummy hunters—a supplement to a limited group of huntsmen.

When all preparations were complete, some tribesmen drove the sheep into the narrow confines of the gorge, while the men stationed in the blinds attacked the animals from above with their weapons. Their method was successful, as there was no escape for the animals once they entered the confines of the trap.

Perhaps to create a magic that would assure a successful sheep hunt, or perhaps in gratitude of a hunt just completed, the first drawing was placed on the wall of the narrow gorge. Whatever the reason, the dark-surfaced, basaltic walls of the gorge became the blackboard upon which these early people communicated their impressions of life and environment. The art work became a tradition, and in the centuries that followed, the art work became a mural of life style of the early Coso Range people.

Through research, the display of rock has been classified into three styles. The naturalistic art, which is representative or realistic of the subject; stylized, a simplified or conventionalized drawing, still recognizable; and abstract, a decorative pattern, having no reference to an object of nature.

A time factor places the drawings into three phases, also. The Early Period, being the time when the first drawings were made. In this category we find many sheep, for the most part, poorly drawn. The horns were drawn from a side view, and only a few showed the detail of hoofs. The atlatl, which was the weapon of that period, appeared with the hook end up, and an exaggerated size of stone weight at the bottom. A few square-bodied anthropomorph figures appeared, but were not placed in any association to the sheep or atlatls. Abstract designs were scattered, again with no association with other art work,

The second, or Transitional Period, was marked by the introduction of a new weapon—the bow and arrow. This new

Decorative dress of the anthropomorphs. Photos by Jack Walker.



weapon appeared in the hands of highly stylized stick men. One artist expressed an incident by placing two stick men facing one another with bows drawn—one can only ponder the reason, and the outcome of that particular event! The Transitional Period was also marked by a new concept of sheep horns—they now began to appear in a head-on view. This view was to replace the Early Period side view in all future drawn sheep.

Another new design of this period was a sack, complete with handle and fringe—thought to be a medicine bag. Anthropomorphs appeared with square, patterned bodies, and clothed in dresses—the beginning of the more elaborate art of the Late Period. Imagination in design began to enter into the artwork, this being noted by a scattering of elaborate abstract drawings. A shield, about a foot square, with a circular or oval design inside the incised outline, was placed aimlessly among other drawings. These first shields were simple, and poorly done, in comparison with the work of the next and last period.

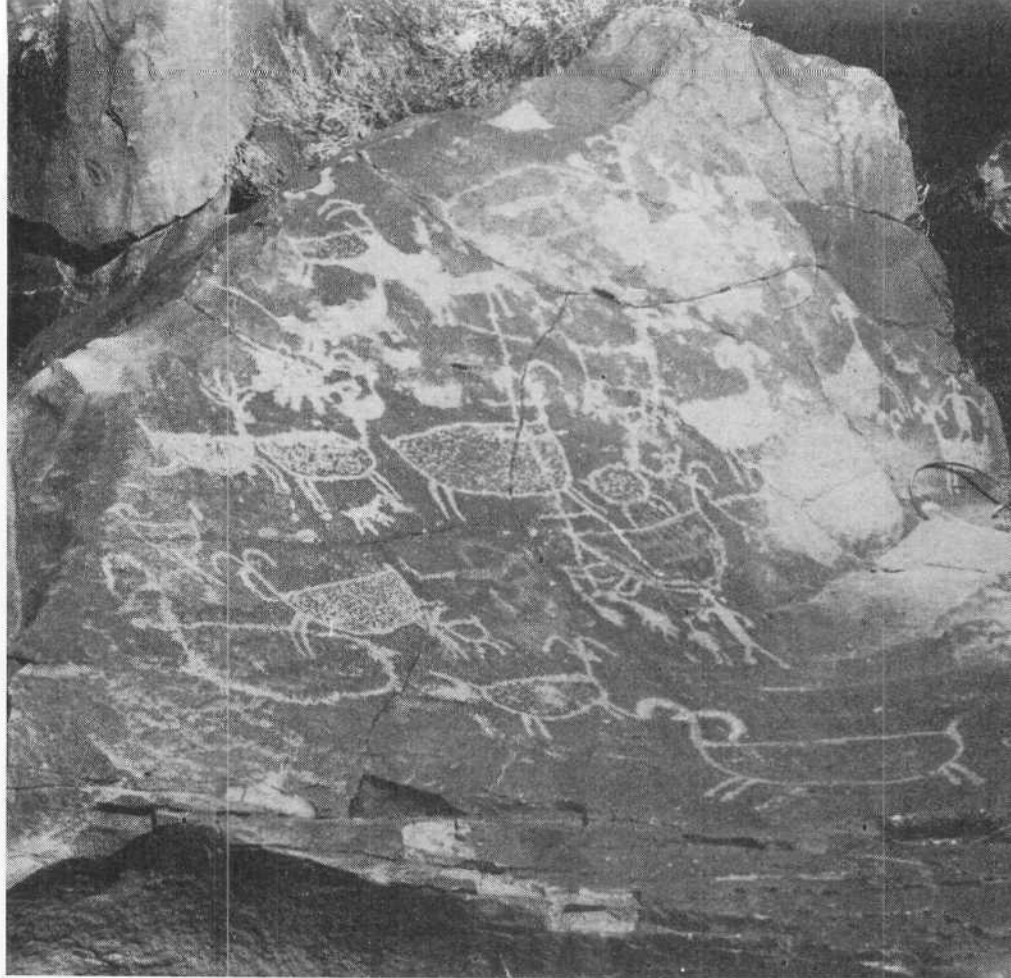
The drawings of this last time sequence, the Late Period, showed a much higher level of execution, and a trend toward more stylization of figures. Sheep often appeared life-size, and often in association with the hunt. Some were drawn with spears or shafts sticking in their backs, others in direct line of stick men with drawn bows.

Animals other than sheep were introduced. A small dog with a long tail bent over its back is seen at the heels of the sheep.

Stick people were drawn in groups, depicting more social life. The anthropomorphs were drawn two and three feet in length, and had detailed dress, earrings, and very elaborate headdress.

Shields were the only abstract patterns seen in the Late Period. They were developed into the most technical artwork, and were by far the most detailed work of the group.

The Late Period was terminated when the Shoshonean people left the Coso Range and migrated to the north and northeast. The reason for their migration is thought to have been the disappearance of the big horn sheep. No one can say for sure if the sheep left to avoid harassment by hunters, or of their number were diminished by killings with the new and more effective weapon—the



Early Period sheep, and some Late Period, showing small dog at heels of the sheep.

bow and arrow. This final migration took place about 1000 A.D.

The rock art these people left behind represented many man-hours, and much patience on the part of the artist. He used a sharp-pointed implement, and struck it with a hammer-like tool. Each strike broke through the chocolate-colored cover of the basaltic granite blocks, fracturing the tiny crystals and allowing the opaque effect to stand out in relief. Sometimes, for effect, the area inside the pecked outline was scraped or abraded, exposing a larger area of contrast.

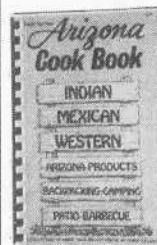
Dating of the drawings in the Coso Range is only approximate, and is arrived at by two methods. The patina, or desert varnish that forms the dark coating on the grey granite rock, is thought to have started formation after the little pluvial period, at a time when the climate turned hot and dry. This would give us a clue that the drawings were first made approximately 3000 years ago.

Dating by subject matter focuses on the Transitional Period, when the bow and arrow replaced the atlatl. The introduction and use of this new weapon

occurred about 200 B.C.

Fortunately for those involved in the research of the Coso Range, the area is protected from vandals. All of the caves and sites of rock art are confined within the boundaries of the Naval Weapons Center. Guided tours are extended to interested groups, and information may be had by writing to the Maturango Museum at China Lake. □

ARIZONA Cook Book



By Al and
Mildred Fischer

Includes sourdough and Indian fried bread recipes, as well as other mouth-watering favorites. Unique collection of hard-to-find Western cooking. Paperback, 142 pages.

\$3.00

Calif. residents
add 6% sales tax

Please include 25c
for postage & handling.

Duett Magazine Book Shop
P. O. Box 1318, Palm Desert, Calif. 92260

PURPLE GLASS FARM

ANTIQUES

Specializing in Sun Colored Glass

Open 10 A.M. to 5 P.M. Tues. thru Sat.
or by Appointment

1330 So. Magnolia Avenue
Anaheim, California 92804
Telephone (714) 827-4330

MOAB



Located 5 miles South of Moab, on U.S. 163

For brochure, write:

P. O. Box 147-D, Moab, Utah 84532

BREAKFAST
ANYTIME!
OPEN 7 DAYS
24 HOURS
A DAY

206 South Main

Sportsman's Cafe
LONE PINE, CALIFORNIA

MOVING?

So you will not miss an issue
notify us as soon as possible.

Be sure to include old address
as well as the new
AND BOTH ZIP CODES!

FIND BURIED TREASURE

Locates buried gold, silver, coins,
jewelry, old weapons. Works
through earth, vegetation,
water, wood, etc.

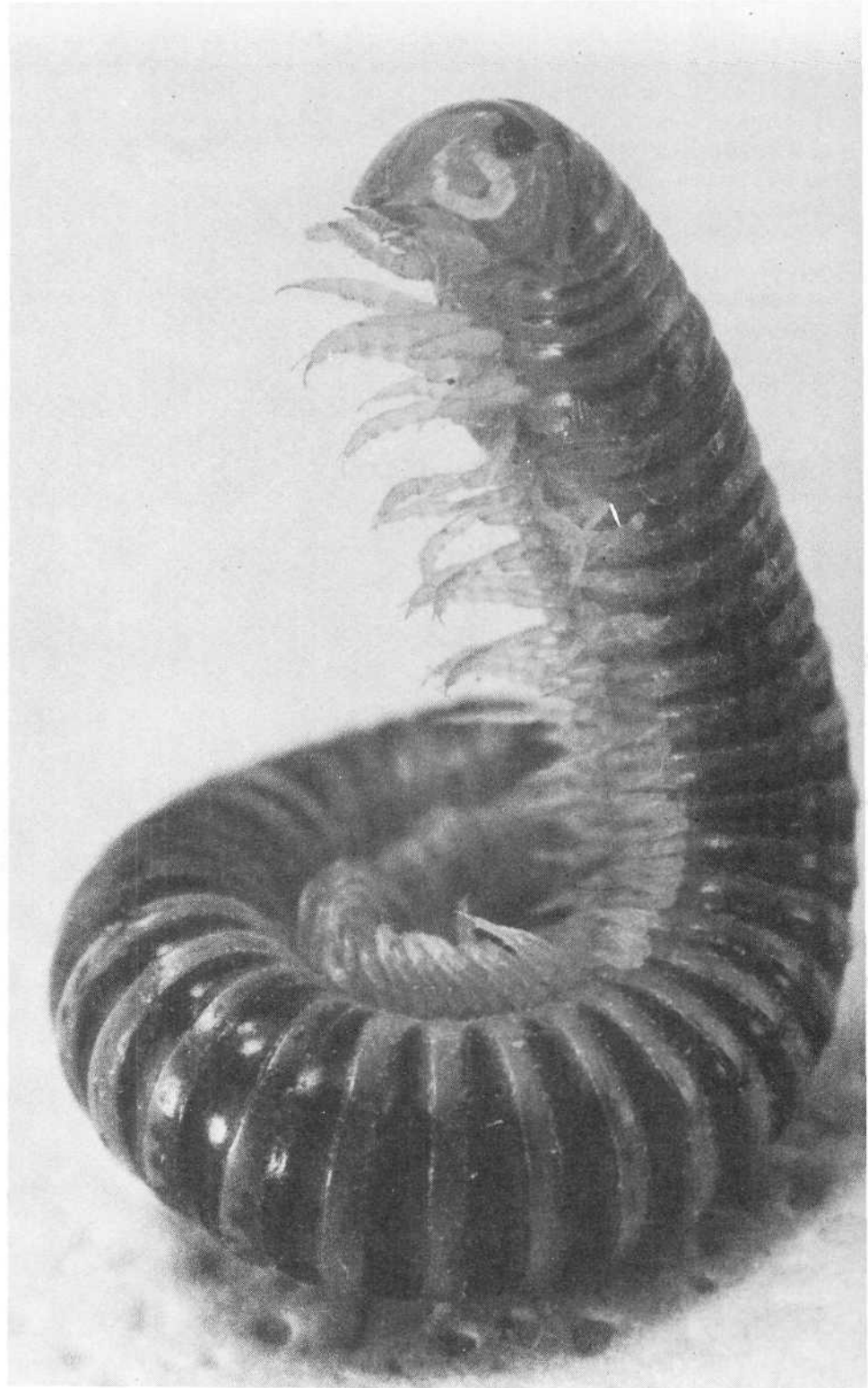
Write for free catalog and fasci-
nating treasure booklet.
Financing available.

