

JULY, 1976 75c

# Desert

MAGAZINE OF THE SOUTHWEST



CARL G. BRAY

Come  
visit us...

A GREAT SELECTION  
OF BOOKS ON THE WEST

SUMMER HOURS  
Monday—Friday: 10 - 3  
Closed Weekends

*Desert* MAGAZINE  
BOOK SHOP

74-425 Highway 111  
at Deep Canyon Road  
in  
Palm Desert, California

# Back Issue Bargains

1969—11 issues  
only—Feb.-Dec.

**\$2<sup>50</sup>**

Complete  
'66, '67, '68  
'70, '71, '72, '73  
Volumes

**\$4<sup>00</sup>**

Each

1974  
Volume

**\$4<sup>50</sup>**

1975  
Volume

**\$5<sup>00</sup>**

"Rain Barrel"  
Assorted Issues  
1959 to 1965

**\$4<sup>00</sup>**

Package of 20

Mail all orders to:  
DESERT Magazine  
Box 1318  
Palm Desert, Calif. 92260

Check or money order  
must accompany  
your order



WILLIAM KNYVETT, *Publisher-Editor*

GEORGE BRAGA, *Art Director*

MARY FRANCES STRONG, *Field Trip Editor*

F. A. BARNES, *Utah Associate Editor*

GLENN VARGAS, *Lapidary Editor*

K. L. BOYNTON, *Naturalist*

MARVEL BARRETT, *Circulation Manager*



Volume 39, Number 7

JULY 1976

## CONTENTS

### FEATURES

- AMERICA'S BIRTHDAY 100 YEARS AGO 10 *Betty Shannon*
- GOLD HILL, NEVADA 14 *Howard Neal*
- IN THE FOOTSTEPS OF PADRE GARCES 16 *Mary Frances Strong*
- "RUBBER DUCKS" 20 *Ken Marquiss*
- CARL G. BRAY 24 *Western Art*
- BANNERTAILS 28 *K. L. Boynton*
- LAKE POWELL BY AIR 32 *F. A. Barnes*
- WHITE'S CITY 36 *Fred S. Cook*
- UNIFORMS, ACCOUTREMENTS AND WEAPONS  
OF THE U.S. CAVALRY 38 *William Zito*

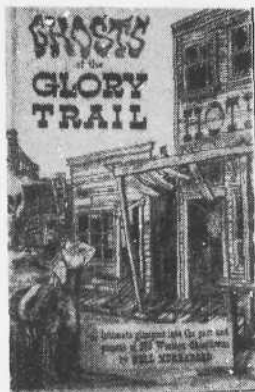


THE COVER:  
Desert smoketree, by Carl  
G. Bray, Indian Wells,  
California.

### DEPARTMENTS

- A PEEK IN THE PUBLISHER'S POKE 4 *William Knyvett*
- BOOKS FOR DESERT READERS 8 *Book Reviews*
- RAMBLING ON ROCKS 42 *Glenn and Martha Vargas*
- LETTERS TO THE EDITOR 47 *Readers' Comments*
- CALENDAR OF WESTERN EVENTS 47 *Calendar of Western Events*

EDITORIAL AND CIRCULATION OFFICES: 74-425 Highway 111, Palm Desert, California 92260. Telephone Area Code 714 346-8144. NATIONAL ADVERTISING OFFICES: JE Publishers' Representative, 8732 Sunset Blvd., Los Angeles, California 90069. Telephone Area Code 213 659-3810. 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 1976 by DESERT Magazine and permission to reproduce any or all contents must be secured in writing. Unsolicited manuscripts and photographs will not be returned unless accompanied by a self-addressed and stamped envelope.



**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.



**30,000 MILES IN MEXICO** by Nell Murbarger. Joyous adventures of a trip by pick-up camper made by two women from Tijuana to Guatemala. Folksy and entertaining, as well as instructive to others who might make the trip. Hardcover, 309 pages. \$6.00.

Order from

**Desert Magazine Book Shop**  
Box 1318, Palm Desert, Calif.  
Calif. Res. add 6% sales tax

## Lowest Photo Print Prices Highest Quality

KODACOLOR FILM  
DEVELOPED & PRINTED

Standard 12 Jumbo Prints.....2.18

Standard 12 Jumbo Prints and

New Roll of KODACOLOR .....3.34

Kodacolor Neg. Standard reprints......15

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. D.**

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

# A Peek in the Publisher's Poke

IT WAS 200 years ago that this country was founded and it is fitting to include three articles in this issue concerning our historic past.

The Mojave Desert is a vast area, but in our modern world distances shrivel with air and auto travel. In 1776, Father Francisco Garces, accompanied by only a few Indians, made his way across this formidable desert. To commemorate the Bicentennial year, Mary Frances Strong retraces those footsteps of 200 years ago.

We all know the West was wild, so authoress Betty Shannon did a little research on how certain towns celebrated the country's birthday 100 years ago. She came up with a yarn that reveals just how wild it got, and I hope that any celebration of the Bicentennial will be a lot tamer!

One hundred years ago also marks the famed Battle of Little Big horn, where General George Custer died in combat. William Zito has contributed a photo layout, dedicated to all those brave men, depicting the uniforms and weapons of that era.

One of the desert's most unique plants is the Smoke tree, and artist Carl G. Bray has been painting them for years. He created this month's cover especially for *Desert Magazine* and estimates that he has done over 6000 of these delicate trees. This work and other selected pieces are on display in our gallery.

Also in this issue: Naturalist K. L. Boynton describes the ways and wiles of the Bannertail kangaroo rat, Ken Marquiss recounts a possible site for buried coins in a feature titled, "Rubber Ducks;" F. A. Barnes is up in the air over Lake Powell; Howard Neal takes us to Gold Hill, Nevada and Fred Cook travels to New Mexico and gives an account of White's City.

Preserve Your Issues  
For Travel Guides and  
Reference in a

## Desert BINDER

Each library-style brown vinyl binder holds 12 issues of *Desert Magazine*. An ideal gift for friends who constantly refer to *Desert* as a source of information on all of the West.

Postpaid **Only 4.50**

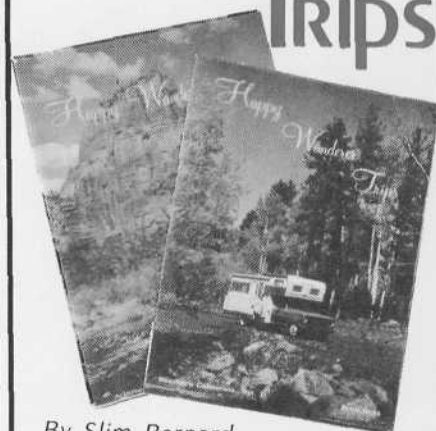
BE SURE TO STATE WHAT YEAR YOU WANT  
PRINTED IN GOLD ON THE BINDER

Send check or money order to

**Desert** MAGAZINE

Palm Desert, California 92260

# 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



# A Special Guidebook Offering!

Great reading about the West from the pens of such authors as Russ Leadabrand, Choral Pepper, Marjorie Camphouse and the Society of American Travel Writers. Informative little books that will make your future trips more enjoyable. Well illustrated, paperback. Supplies are limited.

ONLY . . . **\$1.95**  
EACH

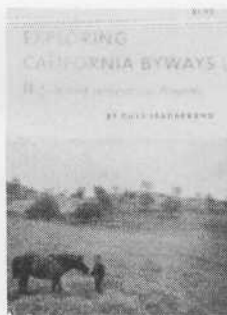
any **3** for **\$5.00**

Plus 25c per order for postage/handling  
California residents please add 6% sales tax

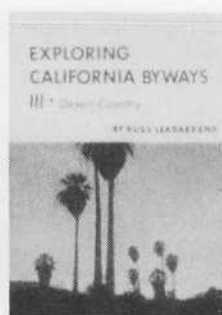
ORDER TODAY FROM

**Desert Magazine Book Shop**

Box 1318, Palm Desert, California 92260



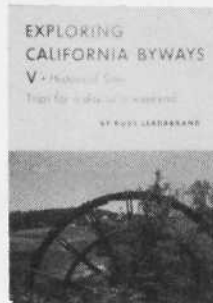
Exploring Calif. Byways  
#II In and around  
Los Angeles



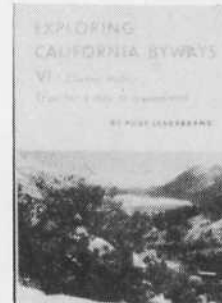
Exploring Calif. Byways  
#III Desert Country



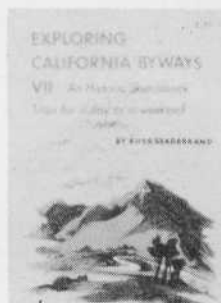
Exploring Calif. Byways  
#IV Mountain Country



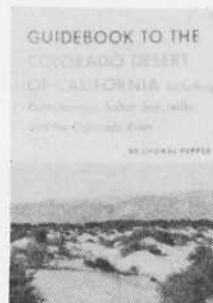
Exploring Calif. Byways  
#V Historical Sites



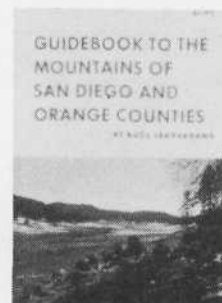
Exploring Calif. Byways  
#VI Owens Valley



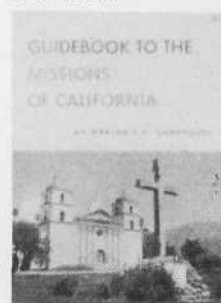
Exploring Calif. Byways  
#VII An Historic  
Sketchbook



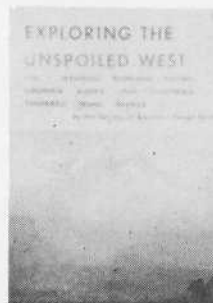
Guidebook to the  
Colorado Desert  
of California



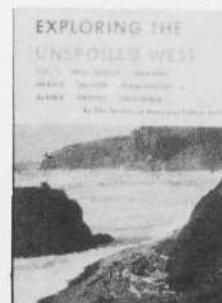
Guidebook to the  
Mountains of San Diego  
and Orange Counties



Guidebook to the  
Missions of California



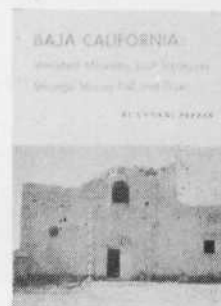
Exploring the Unspoiled  
West Vol. 1  
Wyoming, Montana,  
British Columbia,  
Alaska, Utah, Calif.,  
Colorado, Idaho,  
Nevada



Exploring the Unspoiled  
West Vol. 2  
New Mexico, Arizona,  
Mexico, Oregon,  
Washington, Alaska,  
Hawaii, California



Exploring Historic  
California



Baja California

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

# BOOKS OF

**GHOST TOWN ALBUM** by Lambert Florin. Over 200 photos. Fascinating pictorial accounts of the gold mining towns of the Old West—and the men who worked them. Large format, 184 pages, profusely illustrated, hardcover, originally published at \$12.50, new edition \$4.95.

**HOPI KACHINA DOLLS** [With a Key to Their Identification], by Harold S. Colton. Kachina dolls are neither toys nor idols, but aids to teaching religion and tradition. This is a definitive work on the subject, describing the meaning, the making and the principal features of 266 varieties of Kachina dolls. Line drawings of each variety, plus color and b/w photos make it a complete guide to learn more of the richness of American Indian culture. paperback, 150 pages, \$3.45.

**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.

**BACK ROADS OF CALIFORNIA** by Earl Tholander and the Editors of Sunset Books. Early stagecoach routes, missions, remote canyons, old prospector cabins, mines, cemeteries, etc., are visited as the author travels and sketches the California Backroads. Through maps and notes, the traveler is invited to get off the freeways and see the rural and country lanes throughout the state. Hardcover, large format, unusually beautiful illustrations, 207 pages, \$10.95.



**JESSE JAMES WAS ONE OF HIS NAMES** by Del Schrader [with Jesse James III]. According to the author, Jesse James did not die as recorded in history, but lived to a ripe old age. This book details the lively escapades Jesse was supposed to be involved in following his attendance at "his own funeral." Interesting and exciting reading based on information supplied by Jesse James III, executor of his grandfather's will. Hardcover, illustrated with old photos, 296 pages, index, \$8.95.

**GEM MINERALS OF IDAHO** by John Beckwith. Contains information on physical and optical characteristics of minerals: the history, lore and fashioning of many gems. Also eleven rewarding field trips to every sort of collecting area. Slick paperback, maps and photos, 123 pages, \$3.95.

**LOST MINES OF ARIZONA** by Harold Weight. Covers the Lost Jabonero, lost mines of the Trigos, Buried Gold of Bicuner and others of southwestern Arizona. Paperback, \$2.00.

**REPTILES AND AMPHIBIANS OF THE AMERICAN SOUTHWEST** by M. M. Heymann. Features 68 species, all in beautiful four-color photographs. Descriptions are stated in simple, non-technical terms. Extensive text tells of their origins and life-styles today. Extremely useful book for all who enjoy watching and learning about wildlife. Paperback, 77 pages, \$4.95.

**NEW BAJA HANDBOOK** for the Off-Pavement Motorist in Lower California by James T. Crow. Discover the real Baja that lies beyond the edge of the paved road, the unspoiled, out-of-the-way places unknown to the credit-card tourist. The author, drawing from his extensive travels in these parts, tells where to go, what to take along, the common sense of getting ready. Illustrated, paperback, 95 pages, \$3.95.

**SAN BERNARDINO MOUNTAIN TRAILS** by John W. Robinson. Easy one-day and more rugged hiking trips into the historic mountains. The 100 hiking trails are described in detail and illustrated so you will not get lost. Heavy paperback, 257 pages, \$5.95.



**GOLD RUSHES AND MINING CAMPS OF THE EARLY AMERICAN WEST** by Vardis Fisher and Opal Laurel Holmes. Few are better prepared than Vardis Fisher to write of the gold rushes and mining camps of the West. He brings together all the men and women, all the fascinating ingredients, all the violent contrasts which go to make up one of the most enthralling chapters in American history. 300 illustrations from photographs. Large format, hardcover, boxed, 466 pages, \$17.95.

**DESERT GEM TRAILS** by Mary Frances Strong. The "bible" for both amateur and veteran rockhounds and backcountry explorers, DESERT Magazine's Field Trip Editor has brought up-to-date her popular field guide. Areas have been deleted which are now closed to the public, and maps updated. Heavy paperback, 80 pages, \$2.00.

**GHOST TOWNS OF THE WEST** by Lambert Florin. This popular hard-back series is now available in paperback volumes. Rearranged state by state, lavishly illustrated, handy to take along while traveling. Please state which volume when ordering: Arizona-\$2.95; California-\$3.95; Colorado/Utah-\$2.95; Nevada-\$2.95; Oregon-\$2.95.

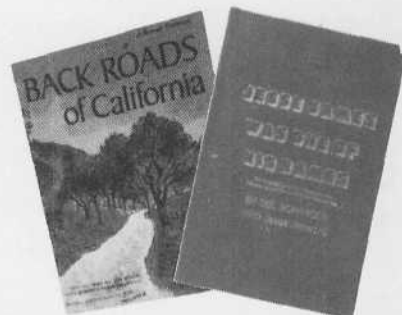
**WHERE TO FIND GOLD IN THE MOTHER LODGE** by James Klein. As in his *Where to Find Gold in the Desert* and *Where to Find Gold in Southern California*, author Klein guides you to the areas in which people are doing the best now. He includes history, tips on equipment needed, how to pan, how to stake claims, etc. Paperback, 121 pages, illustrated with photos and maps, \$4.95 each.

**FORKED TONGUES AND BROKEN TREATIES** Edited by Donald E. Worcester. This book gives us a better understanding of the unequal struggle of native against immigrant while our nation was being explored and settled. Profusely illustrated with excellent photos, a "must" reference for historians, students, librarians. Hardcover, 494 pages, \$9.95.

**ENCOUNTER WITH AN ANGRY GOD** by Carobeth Laird. A fascinating true story of the author's marriages to anthropologist John Peabody Harrington, the "angry god," and to the remarkable Chemehuevi Indian, George Laird. The appeal of this amazing memoir is so broad it has drawn rave reviews throughout the country and is being hailed as a classic. Hardcover, 230 pages, \$8.95.

**GUIDE FOR INSULATOR COLLECTORS** by John C. Tibbitts. This is the third and final book on insulators by veteran bottle collector John Tibbitts. This third book has a revised price list and index to insulators described in the previous two volumes. However, each volume describes insulators not shown in the other books, so for a complete roundup of all insulators, all three volumes are needed. Books are paperback, averaging 120 pages, illus., \$3.00 EACH. Please state WHICH VOLUME when ordering.

**HANS KLEIBER, Artist of the Bighorn Mountains** by Emmie Mygatt and Roberta Cheney. A man who loved nature above all, this legacy of Hans Kleiber's superb etchings and paintings is admirably presented by the authors as a glimpse into the experiences which served as background and inspiration for his art. Horizontal 8½x11 format, 74 etchings, 22 paintings, aquatints, photographs, cloth bound, boxed, \$17.95.



**HISTORICAL ATLAS OF NEW MEXICO** by Warren A. Beck and Ynez D. Haase. Geographical data, sites of prehistoric civilizations, events of history, first towns, stagecoach lines, historic trails, etc., are included in this comprehensive atlas. Excellent maps, index. Hardcover, highly recommended, \$5.95.

**HISTORICAL ATLAS OF CALIFORNIA** by Warren A. Beck and Ynez D. Haase. Extensive documentation and pertinent detail make this atlas a valuable aid to the student, scholar and everyone interested in the Golden State. 101 excellent maps present information on the major faults, early Spanish explorations, Mexican land grants, routes to gold fields, the Butterfield and Pony Express routes, CCC camps, World War II Installations, etc. Hardcover, extensive index, highly recommended, \$9.95.

**THE CREATIVE OJO BOOK** by Diane Thomas. Instructions for making the colorful yarn talismans originally made by Pueblo and Mexican Indians. Included are directions for wall-hung ojos, necklaces, mobiles and gift-wrap tie-ons. Well illustrated with 4-color photographs, 52 pages, paperback, \$2.95.

**THE CARE OF DESERT REPTILES** by Karl H. Switak. This small, but informative booklet contains 4-color photos of all species included, and were photographed in their native habitat. Interesting information regarding Distribution; Size; Food, and Care. \$1.50.



# THE WEST

California residents  
please add  
6% state sales tax

Please add 25c for postage & handling

**SUCCESSFUL COIN HUNTING** by Charles L. Garrett. An informative study of coin hunting, this is a complete guide on where to search, metal detector selection and use, digging tools and accessories, how to dig and the care and handling of coins. A classic book in the field. 181 pages, paperback, \$5.00.

**TALES OF THE SUPERSTITIONS, The Origins of The Lost Dutchman Legend** by Robert Blair. An intriguing and well documented account of the fabulous Lost Dutchman, the author turns up new clues and signatures which will prove to be both a setback and a stimulus to the search for the legendary mine. Paperback, 175 pages, \$4.95.

**TO HELL ON WHEELS** by Alan H. Siebert. A must for every desert traveler, this is not just another survival book, it is a manual of mobility for the recreational vehicle drive who is looking for something more than the organized campground. Highly recommended for both the newcomer and old-timers. Paperback, 64 pages, well illustrated, \$2.95.

**THE LIFE OF THE DESERT** by Ann and Myron Sutton. This fascinating volume explains all the vital inter-relationships that exist between the living things and the physical environment of our vast desert regions. More than 100 illustrations in full color. Helpful appendices contain comprehensive index and glossary. Special features on endangered species, lizards and poisonous animals. Hardcover, 232 pages, profusely illustrated, \$5.50.



**CALIFORNIA GOLD CAMPS**, a Geographical and Historical Dictionary of Camps, Towns and Localities Where Gold Was Found and Mined, and of Wayside Stations and Trading Centers, by Erwin G. Gudde. Includes 7 excellent maps, in addition to a List of Places by County, a Glossary and Bibliography. Highly recommended. Hardcover, 467 pages, \$19.50.

**THE CAVE PAINTINGS OF BAJA CALIFORNIA, The Great Murals of an Unknown People** by Harry Crosby. A sequel to his *The King's Highway in Baja California*, the author presents a tantalizing disclosure of a sweeping panorama of great murals executed by an unknown people in a land which has barely been penetrated by man. Beautifully illustrated with color reproductions of cave paintings and sketches of figures which appear on cave walls in four different mountain ranges. Hardcover, large format, 174 pages, \$18.50.

**GOLD RUSH COUNTRY** by the Editors of Sunset Books. A revised and up-dated practical guide to California's Mother Lode country. Divided into geographical areas for easy weekend trips, the 8x11 heavy paperback new edition is profusely illustrated with photos and maps. Special features and anecdotes of historical and present day activities. Four-color cover, 96 pages, \$2.95.

Desert/July 1976

**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 format, 700 photographs, hardcover, 492 pages, \$15.00.

**BAJA CALIFORNIA GUIDEBOOK** by Walt Wheelock and Howard E. Gulick, formerly Gerhard and Gulick's *Lower California Guidebook*. This totally revised fifth edition is up-to-the-minute for the Transpeninsular paved highway, with new detailed mileages and descriptive text. Corrections and additions are shown for the many side roads, ORV routes, trails and little-known byways to the desert, mountain, beach and bay recesses. Folding route maps are in color and newly revised for current accuracy. Indispensable reference guide, hardcover, \$10.50.

**BOOK OF CACTUS** by Harry C. Lawson. Written for the amateur, this book tells how to plant, care for and identify cactus found in the West. The 36 pages contain 409 small photographs and descriptions of the plants. Paperback, \$2.00.



**CALIFORNIA-NEVADA GHOST TOWN ATLAS and SOUTHWESTERN GHOST TOWN ATLAS** by Robert Neil Johnson. These atlases are excellent do-it-yourself guides to lead you back to scenes and places of the early West. Some photos and many detailed maps with legends and bright, detailed descriptions of what you will see; also mileage and highway designations. Heavy paperback, each contains 48 pages, each Atlas priced at \$2.00.