5 powerful
models



New Relco detec-
tors send electronic
beam far into earth to
seek out treasures lost or
hidden throughout the cen-
turies. Signals when object
is detected. Most powerful
made.

RELCO, Dept. D-318 Box 10839, Houston, Tex. 77018



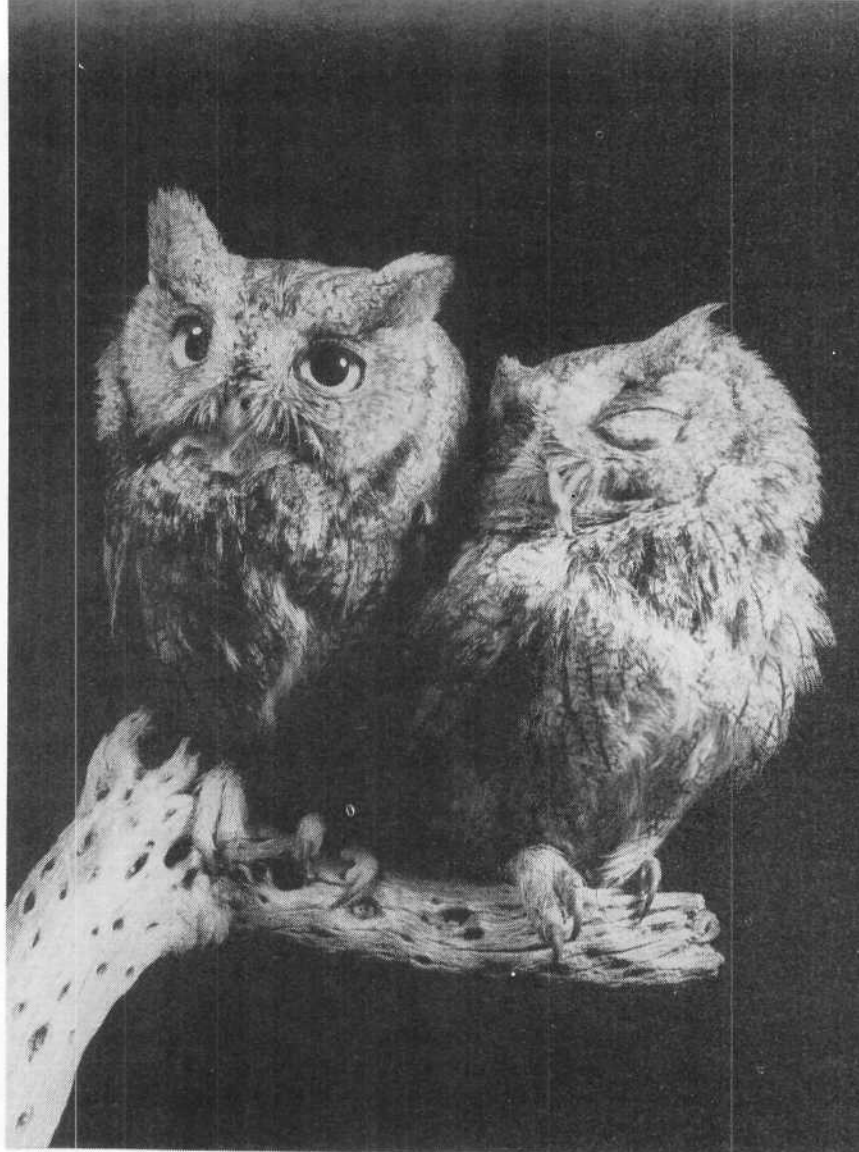
by DR. HANS BAERWALD

Desert Life

The millipede is a common little
creature found usually in debris
and under bark and stones. Though
mean-looking they are harmless
and do not bite. Varying in size
from a few millimeters to four
inches, some give off
a bad-smelling fluid.

Whoooo's the Wise Owl?

DON'T BE CAUGHT NAPPING!
DECIDE TODAY TO SAVE
TIME AND MONEY BY SUB-
SCRIBING TO DESERT MAGA-
ZINE, THEREBY AVOIDING
THE POSSIBILITY OF NOT
FINDING IT ON THE NEWS-
STAND, PLUS THE ASSUR-
ANCE OF NOT MISSING ONE
SINGLE ISSUE AT GREAT
SAVINGS TO YOU!



ONE YEAR SUBSCRIPTION

SAVE \$3⁰⁰*

TWO-YEAR SUBSCRIPTION

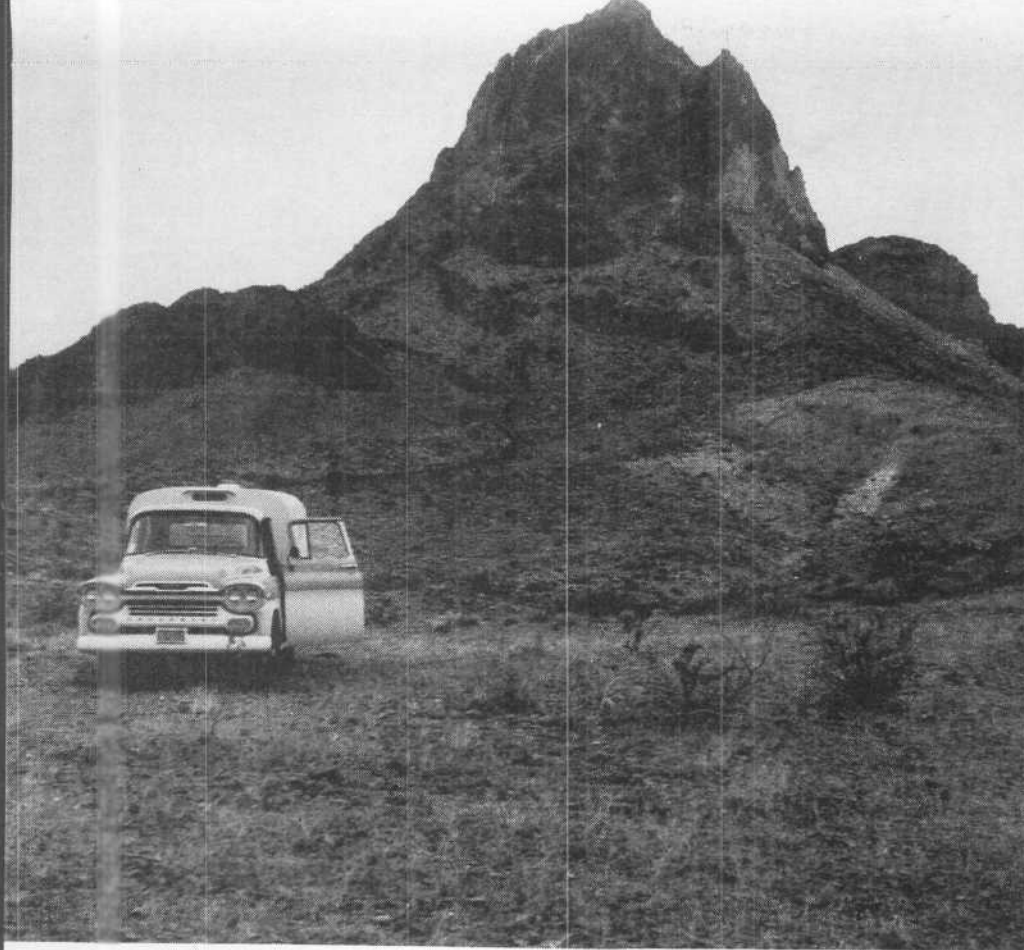
SAVE \$7⁰⁰*

THREE-YEAR SUBSCRIPTION

SAVE \$11⁰⁰*

*Over Current Newsstand Price

USE ORDER FORM ON PAGE 45



Above: Three miles southwest of the ghost town of White Mountain City, Crystal Hill provides good quartz crystal collecting for rockhounds. The "light spots" on the hillside are part of several diggings. Below: Beginning with prehistoric Indian, Deep Springs Valley has played host to man down through time. The earliest residents left a record of their presence on stone in many places throughout the region.

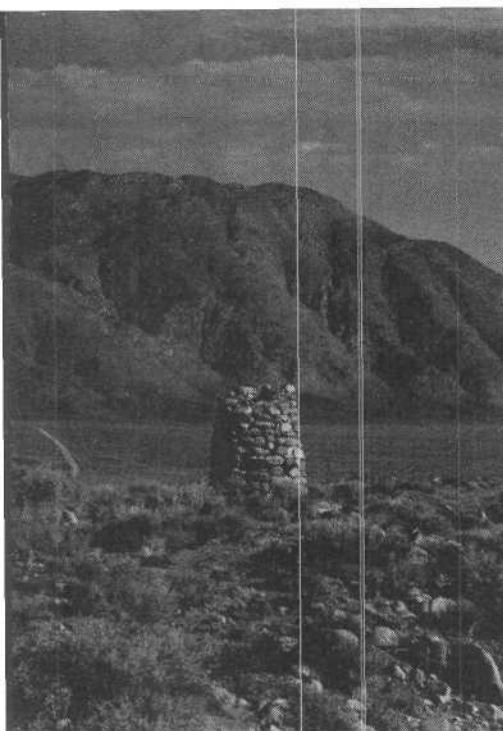


DEEP

by **MARY FRANCES STRONG**
photos by **JERRY STRONG**

RESEMBLING AN ELONGATED, oval-shaped bowl with a scalloped rim composed of mountain peaks, Deep Springs Valley nestles snugly at 6000 feet in California's White Mountains. Though traversed by a paved road following the toll route along the earlier Midland Trail, this beautiful, high desert valley has somehow managed to escape so-called civilized development. Only a highway maintenance station, a large ranch and, more recently, a trailer at what is reportedly a mining venture, accommodates the valley's small population.

Few of the many visitors to the Bristlecone Pine Area, 15 miles west, elect to travel the "pass climbing" back road into Nevada via Deep Springs Valley. Happily, the absence of traffic and people make this scenic and historical region a tranquil retreat for those who prefer to enjoy the great outdoors in a pristine set-



White Mountain City occupied this broad, rocky alluvial fan on the north side of Wyman Creek. Nearly a dozen stone ruins and a small rock furnace mark the site. This is a good camping area.



Above: This is Pinus Alpha, the first Bristlecone Pine discovered to be over 4,000 years old—actually, it is 4,300 years of age. If you have not visited the Bristlecone Pine Area, you will enjoy making this side trip during your stay in Deep Springs Valley. Below: The little furnace is beautifully crafted without the use of mortar. Excellent workmanship has defied time and elements.

SPRINGS VALLEY

ting. Combining the best in mountain and desert habitat, visitors will find trails to hike, old mines to explore, rocks to collect, challenging 4WD routes to follow, plus a streamside campsite located among the ruins of an old ghost town.

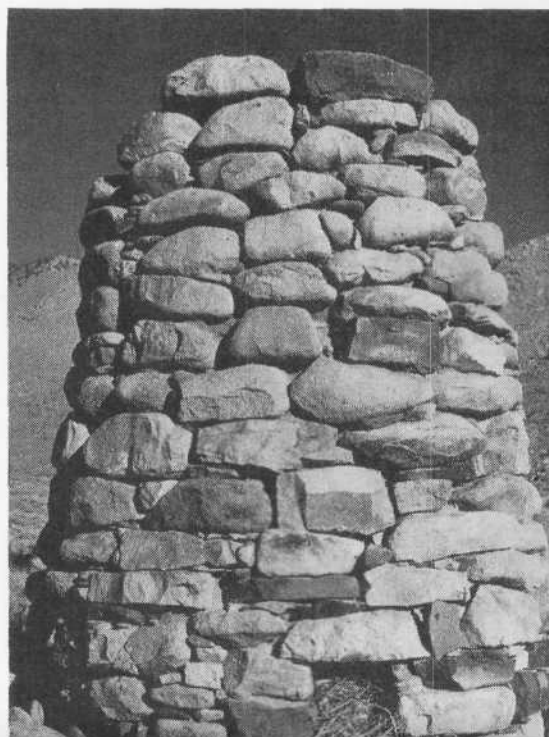
Usage of Deep Springs Valley dates back to prehistoric time when early Indians camped, hunted, gathered pine nuts and patiently recorded their activities on stone. Several fine petroglyph sites and chipping grounds are located within the region. Recent Indian tenancy dates back several hundred years. As late as 1861, Piute Chief Joe Bowers had an established camp at Antelope Springs.

Probably the first white men to visit the valley were prospectors who left the Mother Lode to try their luck elsewhere. Rumors concerning placer gold discoveries in the White Mountains eventually

reached crowded mining camps. The fall of 1861 found a party of men, including Dan Wyman whose name would be given to the main creek entering the valley, coming to locate placer ground. Finding a promising area, they wintered along Cottonwood Creek. Many other miners were working claims in the general area.

Wyman Creek spills out of the mountains at the northwestern corner of Deep Springs Valley. Rushing toward a playa at the southeastern end, it completes an 18-mile journey from its headwaters, over 10,000 feet high, in the White Mountains. The mouth of the canyon opens into a broad, creek-cut alluvial fan, which was ready-made for a settlement; and, in 1861, a number of prospectors called "White Mountain City" home.

The "City" is remembered in historical annals for the part it played in an





"Hard rock mining" is required to obtain the crystals. Following a quartz vein will often lead to vugs of clear, smoky-tipped and smoky specimens.

election fraud. Even in those days, there was hanky-panky in politics! A request for a polling place at Deep Springs Valley led to the establishment of Big Springs Precinct in August, 1861—just in time for September elections. When the new precinct cast 521 votes for Governor, Senator and Assemblyman, one defeated candidate became suspicious. He paid a visit to White Mountain City and found less than 50 men in the entire district! Lengthy hearings disclosed the ballots and poll lists were "lost." Fraud was proven and, eventually, two defeated candidates were seated.

Spring of 1862 brought Indian problems. Piute Chief Joe Bowers, residing in the valley, was friendly to white men, but many other Indians did not share his feeling. When an irate group ordered the prospectors along Cottonwood Creek to leave, Chief Joe came to their assistance. Declaring the men were in his territory, he temporarily halted the trouble. However, he advised them to move out as his delaying tactics appeared to have only deterred the hostile Indians momentarily. Taking the Chief's advice, the men cached their mining equipment and left the diggings. Many others followed suit.

If this can be called a "skirmish," it was the first of many that occurred during the next six years. Early settlers in the Owens Valley region bore the brunt of the Indians' wrath and a number of people, both Indian and white, were killed.

Prospectors were often the target of an attack and one frightening encounter took place at Deep Springs Valley in November, 1864. Thinking the hostilities were over, three miners—Mathew, Crow and Byrnes—were working a claim four miles north of the Gilbert Ranch (now Deep Springs Ranch). Mathew was preparing dinner when an Indian and his squaw came into camp seeking food. Caught off guard as he responded to their request, Mathew was shot in the jaw. Simultaneously, another shot ended Crow's life as he was working the mine windlass.

Byrnes was trapped at the bottom of a 60-foot shaft into which the Indians dropped large boulders in an attempt to kill him. Though seriously wounded and believed dead by the Indians, Mathew managed to reach his gun and opened fire. His shots missed their mark, but the Indians hastily departed. Thinking his partners were both dead, Mathew headed for the Owens Valley. He was found by a rancher and eventually recovered from his wound.

At the bottom of the shaft, Byrnes had been able to evade the rocks. However, the Indians had taken the windlass rope and he was trapped in the shaft. Luckily, Chief Joe came to the claim. Though unable to pull Byrnes out, he managed to supply him with water before heading to Owens Valley for help. A party of 30 men went to Byrnes' rescue. He was hauled out of the shaft after five days imprisonment, none the worse for wear.

The ironic ending to this story clearly illustrates man's long record of inhumanity to his fellow man. Several years later, Byrnes decided he wanted Antelope Springs for his own use and forced Chief Joe to give up his camp. Again, Chief Joe went to his white friends in Owens Valley for help. They quickly formed a posse and forced Byrnes to vacate.

Mining has been intermittent in the Deep Springs Region for over a hundred years. Probably the more notable mines include the Lincoln (Silver Dome)—silver; Pine Mountain Group—gold; Gold Wedge—gold; Westgard (Chalmers)—lead and silver; Bull Domingo—lead and silver; Wilkerson—gold plus the Cottonwood and Crooked Creek Placers. Tungsten occurs at the Emergency Group of Claims and the Deep Springs Valley Deposits contain molybdenum. The Inyo Chemical Company attempted to extract potash from Deep Springs Playa in the 1920s. Evidently, the deposits were not extensive enough for commercial operations, as no production has been reported.

Today, Deep Springs Valley remains much as it always has—a quiet retreat for man. The site of White Mountain City is marked by ruins of a dozen stone cabins. An old, small but beautifully crafted rock furnace stands as a lonely monument to the little "city" of hardy men. The ghost town site makes a good camping area, providing a fine view of the valley. There are no facilities though water is available from Wyman Creek. Please take your trash with you. There are no "pickups" here!

A typical back-country road (maintained to service the power line) leads west to Wyman Canyon. Narrow, winding and rough in spots, it follows along the creek then claws its way up a steep-sided mountain when the canyon closes to only stream width. Traveling through picturesque Granite Valley, it again returns to creek-side and eventually joins the Bristlecone Pine road at an elevation of 10,000 feet. Following Wyman Creek up from high desert country to pine forests on the crest of the White Mountains makes a beautiful drive. Several four-wheel-drive trails branch off the main road and lead to "cliff-hanging" mines. Most of them have long been idle, but they are still under claim.

Not for the timid, Wyman Creek Road

is sometimes impassable. Many side-tributaries empty into the creek and the combined runoff from heavy storms often carries sizable boulders which cut away at the canyon walls and wipe out sections of the road. Water level marks, 30 feet above streambed, indicate the depth of water that has rushed wildly down the canyon in recent years.

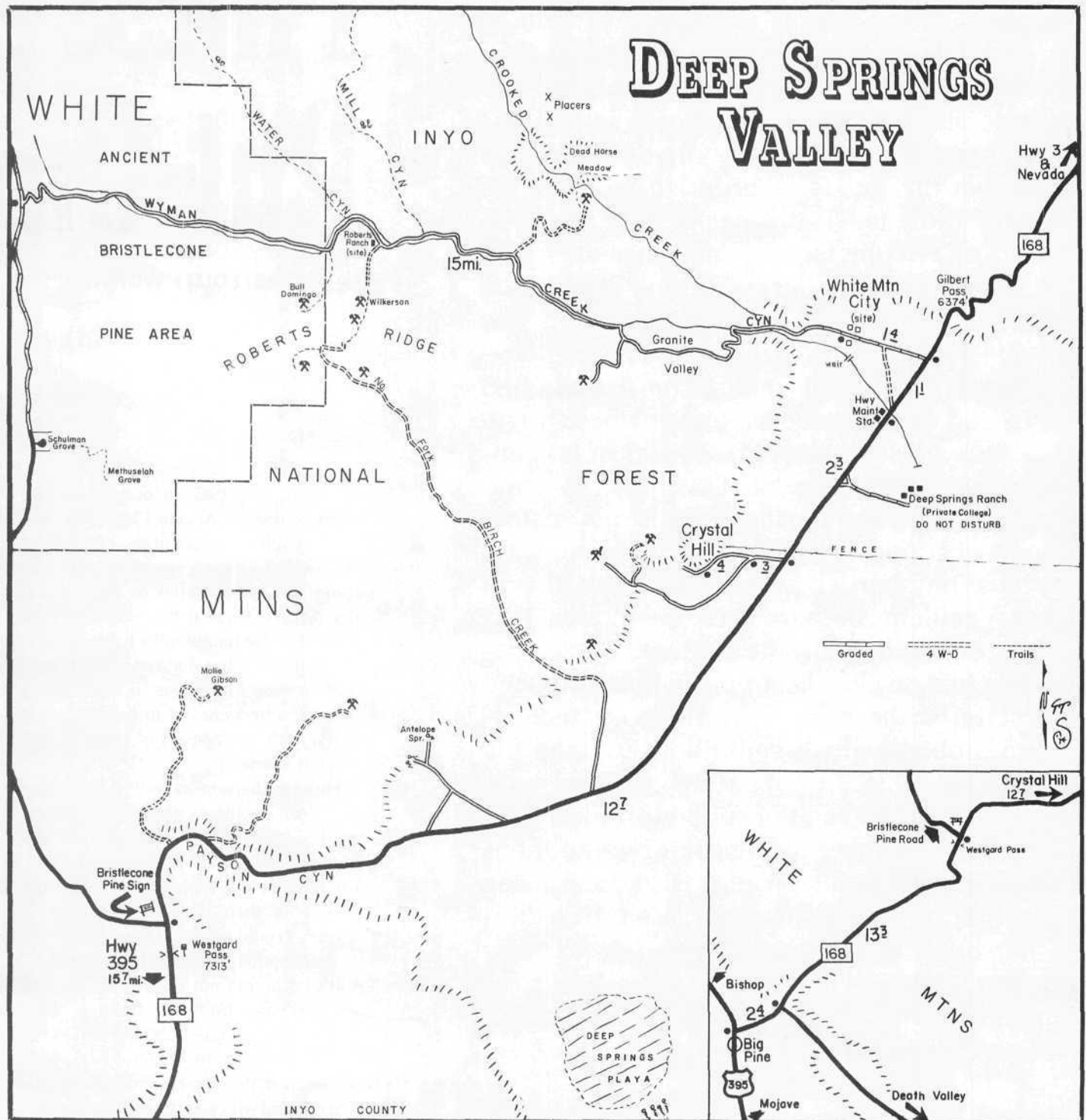
There are several dirt roads heading into the mountains from the highway along the western side of Deep Springs Valley. A four-wheel-drive trail leads north up the North Fork of Birch Creek

Canyon for some 10 miles to several old mines. For a guide to serious exploring, purchase the Blanco Mountain and Lida topographical maps.

Of particular interest to rockhounds is Crystal Hill, less than a mile from the highway. Veins of quartz containing crystals will be found in a conical-shaped, granite hill. Clear, smoky-tipped, smoky and milky crystals from one-half to eight inches in length may be obtained by hard-rock mining. You will need a shovel, pick, sledge and chisels to dig into the veins. A level, cleared area

at the base of the hill makes a good campsite.