**MY CANYONLANDS** by Kent Frost. A vivid account of the early exploration of Utah's Canyonlands by the author who spent his entire life exploring America's new national park and who presently runs a guide service through the scenic country. Hardcover, artist illustrations, 160 pages, \$5.00.

**GOLD DIGGERS ATLAS** by Robert Neil Johnson. Maps covering the areas from California east to Texas and north to British Columbia show where gold has been found. Gives likely sites of "buried treasure tales" such as the Lost Breyfogle Ledge, Lost Adams Cave, Lost Arch Mine, Lost mule Shoe Gold, Lost Black Rock Silver and many more. Paperback, \$3.00.

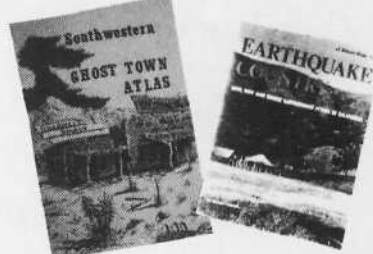
**CALIFORNIA YEARBOOK, Bicentennial Edition.** Contains 25 separate chapters covering all aspects of the state. Comprehensive index of names, places, topics and events. 400 pages of accurate, up-to-date information and statistics. Large format, paperback, \$4.95.

**MINES OF THE MOJAVE** by Ron and Peggy Miller covers the numerous mining districts running across the upper Mojave Desert from Tropic, west of the town of Mojave, to Mountain Pass, a little west of the Nevada border. Paperback, 67 pages, \$2.50.

**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.

**ROADSIDE GEOLOGY of U.S. Interstate 80 Between Salt Lake City and San Francisco.** Written for the layman, text paragraphs are keyed to colorful maps so that specific features can be studied and identified. Scenic attractions, famous mining areas and rockhounding areas are included as well as a reference page for further reading, a geologic time scale in color and an extensive glossary of terms. Large format, slick paperback, \$3.00.

**TOP BOTTLES U.S.A.** by Art and Jewel Umberger. The discovery of a rare old bottle opens up a new understanding of life at an earlier period. A collection of old medicine bottles takes one back to a slower, less complicated life-style. A time when a concoction of aromatic bitters could cure almost anything. The authors have an expertise in their field that cannot be challenged. Illustrated, paperback, \$4.50.



**BAJA CALIFORNIA GUIDE** by Cliff Cross includes highway information on the new transpeninsula highway, accommodations, etc. All updated material, 60 maps, 450 photos, large format, \$4.95.

**TREASURE HUNTER'S MANUAL #7** by Karl von Mueller. Treasure, or treasure trove, may consist of anything having a cash or convertible value; money in all forms, bullion, jewelry, guns, gems, heirlooms, genuine antiques, rare letters and documents, rare books and much, much more. This complete manual covers every facet of treasure hunting. Paperback, 293 pages, illustrated, \$6.50.

**UTAH GEM TRAILS** by Bessie W. Simpson. Newly revised edition for the casual rockhound or collector interested in collecting petrified wood, fossils, agate and crystals. The book does not give permission to collect in areas written about, but simply describes and maps the areas. Paperback, illustrated, maps, \$3.50.

**WILDLIFE OF THE SOUTHWEST DESERTS** by Jim Cornett. Written for the layman and serious students alike, this is an excellent book on all of the common animals of the Southwest deserts. A must for desert explorers, it presents a brief life history of everything from ants to burros. Paperback, 80 pages, illustrated, \$2.99.

# COOK BOOKS

For the outdoor enthusiast,  
and those who like to flavor  
their life with the unusual

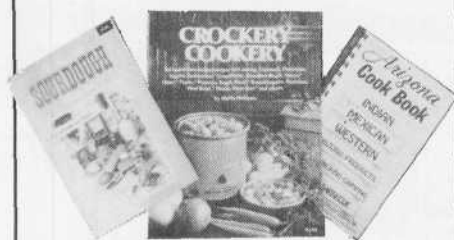


**ROUGHING IT EASY** by Dian Thomas, puts the fun back into camping with easy and economical ways to prepare foods, equip a campsite and organize a camping trip. Paperback, 203 pages, \$5.95.

**AMERICAN INDIAN FOOD AND LORE** by Carolyn Neithammer. Original Indian plants used for foods, medicinal purposes, etc., described, plus unusual recipes. Large format, 191 pages, profusely illustrated, \$4.95.

**DUTCH OVEN COOK BOOK** by Don Holm. New and exciting culinary adventures in Dutch Oven cooking. Heavy paperback, 106 pages, \$3.95.

**CACTUS COOK BOOK** compiled by Joyce L. Tate. An excellent selection of recipes that emphasize their edible or potable qualities. Also includes chapter on Food Preservation. Paperback, 127 pages, \$2.00.



**SOURDOUGH COOKBOOK** by Don and Myrtle Holm. How to make a sourdough starter and many dozens of sourdough recipes. Paperback, 136 pages, illus., \$3.95.

**CROCKERY COOKERY** by Mable Hoffman. 262 tested slow-cooker recipes. Contains Consumer's Guide to various pots, temperature charts and details on how the recipes work with each pot. 176 pages illus., \$4.95.

**ARIZONA COOK BOOK** by Al and Mildred Fischer. Unusual recipes for Indian cooking, Mexican dishes, Western specialties. Unique collection. Paperback, 142 pages, \$3.00.

Add 25c per order for postage/handling  
California residents please add 6% Sales tax

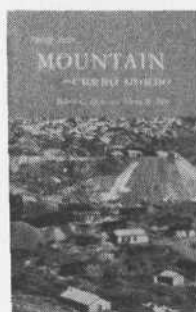
Send check or money order today to

**Desert Magazine Book Shop**

P. O. Box 1318  
Palm Desert, California 92260

## 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.



### FROM THIS MOUNTAIN— CERRO GORDO

By Robert C. Likes  
and  
Glenn R. Day

The mining outpost of Cerro Gordo  
produced silver in such quantities that

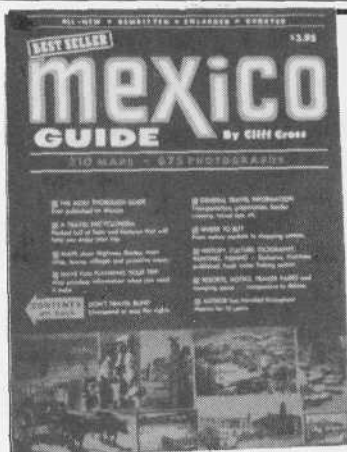
the bullion bars piled up along the shore  
of Owens Lake awaiting shipment. The  
freighting of this silver to Los Angeles,  
plus supplying the miners on the return  
trip, changed Los Angeles from a sleepy  
village into a thriving city that has never  
stopped growing.

The authors tell about the height of  
the boom, then the decline of "Fat Hill."  
Beaudry, Belshaw, Remi Nadeau, earth-  
quake of 1872, the "Bessie Brady,"  
Stevens' Mill in Cottonwood Canyon, the  
kilns, the "Molly Stevens," Keeler and  
the tramway . . . the entire history of this  
area is told in detail.

Bob Likes moved from the East to  
California in 1961. It was intriguing to  
him that in the East the towns, once es-  
tablished, continued to grow, while here  
in the West, you can roam entire towns  
that have been deserted. This designer  
in manufacturing automation became  
president of the Ghost Town Club.  
During this time of researching, finding  
data and taking pictures, he began to  
write articles for *Desert Magazine*.

Planning an article on Cerro Gordo, he  
and Glenn Day found there was very lit-  
tle information available. They teamed  
up to write *From This Mountain—Cerro  
Gordo*. Bob Likes, the technical illustra-  
tor, designer and oil painter, along with  
Glenn R. Day, the manufacturing engi-  
neer and top-notch researcher, have dug  
out much information that makes for in-  
teresting reading.

Paperback, illustrated, \$3.95.



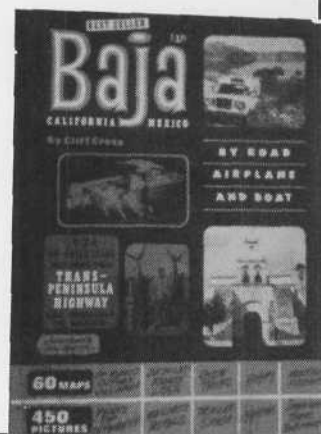
New revised editions of **MEXICO Guide**  
and **BAJA CALIFORNIA Guide** by Cliff  
Cross. All-new, enlarged and updated.  
**MEXICO Guide** contains 210 maps, 675  
photos; **BAJA Guide** includes new  
Transpeninsula Highway and gas avail-  
able in Mexico; 60 maps, 450 photos.  
\$4.95 each.

NOW  
IN  
STOCK

Order from

**Desert Magazine**

Box 1318, Palm Desert, CA 92260  
Calif. Res. add 6% sales tax  
Please include 25c for postage







## DEEP CANYON, A DESERT WILDERNESS FOR SCIENCE

Edited by Irwin P. Ting  
and  
Bill Jennings

Research into the whys and wherefores of desert life, plant and animal, has occupied scientists for centuries and still man does not have all the answers as to how life forms adapt to arid, hot environments. A few answers, but many more to come.

This new book, published by the Philip L. Boyd Deep Canyon Desert Research Center of the University of California, does not offer new answers but concerns itself with a description of one particular canyon in one specific desert, the Colorado of Southeastern California. Lavishly illustrated by the incomparable Ansel Adams, it details the work accomplished at the Center since it was established in 1959.

Twelve chapters describe past, present and perhaps future research activities in specific fields of studies. A general introduction describes Deep Canyon and orients the reader with the canyon's physical location along the eastern escarpment of the Santa Rosa Mountains adjacent to the Coachella Valley.

The editors are the Director and Editor-Administrator for the 14,000-acre reserve, respectively. They also are co-authors along with professors and graduate student-researchers in several fields of biology, geology and Indian studies.

*Deep Canyon, a Desert Wilderness for Science*, is a first in several categories. It is the initial general publication of the Research Center in a series. It is the first effort to describe both for the informed layman and the general scientist the environmental relationships of plants, people and animals in a special area of the Colorado Desert. It is also the first book ever to feature the low-desert photography of Adams. All of his previous

desert efforts have delineated the Death Valley area.

Hardcover in large format, this book includes 22 Adams prints in its 200 pages. A first edition, this volume is \$12.50.

## LOST MINES AND TREASURES OF THE SOUTHWEST

by Jimmie Busher 200 stories 200 maps  
Calif Ariz Nev Utah Colo N.Mex Tex Okla  
Fantastic New Book Wonderful Gift  
Only \$5 postpaid Satisfaction Guaranteed  
Prompt Delivery Send orders to:  
Treasure Book Guides  
Box 368 Mesilla Park, New Mexico 88047

## UPHILL BOTH WAYS Hiking Colorado's High Country

Robert L. Brown

Hiking teaches self reliance, affords pleasure, freedom, and rewards unlike those offered by any other activity today. This book offers a choice selection of hikes. They are grouped by area and all are in Colorado's Rocky Mountains. There are trails of graduated difficulty, including walks for the beginner, and for all who want to see more of Colorado's beautiful high mountain country.

Need suggestions about what to carry, how to build your pack, safety suggestions? This book has these features, and more.

232 pages, 6 x 9 paperbound, photographs and maps . . . . \$4.95

The CAXTON PRINTERS, Ltd.

Box 700

Caldwell, Idaho 83605

## POPULAR ARCHAEOLOGY

This photo is the Crystal Skull from pre-historic Mexico and is only one of the features in this magazine about world-wide archeology. Popular Archaeology, edited by professional archeologists, presents the "Mystery and Excitement of the Search and Excavation" in easy-to-read and well illustrated issues about the history of our civilization; such as, pueblo ruins of the Southwest, Spanish forts, finding of the Monitor, opportunities for amateur field work and current events in American archeology.

Subscription is \$9.75 per year and a second one-year subscription for yourself or a friend is \$7.50

P. O. Box 4190A, Arlington, Virginia 22204



MAYA CRYSTAL SKULL

## COME EXPLORE THE WILDERNESS WITH US

BACKPACKER magazine is . . . for experienced, upscale hikers, backpackers and outdoors enthusiasts. Editorial emphasis is upon the quality of the outdoors experience—not upon elementary "how to's".

Each handsome issue of this richly illustrated bimonthly has over 80 pages of photos and articles by such leading photographers and writers as Colin Fletcher, Ansel Adams, Harvey Manning, Eric Ryback, Elliot Porter, and Galen Rowell.

We feature articles on . . .

- Backpacking trips in pursuit of scientific or historic information
  - Ski touring
  - Hikes for spiritual or esthetic uplift
  - Nature photography with portfolios of color photos and interviews of leading nature photographers
  - In depth backpacking equipment reports
- You can look forward to BACKPACKER every February, April, June, August, October and December.



Please send me a nine-month trial subscription (4 bi-monthly issues) of BACKPACKER magazine at the Special Introductory Subscription rate of \$7.50. This is a savings of 25% off the single copy price.

Add \$ .60 for Canada; \$3.00 for Foreign

☐ Check enclosed. ☐ Money Order enclosed.

7000

Name

Address

City

State

Zip

BACKPACKER MAGAZINE  
28 West 44th Street, New York, N.Y. 10036

# America's Birthday—100 Years Ago

by BETTY SHANNON

*Forest City—July 4, 1876. All the residents turned out for a Centennial portrait at the beginning of their day-long celebration. As was the custom in many mining camps, evergreens decorated the main street. Note the speakers' platform and the banner "Our Country." The pole in the center of the street was a permanent fixture of the tiny Sierra mining camp. It holds aloft "apartments" for purple martins.*

**T**HE FOURTH of July was always cause for celebration in the mining camps of the West. But 100 years ago this month—July 4, 1876—marked a special birthday, our nation's Centennial.



*The "Wallis" and some of the Bald Mountain miners about 1876. This is the little coal-burning locomotive that was used to pull the train of ore cars loaded with Centennial revelers into the Bald Mountain Mine in Forest City. The locomotive was named for Hiram Wallis, superintendent of the mine.*



Just how did our western forefathers observe this once-only, never-again event? Was it a traditional day filled with stirring orations and patriotic songs? A day which stretched into the next as costumed revelers danced until dawn in a bunting-bedecked hall? In many communities, yes. But surprisingly, and perhaps reassuringly, in a number of camps it was not all flag waving followed by a chorus of "Hail, Columbia."

There are several parallels between 1876 and 1976. As the Centennial approached, many Americans worried about the economy. The United States was in the middle of a depression marked by failing banks and rising unemployment. People were appalled by the squalid scandals of the Grant administration as the President's friends and associates faced jail terms on charges of conspiracy to defraud the government and burglary. Then, as now, many Americans had misgivings about the country's future, and this attitude, coupled with the West's flair for rugged individuality, produced a number of unique Centennial observances.

In California, nowhere was the contrast between the traditional and the irreverent as obvious as it was in two Owens Valley communities. Poetry readings, including an original piece titled, "Our Centennial," the Declaration of Independence, and speeches by local orators were the order of the day at Bishop Creek (Bishop). Picnic tables had been set up in the shade at Russell's Mill, where nothing stronger than lemonade, cooled with snow from the Sierra, was served to the celebrants.

"Consequently, all were sober and happy," commented the *Inyo Independent*. "That's the way they always do it on Bishop Creek."

The young people remained for a dance in the evening. But for many, the Centennial reached its culmination when the punk was touched to a stationary piece in the fireworks display, setting off, in a dazzling blaze of glory, the dates "1776-1876."

Some 60 miles to the south, at Lone Pine, the Centennial observance was of an entirely different character, a successful blend of the serious and the absurd. The program had been well advertised in advance throughout the Owens Valley. Men, women and children, some from as far away as Benton, a distance of

*Bald Mountain miners and the train of ore cars that figured prominently in Forest City's Centennial celebration. No doubt these were some of the same miners who participated in the camp's Centennial picnic deep underground in the Bald Mountain mine.*



nearly 100 miles, gathered in Lone Pine to observe and participate in the festivities and foolishness. The crowd, estimated at 1000 happy celebrants, was by any reckoning quite a gathering for the sparsely populated valley.

Company D of the 12th U.S. Infantry, stationed at Camp Independence, no doubt lent an air of decorum to the early activities. The company had arrived in Lone Pine on the 3rd, setting up camp in the plaza.

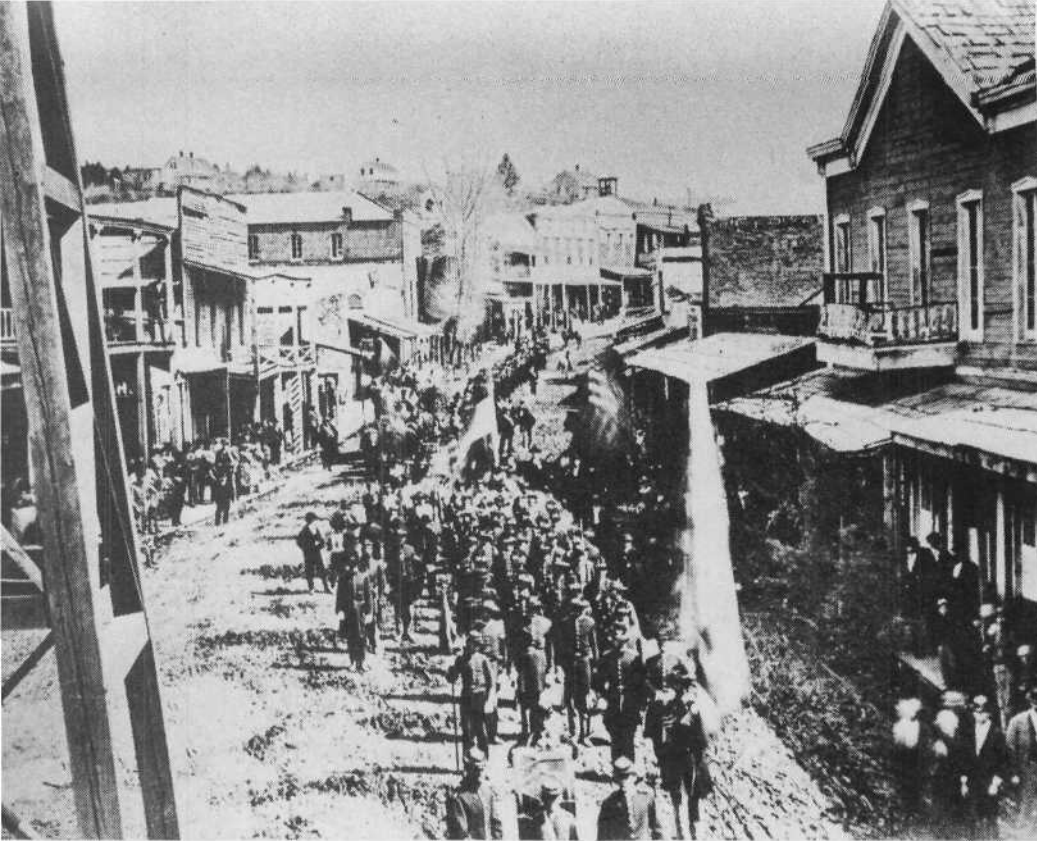
The Centennial observance began officially at sunrise when a seven-man squad from the company fired a 13-volley salute. This was followed by a full dress guard at 7 a.m. The parade, which got under way at 10, was led by the military, a mounted police unit, and a band. Next came the Mexican Society, followed by the Chileno Society, each displaying their national colors, Lone Pine priding itself on its cosmopolitan population. Any and all other citizens, in

carriages or on horseback, were urged to join the procession's fourth and last division.

Following the parade, a lengthy oration, delineating in great detail the county's history, was delivered from a speaker's stand in the plaza. Meanwhile, 16 miles up the road in Independence, a group of local residents calling themselves the Ancient Order of Rowdy Roosters were assembling at Blaney House, the county seat's leading hotel.

After parading and partially delivering their pieces, in a sort of impromptu dress rehearsal for the few who had remained behind in Independence, the group set off for the main show in Lone Pine. Half way there they were met by the Lone Pine Roosters.

In the vanguard, as the combined forces entered town, was a devil, costumed in a fiery red suit complete with horns and tail, who sailed into Lone Pine whirling a raucous sounding rattle



Local residents line Placerville's Main Street to watch the first of the town's two Centennial parades. In the foreground, the Placerville Militia Company in full dress uniform. Note also the evergreens in front of building on the right side of the street.

above his head, the signal for all to turn out for the afternoon's frivolities. The procession was so well received that the Rowdy Roosters paraded through the streets several times.

The Roosters represented a host of costumed characters—Uncle Sam, Father Time, "Bones" with his black face, two grotesque little bankers with a printing press distributing phony bills—but the star of the show was a most outrageously masculine Goddess of Liberty driving "her" own one-horse shay. By Liberty's side was a formidable 16-pounder cannon, which according to the *Inyo Independent*, "was ready to defend her life, liberty, and character, if she had any."

From the speakers' stand the Roosters continued their assault on custom and tradition. To uproarious laughter and applause, key Roosters delivered such pieces as "Joaquin's Pome" (sic), an irreverent spoof in verse on local and national history, and their masterpiece of parody, "The Declamation of Impudence."

The Declamation declared, among other things, "That all men are equal when not blind drunk; that they are endowed with numerous inalienable rights, among these are the right to drink all the

whiskey that they can pay for, bum, or get on tick; to live without work if they can; and liberty to sell tarantula juice to the Piutes on the sly."

Further on, the Declamation delved into the realm of politics. Regarding the Central Pacific Railroad it offered the following resolution: "The Central Pacific is a burdensome tax on the people and a gigantic fraud to which we can never feel fully reconciled until the county allows us a fair share of the swindle and builds us a branch road through the Owens River Valley."

And on the subject of the state capitol distantly located in Sacramento, the audience approved with a rousing cheer the resolution declaring, "The State Capitol is injudiciously located and should be relocated in Saline Valley."

While the Roosters were a localized phenomenon, at least in name, the organization did not have a monopoly on poking fun at American ideals and institutions. The names were different, but their performances took the same light-hearted approach. In Placerville, in the heart of the Mother Lode country, they were the Knights of Huggermugger. In Dutch Flat, they called themselves the Calithumpians. And as with the Rowdy Roosters, the Knights and the Calithum-

pians were not allowed to take over the streets until all others had had their opportunity to pay a fitting and dignified tribute to the Centennial.