Deep Springs Valley is a special place for those who prefer "doing it themselves." There are no sign posts to direct you, no marked trails to follow, no campgrounds, no gasoline stations or grocery stores. You must come prepared to explore and find its many delightful recesses on your own. In this day of more and more control and restrictions on the use of our mountains and desert, Deep Springs Valley is a welcome change from organized living and playing. □



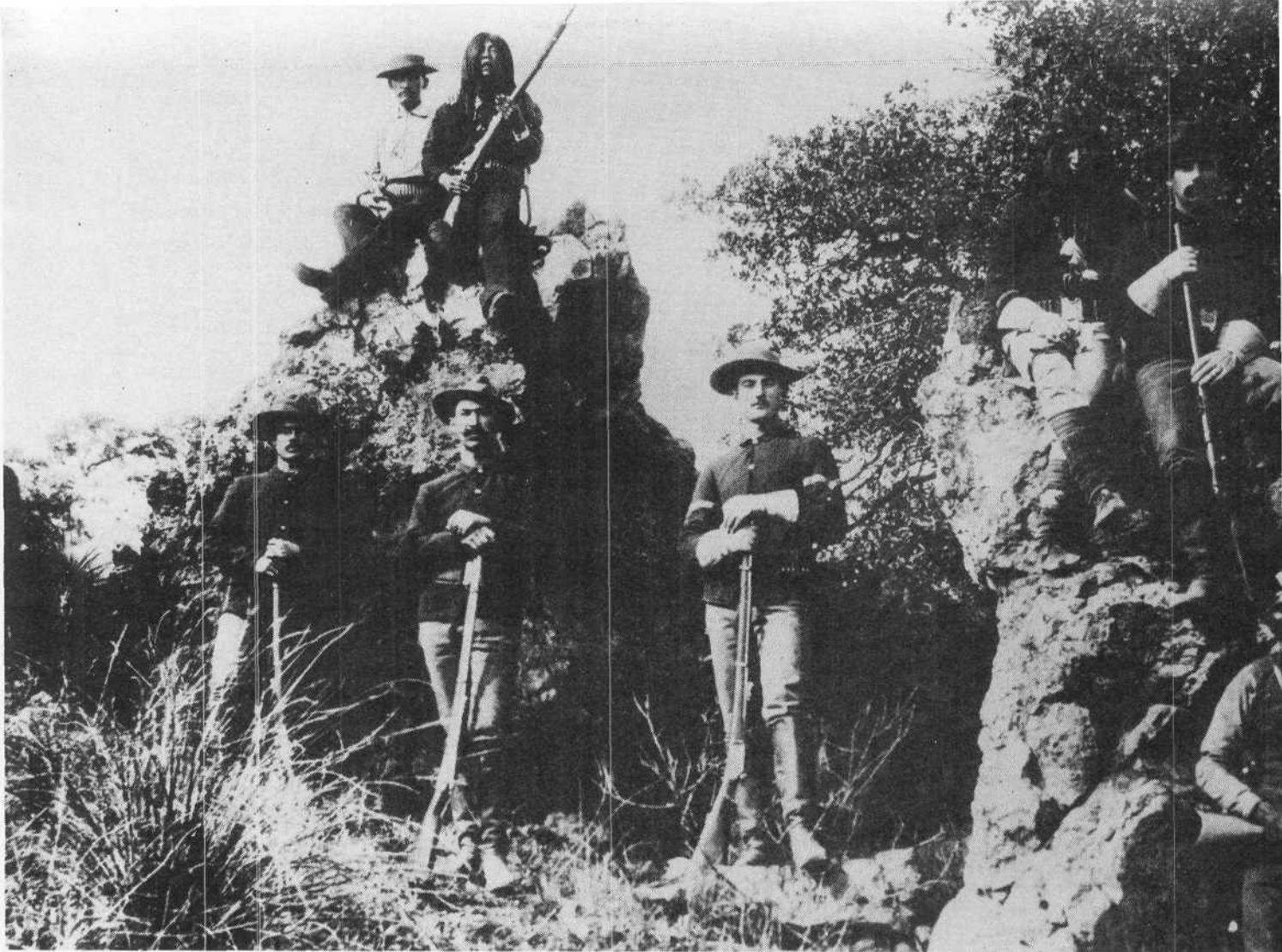
Although the Apache Indian was one of the finest fighting machines the world has ever seen, his improvident habits kept him in perpetual confusion and turmoil. He was always in serious need of food, arms, ammunition and horses. To him, these items were totally expendable without thought for the future and he always required dependable outside sources of resupply. White settlers, freight wagons, mule trains, and even individual travelers felt the continual weight of Apache need for material and understandably felt imposed upon when they were sometimes forced to give up their very lives as well as their worldly goods in order to support the raiding Indians. The Apache was also the victim of circumstances. His ancestors had long known many sources of raw gold in the land and lived to regret ever telling the greedy whitemen where the "useless" yellow metal could be located. The Apache had many sad experiences which convinced them that they must forever after keep quiet concerning the yellow metal. This they have meticulously done. Further, with no visible means of support, the Apache could not walk into just any border town with a sack of coin so he seldom bothered to keep any that appeared incidentally in his loot. Barter definitely had no significant place in the Apache life style, so he lived with a supply and demand problem which continuously taxed his ingenuity. This is the story of how one Apache Chief solved his supply problems for his entire band for a whole winter without endangering any of his people. His success was such that, although he massacred 19 whitemen in order to safeguard his secret, that fact goes unnoticed in history and the event is remembered only for the gold at the Lost Adams Diggings.

Nana's Finest Put-On

by JOHN S. SOUTHWORTH

BESIDES HAVING an odd name and being no beauty, Apache Chief Nana was a cob-rough character of the old school. He lived the harsh life of the Apache tribesman, he got drunk on the raw native liquors, he beat his wife when she needed it, he fought with his neighboring Apache tribes for no other reason than to keep his braves in top fighting form, and he went out of his way to do battle with the Mexicans south of the present border.

He never became as well-known to the American people as did his contemporaries Cochise, Geronimo, Victorio and Mangas Coloradas, although his hard-riding raids and exploits were more unbelievable than the best those other worthies could muster. He was cold and efficient rather than colorful with the result that he did not trigger enthusiastic press reports from the frontier newspaper correspondents. General George Crook, the one army general who really understood the complex nature of the Apache and who was the most successful



Army officers and their scouts during the 1800s. Photo courtesy Arizona Historical Society.

in confining it, publicly stated that Nana was the real brains of all the hostile leaders.

For all his capabilities, Nana didn't leave many positive things to show for his long and violent life. But then, he really didn't have much to work with. His tribe raised a few simple crops in a desultory sort of way, when and if the mood struck them or an opportunity presented itself. He was not adverse to raiding neighboring tribes for any useful items, including women and children as well as the necessities of life such as food, weapons, ammunition and horses.

His tribe got along and lived with its many cousin tribes in a sort of armed truce, gathered together under one name by the white men who called them what the Zunis called them, "apache" meaning "enemy." Any confederation the Apache might have had was extremely loose, based mostly on language ties and convenience. And if it wasn't convenient, forget it. But they did a good job of controlling all of eastern Arizona

and beyond, from the Colorado River far down into Mexico and eastward across the Rio Grande. Their land was austere and cruel, and so were they.

The coming of the white man cramped the Apache style more than somewhat. While a few of the more restless chiefs and braves demonstrated against the new establishment in a most modern manner, old Nana studied the changing situation and recognized many new and interesting challenges. True, his territory now had to be shared with unwelcome strangers, but they brought items of great new interest to him, items that could be collected quite easily, at the same time offering a great deal of fine red-blooded sport in the taking. So now, Nana could live off the white man as well as the sunburned land, and he acted accordingly.

Being a good general, Nana put his problems to work for him. He set out to implement one of his most successful coups, one for which he has never been given proper credit because he and his

band performed their allotted tasks with utmost precision, and not one of them ever talked. He put together a fascinating scheme which was destined to produce equipment and supplies sufficient to keep his whole band of 40 or so braves plus their squaws and kids through one whole winter. This wonderful plan of his would not require his braves to leave their camp, and best of all would not leak the secret of his gold-baited trap. His scheme was superior and it worked almost perfectly.

Chief Nana laid thorough plans. His trap needed unprocessed gold and a secluded hideaway. The measure of his success on both counts is well documented. There was very real gold and the chosen spot has not been located to this day, though not from lack of trying. Perhaps long-forgotten raids on Spanish or Mexican gold shipments along the Rio Grande between Colorado and Santa Fe or Sonora had already provided the perfect bait.

More likely, a raid on freighters



Typical Apache braves as photographed in the 1800s. Photo courtesy History Division, Los Angeles County Museum.

moving gold from recently-discovered Rich Hill south of Prescott, Arizona, to the newly-established United States Mint at Denver, Colorado, provided Nana with the necessary gold, plus a few incidental animals, guns and ammunition. In this latter case, Nana just diverted a shipment, in its entirety, to one of his favorite strongholds, there to pour out the gold in an area "about the size of a wagon bed" to await its rediscovery by a chosen group of white men. Conveniently and better to fully arouse the white man's deep lust for gold, Rich Hill nuggets were extremely large, large enough to earn for an area at their source the descriptive name of "The Potato Patch."

And so it was that in late 1864, the stage was fully set for one of the west's bloodiest Indian massacres which is remembered today, more than 100 years later, almost entirely as a lost mine story.

An Indian informer, well known to the white men of Tucson, Arizona, was

planted in the idle gatherings of gold-hungry prospectors in that western desert town. At the right moment, he told of much gold to be had many days to the northeast. His story, with its ring of authenticity, had the expected effect and for the promise of a few dollars, a gun, and a horse or two, he agreed to guide the miners to the bonanza he knew. The more the merrier, as the guide put it, since there was plenty for everyone and a large party would be safer in that hostile land. Little did any of them realize the fatal role each was to play as victims of Chief Nana's careful plot. Presumably, the large party was for its own advantage. Actually, it was the other way around. A larger party would require more food which it would never live to consume, but which the Apache would.

Twenty-two prospectors were in the group that headed northeast out of Tucson. They traveled easily under the expert direction of their volunteer guide who never got lost or became confused,

no matter how obscure the trail. He knew every step of the way, pointed out landmarks, and made a special point of showing the trail to Fort Wingate, near present Gallup, where more supplies could conveniently be obtained should such become necessary. The Apache plan assured that such would become necessary.

The excited, expectant miners were 10 days out of Tucson when a very particular, very remote, and still unidentified canyon was reached. According to their willing guide, the canyon had only one access, the one they were using. The defile was a typical Indian stronghold with plentiful water, steep walls, and no unwanted visitors, but at the time of their arrival it just happened to be crawling with Apache Indians. Chief Nana and his whole bloodthirsty crew were waiting to greet the newcomers. Greatly out of character, Nana welcomed the miners, promised no harm, and allowed the guide to show where to dig.

Gold beyond the wildest dreams greeted the eyes of that ill-fated few almost immediately. Gold in great lumps lay beckoning just below the surface. Exhausted as were those travelers from many days of the trail, the gold fever was hard upon them and they all found new strength to dig far into that first night, ceasing only when they were fully convinced that the gold would still be there on the morrow.

It was still there the next day and the day after that. The miners made plans to stay the winter and the Indians, playing their roles to the hilt, were more than happy to have them. Construction of a log house was begun and plans made to send a small party to Fort Wingate to bring back sufficient supplies for a long stay. The situation was all too perfect. It just couldn't last, and it didn't.

Only one miner retained his common sense through all the greed which blinded the rest. He had decided that his 60 pounds of raw gold was enough for any man and, feeling ill at ease in the abnormal situation, left the diggings with the supply party which would follow the Fort Wingate track so carefully pointed out only a few days earlier.

The single man made it safely back to Tucson with his load of gold, to sell it, and to live a while to enjoy the benefits thereof. His actions being fairly common in those uncommon times and therefor

not newsworthy, his name went unrecorded. The Fort Wingate group, loaded with food useful to the Indians as well as to the miners waiting their return, made it back to the hidden canyon, almost.

The supply train was long overdue when a man named Adams, concerned for the safety of his friends, as well he might be in those circumstances, climbed from the canyon, accompanied by another miner, to check the access trail. They were totally unprepared for the scene that presented itself. The returning train, loaded down with all the impedimenta required to maintain 20 white men through a long winter, had been ambushed, massacred to the last man, and the animals with their loads of food removed to parts unknown. Unwanted mining tools littered the grisly scene.

Thoroughly frightened, Adams and his companion raced to warn those who remained at work in the base camp. They were too late. Nana and his efficient followers were in the final stages of wiping out every white they could get their hands on. Already some of his braves, unable to restrain themselves any longer and in a spirit of unbounded enthusiasm, had begun a bloodcurdling celebration of the complete success of Nana's finest plan. The two shocked observers waited not for their belongings nor their new-found, and now-lost, wealth. Recognizing their fortunate position in surviving two massacres, they took off for civilization with little more than their lives, a tall tale and one large nugget which Adams habitually carried in his pocket.

Unknown to Adams, still another man made good his escape in his own manner. Being in just the right place at the right time, he was able to avoid the total extermination as planned by Nana. Cut off from the natural escape route, he climbed the canyon wall, headed east without equipment or supplies, and eventually reached safety in the pueblos of the Rio Grande.

Each escapee told his own story, convinced his listeners, and precipitated interest ranging from curiosity to full-blown expeditions. For years, searchers actively sought the lost Adams, Davidson, or Brewer Diggings, named according to which survivor originated the story they had heard. Adams lived the longest, searched the hardest, and his name

has survived the rest. As far as the record goes, every search has been fruitless. Even the general area of Nana's stronghold remains to be positively identified, for in true Indian fashion, Nana destroyed all incriminating evidence, little realizing how well his plan had worked and how long it would take for the white man to get back on his trail. They are not really well onto it yet.

The massacre site and the gold used as bait both remain thoroughly lost. Adams himself spent most of the years which were left to him in a New Mexico-based search which yielded not the faintest clue. No better success has been reported by any outsider in a hundred years of trying. Casual modern interest seems to center farther north in the canyon country, but persistent rumors point toward the depths of the Gila Wilderness, an area which also happens to be convenient to Nana's home base at the warm springs near present-day Winston, New Mexico.