Placerville's celebration began with a mid-morning procession of marching units—the military, volunteer firemen, and the lodges; Odd Fellows, Red Men, Grangers, '49ers—followed by several hours of patriotic music and solemn orations in the plaza. Then at three in the afternoon, led by the Sublime Muggins, the costumed, fun-loving Knights of Huggermugger put on what was described in the local paper, the *Mountain Democrat*, as "one of the most gorgeous, fantastic and impressive displays ever held in California." Their parade depicted characters from many nations, wagons carried historical scenes, the Ship of State, and even the Man in the Moon was presented "for the first time." An oration, delivered by their Grand Spouter, delighted the crowd.

In Dutch Flat, the citizens went all out to celebrate the Centennial with a noisy, round-the-clock marathon of activities. Dutch Flat businessmen tried to outdo each other in Centennial decorations. As a result of their enthusiasm, Main Street was a connected garland of wreaths, pictures, flags, flowers, bunting and evergreens.

The Fourth began with a big bang, a 100-gun National salute at sunrise, and finally ended almost 24 hours later when, footsore and weary, the last of those who had attended the Grand Ball stumbled home to their doorsteps. Sandwiched in between were a parade, featuring 38 of Dutch Flat's loveliest young ladies—one representing each state and one depicting the Goddess of Liberty—all on a chariot drawn by 12 horses, a program of patriotic songs, poems, orations and the inevitable reading of the Declaration of Independence, another firearms salute, bellringing, games and amusements, fireworks and even a balloon ascension!

The Calithumpians, described by the *Dutch Flat Forum* as, "a kind of humpback, goggle-eyed, bugle-nosed organization seen only on the Fourth," put in their appearance between the greased pig contest and sack races, and the fireworks. Their procession combined the sublime and the ridiculous, with a free ticket to the ball awarded to the member with the best costume.



Notwithstanding the magnitude of the festivities, the *Forum* reported that the crowd was sober, orderly and well-behaved. For this the saloon keepers were given much of the credit, for they and all other businessmen had closed their doors during the serious part of the ceremonies "with a unanimity never before witnessed in a California mining town."

Sobriety was not the rule, but the exception, in Forest City, a tiny hamlet in Sierra County. After a special service at the Methodist Church, most of the town's population piled into a train of ore cars for a mile-long ride underground into the cavernous turnout area of the Bald Mountain mine, and a most unique Centennial picnic.

However, the train was pulled by a little coal-burning locomotive which couldn't quite build up the necessary horsepower for the difficult uphill haul. When the wheels began slipping the track was sanded and all the men were told to stand up and "push on the caps," that is, the timbers overhead. The strategy was successful. Once inside, the festivities began. Fiddlers provided music while square dancers sashayed to the commands of an expert caller. There were games for the children, plenty of food, and more than enough whiskey.

When the picnic drew to a close, the more sober men picked up the drunks and loaded them into the ore cars. Three of four were dumped into each car, piled one on top of each other, limbs carelessly askew. If the men had had to push on the timbers on the way out, there was not enough able-bodied manpower left to do the job. But fortunately it was a downhill run to the exit. The engine gave a toot, coal smoke poured out, and the train of revelers rumbled out safely into the fading light of a summer evening.

For most the Centennial was recorded as a safe and sane Fourth, with no conflagrations, that bane of all frontier camps, and few major incidents reported. However, one place where tragedy did strike was in Carson City, Nevada. There, while the sunset salute was being fired, a cannon discharged prematurely, killing one man and severely injuring three others. The accident was attributed to either carelessness or inexperience. In San Francisco, gangs of young hoodlums celebrated the Centennial by throwing homemade bombs into street cars.

In remote Alpine County, the Centennial was seen as an ideal opportunity to hold a grand reunion of county residents. Although the impromptu firing of Centennial salutes began on Monday, the 3rd, and lasted until Wednesday evening, the only planned event was a Grand Ball which was held in the Odd Fellows Hall in Monitor on the evening of the Fourth. A midnight supper was served at Dunlap's Hotel, after which dancing resumed and continued until daylight.

The *Alpine Chronicle* reported, "The Centennial holidays passed more jubilantly than the lack of interest on the part of the people seemed to predict. Although we had no processions under a broiling sun, no long-winded orations from the lips of fourth-rate orators, no machine poetry dubbed poems, no murdering of the Declaration, our people enjoyed the Centennial Fourth fully as well as they would have done had we been the victims of the above mentioned abominations."

The little mining camp of North San Juan also dispensed with the speeches and songs. There the Centennial celebration began when an unidentified citizen fired a pistol at five in the morning, followed by the ringing of the lone hotel's bell and raising of the flag on the liberty pole to the resounding cheers of five early risers. Then, according to the local news sheet, the *North San Juan Times*, "The balance of the day was spent by the multitudes of people, 20 in all, in trying to keep cool by drinking Boca beer of which there was a good supply. Taking it all in all the Centennial Fourth will long be noted as a terribly hot day, if nothing more."

And so it was. Whether to those who had experienced it, it was just another hot summer day or a never-to-be-forgotten event, the Centennial passed into history. And with a thought toward the Bicentennial, a century hence, the editor of the *Dutch Flat Forum* wrote, "The day that was looked forward to with pleasure by every American citizen has come and gone, and the springtime of our nation's second century is here. If the growth and prosperity of the past may be taken as a criterion for the future, the inhabitants at the opening of another national centennial year will behold the greatest, wealthiest, and most populous of any of the civilized countries on the globe." □

## The Larian Motel

"Clean - Comfortable - Convenient"

WALT & ELEANOR ROBERTS

Box 224, Highway 80  
Tombstone, Arizona

Phone (602) 457-2272

Walking distance to all attractions



FULL SERVICE REALTY

SIERRA VISTA REALTY

TOMBSTONE OFFICE

Opal Gill, Manager

Ph. (602) 457-3908

429 Allen Street  
Tombstone, Arizona 85638

From the world's largest  
manufacturer/distributor  
of portable mining equipment  
**KEENE ENGINEERING**



**FREE 1976 CATALOG**

KEENE ENGINEERING, Inc. Dept. D  
9330 Corbin Avenue  
Northridge, CA 91324

☐ Send me your FREE 1976 Catalog  
☐ Enclosed is \$7.95. Send me your  
240 page "Dredging For Gold,"  
the book that tells everything  
about underwater gold-dredging.

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

# *Desert* GHOSTS by HOWARD NEAL

## Gold Hill, Nevada

**LOCATION:** Gold Hill is located on Nevada State Highway 80, approximately one mile south of Virginia City and 10 miles east of Carson City.

**BRIEF HISTORY:** It was nearly noon on a warm day in May of the year 1849. A wagon train, under the leadership of a Mormon named John Orr, had paused near the shadow of the mountain to be later called Mount Davidson.

While waiting for the mid-day heat to pass, a member of Orr's group, named William Prouse, idly panned for gold in a nearby canyon. Prouse was elated when he found flakes of the shiny metal in the bottom of his pan. Orr was less impressed. His destination was California. Still, he did name the spot Gold Canyon.

Even in the sparsely populated lands of what was then known as western Utah the word of gold spread quickly. As many as 20 prospectors could be found in Gold Canyon in the summer of 1849. The threat of coming winter was too much, though, so by the end of September the small population of Gold Canyon had disappeared.

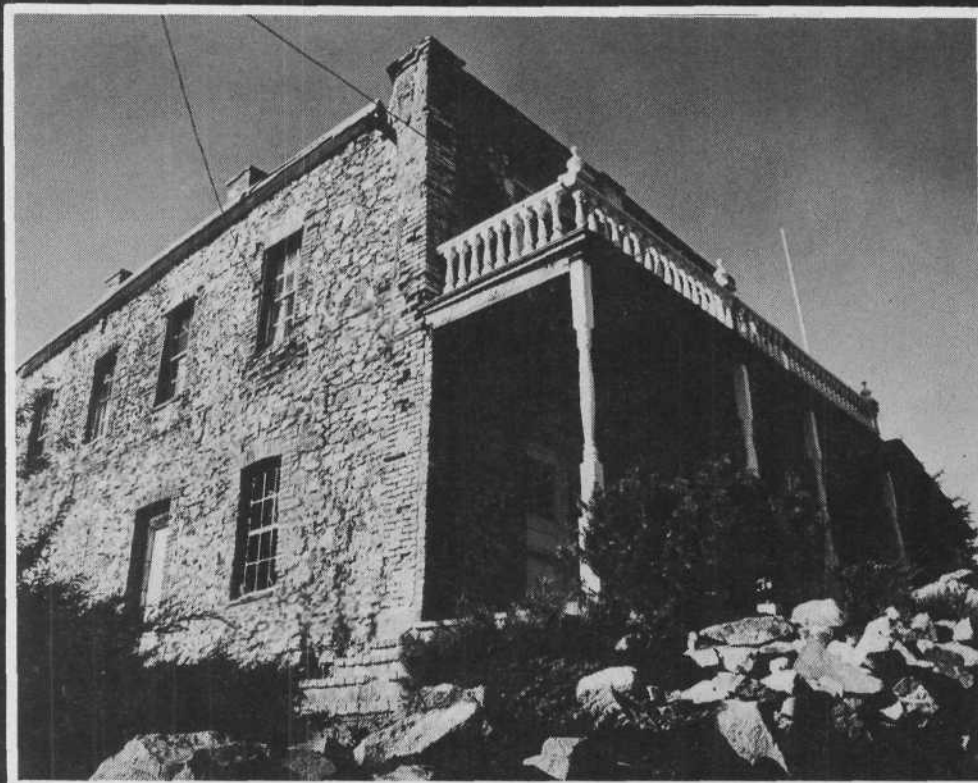
Winter was not the only problem. The placer gold of Gold Canyon was mixed with an annoying blue substance. It would be called Comstock

Silver! The silver of the Comstock Lode would create the second largest city west of the Rockies on the side of Mount Davidson, would finance the prosperity of San Francisco, would underwrite the development of more than one railroad, and it would, within a span of months after its discovery, create a new state called Nevada.

During the 1850s, though, it was gold that shined in the eyes of the prospectors in Gold Canyon. To be sure, some, such as the brothers Allen and Hosea Grosh, knew that there was silver there, with the gold. Yet that blue stuff really slowed the gold recovery so that mining success in the area could, at best, be described as modest.

In 1859 success that had been modest became a bonanza. In January of that year Henry Comstock and James Fenimore located several placer claims in upper Gold Canyon that turned out to be the surface indications of the fabulous lode below. And, a few miles away, others were extracting as much as \$1,000 per day from their gold rockers. The real rush didn't start, though, until an assay showed that the worthless blue-gray ore that the miners were throwing away was worth as much as \$3,000 a ton in silver as well as nearly \$1,000 a ton in gold.

Within weeks it seemed as if half the people in California were crossing the Sierras. At the head



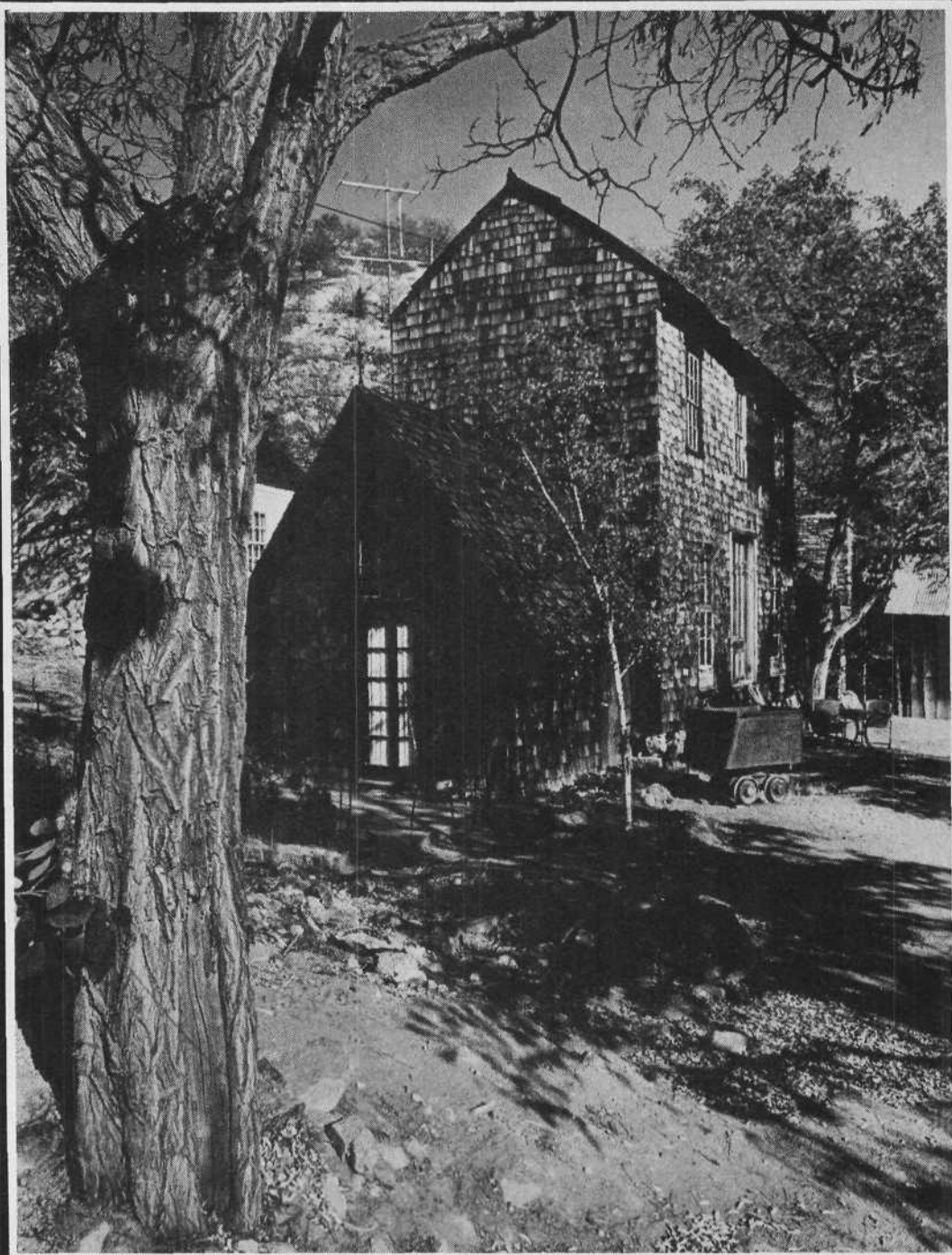
The Gold Hill Hotel was built in 1859. It was the first hotel on the Comstock and, according to a nearby marker, was "The first edifice known to Nevada to be worthy of the name of Hotel."



Part of the original Gold Hill Brewery is now used as a private residence.

The quiet of Gold Hill is in sharp contrast with the honky-tonk atmosphere in nearby Virginia City.

Photographs by Howard Neal.



of Gold Canyon, Gold Hill was born. At first there were only crude shacks and tents. When the Californians started arriving in numbers, though, both the population and prosperity of Gold Hill mushroomed. By the end of 1859 Gold Hill was rivaling its better known sister on the slope of Mount Davidson, Virginia City.

By 1873 Gold Hill was as modern as any city in the West. It could no longer keep up with the fame, growth, and wealth of Virginia City, but it did have a population of 8,000, a public school system, a thriving business community, and one of Nevada's most influential newspapers, **The Gold Hill Daily News**.

The success of the Comstock mines, and with it the prosperity of Gold Hill, started its down-

ward trek in 1878. The path was slow but it was sure. So, today, the "other city" on Mount Davidson must answer roll as another one of the many ghosts of the great American desert.

**GOLD HILL TODAY:** These days, too many travelers take other roads to Virginia City. The proper way to go is through Gold Canyon. Many old buildings and ruins line the winding road up the canyon. Both headframes and mills tower from the hillsides. The hotel, reputedly the oldest in Nevada, is still operating. Although the population is small Gold Hill is not quite a true ghost. Still it does reflect a quiet splendor of the past that contrasts sharply with the carnival atmosphere of Virginia City, just across the hill. □

# In the Footsteps of Padre Garces



by MARY FRANCES STRONG

**W**ALKING TO the rim, we were unprepared for the splendor of Indian Gorge. Exposed sediments stretched out before us. Bathed by the light of a morning sun, they resembled a gigantic bolt of folded beige velvet, shimmering and radiating, as if being gently touched

by an unseen hand. Only the soft rustle of wind across the deep chasm broke the stillness. Once again, the Great Mojave Desert had shown us another of her hidden treasures.

Our journey to the Piute Mountains was part of a personal Bicentennial celebration. Here, 200 years ago, March 4, 1776, the first white man ventured across California's unknown desert region. On foot and accompanied only by Indian guides, Padre Francisco Garces crossed the Colorado River, several

miles north of what is now Needles, California, then followed the Indian Trail to the San Gabriel Mission in Southern California. We had come to follow in his footsteps along a short section of trail through the Piute Mountains. Until then, we had been unaware of the colorful geological formation at their western base.

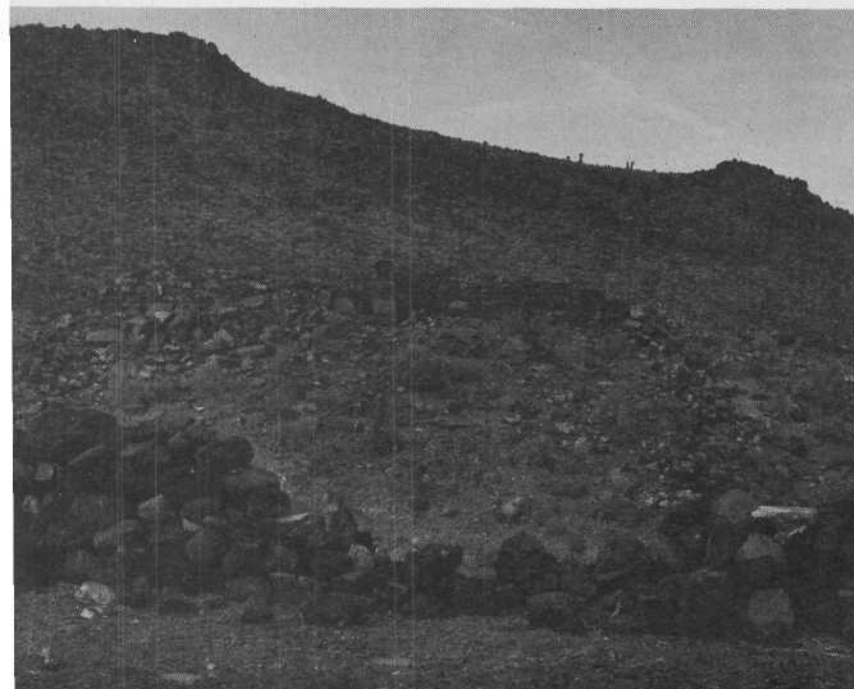
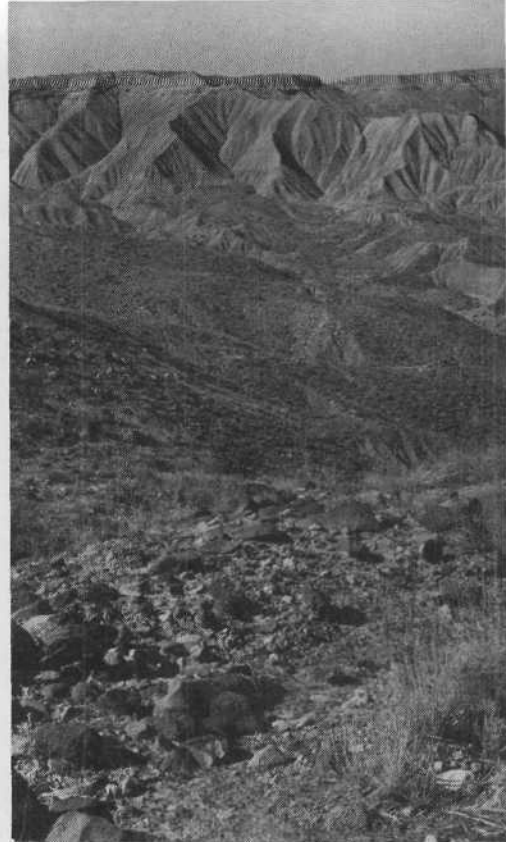
Although we had been within a mile of Indian Gorge several times, it is undetectable until almost reaching its edge. With the rim at land level and mountains rising on the eastern side of the Gorge, there is a feeling of continuity—as if land and mountain meet. But meet, they do not!

Instead, through eons of time, rushing gravel-laden water has scoured away tremendous amounts of detritus and left a three-mile chasm along the western base of the mountains. Encountering more resistant rock and beating against them like waves on a rocky shore, the cutting action of uncountable storms has eventually carved a slot through the Piutes. It was across such desert basins and through the washes and passes that the Indian Trail became established.

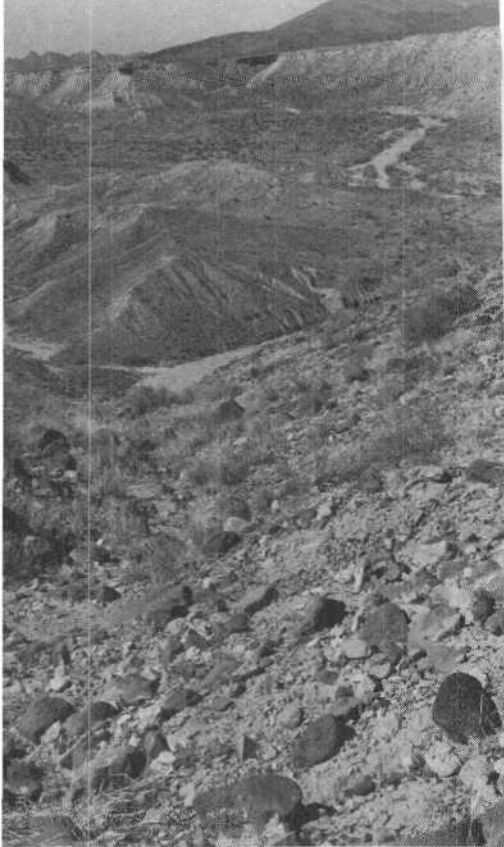
Dating well back into prehistoric time, the trail was a main route from the Colorado River to the coastal region now known as the Los Angeles Basin. Trade with Coastal Indians was very important to Arizona tribes, as well as those tribes living on the desert and in the mountains.

Padre Garces had learned of the In-

*Primitive rock work outlines the stockade, corral and shelters and is all that remain of Fort Piute. The post was first called Fort Beale, in honor of Edward Beale, whose camel caravans watered here during their brief period of service.*

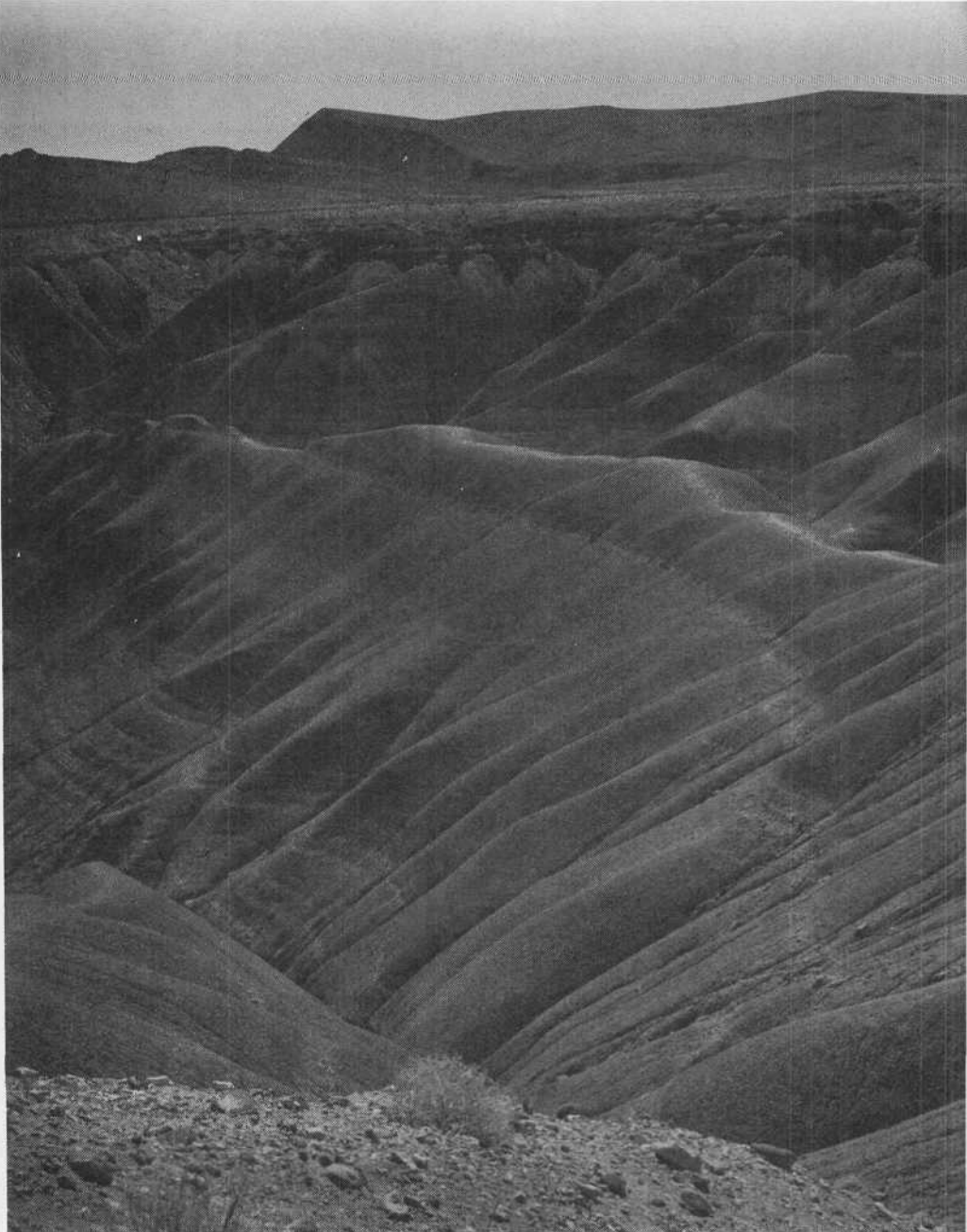






*Above: At the southeastern corner of Indian Gorge, the Old Indian Trail climbs to the rim. In use since prehistoric time, the trail is still visible though long abandoned and over grown with desert brush. Right: The sedimentary formations in Indian Gorge are best viewed in morning light. At such times, they shimmer and radiate like beige, brown, white and chocolate-covered velvet.*

**photos by Jerry Strong**



dian Trail and his explorations were an attempt to find a feasible land route from Mission San Xavier del Bac, Southern Arizona to San Gabriel Mission in Southern California. Knowing the trail utilized dependable springs, he hoped it would become the needed artery. Later explorers, on foot and horse back (1826-1848), followed the route he opened but almost another 75 years would pass before wagons lumbered along the rugged trails.

Postponing the exploration of Indian Gorge for a day, we changed our plans and elected to hike the trail from the eastside of the mountains. We would be going up through the pass and into Indian Gorge instead of hiking "down trail." We quickly headed over the mountains and drove to the ruins of Old Fort Piute.

Situated in a narrow canyon, this lo-

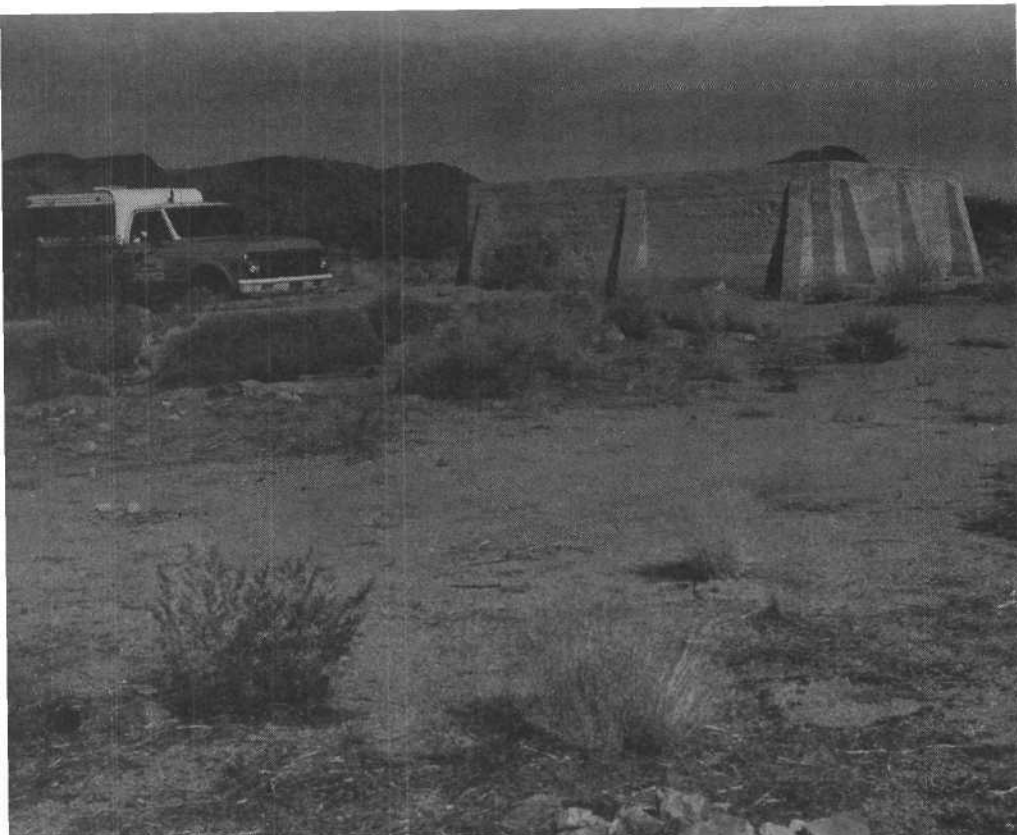
cale always activates our imagination. Piute Spring surfaces a mile upstream and flows easterly for nearly two miles. Cottonwoods and willows proliferate along the banks and provide a welcome "oasis" in a treeless land. It is easy to envision Indian runners resting here before continuing their long journey to the coast.

Trade runners were not the only Indians to utilize Piute Spring. There is evidence of regular use by prehistoric hunting parties and, possibly, family groups that "stayed awhile." Many artifacts have been found and the petroglyphs they left behind appear to be very old. Remember, it is illegal to collect any Indian artifact.

Fort Piute was a "Johnny come lately" in the history of this region. Following the California Gold Rush of 1849, when thousands of people trekked to the

promised land of gold and glory, emigrants began to move west to settle and develop the frontier. Those headed for California primarily utilized routes which brought them to San Francisco or San Diego. The small Pueblo de Los Angeles was unhappy with this situation and felt they were deserving of a fair share of the settlers.

When Fort Mojave, Arizona was established in 1859 (14 miles north of what is now Needles, California), a road roughly following the Indian Trail was laid out. It was initially used by the military to haul their supplies from Los Angeles. Because of this it was called the Government Road. It was also a shorter, more direct route to the City of the Angels and a few emigrants began to use the road in spite of the many hardships to be encountered. Eventually, there were numerous skirmishes with hostile



*The settlement of Lanfair is gone except for rubble and a cement reservoir. Sturdy homesteaders attempted to tame the land but the desert aridity defeated them.*

Indians who, at first, only demanded goods from the travelers. When killings and burnings increased, the emigrants became reluctant to use the route unless some protection was provided.

Businessmen in Pueblo de Los Angeles brought pressure to bear on the Military based in the city. At the same time, increased Indian attacks on the U.S. Mail wagons and riders made patrols mandatory. In response, a number of military out-posts were established at 40-mile intervals along the Government Road. From west to east they were Camp Cady, Hancock Redoubt (later Fort Soda), Camp Marl Springs, Camp Rock Springs and Fort Beale (later Fort Piute).

All except Camp Cady, which later developed into a "more typical" army post, were primitive installations located at a good source of water with a stockade and corral. Living quarters were constructed in a manner and style dependent on material available and the ambition of the men. Adobe huts, rock houses, log cabins and caves all served well.

After nearly a decade of use, the posts were closed one by one. Indian hostilities had been quelled by the valiant efforts of men who had served, in what Elliot Coues described after a visit in 1865, "a Godforsaken Botany Bay of a place—the meanest I ever saw for a military sta-

tion." A new Government Road (National Old Trails Road), a few miles south, replaced the old one which had followed the Indian Trail.

During the years 1860 to 1920, many homesteaders came to the Mojave Desert. "Settling in" during wet years, they were unprepared for the normal dry years of a desert region. Euphonious names such as Golden, Surprise, Superior and Paradise Valleys were given to the basins. While ranches and farms along the Mojave River prospered, few in the basin areas were successful. This was due in large part to the lack of water.

Paradise Valley (now called Lanfair Valley), the region west of the Piute Mountains including Indian Gorge, showed more promise than some of the others. Cattle ranching had flourished for many years when the first settler, Edwin Lanfair, came in 1910. Lanfair cleared his land by hand and planted hard wheat and barley. It produced a bumper crop. Word of his success spread and soon many other homesteaders began to take up land.

A large group of settlers arrived in the spring of 1912 and took up a quarter-section each. This was not a happy event for the cattlemen, who promptly advised the settlers they owned all the water and would not sell one drop. Most of the new arrivals elected to stay and haul their

water from Government Holes, 10 miles west. Lanfair developed two good wells, tapped water from a spring in the northern end of the valley and became the local water company. Fortunately for the new settlers, Paradise Valley entered a wet cycle. Winter brought a blanket of snow with enough moisture for a winter wheat crop. Spring rains helped many of the later crops.

A store opened in the valley and soon became the community center. In June, 1913, a school district was organized. The Nevada Southern Railroad built a station at Lanfair and finally, a post office was established. Since the name "Paradise" was already in use, Lanfair was the alternate choice.

By 1917, the settlement of Lanfair boasted over 130 registered voters. Water was still a problem, even though the railroad regularly hauled in water cars. A charge of 25 cents per barrel was made. However, the wet cycle was over and the desert was beginning to take its toll.

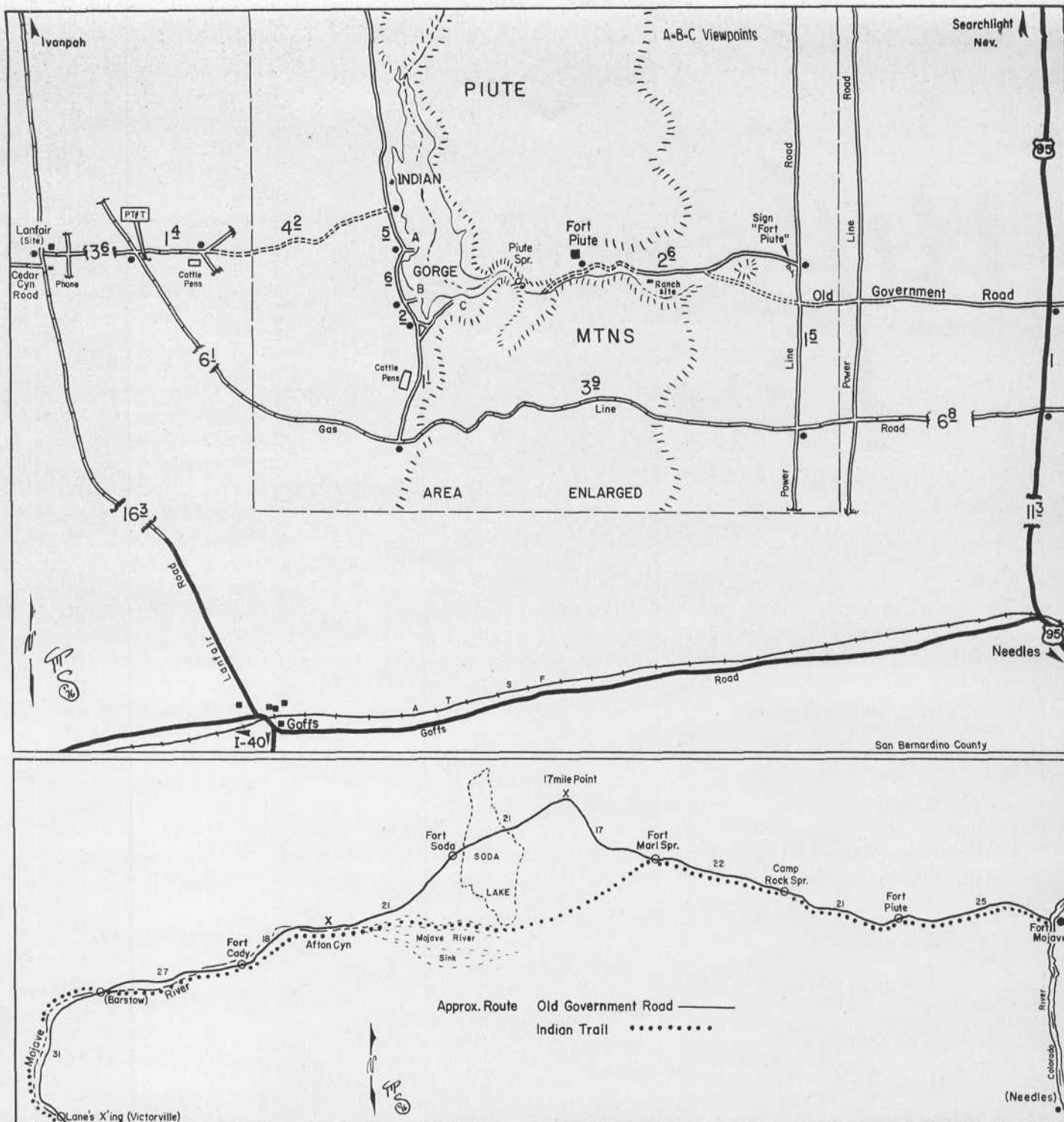
Railroad business was also in a drought, as important mines shipping their ores via the line began to close down. In 1921, a strike and severe washout caused Santa Fe to consider abandonment. Another severe washout, in 1923, wrote the final chapter—gone was the little Nevada Southern Line.

Lanfair's main artery had been the railroad. With its demise, decline of the settlement followed. Today, only crumbling foundations, cement steps to nowhere, an old reservoir and a modern telephone booth mark the site. However, Lanfair remains an important marker for the Old Indian Trail, Government Road and the turnoff to Indian Gorge.

Over the years, Jerry and I have covered many miles along the Indian Trail and Old Government Road either by foot, trail bikes or four-wheel-drive. Our hike up the wash from Fort Piute Ruins into Indian Gorge would leave only a small section of both we hadn't traveled. We planned to remedy this before the Bicentennial Year was over.

We leisurely headed up the canyon, each deep in our own thoughts. I couldn't help but feel that with all our modern equipment we have sacrificed intimacy while gaining greater mobility. Walking gets one down to the basics and gives opportunity to really observe the world around you. I have never been an avid hiker or even a devotee of the sport





but I do enjoy "strolling over" what I possessively think of as my beloved desert.

From the spring, it seemed only a few minutes before the wash widened and we stood at the bottom of Indian Gorge. It was breathtaking. The perspective was a radical change from our earlier view. Exposed sediments towered over us and the extent of the gorge seemed enormous. On the south, a steep, faint trail led up to the rim where we had initially parked.

Climbing up the trail, I had a feeling of deep comfort and reward. This had been

a pilgrimage for me. I had walked in the footsteps of the first white explorer to cross the Great Mojave Desert—Father Garces. His explorations had come to my attention time and time again while doing research for articles. I had developed a deep admiration for his faith and courage. Whenever we had traveled along the Indian Trail, I couldn't help but remember his incredible journey through an unknown and hostile land.

This is the year of our great Bicentennial Celebration. A time when all thoughts turn to our country's birth and the dedicated people who gave of them-

selves to make it all possible. While we are lauding the heroes of 1776, let us not forget the men who explored the western frontier. They opened the unknown land and its resources so our country could grow into the powerful United States of today.

Among these lesser known heroes is Padre Francisco Tomas Garces, Franciscan Monk and Explorer. I hope I am speaking for all of *Desert's* readers and "desert aficionados" when I say, "Thank you, Padre Garces, for opening the gates to a truly promised land—the Great Mojave Desert of California." □

## A TALE OF MINING, MURDER AND A MISER

# "Rubber Ducks"

by KEN MARQUISS

THE READER'S indulgence is asked for the above title choice; I needed some kind of corral to hold a bunch of different broncs—and it represents a chauvinist victory over insubordination!

(My ever-lovin' co-pilot, who corrects my spelling and types my stuff, insists that this account should be called, "Those Dirty Old Men." But, after all our years together, she still has a suspicious, irreverent and flippant attitude toward the whole fascinating business of

western mining history and legitimate prospecting; let alone the fringe manias of lost mine chasing and/or buried loot "bugging." So, consequently, *her* title should be disregarded!)

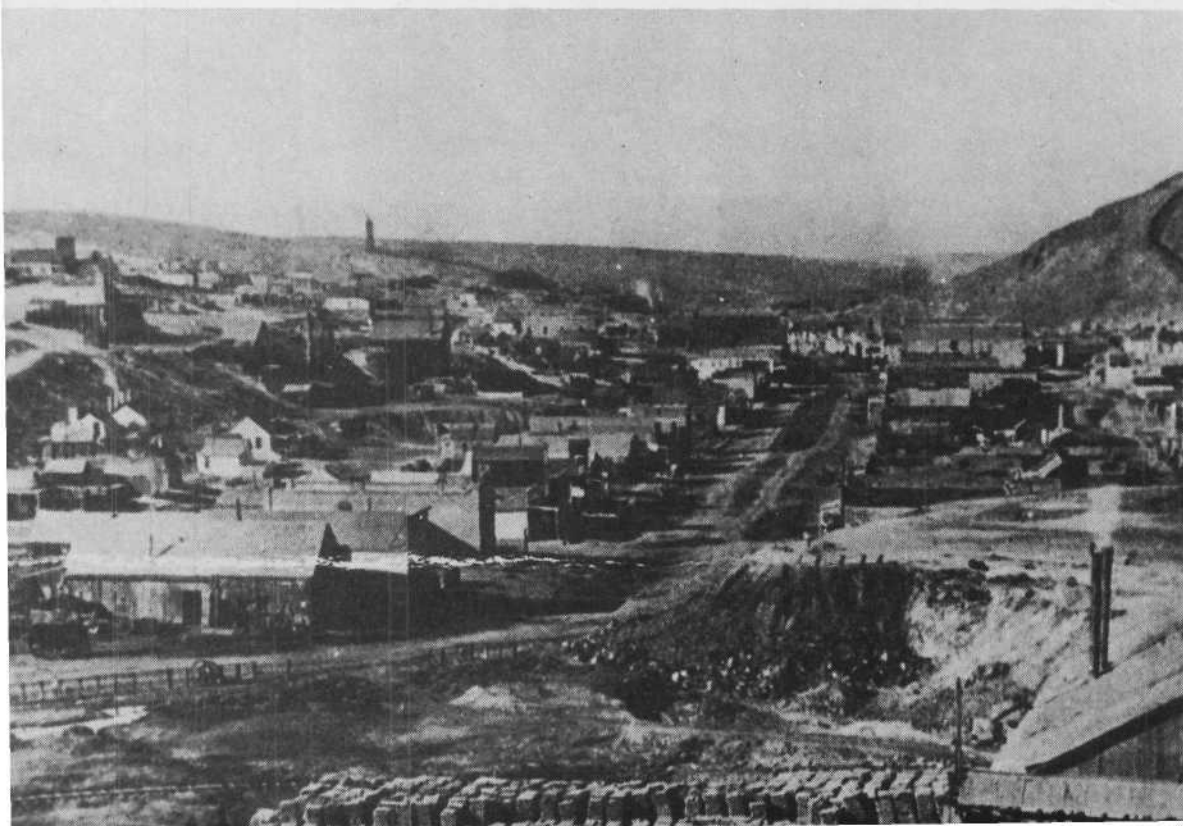
Besides, any self-respecting, deadline-haunted Editor would shoot down—on sight—a silly title that reads, "Pollution's Price, an 'Energy Crunch,' Permissiveness, Crime, Humor, Psychic Phenomena and Buried Loot—They were all part of the Gay 90's too!"