Old Chief Nana never admitted a thing, not even when confronted by Adams himself almost 20 years after the massacre. Nana went to his Happy Hunting Ground shortly afterward, a wholly incorrigible and totally unreconstructed Apache raider. He is probably still enjoying the excitement he caused during his long and eventful life, excitement which even yet recurs every time someone arouses new interest in the Lost Adams Diggings.

Perhaps you will be the modern-day searcher who will recover whatever golden treasure remains where it was planted by one of the West's most successful mine salters, and old Nana's eyes will turn blood red, just as they did in the old days, when that time comes. □

RIVERSIDE COUNTY'S LARGEST 4-WHEEL-DRIVE HEADQUARTERS

Accessories for All Makes

Jeep

JOHNSON'S SALES and SERVICE

1st and Market, Riverside, California
Telephone 714 584-9020

TREASURE HUNTERS — PROSPECTORS —

Metal-Mineral Detectors

DREDGES
DRY WASHERS MAPS
BOOKS TOOLS ASSAY KIT
SLUICE BOXES MINERAL LIGHTS
LAPIDARY EQUIPMENT
Send 25c for catalog to:

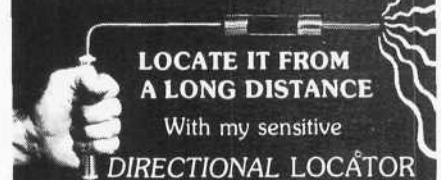
AURORA

6286 BEACH BLVD.
BUENA PARK, CALIF. 90620
[714] 521-6321

COE PROSPECTOR SUPPLY

9264 KATELLA
ANAHEIM, CALIF. 92804
[714] 995-1703

BURIED TREASURE



**LOCATE IT FROM
A LONG DISTANCE**

With my sensitive

DIRECTIONAL LOCATOR

Send for my FREE INFORMATIVE
BROCHURE and read about this
remarkable device
RESEARCH PRODUCTS
P.O. Box 13441BU Tampa, Fla. 33611



United Campgrounds of Moab

"Our Concern for You is Your Guarantee"

Location:

- One mile north of Moab, and ½ mile National Parks
- Between Arches and Canyonlands National Parks
- Near Dead Horse Point State Park

Facilities:

- Level, Shaded Sites
- 88 Tent and Trailer Spaces
- Full Hookups
- Swimming Pool
- Hot Showers
- Store and Laundry
- Miniature Golf

For Campground brochure
and Reservations, write or call:

UNITED CAMPGROUNDS OF MOAB

Offices for Canyonlands by Night

P.O. Box 370D, Moab, Utah 84532 801 259-7660



Send orders to
Box 1318,
Palm Desert, California 92260
Please add 25c for postage & handling

BOOKS OF

OUR HISTORIC DESERT, The Story of the Anza-Borrego State Park. Text by Diana Lindsay, Edited by Richard Pourade. The largest state park in the United States, this book presents a concise and cogent history of the things which have made this desert unique. The author details the geologic beginning and traces the history from Juan Bautista de Anza and early-day settlers, through to the existence today of the huge park. Hardcover, 144 pages, beautifully illustrated, \$9.50.

FLOWERS OF THE CANYON COUNTRY by Stanley L. Welsh, text; and Bill Ratcliffe, photographs. Brigham Young University Press. Two professionals have united their talents to present an informative, scholarly and artistic promotion of the beauty found in flowers and plants of vast regions of the Southwest. Paperback, 51 pages, \$2.95.

A FIELD GUIDE TO INSECTS of America North of Mexico by Donald J. Borror and Richard E. White. This is the most comprehensive, authoritative and up-to-date guide to North America insects ever published. It covers 579 families of insects and has more than 1300 line drawings and 142 color plates. Hardcover, 372 pages, glossy, references, \$5.95.

FANTASIES OF GOLD by E. B. Sayles. During his search for archeological finds for more than 30 years, the author was exposed to the rumors and legends of lost gold and treasures. After his retirement as curator of the Arizona State Museum, he classified and delved into these still unsolved mysteries. An interesting and informative book on lost bonanzas and legends, many of which have never been published. Hardcover, well illustrated, 135 pages, \$6.50.



THE CALIFORNIA MISSIONS by the Editors of Sunset Books. A beautifully written history of California's 21 missions. One can feel, as he reads, the fervor of the padres as they gathered materials to build their churches, and an insight into history develops as the authors tell in simple prose what was going on in the world at the same time. 300 pages, complete with artful sketches and photographs, and paintings in color, hardcover, large format, \$12.75.

NEVADA GHOST TOWNS AND MINING CAMPS by Stanley W. Paher. Covering all of Nevada's 17 counties, Paher has documented 575 mining camps, many of which have been erased from the earth. The book contains the greatest and most complete collection of historic photographs of Nevada ever published. This, coupled with his excellent writing and map, creates a book of lasting value. Large 9x11 format, 700 photographs, hardcover, 492 pages, \$15.00.

THE GREAT AMERICAN WEST by James D. Horan. With over 650 illustrations, many in full color, this is the full western story from the days of the conquistadores to the 20th Century. Many rare photos never published before. Large 9x12 format, hardcover, 288 pages, originally published at \$10.00, now only \$4.95.

FROSTY, A Raccoon to Remember by Harriett E. Weaver. The only uniformed woman on California's State Park Ranger crews for 20 years, Harriett Weaver shares her hilarious and heart-warming experiences of being a "mother" to an orphaned baby raccoon. A delightful book for all ages. Illustrated with line-drawings by Jennifer O. Dewey, hard cover, 156 pages, \$5.95



DICTIONARY OF PREHISTORIC INDIAN ARTIFACTS OF THE AMERICAN SOUTHWEST by Franklin Barnett. A highly informative book that both illustrates and describes Indian artifacts of the Southwest, it is a valuable guide for the person interested in archaeology and anthropology. Includes 250 major types of artifacts. Each item has a photo and definition. Paperback, 130 pages, beautifully illustrated, \$7.95.

OLD MINES AND GHOST CAMPS OF CALIFORNIA, compiled by A. Ekman, I. H. Parker, W. H. Storms, H. W. Penniman and M. E. Dittmar. A lot of informative reading takes you county by county through the vast mining areas of the Mother Lode and adjoining rich properties. Paperback, photos, 144 pages, \$3.50.

OUTDOOR SURVIVAL SKILLS by Larry Dean Olsen. This book had to be lived before it could be written. The author's mastery of primitive skills has made him confident that survival living need not be an ordeal once a person has learned to adjust. Chapters deal with building shelters, making fires, finding water, use of plants for food and medication. Buckram cover, well-illustrated, 188 pages, revised edition boasts of 96 4-color photos added. \$2.95.

50 YEARS IN DEATH VALLEY by Harry P. Gower. First hand account of the dramatic mining years by a man who spent his life in the mysterious valley. Describes the famous characters of Death Valley. Paperback, illustrated, 145 pages, \$2.95.

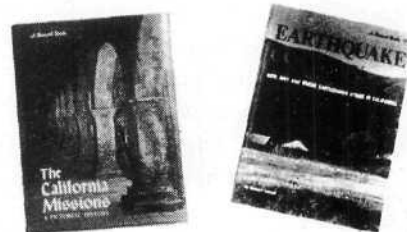
ROCK DRAWINGS OF THE COSO RANGE by Campbell Grant, James Baird and J. Kenneth Pringle. A Maturation Museum publication, this book tells of sites of rock art in the Coso Range which, at 4000 feet, merges with the flatlands of the northern Mojave Desert. Paperback, illustrated, detailed drawings, maps, 144 pages, \$3.95.

THE DESERT IS YOURS by Erle Stanley Gardner. This is the late author's fifth book written on the desert but the first that is devoted to the western desert of the United States. With parties of hunters and companions, he proves to be the true adventurer, combing the vast reaches of trackless land, and shows how the good outweighs the bad in the perils of the desert. Hardcover, well illustrated, 256 pages, \$7.50.

DEATH VALLEY GHOST TOWNS by Stanley Paher. Death Valley, today a National Monument, has in its environs the ghostly remains of many mines and mining towns. The author has also written of ghost towns in Nevada and Arizona and knows how to blend a brief outline of each of Death Valley's ghost towns with historic photos. For sheer drama, fact or fiction, it produces an enticing package for ghost town buffs. Paperback, illus., 9x12 format, 48 pages, \$1.95.

EARTHQUAKE COUNTRY by Robert Jacopi. Published by Sunset Books, this well illustrated book separates fact from fiction and shows where faults are located, what to do in the event of an earthquake, past history and what to expect in the future. Large format, slick paperback, 160 pages, \$2.95.

DESERT, The American Southwest by Ruth Kirk. Combining her knowledge of the physical characteristics of the land, and man's relation to the desert from the prehistoric past to the probable future, with her photographer's eye and her enthusiasm for a strange and beautiful country, the result of Ruth Kirk's work is an extraordinarily perceptive account of the living desert. Highly recommended. Hardcover, beautifully illustrated, 334 pages, \$10.00.



GOLD RUSH ALBUM, Editor in Chief Joseph Henry Jackson. 352 authentic first-hand pictures with text. The complete story of the most exciting treasure-hunt in history when some 200,000 persons sought gold in California. Originally published at \$10.00. New, complete edition only \$3.95.

BIRDS OF THE SOUTHWESTERN DESERTS by Gusse Thomas Smith. Thirty-one of the most commonly sighted birds of the Southwest are described and illustrated in 4-color artist drawings. Heavy paperback, 68 pages, \$3.95.

PADRE ISLAND [Treasure Kingdom of the World] by William Mahan. At the age of 13 the author had done research on lost treasure and completed a scrapbook on the subject. In later years, he discovered "Padre Island" off the coast of his home state of Texas. Bill Mahan is well qualified for his work having made countless trips to Padre where he relates in historical detail of lost treasures, shipwrecks and savage Indian tribes. If you are a historian or treasure hunter, you'll "dig" this adventurous accounting. Hardcover, illus., maps, translations of Fray Marcos de Mena from Spanish to English, 139 pages, \$6.95.

THE WEST

California residents
please add
6% state sales tax

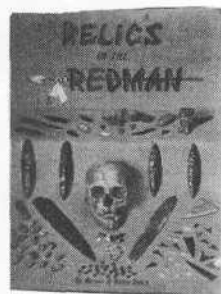
Please add 25c for postage & handling

BOTTLE COLLECTOR'S HANDBOOK by John T. Yount. Contains a listing of 1850 bottles and their market value (including the prized Jim Beams), where to sell and buy, identifications, etc. Although contains few illustrations, it has more listings than any other bottle book. Paperback, 89 pages, \$3.95.

FOUR WHEEL DRIVE HANDBOOK by James T. Crow and Cameron Warren. Packed into this volume is material gathered from actual experience and presented in a detailed manner so it can easily be followed and understood. Highly recommended for anyone interested in back country driving. Paper, illus., 96 pages, \$3.95.

GHOSTS OF THE GLORY TRAIL by Nell Murbarger. A pioneer of the ghost town explorers and writers, Miss Murbarger's followers will be glad to know this book is once again in print. First published in 1956, it is now in its seventh edition. The fast-moving chronicle is a result of personal interviews of old-timers who are no longer here to tell their tales. Hardcover, illustrated, 291 pages, \$7.00.

THE BAJA BOOK, A Complete Map-Guide to Today's Baja California by Tom Miller and Elmar Baxter. Waiting until the new transpeninsular highway opened, the authors have pooled their knowledge to give every minute detail on gas stations, campgrounds, beaches, trailer parks, road conditions, boating, surfing, flying, fishing, beachcombing, in addition to a Baja Roadlog which has been broken into convenient two-mile segments. A tremendous package for every kind of recreationist. Paperback, 178 pages, illus., maps, \$7.95.



RELICS OF THE REDMAN by Marvin & Helen Davis. Relics can be valuable! Those dating back to Indian history in our land are becoming almost priceless. How to search for these "hard to find" Indian relics, where to search and at what time of the year, and types of tools needed, are among the many helpful suggestions given. Large format, many color and b/w illustrations, a striking cover. Paperback, 63 pages, \$3.95.