So, I like *my* title; and the "Rubber Duck" twist came to me one evening while visiting a couple of cronies in the should-have-been-den-turned-lapidary-workshop of one of them. These two are both nice 'kids' (at least ten years younger than I), but they have a pitiful case of rock-knocker's fever. Their tongues are all calloused from licking rocks "to see how it will polish" when there's no other water handy. (A sure sign of the malady.)

Our long friendship gives the privilege of 'ribbing rough,' and I was giving them some fatherly static on the error of their ways, and the probable monetary worthlessness of the overflowing benches and boxes of colored rock cobbles, chips and slabs that littered the place. I added that it was my considered opinion that they both would walk away from a real crack-erjack bonanza, unless the ledge had "auroral luminosity" slabbing potential; and particularly if the gold-spangled ore failed to "cut pretty."

Exasperated, one of them retorted, "Get off our backs, you old sun-stunted, cactus Ali Baba! A rock would have to have a neo \$ sign on it before *you* would pick it up. So leave *our* hobby toys alone, and go play with your own prospecting 'rubber ducks'!"

Later, strolling home through the warm dark, it struck me how apt was the



*Downtown Eureka, Nevada, looking north, as it appeared in the early boom days. Note how the surrounding countryside had already been stripped bare of all wood to make charcoal for the smelters. Some of the smelter smoke had arsenic! Photos on this and opposite page from the collection of the late Senator Casey Fisher, Ely, Nevada.*



Typical freight outfit coming into Eureka during the boom days. The "skinner" generally rode the 'near-wheeler' [not perched in the wagon like in the movies]; But it was the swampers who did most of the work—harnessing up, checking the hogging chain and whiffletrees, braking the wagons on the down grades, the 'squaw work' [cooking and wood] in the road camps, etc.



old saying about wisdom out of the mouth of babes . . . and how often indeed do grown men's serious projects somehow become just "rubber ducks!"

Take old Zeb Heggland's gore-stained loot, for example. And the stories of the Gay 90's happenings in and around Eureka, Nevada, as my old friend, Stanley Fine, related them to me many years ago.

Back in the days when I was chasing leads to the Mormon Elder's Lost Lode (*Desert Magazine*, May 1965), a mutual friend in Eureka referred me to Mr. Fine since he had grown up in the last of the boom days, had been Sheriff there for over 20 years and knew just about everybody. My informant also said, "He has a weird treasure dowsing story, if you can get him to tell you about it."

I found Stan, and his gracious wife, working in the yard of their neat white house that overlooked much of the town, and I had been steered right; he proved to be indeed an information bonanza!

He is one of those rare persons who make you feel you are an instant friend, and his sparkling clear memories of the past were as delightful as a ticket on a time machine—you could almost feel you were present when the incidents happened. He couldn't add much to the Elder's Lode story, but after the first

quarter hour I didn't care.

Besides his memories of the end of the old boom days and decline of Eureka, he had quite a remarkable personal collection of relics of the past he had picked up over the years. One of his items particularly intrigued me. It was a block of old time sulphur matches, still partially enclosed in its faded garish wrapper. As he handed it to me he said, "That is the real villain of most of the terrible fires they had in the Old-West towns and camps." This surprised me, as I had always thought the fires were mostly caused by tilted kerosene lamps and shoddy stove pipes and ceilings.

He broke one match off its wood root and struck it on a board. It sputtered and fizzed and smoked; and it seemed minutes before it burst into a bright sharp flame. He said there were two reasons for the menace of the old sulphur matches: one that people often wouldn't wait for the match to "catch," figure it had gone out and then toss it into the coal scuttle or wood box—with dire consequences. The second reason was that most old-timers failed to keep their matches in rat-proof boxes—"too much trouble"—and rats were crazy about the sulphur head of the matches (something their bodies undoubtedly craved), since "they go for sulphur matches like range stock go to a block of lickin' salt!" The

night roving rats would take the matches to their nest in the walls of the buildings to gnaw on—and *whoosh!*

The community of Eureka, Nevada is far from a ghost town, as there is still ranching and some mining in the area; and it is one of the most interesting blendings of the old and the new I have seen. To top it off, the "Howdy!" cordiality of the inhabitants to strangers (at least the ones I met) has an almost frontier flavor. If you are bumming around Nevada, and have some time, don't miss Eureka.

The town was built up along both sides of a rather narrow north-south valley, since there was water there for the smelters, and for the town, which became the focus of the rich silver-lead ore mining in the area.

Stan said that in the boom's height there were eight smelters going in the valley, spreading their smoke over the area. The fires were fed at first with charcoal made from the pinyon forests which covered the surrounding mountains and hills. It didn't take long before the furnances had gobbled up most of the nearby wood, creating an "energy crunch" that threatened to shut down the major industry. Before the railroad was finished and brought in coal from Utah, huge double wagon freight outfits using eight and ten span teams of mules,

were hauling in the fuel from new charcoal sources as far away as 50 miles!

Incidentally, if you like to hunt for relics, these remote camp sites near the larger ovens are a fertile place to search.

The charcoal energy crunch was not the only pollution price the early people of Eureka paid to keep their economy going. Like most desert areas, even on so-called windless days, the sun's heat moves the air up the canyon by day, and the night cold moves it down. So the smoke from the stacks really saturated the area. Unfortunately, there was also a

small amount of the antimony/arsenic elements in the rich silver-lead ore, and these volatile metals poured off in the smoke from the stacks. There was a lot of early talk about the number of citizens who became "lungers" and had to leave town; but the crisis came when the county clerk discovered, in going over vital statistics, that for almost 14 months not one single live baby had been born in the houses that lined the valley beneath the pall of lethal smoke!

One of the solutions that was developed to try to dissipate the smoke was construction of "slaunch stacks." These were large brick corridors or flues built up the slopes of a nearby mountain, to an elbow base, on which was erected a tall smoke stack. The tops of these secondary stacks were high enough for the prevailing northwest winds to carry the smoke away from town, and life returned more or less to normal. The foundation scars of one of the "slaunch stacks" can still be seen on the east side of town. The slump in the price of silver after the turn of the century, and the "pinching down" of the ore bodies happened about the same time; and the Eureka boom was over.

The smelters and smoke stacks were later dismantled for building materials, and shipped to other parts of the state, but the huge old slag piles are still there. One story is told of a local sharpie who contracted to dismantle and clean the dirty bricks of some of the slaunch stacks at a price that convinced his friends he was due for the "funny farm." The first thing he did was to scrape and whisk broom down all the soot which he carefully shoveled into sturdy sacks and shipped to the Salt Lake smelter. The recovered minute silver particles in the soot brought him a smelter check for

more than \$6,000—and he hired someone else to do the *hard* work

Like all boom towns, life in early Eureka was lusty, and the humor often ribald. Also, like all places where the elected officials begin to feel that "rehabilitating" the wicked is their personal prime passion in life, permissiveness seeped into the courts; and crime became an ugly factor of life there. The heavy traffic road in the narrow canyon that leads from Eureka to the mine camps above became a favorite nightly haunt of thugs and "owl-hoots," so-called from the resemblance to owls in the empty flour sacks with big eye holes cut out for masks, with the corners tied up so the mask would fit snugly over the head.

The local law and court didn't seem to be able to do anything about it, and when the people finally got fed up, the undercover vigilante committee took a hand. They staked out and caught a couple of would-be owl-hoots red-handed, complete with masks and guns; and the committee "rehabilitated" the suspects the quick way—with a 10-foot bull whip!

Next, the vigilantes had one of the local blacksmiths rivet together a heavy plate iron casket, complete with hinged top and lock hasp, which they freighted to a strategic spot in the canyon. Then they erected a sign behind the casket which in essence said, "The very next one of you dear boys we catch can try this on for size!" So the local crime rate came to a shuddering slow-down, without benefit of sociology professors or other high priced anthropologists.

When Stan was showing me the site of the casket he said, "And I know for a fact, it took 20 men to lift that heavy box on and off the wagon!" So the casket remained in place, a grim warning to thugs, until the high price of scrap metal during the first World War cause it to be cut up.

The next morning, since I was due in Ely the following day, I gently brought up the subject of the buried money dowsing story I had heard about. Stan gave me a funny look and asked, "Do you believe in dowsing?"

When I admitted that dowsing devices go limp and do *not* work, for me, at least, he said, "Let's go for a ride."

We went down the valley for about one and a half miles north of Eureka, and then turned off west to a sort of wide bench; there he showed me a couple of

## Charles Carter Mfg.

**PROSPECTORS  
TREASURE HUNTERS  
ROCKHOUNDS  
YOU'VE GOT IT!**

●  
**Garrett - Treasure-Ray  
Compass - D-Tex  
Metal Detectors**

●  
**Rock Tumblers and Saws  
Books and Magazines**

●  
*The world's most powerful  
productive gold dredge  
"THE DREDGE MASTER"*

●  
**Carter Manufacturing Corp.**

118A East 21st Street  
Bakersfield, California 93305  
805-325-0251

## Gene and Mary Foushee's

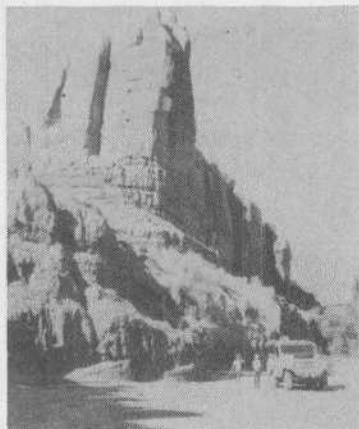
### RECAPTURE LODGE & TOURS

There are still places like this . . . peaceful, quiet, remote. And just a 15 minute stroll, or a five minute drive, or a stone's throw from Recapture Lodge. Besides scenery and tranquility like this, we have geologist-guided tours to Monument Valley, Canyonlands, Poncho House . . . and lovely spots you've never heard of.

Nightly slide shows. Heated Pool. Playgrounds. Automatic laundry. San Juan River trips.



BLUFF, Utah 84512 Phone 801-672-2281





*Retired former sheriff Stanley Fine points out the places where, in boyhood days, he and his buddy unearthed the bodies of the slain Swedish couple, while hunting the old miser's cache with a "hot" dowsing fork. The woman was found to his right, the man to his left.*



shallow, wide holes that had obviously been dug many years before. It was the site of old Zeb's truck farm.

Stan said Zeb had shown up in Eureka in the early days and promptly went to work in a smelter; but his job didn't last very long. He was suspected of grand theft, but the bosses couldn't prove anything; so he was bounced out for "incompetence." He tried for work in the mines, but he couldn't make it, even as a mucker, because his reputation had preceeded him.

So, Zeb started scouting around for the right piece of ground, that could be watered, which he subsequently bought and built a house on (probably with the stolen silver from the smelter) because he had an idea! In those days, everybody was interested in metal; and fresh produce had to be brought in from days away and the price was high. So it wasn't long before old Zeb had practically cornered the fresh vegetable market. And, as soon as he began to prosper, he started planting fruit trees, mostly apples and apricots.

He hired Chinese or Indians or the hopeful who hit the town broke; anybody he could hire for a pittance-and-fresh-vegetables, to eat. There was rarely meat on his table. He disliked paying for things with money, and swapped produce for his supplies wherever possible—so it wasn't long before he had develop-

ed a real Gung-ho-Scrooge reputation in the Eureka area.

Stanley said that one late fall, before the spring that Zeb died (and about the time Stan was 16), there was a "real close-down blizzard" that stopped all traffic in and out of Eureka for some days.

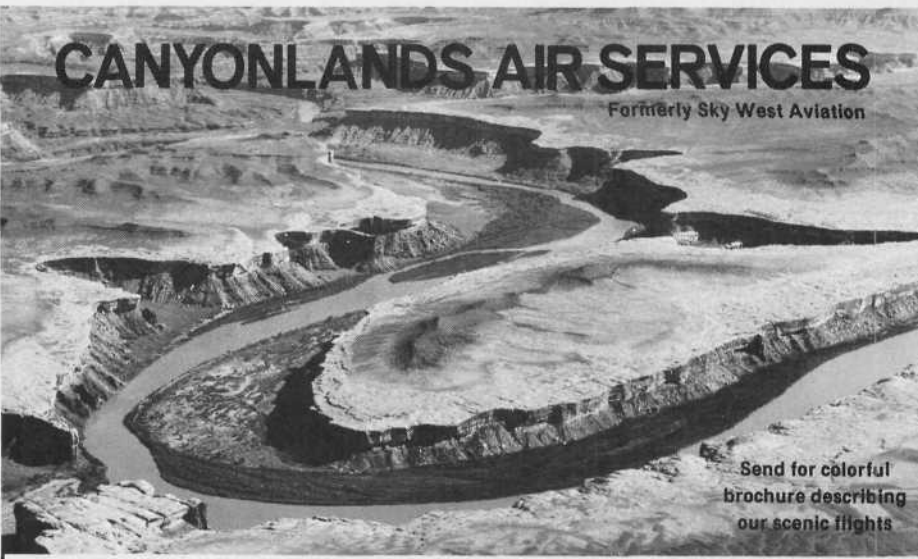
Two people marooned by the storm were a youthful Swedish couple who had worked around Eureka for several years.

They were well liked because they were industrious, sober and thrifty. They had been saving every penny they could scrape up in order to realize their dream of returning to Sweden, and buying a nice, cozy farm of their own—no more mining camps gamble or romance for them! They were all ready to leave when the storm hit, and as they had given up their lodgings they had no place to go.

*Continued on Page 41*

## CANYONLANDS AIR SERVICES

Formerly Sky West Aviation



Send for colorful brochure describing our scenic flights

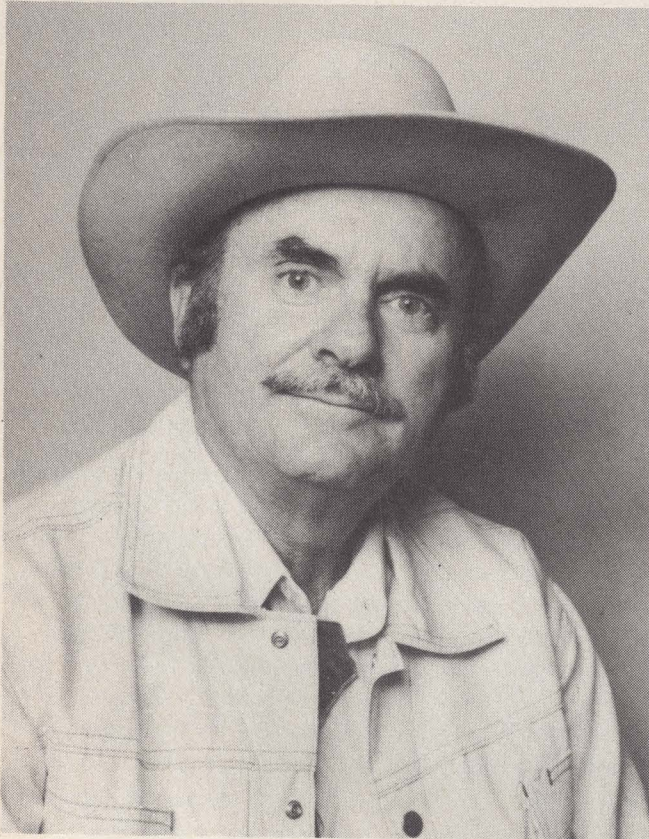
**OFFERING:**  
Popular air tours over Canyonlands and Arches National Parks and other scenic highlights in southern Utah.

- Located at Canyonlands Field, 16 miles north of Moab, Utah
- Also serving the Lake Powell-Grand Canyon area out of Page, Arizona

**Canyonlands Air Service, Moab, Utah 84532 [801] 259-7781**



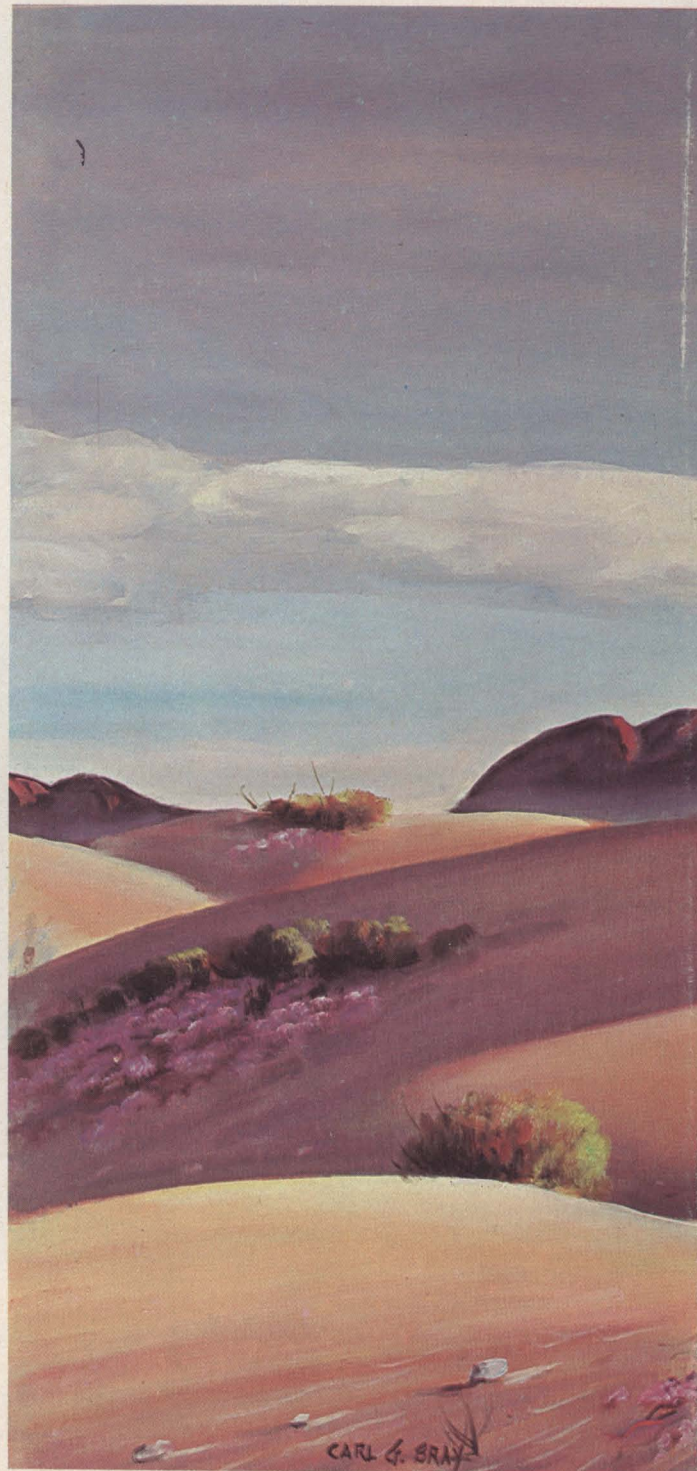
# CARL G. BRAY Smoke



CARL G. BRAY

**C**ARL BRAY was born in the lovely Ozark country of Eastern Oklahoma, and as long as he can remember, drawing has been a part of his life. Depression problems sent him searching for employment in California, where he fell in love with the panorama of sage and sand, and the purple mountains of the Southwest.

He studied art classes and later came under the influence of Maynard Dixon and of old time desert painters, Fredrick Chisnall



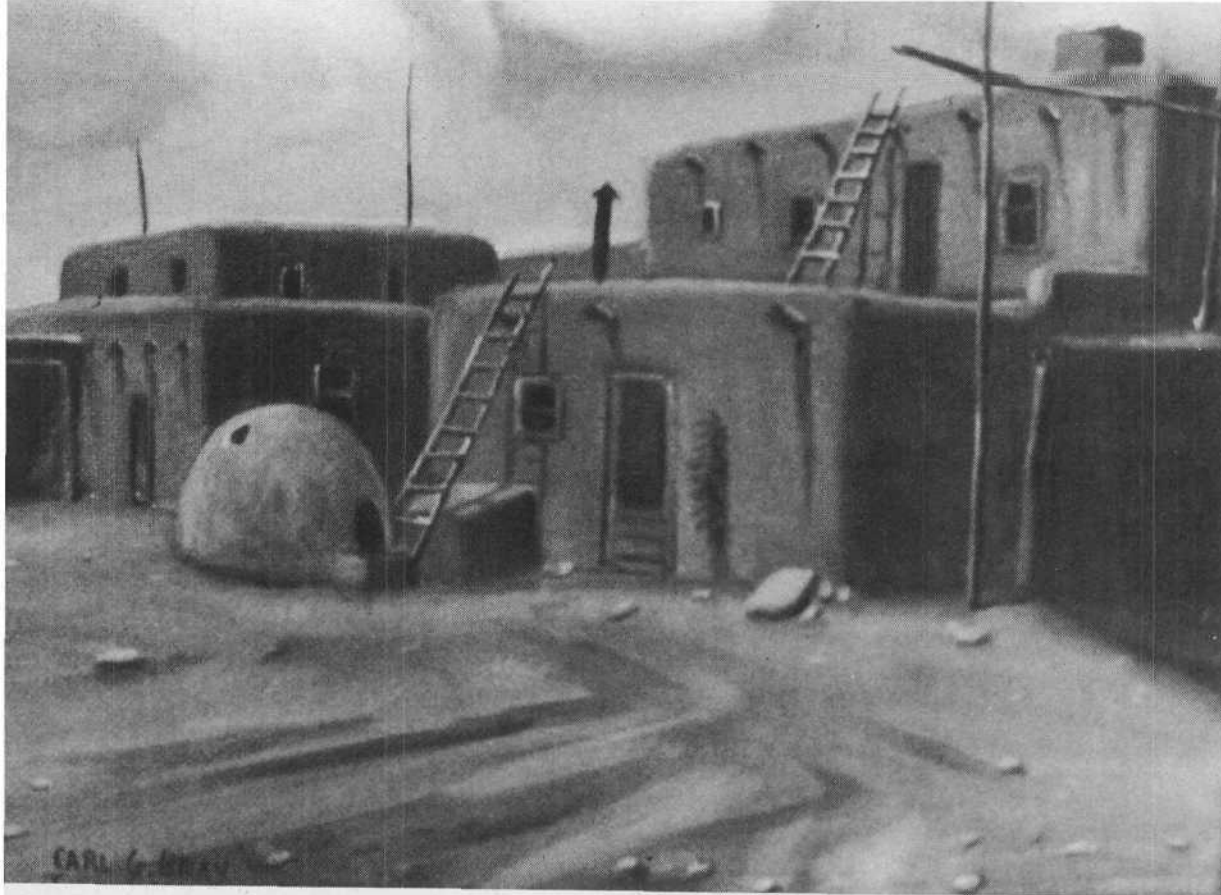


# tree Artist

Oil,  
36"x24"  
"Desert Dune"







*Oil,  
12''x16''  
"Taos Pueblo"*

and Russell Swan. He was encouraged along the way by his close friend and associate, Jon Gnagy, long time art teacher of NBC television fame.

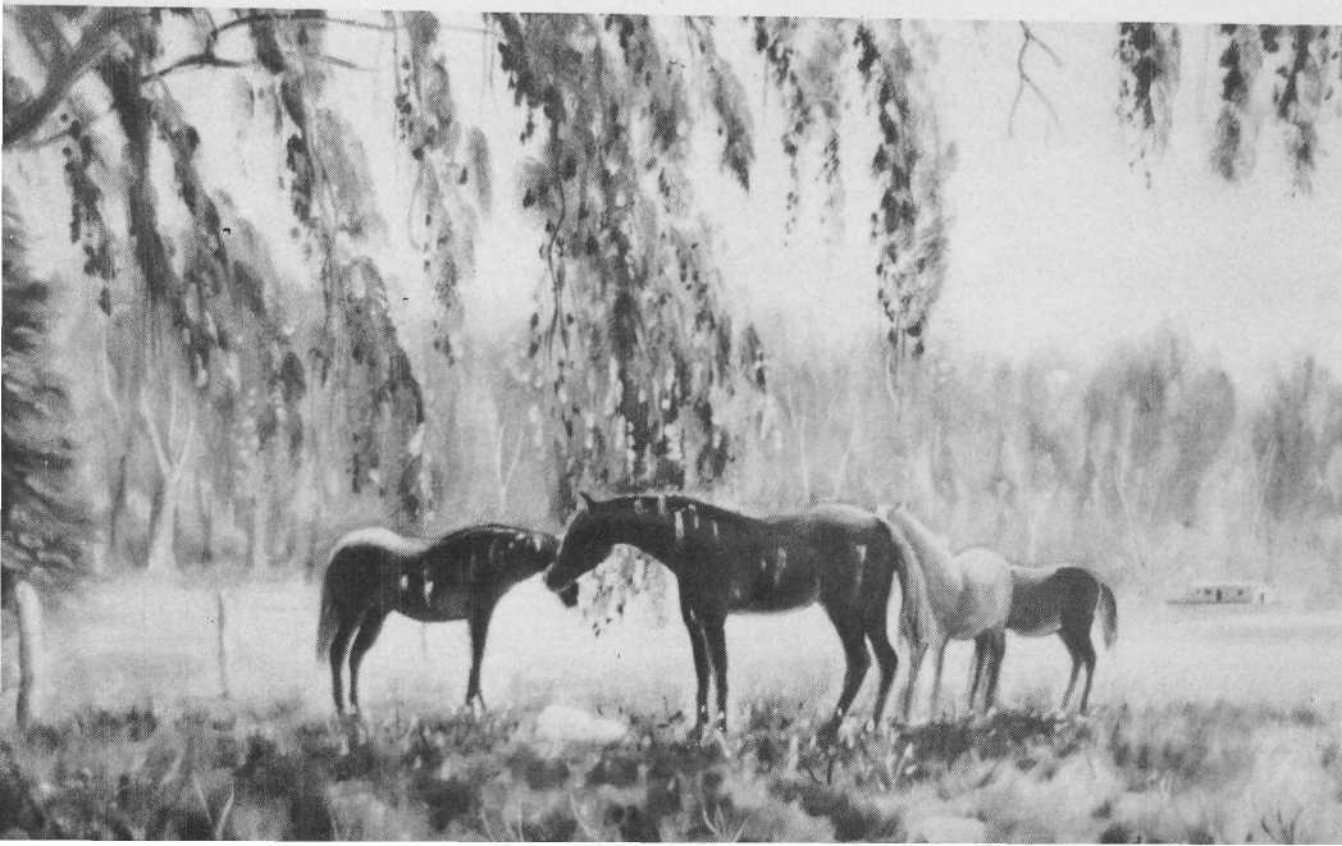
In 1956, Carl settled in Indian Wells, California and constructed his own home and art gallery. Especially popular with his

clientele are desert scenes with smoke trees as the focal point. For the past seven years, Carl and his wife, Luella, have divided their time between Indian Wells and a second home and art gallery located in Taos, New Mexico.

Active in many art associations, he has won over 100 awards in

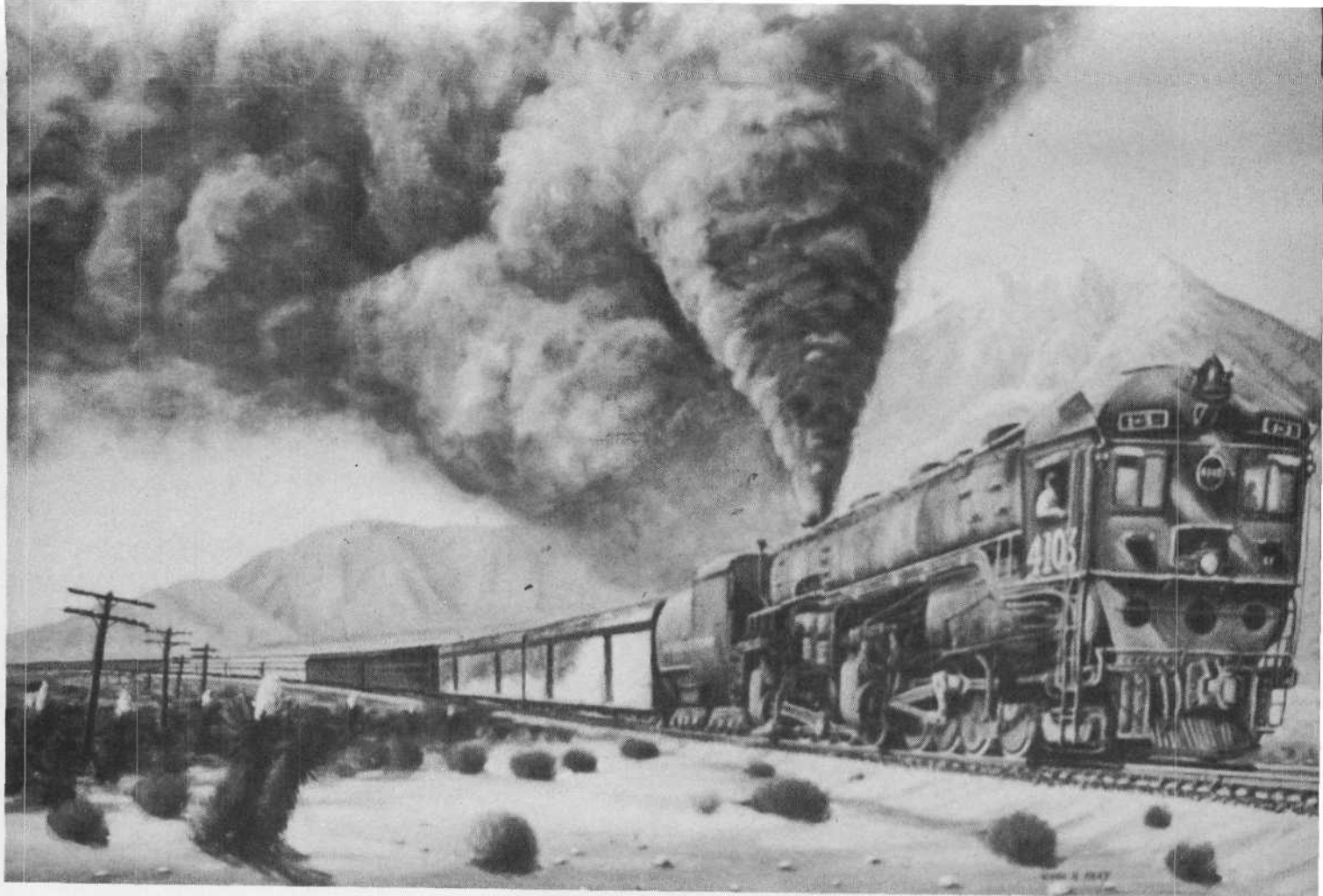
various exhibitions, and has become a regular invitational exhibitor at the Death Valley '49er Encampment Art Show held annually in November.

With the low desert warmth in the winter, and the cool climate of Taos in the summer, this artist truly has the best of two worlds! □



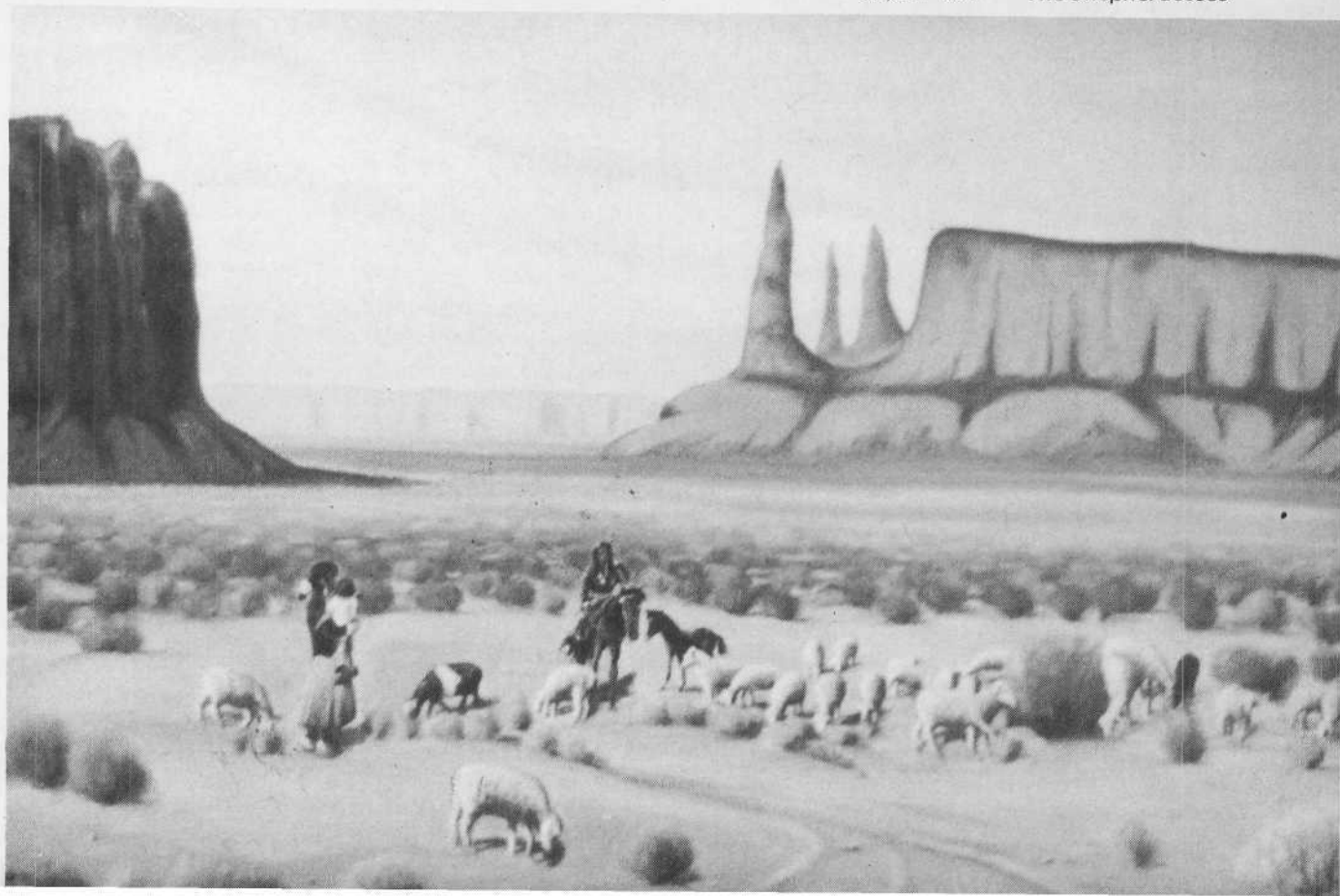
*Oil,  
24''x36''  
"In the  
Cool  
Shade"*





Oil, 24"x36" "Up the Beaumont Hill"

Oil, 24"x36" "The Shepherdesses"





# Bannertails

by K. L. BOYNTON

©1976

**O**F ALL the members of the heteromyid tribe (that oddball group of rodents composed of pocket mice and kangaroo rats) *Dipodomys spectabilis* and his cousin *D.s. baileyi*, are the largest, measuring some 14-15 inches respectively in overall length. Besides their noble size, these kangaroo rats also rejoice in a long brush of white hair located back yonder near the tip of their very long and slender tails. This hairy adornment, besides adding considerable dash to their appearance, is the very conspicuous reason for their clan nickname of bannertails.

Unlike many another member of the pocket mice, kangaroo rat assembly, these bannertails are great believers in a good big house to live in. No plain old hole in the ground for them. Architects by nature, each constructs his own pri-

vate palazzo, digging long and lustily, and taking months at the job. Viewed from the exterior, the resulting mansion is a big mound maybe 10 feet in diameter and a good one and one-half feet high. Several three by four inch holes for doorways give the edifice a slightly Swiss cheese appearance. The interior, however, is a magnificent structure built in three or four levels, the basement being three feet underground. Each level contains many chambers and rooms all interconnected with passageways. A section devoted to storehouse facilities may contain a bushel of seeds stashed for winter fare or to tide the resident over long dry periods. Needless to say, a spread like this takes a lot of original digging and constant upkeep. The owner keeps the premises clean and neat, flinging out any moldy food and debris.

Not being a convivial soul, the banner-tail doesn't care for live-in company. Quite the opposite as was shown in both Voorhies and Taylor's classic study of Arizona bannertails and Holdenried's investigations of the New Mexico contingent. One rat to a mound is the story. Yet, interestingly enough, the mounds of a population of bannertails dwelling in a vicinity tend to be concentrated. Holdenried's study, for instance, involved some 181 mounds, some old not being used, some being refurbished, some occupied, all located within a portion of the area.

Now it must be reported that when these kangaroo rats are kept in laboratories, they are exceedingly rude to each other and will immediately set about fighting to the death if housed together. Well aware of this, the team of G.D. Schroder and K.N. Geluso viewed with raised eyebrows this tendency to clump their mounds in the wild. Why didn't these congenitally aggressive kangaroo rats get into more fracascs thereby? Fighting in nature is an economic waste—a waste of time and energy. In a desert it can be a fatal matter where every bit of energy must be conserved to secure food and survive under such stressful conditions.

So Schroder and Geluso set about seeing just how these mounds actually lay in relation to each other. They went at it with surveying equipment, locating each one, plotting it on a ground map, and feeding the information into a computer.



*Two photos of the Bannertail taken near Fort Bowie, Arizona. The one at left clearly shows the median stripe on the tail, and the bottom, shot at 1/1000 of a second, gives evidence of the little fellow's speed. Photos by George Olin.*

The first thing that showed up was that while the distribution of the mounds looked clumped, there was actually a regular spacing withing the clump. Cogitating on this, the biologists had to admit that it certainly looked as if the kangaroo rats were making an effort to avoid neighbor trouble. In normal times, any rats being recruited to the population from the outside and the usual crop of youngsters reaching adulthood and setting up for themselves, apparently rebuild old unoccupied burrows. Thus the elbow room spacing is not upset. However, in times of high population (due to exceptionally favorable environmental conditions) all existing burrow systems would be occupied. Any newcomers—strangers or local new adults—would get the bum's rush from the residents. Forced out into the marginal habitats they would have to dig their palazzos from scratch and the old status quo spacing would be still intact.

One surprising fact emerged in the Schroder and Geluso study: in spite of that warlike lab conduct and in spite of that live-alone philosophy, bannertails in the wild are not completely anti-social. Indeed, recent snowfalls showed tracks of feet leading from one burrow to another and also many forming a trail to

the nearest weed and seed patches and across wide stretches of ground.

Long a child of the desert, the bannertail gets the water he needs from this diet of dry seeds, and water formed by body metabolism. Water loss is cut by the production of extremely concentrated urine and dry feces. But there is still that unavoidable loss by evaporation from the lungs. How much naturally depends on how humid the air is. If the air's water content is high, less is lost. In dry air, the loss is heavy. In fact, it can be greater than the body can supply by metabolism, thus resulting in upset water balance and trouble.

How does the bannertail solve this problem?

Since the bannertail wisely spends the day in his burrow with his doors plugged up tight, anatomists Knut and Bodil Schmidt-Nielsen wondered if the air in this closed-up burrow system might be more humid, and thus play an important and perhaps vital role in the animal's water economy. They picked the driest part of the Arizona year and set about testing. Livetrapping each burrow's resident, they tied a microclimate recorder to its tail with a piece of string. A long soft wire was also attached to the recorder to its tail with a piece of string. A long soft wire was also attached to the recorder with its other end fastened outside the burrow. The animal, once let loose, popped back into its home taking the recorder with it, and maybe 12-14 feet of wire, if it took the long route to its nest chamber. Once there, it usually prompt-

ly chewed the string off, and thus the recorder was left in the burrow until the Schmidt Nielsens pulled on the wire and hauled it out some 12 hours later.

Naturally, how moist and how hot the ground itself makes a big difference in the humidity inside the burrow, and it came as a big surprise to the biologists to find that the soil in Arizona was humid at a moderate depth in spite of the blistering surface temperature and low air humidity above ground. The three-foot-deep basement level of the burrow system, for instance, was right where the soil moisture was considerable. The nest chamber itself enjoyed a relative humidity of about 30 percent.

Holed up daytimes in his burrow system with the doorways plugged shut, the kangaroo rat is exhibiting some first class survival behavior. Breathing its humid air he is losing by test some 24 percent less water than if he were breathing the dry air topside. This saving can be vitally important. Losing less than he is manufacturing metabolically, he actually ends up with a water gain. No wonder these bannertails flourish under such rugged conditions.

Interested in learning what went on in a kangaroo rat community, Holdenreid trapped and marked 172 animals and recaptured some of them as many as 40 times. In fact, it got so that he recognized the trapees at sight, and they recognized him and what with this thing and that and their combined efforts, the rats and the biologist came up with some interesting facts.



It seems that the New Mexico bannertails think it's spring in the coldest month in those parts. December sees the opening of the courting season, a good three months before there are any visible signs of spring's actual advent. Nor does

the whoop-la come to an end among these enthusiastic reproducers until August when the last of the young are weaned. All of the adult females captured during the season had at least one litter each, several two or more with

periods between litters averaging only about five to seven weeks.

Gestation is about 27 days. The infants (usually about three to a batch) check in weighing about seven grams apiece. Pink and semitranslucent, they are quite hairless except for stubby silvery whiskers. Their eyes are closed and so are their ears, with the tips folded down, and they have no teeth. A week later they have a soft coat of fur and their ears are beginning to straighten up and get on the job. Their incisor teeth appear around the 11th day, their eyes open at 14 days. By the fifth week the youngsters are active above ground and from now on the growth is fast. At four months they are full-sized adults.

Getting on with this business of growing up is exceedingly important in the harsh desert that is their home, for the youngsters must set about storing a year's supply of food in a burrow system of their own from a crop of seeds produced by one rain. The same rain, as biologist V. Bailey observed, that started their parents off on the wooing season in the first place. All the way along the line the production and survival of the young are influenced by what is going on in the way of plant growth. So is the survival of the adult colony, too.

Bringing in the groceries is a big part of the kangaroo rat's life, and it is done at night. Seeds must be collected, stuffed hastily into face pockets, and lugged off home to the storehouse. Trip after trip must be made. Activity is confined to small local areas. The bannertails stick around home in a range of 500 feet or less, or use the well-traveled trails to seed sources, always watchful for enemies.

Zoologists R.B. Lockard and D.H. Owings suspected that old desert hands like these had evolved a system of dealing with the problem of food getting in the face of enemy odds, and figured that the specific time of activity had something to do with it. Night is not just night after all, but a time of different dark conditions. How do the bannertails make the most of them?

The zoologists installed some fancy recording devices in their study area. These timers released six millet seeds per hour into a slight depression in a treadle for 12 hours starting at evening twilight. An animal taking the seeds stepped on the treadle, its weight de-

#### 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

# Ultra-Tan™

*A natural tan plus  
sunscreen protection!*

Because Ultra-Tan™ treats your skin like the most important skin in the world, some users tell us it's worth its weight in gold!

Ultra-Tan™ was originally formulated for persons who found it difficult to tan because of sensitive skin or because their natural tanning chemistry required excessive exposure before darkening appeared. Ultra-Tan™ was also designed to leave your skin soft and smooth while its gentle sun screen helped protect you from harmful sunburn. Today, growing numbers of persons are enjoying these superior qualities of Ultra-Tan™.

By mail order only. Your satisfaction guaranteed, of course. 8 oz. squeeze bottle. \$5.00 plus 66¢ postage. Check or money order. The Amel Company. P.O. Box 6009. Boston, MA. 02029. Dept. A.

Please allow two weeks.

AT **CARLSBAD CAVERNS** Nat'l Park

**CAVERN INN** Best Western  
AAA• 505-785-2291

**PARK ENTRANCE R.V. PARK**

505-785-9389

**WHITE'S  
CITY**

**VELVET GARTER**  
SALOON & RESTAURANT

**WHITE'S CITY CURIO  
MUSEUM - SKYRIDE-BUMPER CARS**

COMPLETE VISITOR ACCOMMODATIONS



pressed it, and this made a pen write on a clock-rotated paper disc. Thus the time of the visit was recorded and the approximate body weight of the diner. Weight was important as smaller rodents were around whose light weight visits would show they were not bannertails and thus should not be counted. There were problems: some timers were stolen, some didn't work, and ants drank all the ink in others. Still 21 operated o.k. for the 97-day test and some 11,983 bonafide bannertail visits were recorded.