ROCKS AND MINERALS OF CALIFORNIA compiled by Vinson Brown, David Allan and James Stark. This third revised edition will save you hours of time by the description and pictures of rocks and minerals found in this state. Color pictures with clearly developed keys show you how to identify what you have found and gives you the fine tools to increase your ability as a field collector. Paperback, well illustrated with photos, locality maps, charts and quadrangle map information. 200 pages, \$3.95.

BAJA [California, Mexico] by Cliff Cross. Updated to include the new transpeninsular highway, the author has outlined in detail all of the services, precautions, outstanding sights and things to do in Baja. Maps and photos galore, with large format. 170 pages, \$3.95.

MINES OF THE HIGH DESERT by Donald Dean Miller. Describes life at the New Dale, Virginia Dale, Supply and other early mines of the high desert country around Joshua Tree National Monument in California. Photos and map. Paperback, \$1.95.



NEVADA LOST MINES AND HIDDEN TREASURES* compiled by Dave Basso. The Second Edition is updated with photographs and a new look. Portions of U.S. Geological Survey topographic maps are provided to give the reader an idea of the general locale in which the specific story is centered. Paperback, 71 pages, \$2.50.

NEW MEXICO PLACE NAMES edited by T. M. Pearce. Lists and gives a concise history of the places, towns, former sites, mountains, mesas, rivers, etc., in New Mexico, including those settled by the early Spaniards. Good for treasure hunters, bottle collectors and history buffs. Paperback, 187 pages with more than 5000 names, \$2.45.

HAPPY WANDERER TRIPS by Slim Barnard. Well-known TV stars, Henrietta and Slim Barnard have put together a selection of their trips throughout the West from their Happy Wanderer travel shows. Books have excellent maps, history, cost of lodging, meals, etc. Perfect for families planning weekends. Both books are large format, heavy paperback, 150 pages each and \$2.95 each. Volume One covers California and Volume Two Arizona, Nevada and Mexico. WHEN ORDERING STATE WHICH VOLUME.

SOUTHWEST INDIAN CRAFT ARTS by Clara Lee Tanner. One of the best books on the subject, covering all phases of the culture of the Indians of the Southwest. Authentic in every way. Color and black and white illustrations, line drawings. Hardcover, 205 pages, \$15.00.

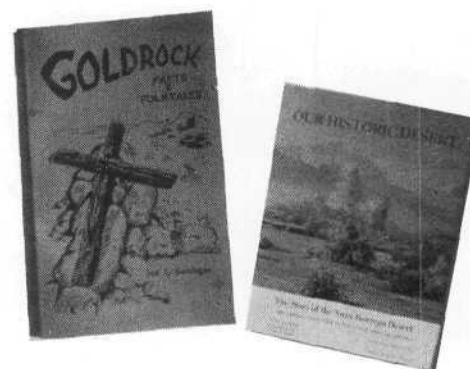
TURQUOIS by Joseph E. Pogue. [Memoirs of the National Academy of Sciences]. First printed in 1915, *Turquois* has in its third printing (1973) been updated in many ways. Among them are listed currently-operated Turquois mines, more color plates. The book is full of incredible results of research and an in-depth study of this fascinating mineral of superficial origin. Hardcover, 175 pages, beautifully illustrated, \$15.00.

DUTCH OVEN COOKBOOK by Don Holm. Wildlife editor of the Portland Oregonian, the author has spent his life exploring and writing about the outdoors, so his recipes for preparing food in a Dutch Oven come from experience. If you haven't had food cooked in a Dutch Oven, you haven't lived—and if you have, you will find these recipes new and exciting culinary adventures—as well as his style of writing. Heavy paperback, 106 pages, \$3.95.

ANASAZI: Ancient People of the Rock, photographs by David Muench, text by Donald G. Pike. This outstanding, moving publication gives the reader the unique opportunity to see and understand the Anasazi civilization that existed some 2,000 years ago. Blending with David Muench's superb photography, historian Donald Pike provides a fascinating text. Hardcover, profusely illustrated with color and black and white photos, 192 pages, \$16.95 until Dec. 31, 1974, then \$18.95.

GOLDROCK Facts and Folktales by Iva L. Geisinger. The author describes this site on the California Desert giving brief, but interesting recounts of the facts and legends of the ghost towns, lost mines and personalities of the Goldrock area. Paperback, 65 pages, illus., \$2.25.

COMMON EDIBLE & USEFUL PLANTS OF THE WEST by Muriel Sweet. A description with artist drawings of edible (and those not to touch) plants along with how Indians and pioneers used them. Paperback, 64 pages, \$1.50.



LAS VEGAS [As It Began—As It Grew] by Stanley W. Paher. Here is the first general history of early Las Vegas ever to be published. The author was born and raised there in what, to many is considered a town synonymous with lavish gambling and unabashed night life. Newcomers to the area, and even natives themselves, will be surprised by the facts they did not know about their town. Western Americana book lovers will appreciate the usefulness of this book. You don't have to gamble on this one! Hardcover, large format, loaded with historical photos, 180 pages, \$10.95.

A LIGHT-HEARTED LOOK AT THE DESERT by Chuck Waggin. A delightfully written and illustrated book on desert animals which will be appreciated by both children and adults. The sketches are excellent and, although factual, descriptions make the animals seem like human beings. Large format, heavy quality paper, 94 pages, \$1.95.

Fun and Profit

TRY THE REVOLUTIONARY ALL NEW
COMPASS 'YUKON'
METAL-MINERAL DETECTORS

PROFESSIONAL
MODEL 77-1B \$249.50
INDUCTION BALANCE DESIGN

OTHERS FROM \$124.50

COMPASS EXCLUSIVES:

WIDE-SCAN SEARCH LOOP!
GROUND CONDITION ADJUSTMENT!

WITH
ALL NEW

COMPASS
Metal
Detectors

Rentals
with
Option
to Buy

14-Day
Money-Back
Guarantee

PROSPECTING AND HIKING EQUIPMENT
BOOKS — TOPO MAPS

Write for

FREE CATALOG

DEALER INQUIRIES
INVITED

**JACOBSEN
SUPPLIERS**

Phone
213 569-8041

9322 California Ave.,
South Gate, California 90280

Rambling on Rocks

by Glenn and Martha Vargas

Apatite: No. 5 in Hardness

AS FAR AS mammals (which includes humans) are concerned, apatite is one of the most important minerals. It is the constituent of teeth and bone. Ideally, the mineral should be a calcium phosphate, but always fluorine, and usually chlorine are part of the chemical make-up. Thus, the mineralogist writes the formula as $\text{Ca}(\text{F}, \text{Cl})\text{Ca}_4(\text{PO}_4)_3$. On rare occasions, there is no fluorine. The material that has an excess of fluorine, which is normal, is sometimes known as fluorapatite; that which has an excess of chlorine, which is very unusual, is chlorapatite.

Pure calcium phosphate (without either fluorine or chlorine) is known, but has a variable composition. Thus the mineral apatite always contains either of these gasses as part of the molecule, and is simply known as apatite, with no prefix reference to the gas. The name, in spite of our teeth being composed of it, does not refer to eating, but stems from the Greek (*apatos*—to deceive) because it has often been mistaken for other minerals.

The presence of a high amount of fluorine in the apatite making up tooth and bone structure is very important to higher animals. A lower fluorine content tends toward a weaker, more brittle structure. This is the reason for fluorides being important to prevent tooth decay.

Apatite crystals belong to the hexagonal crystal system. Many of these are beautiful symmetrical hexagons. Most are small, usually under two inches in length, but sometimes large ones are found weighing up to as much as 500 pounds. The color of apatite is highly variable. Blue and green are most common, and yellow, purple, red, brown and colorless are least common.

Apatite does not have much use industrially, but it is important as a fertilizer, adding phosphorus (phosphates) to soil. In some regions, it is mined as apatite, and prepared for use as fertilizer by adding acids. In other areas, it is mined as calcium phosphate which is the remains of some form of animal life. Sometimes this is known as bone phosphate because it is found as bone remains in huge fossil beds. Evidently the long burial in fossil beds tends to drive off the fluorine and chlorine, leaving calcium phosphate with other impurities.

One interesting side issue of this situation is when fossil bone is infiltrated with a small amount of iron. The result is known as odontolite, and is blue in color. This sometimes is called bone turquoise and has been found in pieces large enough to cut into gemstones. For many years, it was thought to be bone and teeth replaced with turquoise. Actually, it is the mineral vivianite (iron phosphate); turquoise is copper and aluminum phosphate.

We have seen some of these odontolites (from the Greek *odontos*—tooth), and they are beautiful, perfect teeth and bones of a light blue color. Teeth are much more resistant to decay than ordin-

Indian Jewelry FROM Wampum Wigwam

A beautiful array of Indian Jewelry is available from our huge display of craftsmanship by authentic Indian artisans. May we send you a selection? This enables you to see the merchandise before you buy it. Send today for our convenient approval form.



**Shipley's
Mineral House**

Gem Village
Bayfield D,
Colorado 81122
Phone: 303-884-2632

ary bone, thus the name was given because teeth in this form were more common.

The mineral collector is very interested in apatite. The wide range of colors and hexagonal forms are excellent for collections. The most common form is a true hexagonal prism, but this is commonly altered by more faces lying on the corners of the sides and tips of the crystal. Some are so altered that they are almost cylinders. Some crystals are very short, resembling hexagonal coins.

If apatite had a hardness greater than five, it would be an extremely popular gemstone. Regardless, the faceter cuts suites of stones of various colors for a collection.

Burma produces a material that is blue in one direction and green in another. India is known for a number of shades of green. Green also comes from Canada. A pure colorless material comes from Bolivia. The island of Madagascar produces a number of colors, the best-known being a deep green, but a fine light blue is also found there.

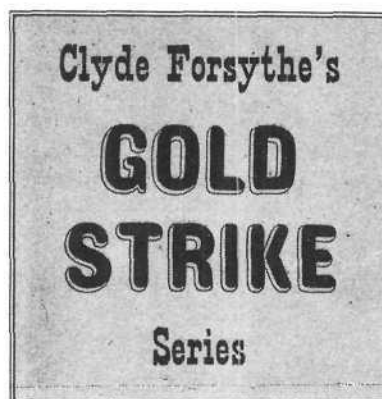
The best of all blue apatite comes from Brazil; a color rivaling the sapphire. Brazil also produces an interesting light-golden brown. A region in Mexico called Cerro de Mercado (Market Hill), and actually an iron mine, is known for yellow, almost cylindrical crystals that are often over an inch across.

The mines at Mt. Apatite, near Auburn, Maine produce the finest color of all, a deep royal purple. These are old mines and were thought to be completely worked out, but in recent years some pockets of excellent crystals have been found. One of the gem mines in San Diego County, California produces delightful pink-lavender crystals.

The refractive index of apatite is near that of topaz, thus the gems that can be cut from these crystals of many hues have good brilliance. The faceter finds that apatite is difficult to cut into a gem. There is no cleavage, but the mineral is brittle. This, coupled with the softness, gives some slight difficulties during cutting and shaping, but great difficulty is experienced during polishing. This, however, only adds to an interesting situation. The gem is not often seen, it exhibits a wide variety of colors, and is also a test of the cutter's skill. Thus, anyone who has cut a suite of these can be justly proud. □

Here's How You Can Order High Quality REPRINTS

SUITABLE FOR FRAMING
OR GIFT GIVING



**4 MINING CAMP SCENES
IN FULL COLOR**

14x17" with white margins,
on high quality paper stock.

No lettering or folds

The artist's personal account
of how each phase of the
series came to be painted is
lithographed on the back of
each painting.