Strikingly apparent was the fact that light on the scene made a big difference. More visits were recorded when the moon was down than when it was up. Nights of full moon showed a big increase in activity in the early morning when the light of the moon was finally decreasing. Moonlight really means light, for it can produce surface illumination hundreds or thousands of times that of starlight. Knowing that the kit fox, badger, coyote, bobcat, great horned owl and barn owl were on the spot hunting, the zoologists think now that it is increased illumination in combination with physical factors that influence just how well these predators can see.

Twilight, for example, is a hard time to see, for the almost uniformly illuminated sky is a diffused source of light and shadows are blurred. Moving objects are harder to detect. In moonlight, on the other hand, shadows are stronger and sharper even early when the illumination may be less. Objects stand out more distinctly and are easier to detect. So the bannertails, restricting their activity outside their burrows to that part of the night when the moon is down, have evolved a behavioral adaptation that results in making themselves harder to see, and hence harder to catch by vision-hunting predators.

Faced with the need to eat for the day and to store for the future, the bannertails have a tougher problem as fall approaches. In September and October only about nine hours a night are available for intensive food caching. Greater risks are taken, the rats seemingly avoiding moonlight less. Maybe, too, it is nature's way of weeding out the less wary and slower footed at the year's end. Only the bannertails who are the sharpest eared, most alert and fastest on the getaway are around to open the Big Season now only a couple of months away. □

PRESENTING THE TENTH SEASON OF . . .

## "Canyonlands By Night"

A SPECTACULAR SOUND AND LIGHT PRODUCTION  
THAT RIVALS FAMOUS EUROPEAN SHOWS

Our season is Easter Sunday through October



*Canyon walls come to life under 40,000 watts of controlled illumination.*

### Canyonlands By Night

is a unique two-hour cruise on the Colorado River at dusk, as twilight fades into night.

Along the way, a startling variety of lighting effects bring to life the darkened red rock cliffs of the Colorado River gorge during an inspiring program dramatizing south-eastern Utah's unusual natural and human history.

### Canyonlands By Night

Cruises leave our dock at the highway bridge near scenic Moab, Utah, every evening throughout the travel season.

#### Group Rates Available

For detailed brochure, reservations or exact departure times, write or call the CANYONLANDS BY NIGHT office at:

SLICKROCK COUNTRY CAMPGROUND

One-half mile north of Moab

Mailing address: P.O. Box 328D,

Moab, Utah 84532

(801) 259-5261

WELTON B. WINN,  
General Manager

## KENT FROST CANYONLANDS TOURS SPECIALIZING IN 4-WHEEL DRIVE COMFORT

Daily Tours into Canyonlands National Park from Moab  
and into Utah's Color Country from St. George

Camping Trips Anywhere in Southern Utah

FOR COLOR BROCHURES AND CAMP TRIP SCHEDULE WRITE:

CANYONLANDS TOURS

BOX 910, DEPT. 6-D

MOAB, UTAH 84532

(801) 259-6866

# Lake Powell by Air

by F. A. BARNES

**L**AKE POWELL is a big lake, no matter how you measure it, yet it is different from any other lake in the world of any size.

Back in 1964, the Bureau of Reclamation completed a dam 583 feet high in a gorge of the Colorado River in Arizona. This resulted in a magnificent and unique lake that lies almost entirely in Utah. Since the dam's completion, the water level in this reservoir has gradually risen higher each spring and is now close to its maximum.

Lake Powell, the body of water backed up by Glen Canyon Dam, is 108 air miles long, but that hardly tells the story of its size. Some of the strangest, most weirdly beautiful desert terrain in the world has shaped this man-made body of water into something unique. The winding, twisting nature of the great river-gorge it fills has created a deep, narrow lake 180 miles long, with several long and equally twisting side-arms and a few broad bays.

For the first few miles above the dam, the lake lies in relatively flat, open desert, but most of the lake is set among sheer rock walls, immense rounded domes of bare sandstone and gigantic talus slopes at the base of towering buttes or mesas. Countless side-canyons, generally narrow and rock-walled, branch off in all directions from the main

body of the lake. The three largest of these, Last Chance, Escalante and San Juan, are each wonderlands in their own right.

All this maze-like complexity gives the lake a total shoreline of approximately 1800 miles, and creates a problem for those who wish to explore its unique recreational, scientific, cultural and aesthetic resources. Exploration is complicated still further by the fact that the lake can be approached by roads and Jeep trails in only a few places, and marinas where boats can be launched are 50 to 100 lake-miles apart, and much farther by road.

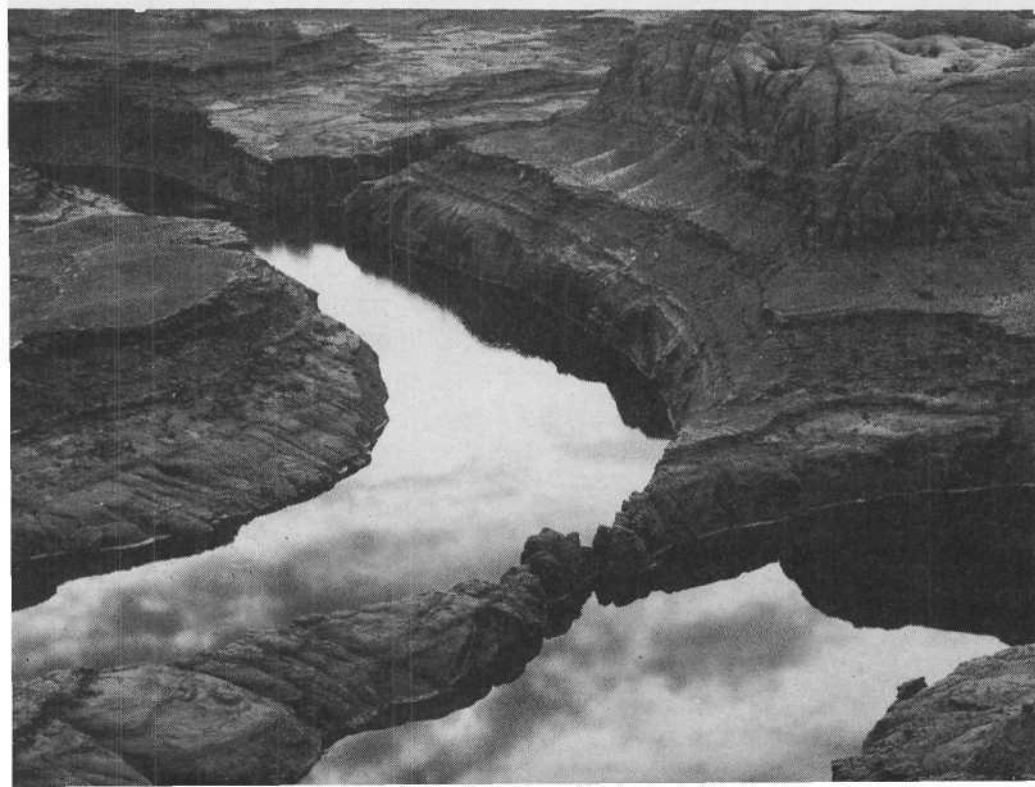
It is possible, and very enjoyable, to explore Lake Powell by boat, but this takes weeks to do if more than a tiny sample of the lake is desired. Spending a day or so on this lake is somewhat like the blind men in the parable inspecting an elephant. Each concluded that the whole beast was like the bit he touched—like a "tree," "wall," "rope," "snake" or "leaf," depending on whether he felt the elephant's leg, side, tail, trunk or ear.

Lake Powell, like the elephant, is just too vast and varied to grasp with just a day or so in a boat. In addition to the magnificent gorges, canyons and bays of the lake itself, there are many other features beside or near the lake that are a part of the lake complex.

Rainbow Bridge National Monument, with its gigantic arc of stone, lies far up Bridge Canyon. Immense Kaiparowits Plateau angles northward from the vicinity of Bridge Canyon and can be seen from the lake for miles. Tower Butte looms above open desert and can be seen from almost anywhere on the first 30 miles of lake above the dam. The Cookie Jar, a towering monolith that resembles its name, stands high on a jutting slick-rock peninsula in the Padre Bay area. The south end of gigantic Waterpocket Fold can be seen from the Bullfrog Basin vicinity.

Massive Navajo Mountain, sacred to the Navajos, looms directly above the

*Here, the lake was so calm that perfect cloud reflections were visible from the air. This is one of the gooseneck loops on the San Juan River arm of Lake Powell. Rising waters have now inundated this slender neck of rock.*

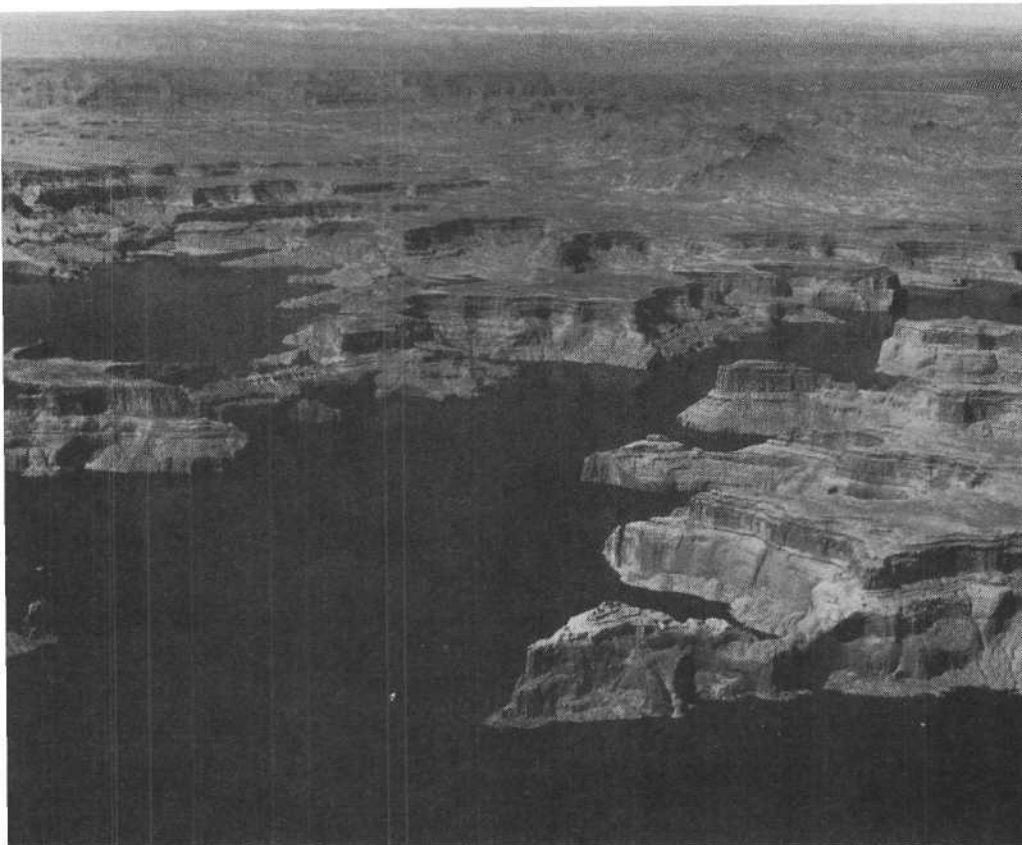


*Magnificent Gunsight Arm  
Lake Powell, Utah.  
Photo by David Muench,  
Santa Barbara, California.*









The mouth of Last Chance Bay opens into a world of sheer-walled canyons that stretch ten miles north from the main body of the lake. Part of Padre Bay is visible to the left of the photo.



Some side-canyons above the lake level are spectacular when seen from the air. Such views are not possible by land or water.

lake in the Oak Creek Bay area, and can be seen from the lower hundred miles of the lake. The Henry Mountains, one of the three unique "lacolithic" ranges in southeastern Utah, dominate the upper hundred miles of the lake. The lower slopes of both the Henrys and Navajo

Mountain are made colorful and picturesque by miles-long slabs of tilted, eroded sandstone.

The geologic formations exposed at lake level or above vary from the light-hued Cedar Mesa Sandstone in the Hite vicinity that is 240 million years old, to to sheer-walled, dark-stained Wingate Sandstone, to the light-hued domes and gigantic natural amphitheaters of Navajo Sandstone and the eighty-million-year-old Straight Cliffs sandstone deposits on top of the Kaiparowits Plateau. The igneous minerals of the Henry Mountains and Navajo Mountain intruded into the older sandstone strata about seventy million years ago.

Within this complex of venerable geologic formations there are many oddities worth seeking out. Even though the rising lake has drowned countless prehistoric Indian dwellings and utility structures, others still remain. On a mesa top near the base of Navajo Mountain, the remnants of a rock-walled pueblo tell silent tales of a vanished culture. The Park Service has restored prehistoric cliff dwellings in several locations that are easily accessible.

The Escalante Canyon system contains several gigantic arches and natural bridges. Among the larger are Coyote Natural Bridge and Jacob Hamblin, Stevens and Broken Bow Arches. Massive spring-seep caverns, some of them hundreds of feet high and even wider,

are found everywhere in Navajo Sandstone walls. Most such caverns shelter verdant oases of water-loving trees and plants.

There is a way, however, for Lake Powell visitors to get an excellent overview of the lake, even though they have only a few hours or days to spend. Flight over the immense reservoir and its immediate vicinity by light airplane, either private or commercial, provides viewers with an overall perspective of its beauty and complexity that can be obtained no other way. In fact, even visitors with unlimited time for exploring the labyrinthine lake should start their explorations with a flight.

After an air tour over Lake Powell, surface explorations by boat can continue for days, weeks or months, and all that is viewed more closely by boating and hiking will then fit into the overall pattern seen from the air.

Commercial air tours over Lake Powell of various durations can be taken from the fields at Page, Arizona, near Glen Canyon Dam, from Jay's Canyonlands Resort at the entrance to the Needles

#### RIVERSIDE COUNTY'S LARGEST 4-WHEEL-DRIVE HEADQUARTERS

*Accessories for All Makes*



**JOHNSON'S 4WD CENTER, INC.**

7590 Cypress [at Van Buren]  
P. O. Box 4277  
Riverside, California 92504  
Telephone [714] 785-1330

#### 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:

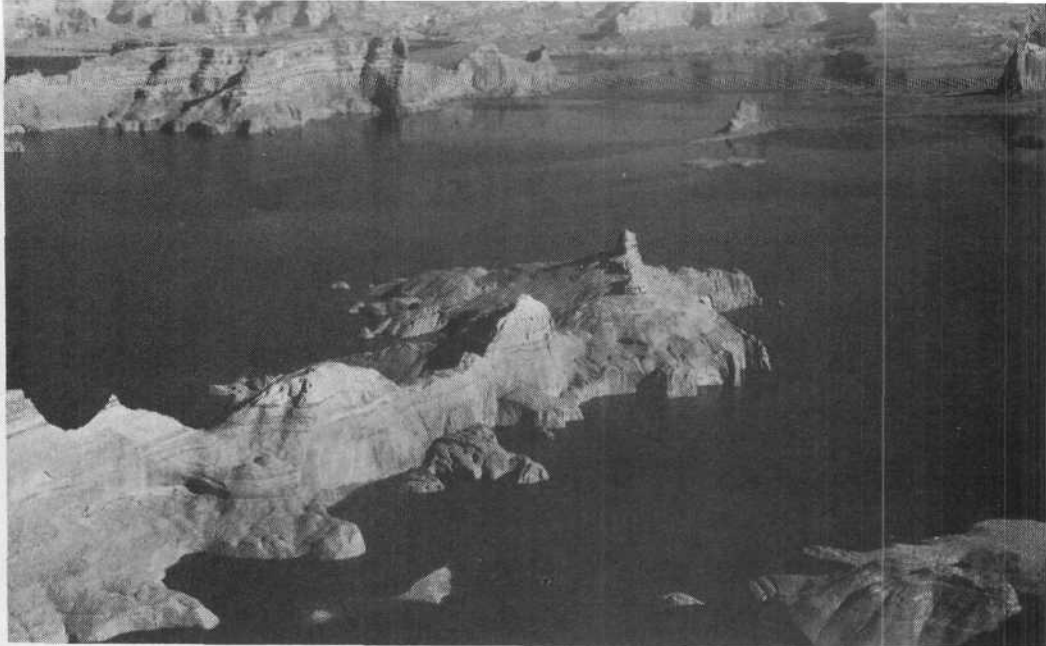
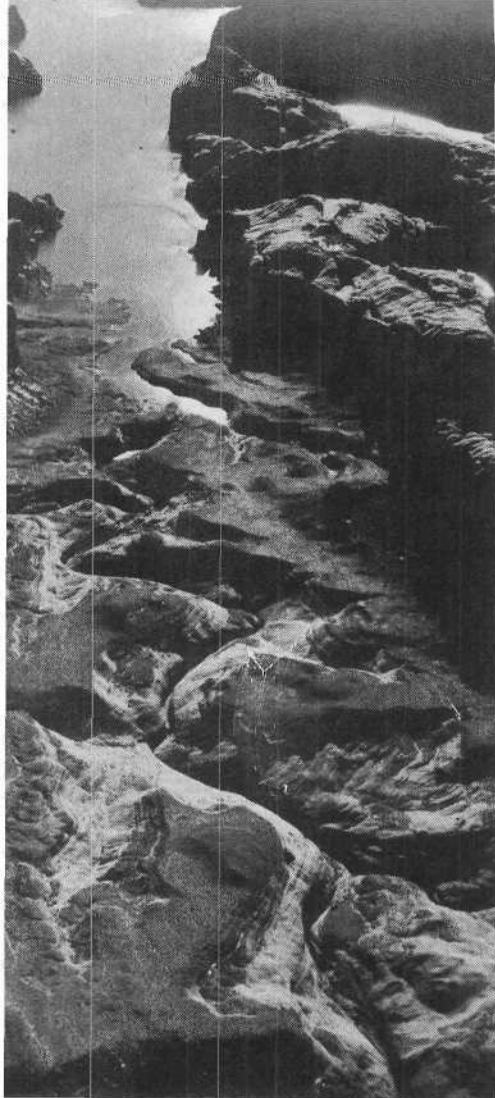
**AURORA**

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

**COE PROSPECTOR SUPPLY**

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





Padre Bay [Desert, April 1973], about 12 lake-miles from the dam, offers spectacular panoramas. Here, the lake is bordered almost entirely by sheer or sloping walls of brilliantly colored sandstone.

be filed and followed. Fuel tanks should be topped off before each flight, thunderhead cloud systems and high winds should be avoided, adequate elevation should be maintained, air charts and maps of the lake should be carried and pilots should be alert for occasional up-

drafts or downdrafts in the vicinity of cliffs and mesa rims. Commercial air tour pilots are familiar with the unusual air conditions in the Lake Powell vicinity, and have excellent safety records.

The best seasons for air touring Lake

*Continued on Page 46*

District of Canyonlands National Park, and from the city-county air fields near Blanding and Moab, Utah.

At the lake, there are airstrips for use by private planes at Wahweap, Bullfrog, Hall's Crossing and Hite. Private planes may also use the city-county air fields at nearby Blanding, Monticello, Page, Moab, Green River, Bluff, Hanksville, Mexican Hat and Escalante as bases from which to explore Lake Powell. There are also many emergency landing strips in this wild and unpopulated region of Utah. Consult air charts for their locations.

Visitors to the canyonlands of southeastern Utah who are taking that opportunity to see Canyonlands National Park by air (see *Desert*, July 1974) can easily extend such flights to include Lake Powell. The commercial air tour operators at Canyonlands Field, north of Moab, or at Jay's Canyonlands Resort offer lake tours.

Those planning to air tour Lake Powell in private planes should take every precaution necessary for flying over remote and unusual terrain. Flight plans should

## Tours in or near Canyonlands National Park

- ISLAND IN THE SKY
- WALKING ROCKS
- ARCHES NATIONAL PARK
- ONION CREEK
- GEMINI BRIDGES
- WASHERWOMAN
- MONUMENT BASIN
- HURRAH PASS
- ROCKHOUNDING

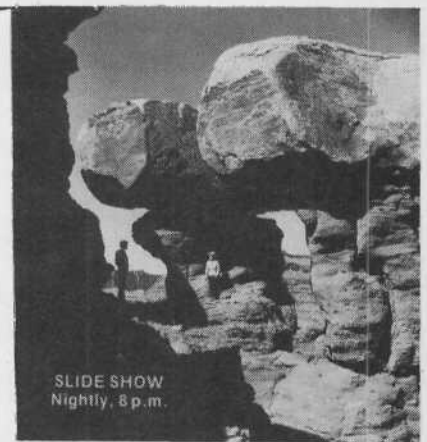
### RATES

8 Hours.....\$15.00 per person  
4 Hours.....\$10.00 per person  
Special Tours.....\$20.00 per person

Unfolded, Framable 16" x 22" Stereographic Maps of Canyonlands & Arches National Parks, \$1.25 each Postpaid.

## LIN OTTINGER'S TOURS

Moab Rock Shop, 137 N. Main, Moab, Utah 84532  
Phone (801) 259-7312 for Reservations



SLIDE SHOW  
Nightly, 8 p.m.

*Walking Rocks in Canyonlands*



## FISH! FISH! FISH!

TROUT, BASS AND CATFISH  
Get your share at Hall's Crossing

**HALL'S CROSSING MARINA OFFERS:** Gas and oil, live bait and lures, fishing gear, boat repair facilities, cold beer, ICE, groceries, slips and buoys for rent. Overnight accommodations that sleep two to eight persons. Write or call for reservations. At the general store: fresh milk, eggs, butter, frozen meat, cold cuts and canned items for camping or picnicking. Take a boat trip to Rainbow Bridge in one day. 2, 3 and 4-day tours to various parts of the lake, camping and sleeping under the stars. Ferry service for travelers with light vehicles. All types of pleasure craft for rent, from 14-foot to houseboats. Airstrip is 4,000 feet with tiedown facilities available.