Send your name,
mailing address, ZIP CODE and

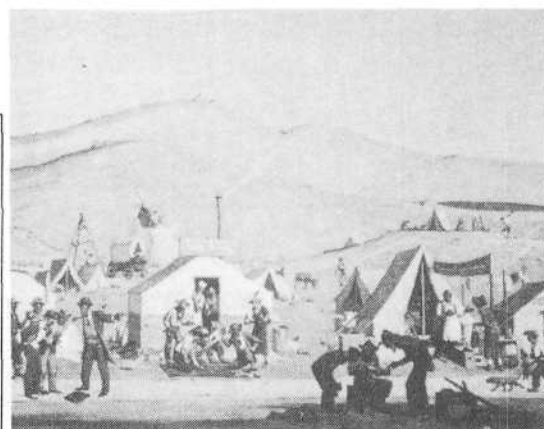
Only \$3.00

(POSTAGE AND TAX PAID)

TO:
REPRINT DEPARTMENT
DESERT MAGAZINE
PALM DESERT, CALIF. 92260



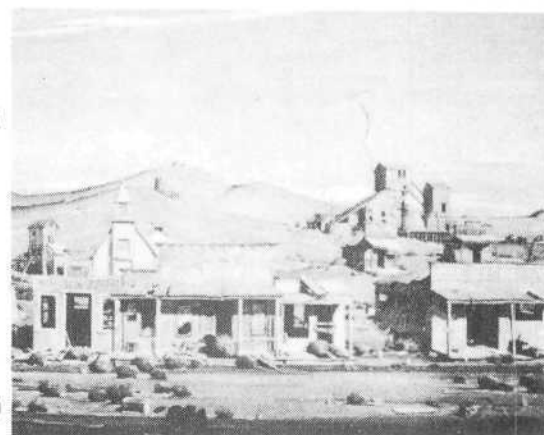
The Gold Rush



The Mining Camp



The Mining Town



The Ghost Town

TRADING POST

CLASSIFIEDS

• BOOKS - MAGAZINES

OUT-OF-PRINT BOOKS at lowest prices! You name it—we find it! Western Americana, desert and Indian books a specialty. Send us your wants. No obligation. International Bookfinders, Box 1, Pacific Palisades, California 90272.

GUIDE TO MEXICO'S gems and minerals: localities, mines, maps, directions, contacts. English-Spanish glossary, too. \$2.00 plus 20c postage. Gemac, Mentone, California 92359.

LOST DESERT GOLD, legendary and geological history of the southern California desert, with photos and maps to pinpoint locations. \$2.50 postpaid. Gedco Publishing Co., Box 67, Bellflower, California 90706.

"GEMS & MINERALS," the monthly guide to gems, minerals, and rock hobby fun, \$4.75 year. Sample 35c. Gems & Minerals, Mentone, Calif., 92359.

ARIZONA HIGHWAYS magazines, 1939-1974. Single copies, full years available. Write for list. J. L. Pettycrew, 2518 East Meadowbrook, Phoenix, Arizona 85016.

WILDERNESS LIVING! Nature, Medical, Survival, Hunting, Firearms, Self Defense, Guerrilla Warfare. Books—Vital, Fascinating, Extraordinary. Catalog free. Adobe Hacienda, Route 3, Box 517A, Glendale, Arizona 85301.

• BUSINESS OPPORTUNITIES

SMALL PRINTING PLANT FOR SALE. Includes Intertype with Quadder; 10x15 Heidelberg; Vandercook Proofpress; Assorted Hand Type; Miscellaneous small equipment. Ideal one-man operation, located in Palm Springs, California. Lease available. Write: Dept. P, Desert Magazine, Box 1318, Palm Desert, Calif. 92260.

• DESERT STATIONERY

MOCKELS ORIGINAL Livingcolor Desert Notes, 25 assorted, \$3.65, add 35c for postage, also Calif. sales tax. Mockels Desert Flower Notebook, \$5.95, please add tax. Artist Henry R. Mockel, P. O. Box 726, Twentynine Palms, California 92277.

• EQUIPMENT

PRECISION LAPIDARY Abrasive Compounds for tumbling, polishing and grinding. Send for free catalogue and price list. MDC Industries, 400 West Glenwood Avenue, Philadelphia, PA. 19140. Dealer Inquiries invited.

HOW TO PLACE YOUR AD

Mail your copy and first-insertion remittance to: Trading Post, Desert Magazine, Palm Desert, Calif. 92260. Classified rates are 25c per word, \$5.00 minimum per insertion. Deadline for Classified Ads is 10th of second month preceding cover date.

• GEMS

SHAMROCK ROCK SHOP, 593 West La Cadena Drive, Riverside, California 92501. Parallel to Riverside Freeway. Phone 686-3956. Come in and browse: jewelry mountings, chains, supplies, minerals, slabs, rough material, equipment, black lights, metal detectors, maps, rock and bottle books.

GEM SHOP WEST. Mineral specimens, custom jewelry, gem identification, slabbing. 72-042 Highway 111, Rancho Mirage, California 92270. Phone 346-2812.

• INDIAN GOODS

FINE RESERVATION-MADE Navajo, Zuni, Hopi jewelry and Kachina dolls, Navajo rugs, Yei blankets, Chimayo blankets and vests, pottery. Nambe cooking and serving ware and unique gifts. Sorry, no Catalogue. Open every day from 10:00 to 5:30. Buffalo Trading Post, 20115 Highway 18, Apple Valley, Calif. 92307.

ARROWHEADS — ARTIFACTS, Birdpoints, Gamepoints, Darts \$1.00 each, 3/\$2.00 - 12/\$6.00. List available. Arrowhead's West, P.O. Box 80, Barstow, Calif. 92311.

BEADS, ALL KINDS, shapes, sizes. Old, new. Complete Catalog \$1.00. Refundable with order. Beads & More, 4234 Craftsman Court, Scottsdale, Arizona 85251.

• MAPS

SPECIAL MAPS! Map #1: "Roadmap To Lost Mines and Buried Treasures of California." Folded only: \$4.00. Map #2: "Roadmap to Pioneer-Towns, Ghost-Towns, and Mining Camps of California." Folded only: \$3.50. Map #3: "The Oregon Trail." Rolled only, you frame, \$2.00. Map #4: "Pioneer-Trails" . . . 1541-1867. Rolled: \$4.25; Folded: \$4.00 Add 10% for handling and postage. State Sales Tax. Detailed information available from: Varna Enterprises, P.O. Box 2216, Dept. A, Van Nuys, Calif. 91404.

REC-MAPS—New series Southern California topographic maps, photoreduced and printed on 8½ by 11 facing sheets. Updated with new roads, popular gem and mineral hunting locations and ghost towns. Write R V Equipment, P.O. Box 1045D, Monrovia, California 91016. Dealer inquiries invited.

OLD MAP KIT. Reprints of old State and Railroad maps. 70-100 years old. All States. Self-addressed stamped envelope for details. Specify state. Northern Map Co., Dept. DM, Eagle River, Wisc. 54521.

• MINING

ASSAYS, COMPLETE, accurate, guaranteed. Highest quality spectrographic. Only \$6.00 per sample. Reed Engineering, Suite C, 1140 N. Lemon St., Orange, California 92667.

• MINING

GOT AN INKLING there might be gold in those hills? Complete instructions and forms for filing mining claims on public lands \$2.50. H & M Mining, Dept. C, P. O. Box 8249, Portland, Oregon 97207.

• OLD COINS, STAMPS

SILVER DOLLARS, UNCIRCULATED 1880-81 S, 1883-84-85 O mint \$12.00 each. Catalogue 50c. Shultz, Box 746, Salt Lake City, Utah 84110.

• REAL ESTATE

GOVERNMENT LANDS! . . . From \$7.50 ACRE! Vacationing, Farming Investment! Exclusive "Government Land Buyer's Guide" . . . plus "Land Opportunity Review" listing lands throughout U.S. Send \$1.00. Surplus Lands, Box 6588-RI, Washington, D.C. 20009.

GOVERNMENT LANDS—Low as \$1.25 Acre! Buy, lease or homestead. Free details! Lands Digest, Box 25561-DM, Seattle, Wash. 98125.

19 - ONE-THIRD-ACRE tracts in beautiful high desert Arizona community. Just 30 minutes to Lake Meak and Lake Mohave. 74 miles to Las Vegas, Nevada. \$2,195.00—\$45.00 down and \$26.90 per month. (Each.) Title guaranteed by Trans-America Title Co. T & F Enterprises, Inc., P. O. Box 8, Dolan Springs, Arizona 86441.

• SEEDS & PLANTS

DOMESTICATED GOLDEN CHIA SEEDS (salvia columbariae), sufficient for four 50-foot rows. Complete instructions. Package \$2.00. Harrison Doyle, P. O. Box 785, Vista, Calif. 92083.

• TRAVEL

4WD—"JEEP" Scenic Adventure Trips, Death Valley region, all desert areas, Paul H. Thompson Enterprises, Box 20, Darwin, Calif. 93522.

• TREASURE FINDERS

SALES: WHITE'S Beachcomber, Coinmaster, Goldmaster Metal Detectors. Repair: Efficient and economical service on all metal detectors by factory trained technician. Send or bring to the Treasure Hut, 628 A Reed Avenue, Red Bluff, Calif. 96080. (916) 527-3895.

WILL YOU GAMBLE \$4.00 to save \$200? Build one of several detectors from our 20-page book "Build Transistor Treasure Detectors." Easily followed instructions. \$4.00. Trionics, Box 164D, Brewer, Maine 04412.

• TREASURE FINDERS

TREASURE FINDER locates buried gold, silver, coins, treasures. Six powerful models. Instant financing available. Write or call for free catalog. Phone (713)-682-2728 day or night. Dealer inquiries invited. Relco, Dept. A-205, Box 10839, Houston, Texas 77018.

POWERFUL METROTECH locators detect gold, silver, coins, relics. Moneyback guarantee. Terms, free information. Underground Explorations, Dept 3A, Box 793, Menlo Park, CA 94025.

TREASURE-METAL and mineral locators. Free 24 page booklet. GeoFinder Co., Box 37, Lakewood, California 90714.

BURIED TREASURE—Locate up to quarter mile away with ultra-sensitive Directional Locator. Send for free, informative pamphlet. Research Products, Box 13441-BUC, Tampa, Florida 33611.

FIND BURIED TREASURE with revolutionary patented, analytical metal detector. Features push button and automatic tuning, negligible ground pickup, greatest range. Free catalogue. Gardiner Electronics Co., Dept 51, 4729 N. 7th Ave., Phoenix, Arizona 85013.

FREE 156 page catalog on detectors, books and maps. General Electronic Detection Co., 16238 Lakewood Blvd., Bellflower, Calif. 90706.

• MISCELLANEOUS

PROFESSIONAL ART BY MAIL—The only one of its kind you have been looking for. Courses approved by California Dept. of Education. Send for Free Brochure. Roy Keister College of Fine Arts, 19 Washington St., Santa Clara, CA 95050.

GUMMED NAME and Address Labels: 1000—\$1, 3000—\$2.25. Three-week delivery. C. Friday, 4705 Adam Rd., Simi Valley, Calif. 93063.

HOME WINE Making Supplies. Enjoy your own wine. Send for free price list, reasonable prices. Howard, Box 706, Victor, California 95253.

FASCINATED WITH ASTROLOGY? Our Home Computer Astrology Kit puts what's in the stars in your home. Based upon same facts used by world famous astrologers. \$11.50 Ppd. Great Gift! Aquarius, 351 Evonshire Ave., Santa Barbara, Calif. 93111. (Add 60c State tax in Calif.)

MAKE EXTRA MONEY. New Booklet Shows You how to make money in your spare time. Only \$1.00. Hubler Enterprises, 1441 Paso Real, Sp. 175, Rowland Heights, Calif. 91748.

MOVING?

**SO YOU WILL NOT MISS AN ISSUE
NOTIFY US AS SOON AS POSSIBLE.**

**Be sure to include old address
as well as the new**

AND BOTH ZIP CODES!

For the Birds?

Hummingbird Feeder

ONLY **\$3.50** Postpaid

Send check or money order to:

Desert MAGAZINE

Palm Desert, California 92260
Calif. Res. add 6% sales tax



- NOTHING TO RUST
- DRIPLESS
- BEE PROOF
- ANT PROOF

MAPS!

DESERT OVERVIEW MAPS

Using topographic maps as basic underlays, are two excellently detailed maps for back country explorers of the Mojave and Colorado Deserts. Maps show highways, gravel roads, jeep trails, plus historic routes and sites, old wells, which are not on modern-day maps, plus ghost towns, Indian sites, etc. **Mojave Desert Overview** covers from U.S. 395 at Little Lake to Boulder City, Nevada, to Parker Dam to Victorville. **Colorado Desert Overview** covers from the Mexican border to Joshua Tree National Monument to Banning to the Arizona side of the Colorado River. Be certain to state which map when ordering. **\$3.00 Each**

ANZA-BORREGO DESERT STATE PARK TOPOGRAPHIC MAPS

A set of 7 maps covering the Anza-Borrego Desert State Park, 8 1/2" x 11" format, bound. **\$5.50**

ROADMAP TO CALIFORNIA'S PIONEER TOWNS, GHOST TOWNS AND MINING CAMPS

Compiled by Varna Enterprises, 38" x 25" and scaled. Southern California on one side and Northern California on the other. Contains detailed location of place names, many of which are not on regular maps. **\$3.50**

MAP OF PIONEER TRAILS

Compiled by Varna Enterprises, this is their new large map on pioneer trails blazed from 1541 through 1867 in the western United States. Superimposed in red on black and white, 37" x 45". **\$4.00**

ROADMAP TO CALIFORNIA'S LOST MINES AND BURIED TREASURES

Compiled by Varna Enterprises, 38" x 25" and scaled. Southern California on one side and Northern California on the other. Contains detailed location of place names, many of which are not on regular maps. **\$4.00**

Order maps today from

Desert Magazine Book Shop

P.O. Box 1318, Palm Desert, California 92260

Please add 25 cents for postage & handling

Calif. residents please add 6% state sales tax

SUBSCRIPTION FORM

September 1974

Desert

74-109 Larrea Street P. O. Box 1318 Palm Desert, California 92260

- ☐ ENTER A NEW SUBSCRIPTION ☐ RENEW MY PRESENT SUBSCRIPTION

NAME _____

ADDRESS _____ ZIP CODE _____

- ☐ SEND GIFT SUBSCRIPTION TO:

NAME _____

ADDRESS _____

Sign Gift Card: "From" _____

One Year \$6.00

☐ PAYMENT ENCLOSED

☐ BILL ME LATER

Two Years \$11.00
(Or 2 One Years)

Three Years \$16.00
(Or Three One Years)

☐ ALSO SEND DESERT'S 12-ISSUE
HANDSOME BROWN VINYL BINDER FOR
\$3.50 (Includes tax and postage)

Date Binder(s) with Year(s) ☐ Undated

Letters to the Editor

Letters requesting answers must include stamped self-addressed envelope

Light on Lantern . . .

Regarding the lantern found by Mr. John W. Dixon, Jr., I, too, have an identical lantern which my father gave to me. Mine came from Colorado and was used for many years on the Denver and Rio Grande Railroad narrow gauge line running from Durango to Silverton. A retired employee of the line gave two of these lanterns to my father and one of them was equipped with a cast iron base that mounts on the wall.

As I understand it, these lanterns were used for lighting inside the coaches, and several can be seen on the walls inside the station at Durango.

BOB SERVICE,
Newhall, California.

The part of the lantern Mr. John W. Dixon picked up was the kerosene container which fits into the bottom portion of a railroad signal lantern. These little lanterns are very scarce and are a rare collector's item these days. What Mr. Dixon found would have no value as he would need the frame and globe of the lantern, also.

C. E. MILLER,
Oakhurst, California.

Editor's Note: Our thanks to the many other Desert readers who also identified Mr. Dixon's mystery object.

Reminiscing . . .

I have been a subscriber to your magazine almost since its inception, many years ago, and have always enjoyed reading its contents. I was a TB patient in a Phoenix sanitarium, and resident in a cabin, in Hassayampa Country Club, Prescott, during 1930-31, with full recovery, after returning back East, later.

During the time I was at Hassayampa, I had an old Essex touring car, and with my camera, made many trips out into the desert country, Grand Canyon, etc., taking pictures of interesting subjects. I have some of the 1930 Prescott Rodeo, Smoki Snake Dance and many others. I had the pleasure of meeting Charlotte Hall, in her home, and I still remember the dress which she wore when she went to Washington as the State's first representative of Copper. I believe it is still in the museum home which she left to Prescott. She

told me many interesting stories about early Arizona and the Indian Country.

I also met Dr. Douglas, from University of Arizona, who was the expert on the age of trees, as determined by tree rings.

I am glad that I had a chance to meet and talk with these interesting people, as well as the opportunity to see the real Rattlesnake Dance at Hotevilla. It is great that you give credit to such people in your magazine, who help to preserve its history, and make it such a wonderful place for those of us who love the great outdoors, and hope to preserve it the way God intended it to be.

HARRISON I. DIXON,
San Diego, California.

Mexico Road Report . . .

I have just read "A Run on Mexico 1," in the July issue. Mr. Smullen mentioned the narrowness and lack of shoulders of the new highway, but he neglected to mention roving livestock and broken-down vehicles on the pavement. A danger warning is three rocks on the shoulder or center line of the road.

We were towing light trailers and drove 45-50 miles per hour on the straight stretches; this is not a high speed highway.

Mr. Smullen should have stopped in Santa Rosalia. There is an excellent bakery (*panaderia*) and, most important, an ice plant. Also, we found it more economical and convenient to change our dollars or cash traveler's checks and obtain pesos at a bank. One usually loses a little in the exchange when paying with dollars, especially for gasoline.

We had a most enjoyable and interesting trip to Mulege and Loreto in late March.

STERLING KENDRICK,
Ridgecrest, California.

We have just finished reading Mr. Smullen's article on the new Baja Highway, and enjoyed it very much.

We drove it as far as Bahia Concepcion in mid-May, and can report to your readers that government-sponsored gas stations along the way are all open, whether completed or not. So there is no trouble finding gas. The *paradors* were still being completed, but most seemed to be open, as were the hotels at San Ignacio and Santa Inez.

Mr. Smullen has a more optimistic view of the dangers of the highway than we do. With NO shoulder, in fact usually a four-foot or more drop-off, plus the hazard of foot-high square-ended culvert tops, there is little leeway and no escape in case the other fellow crowds you or blinds you, or an animal or a car looms up ahead of you. It is also difficult to get out of the way of others if you have mechanical or tire trouble.

Senora Espinosa, a long-respected gas station, store and restaurant owner of El Rosario, advised us to never drive it at night and to always use great care, especially on curvy parts of the road where curves are not banked, making it impossible to see ahead. She knows whereof she speaks!

BETTY MACKINTOSH,
Chula Vista, California.

Calendar of Events

SEPTEMBER 21, Third Annual California Searchers Hunt, 1:00, Historic Pena Adobe near Vacaville, Calif. General Hunt, Ladies Hunt, Junior Hunt. All TH'ers welcome. For registration information, contact: Ed Tanner, 415-223-3388.

SEPTEMBER 21, "Recreation in Rocks" sponsored by the Peninsula Gem and Geology Society, Rancho Shopping Center, Foothill Expressway & South Springer Rd., Los Altos, Calif. Featuring gold panning, cutting material, handmade jewelry, cut geodes, etc. No Dealers.

OCTOBER 4-13, London Bridge Days, Lake Havasu City, Arizona. Third anniversary of the opening of historic London Bridge on the lower Colorado River.

OCTOBER 5 & 6, Second annual Bisbee Gem and Mineral Show, National Guard Armory, Bisbee, Ariz. Exceptional exhibitions by noted collectors and dealers.

OCTOBER 12-13, San Fernando Valley Mineral & Gem Society's Annual Show, North Hollywood at the Valley Plaza Recreation Center, 12240 Archwood St. No admission. Displays, auction, club sales, dealers, demonstrations. Contact: Opal Cockey, 6306 Camelia Ave., North Hollywood, Calif. 91606.

OCTOBER 19 & 20, Long Beach Mineral & Gem Society's 30th Annual Show, "Carnival of Gems," 2175 Cherry Ave., at Hill St., Signal Hill, Calif. Admission free. Dealers, exhibits. Chairman: Frank Teringer, 3935 W. 60th St., Los Angeles, Calif. 90043.

OCTOBER 19 & 20, Daly City Rockhounds Inc., 10th Annual "Golden Gate Gem & Mineral Show," War Memorial Bldg., 6655 Mission St., Daly City, Calif. Dealer space available. Contact: Mary Louise Froese, P.O. Box 596, Daly City, Calif. 94017.

NOVEMBER 2 & 3, "Galaxy of Gems" sponsored by the Oxnard Gem and Mineral Society, Esplanade Shopping Mall, Oxnard, Calif. Exhibits, Dealers, demonstrations. Free parking. Space provided for self-contained campers. Contact: Dan Lounsbury, 1024 Corsicana Dr., Oxnard, Calif. 93030.

BOOKS FOR BAJA LOVERS



BEACHES OF BAJA by Walt Wheelock. Beaches on the Pacific side of Lower California are described by the veteran Baja explorer. Unlike California beaches, they are still relatively free of crowds. Paperback, illustrated, 72 pages, \$1.95.

JOURNEY OF THE FLAME by Walter Nordhoff. The most exciting tale of early Baja and Alta California ever written. Recounts lost treasure legends and is accurate historical account presented in fictional style. Hardcover, \$4.95.

CAMPING AND CLIMBING IN BAJA by John W. Robinson. Contains excellent maps and photos. A guidebook to the Sierra San Pedro Martir and the Sierra Juarez of upper Baja Calif. Much of this land is unexplored and unmapped still. Car routes to famous ranches and camping spots in palm-studded canyons with trout streams tempt weekend tourists who aren't up to hiking. Paperback, 96 pages, \$2.95.

BYROADS OF BAJA by Walt Wheelock. In addition to describing the many highways now being paved, this veteran Baja explorer also tells of back country roads leading to Indian ruins, missions and abandoned mines. Paperback, illustrated, 72 pages, \$1.95.

BAJA [California, Mexico] by Cliff Cross. Updated to include the new transpeninsular highway, the author has outlined in detail all of the services, precautions, outstanding sights and things to do in Baja. Maps and photos galore, with large format. 170 pages, \$3.95.

BAJA CALIFORNIA by Choral Pepper. Packed in this comparatively small book is a world of facts about the land, the insects, vegetation, the seashore, the missionaries, vanished missions, lost treasures and strange stories, tall and true, of Baja California. Fascinating reading. Paperback, 126 pages, \$1.95.

BAJA CALIFORNIA OVERLAND by L. Burr Belden. Practical guide to Lower California as far as La Paz by auto with material gleaned from extensive study trip sponsored by University of California. Includes things to see and accommodations. Paperback, \$1.95.

PALM CANYONS OF BAJA CALIFORNIA by Randall Henderson. The beautiful palm canyons and isolated areas of Baja California are described by the late Randall Henderson, founder of DESERT Magazine. Although these are his personal adventures many years ago, little has changed and his vivid writing is alive today as it was when he first saw the oases. Paperback, illustrated, 72 pages, \$1.95.

LOWER CALIFORNIA GUIDE BOOK by Gerhard and Gulick. Veteran travelers would not venture south of the border without this authoritative volume. It combines the fascinating history of every location, whether it be a town, mission or abandoned ranch, with detailed mileage maps and locations of gasoline supplies, water and other needed information on Baja. 243 pages with 3-color folded map, 16 detailed route maps, 4 city maps, 22 illustrations. Hardcover, \$6.50.

THE BAJA BOOK, A Complete Map-Guide to Today's Baja California by Tom Miller and Elmar Baxter. Waiting until the new transpeninsular highway opened, the authors have pooled their knowledge to give every minute detail on gas stations, campgrounds, beaches, trailer parks, road conditions, boating, surfing, flying, fishing, beachcombing, in addition to a Baja Roadlog which has been broken into convenient two-mile segments. A tremendous package for every kind of recreationist. Paperback, 178 pages, illus., maps, \$7.95.

FLORA OF BAJA NORTE by Tina Kasbeer. The author is a botanist who spends all her free time in Baja and writes in detail of the endemic plants of the country. Describes the use of certain plants for medicinal purposes by the Indians and residents. Paperback, illus. 36 pages, \$1.00.

Order From

DESERT MAGAZINE BOOK SHOP

Box 1318, Palm Desert, California 92260

Please Add 25 Cents Per Order for Handling and & Postage

California Residents add 6% State Sales Tax



Stability is more than a word.

Stability or flamboyance. One will survive under stress. For a quarter of a century Silver Streak produced a luxury recreational vehicle aircraft constructed to meet the most rigorous tests of the road. The success is legend. Stability means endurance. In recent indecisive times the Silver Streak name stood strong. Production didn't hesitate, quality never faltered. When you

own a Silver Streak travel trailer or motorhome, you have a product that has proved itself for a long time. And it's here to stay. That's stability.

Water-Guard purifier is standard equipment on all models.

Send for literature and location of your nearest dealer.

SILVER STREAK

Silver Streak Trailer Company Dept. 742
2319 N. Chico Ave., So. El Monte, Calif., 91733 (213) 444-2646 283-6372