## HALL'S CROSSING MARINA

Write Lake Powell Ferry Service, Blanding Utah or call 801-684-2261

# White's City... an entertainment oasis

by FRED S. COOK

LITTLE DID the 20-year-old school teacher from Kentucky realize what his future held in store in his new home in New Mexico. But Charles L. White was a visionary in a new land and had courage to believe in himself and the state in the early 1900s.

In 1914, he foresaw the popularity of the automobile and installed the first hand-operated gasoline pump in Loving, New Mexico.

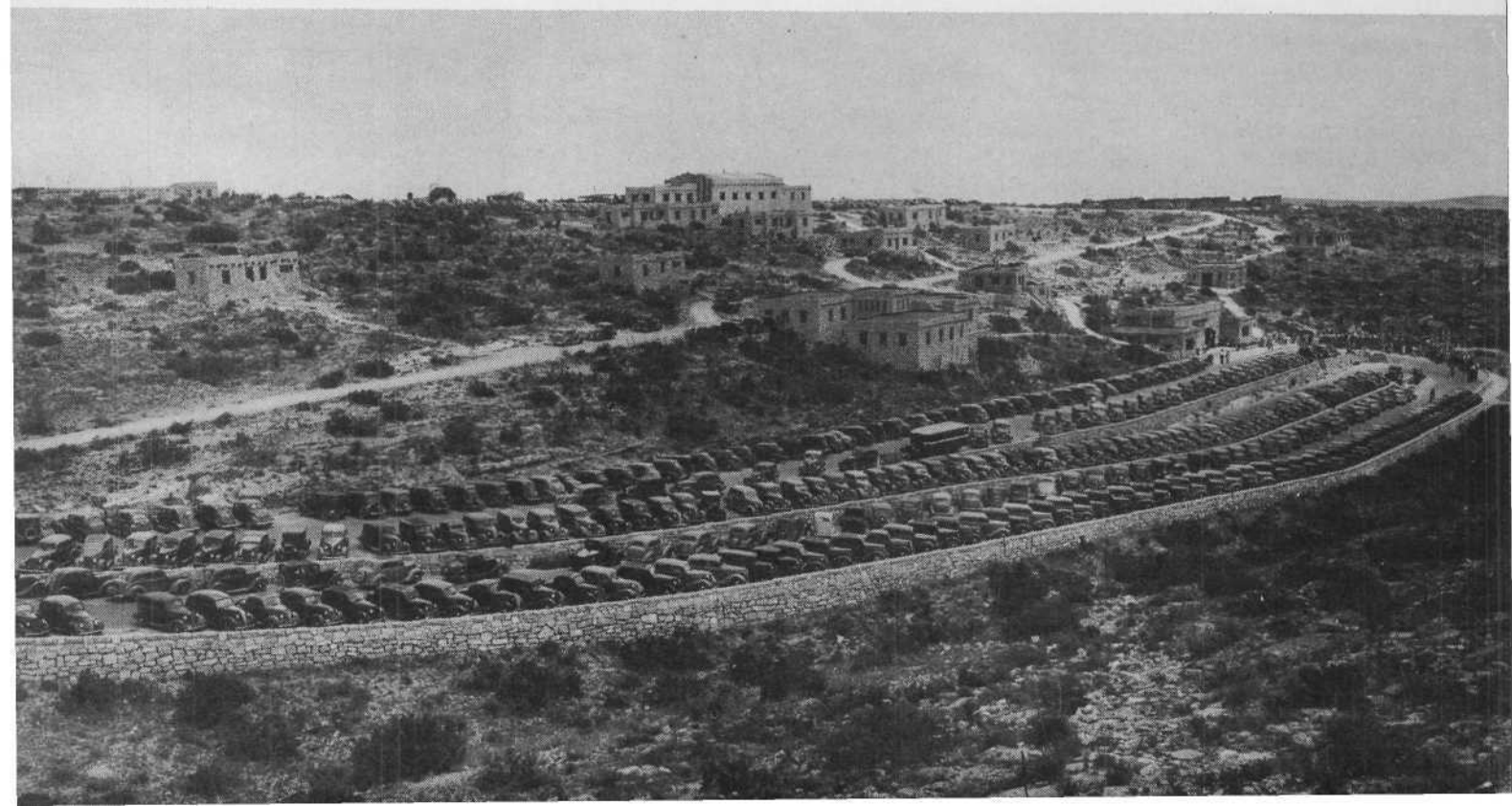
At that time, the Carlsbad Caverns were known locally as Bat Cave, and although Charlie lived quite near he had never visited the area. He decided to take the family to see the cave and that day changed his life.

He was greatly impressed with

the caverns, but noted that while there were numerous visitors, there were no accommodations—not even a restroom. This gave birth to an idea. Charlie went to Carlsbad, filed homestead papers and proceeded to build “White’s Cavern Camp,” consisting of his home, 13 units for visitors and, of course, a filling station. In the following years, he added a cafe, grocery store, drug store and a museum.

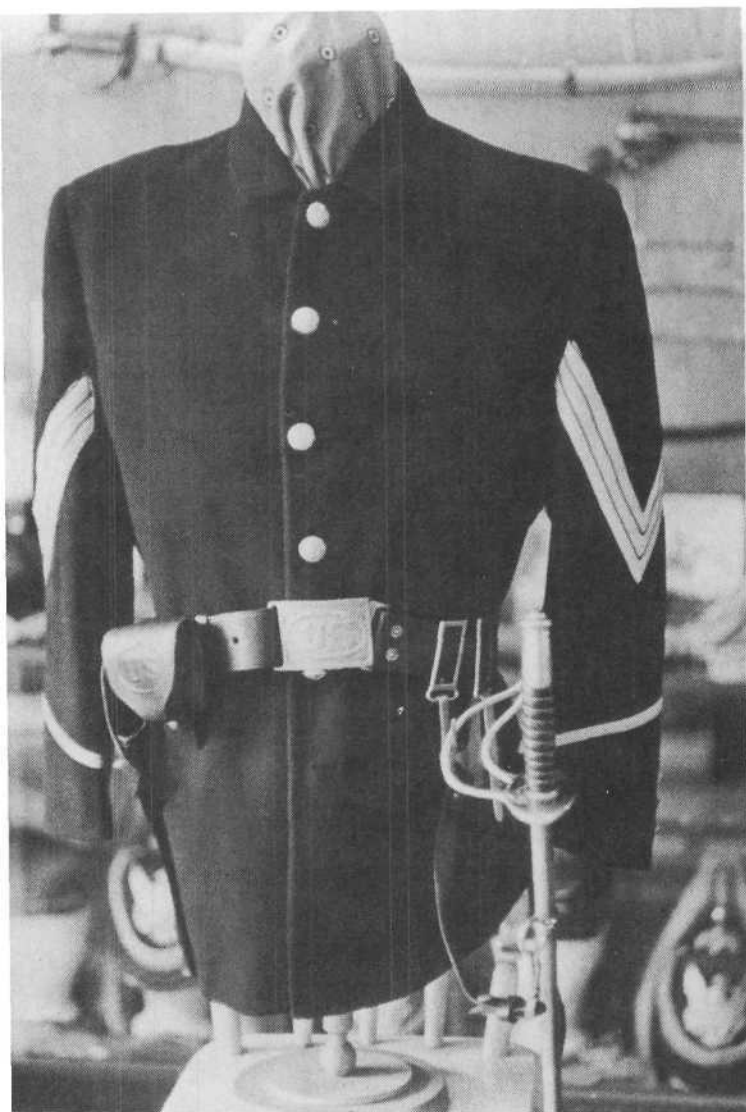
The name had now changed to White’s City and became an entertaining oasis for Southwest desert travelers. Next to the obvious attraction of the caverns, the museum has become a visitor “must.” Through the years Charles expanded the museum,

*An early-day  
photo of the  
parking terrace  
at Carlsbad Caverns  
in New Mexico.*









The fatigue coat, or five-button blouse as it is better known, was issued to the enlistedmen per G.O. #92 in 1872. The fatigue coat represents the U.S. Cavalry of 1874. All accoutrements are original and were standard issue; the black waist belt, U.S. rectangular buckle, the U.S. marked cap pouch and the U.S. half-flap holster. The Cavalry saber is the Model 1860 that was used throughout the Civil War and into the 1870's.



The fatigue coat, or five-button blouse, represents what a Cavalry trooper wore in Field Campaigns, circa 1874. He is wearing the prairie belt which holds 50 rounds of 45/70 carbine ammunition, and the U.S. half-flap holster which held the Model 1873 Army Colt single action with 7½" barrel. Also shown is the carbine sling. The Springfield carbine in this picture is the Model 1879.

## Uniforms, Accoutrements and Weapons of the U.S. Cavalry circa. 1860-1896

This photo layout is dedicated to the U.S. Cavalry from the late 1860's to the 1890's, but especially to Lt. Colonel George A. Custer and the men of the 7th U.S. Cavalry who died at the Little Big Horn, or better known as "Custer's Last Stand." June 25th marked the Centennial of that famous battle.

by WILLIAM J. ZITO





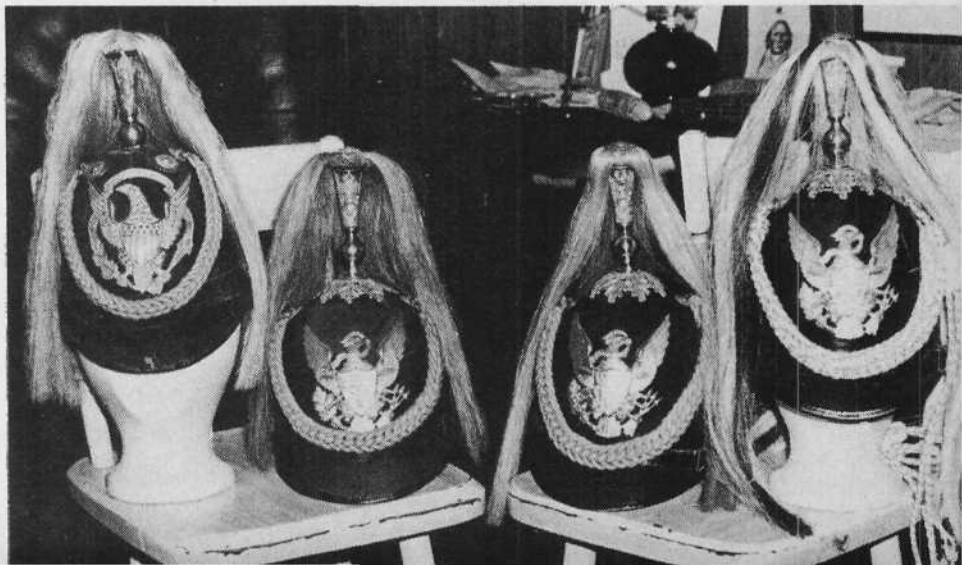
This fatigue coat represents the U.S. Cavalry of the 1880's. On the collar are marksmanship medals which were introduced in the early 1880's. Because of the Custer disaster in 1876, the Army decided to do more target shooting and men were graded and issued these marksmanship medals if they qualified. The medals were known as the Laidley Marksmanship Medals. The web belt and U.S. H-shaped buckle came into issue about 1881. The narrow carbine sling came into issue in 1874 to 1896. The gauntlets became standard issue to the trooper in 1884. The 1881 Army Regulation [above gauntlets] was the Bible for the Army.

The Cavalry dress helmet was first introduced in 1872 per G.O. #92. The helmet at the extreme left was issued in 1876 and little is known of its origin. The eagle plate, cross saber side buttons, plume stand and body of the helmet differ greatly from the model 1881 and 1885. In 1881, the Cavalry helmets saw another change [second from left], but models 1872, 1876 and 1881 had a lemon yellow plume and helmet cord. The 1885 Cavalry helmet [third from left] retained the insignia, but the plume and helmet cord color was changed to orange yellow. Helmet on the right is most colorful of all and was issued to the Indian Scouts in 1890.



The dress uniform was issued originally per G.O. #92 in 1872. This dark blue coat, with a row of nine brass eagle buttons equally spaced, was piped according to branch of service. The Cavalry was piped with a lemon yellow until 1884. From 1885 to 1902, the piping was changed to an orange-yellow. The change came about because the lemon yellow faded due to the sun. Also shown with this uniform are the dress aiguillettes which were a part of the uniform.

Continued on next page





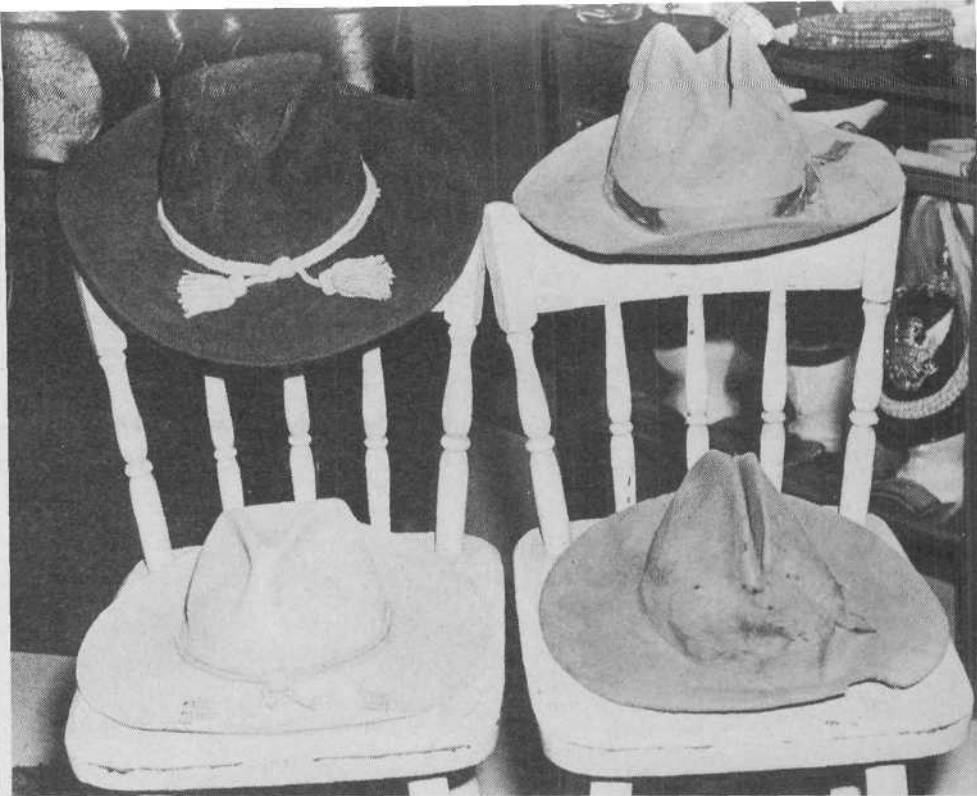
### SUMMER CAMPING TRIPS FOR BOYS 10 - 14

Write for full information on hiking, ghost towns, and much more. Also, Brochures describing our one-day trips from Palm Springs and our Death Valley camping tours.



**DESERT  
EXPEDITIONS,  
INC.**

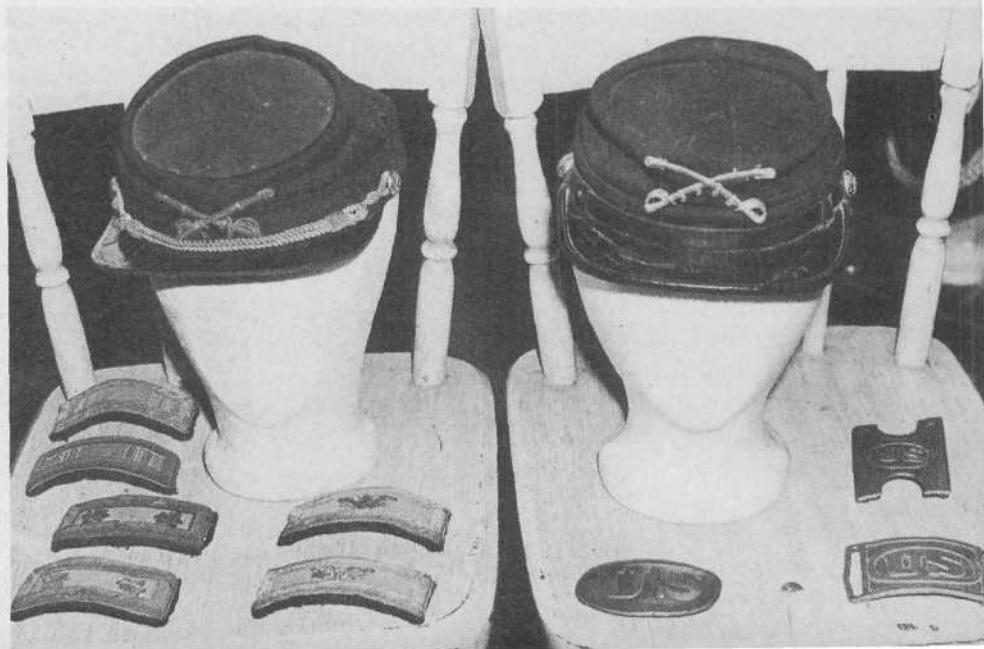
Box 1404D  
Palm Desert, Calif. 92260



The black campaign hat [upper left] was issued to the trooper in 1875, and only one per enlistment. The tan campaign hat [lower left] was a non-issue hat bought from the post store. The model 1885, made of drab-colored felt [upper right], was in existence up until 1896. The hat at lower right was known as a Teddy Roosevelt Campaign Hat and came into issue in 1896.

**Author's Note:** If any historical group or civic-minded organization is interested in using my Cavalry experience during this Bicentennial year, please write to : William J. Zito, c/o Desert Magazine, P.O. Box 1318, Palm Desert, California 92260.

The officer's kepi at the left is from the 1880's, with gold-embroidered cross sabers on the front and the fancy cord with small eagle sidebuttons on the side with a "C" in the shield to designate Cavalry. The Cavalry shoulder straps with this kepi vary; Full Colonel, Lt. Colonel and Captain of Cavalry. The kepi to the right is an enlisted-man's kepi of the 1890's. The buckles date from an early 1839 oval U.S. buckle, an 1874 rectangular buckle and the Model 1890 H-shaped U.S. buckle.





## "RUBBER DUCKS"

Continued from Page 23

Zeb happened to overhear the woman crying in the livery stable where the coaches were, and said that they could come out to his farm and stay with him until they could catch a stage—provided she did the cooking, and her husband would help Zeb overhaul equipment in the barn to pay for their keep.

They were most grateful; and the word went around that maybe old Zeb had a piece of a heart somewhere after all. Later, when someone asked about them, Zeb replied in an offhand way, "Oh, they're probably dickering for a farm somewhere in Sweden by now!"

Late the next spring, when the work rush was really on at the truck farm, one of the Indians came to the house and found old Zeb down with a stroke. He was taken to a doctor's house, to no avail; his whole right side was paralyzed and he couldn't speak. Less than an hour later he stirred, there was a wild look in his eyes, and he pointed his left forefinger out toward the farm, moaning, "Yuhhgh"—and slumped down dead.

His last plight didn't arouse much sympathy; people figured the old miser deserved to lose his money. After the judge closed his books a lot of the curious went poking around, but there was no evidence anyone found anything.

Stan said that a couple of years later, when he was 18, the mines were beginning to slow down and there didn't seem to be work anywhere around. So he and a schoolmate rounded up some stray burros, borrowed packsaddles and hobbles and went for a five-week prospecting and hunting trip over north in the Diamond Mountains. Like most prospecting trips, it was fruitless; and about noon of the last day they stopped for water and rest at what had been old Zeb's truck farm. As they finished the last of a skimpy lunch, his buddy had an idea. Why not cut a forked wand from an apricot tree, and find the old miser's cache? Since there were almost home and had nothing better to do, Stan agreed.

Stan said the wand in his hand "was just a stick"—until he got close to Zeb's old potato cellar, when it began to twist and pull "like a caught gopher snake." It pointed to the south end of the cellar; and at Stan's excited yell, his buddy

came running. His wand, however, pointed down to the north end! The two potential treasure finders ran for their shovel and pick, pried up the board covering and started digging with fervor. About a foot and a half down, they uncovered a hank of reddish blonde hair, bones and a woman's clothing and shoes!

Badly shaken, but still determined, they tried the north end—and at about the same depth they uncovered more bones and a man's shoes!

This was too much for the boys, and leaving the burros to fend for themselves, they went flogging for Eureka and the sheriff. The subsequent coroner's examination showed that both skulls had a round hole in the back; about the size made by a carpenter's hammer, if swung with force. The boys had solved a double murder—that nobody knew had been committed.

After I had taken pictures, I reminded Stan that I had a couple of metal detectors in the camper, and we spent most of the rest of the day carefully checking all logical spots where old Zeb's money might be. The area was too large, however, to properly cover in the time I had. The old miser could have hidden it anywhere around (who knows how *that* kind of mind works?)—maybe up along the old fences, by a tree stump in the orchard, under a rock over on the ridge—anywhere.

I have no way, of course, to guarantee that old Zeb's money is buried there (or ever was, for that matter); but it's a pretty good bet he didn't send it off to some charitable foundation—so a plodding, methodical, detector artist with a good machine and plenty of time just might show me up. It's anybody's guess how much total money he might have squirreled away; but since all the coins would predate 1904 or 1905 at least, the thought of their value in the present day old coin market has a warm, cozy feeling.

If that kind of an operator does find Zeb's cache, I have one word of warning for him: "Handle your winnings with caution."

I am not supposed to be superstitious; but surely there must be some kind of special curse on the tainted leavings of a creature like old Zeb . . . whose grisly rubber duck was a sneak-killer's lust for other men's gold! □

Now . . .  
*Good things  
are happening at . . .*

## Death Valley Junction

Stay at the historic  
**AMARGOSA HOTEL**

This lovely 50-year-old hotel is being restored. 20 rooms open year 'round. All carpeted. All beautifully furnished. Electric heat and air conditioning. Make the Amargosa Hotel your headquarters while in the Death Valley area.

You can now dine in the restored DINING ROOM in the Hotel. A separate banquet facility is available for groups. Telephone Death Valley Junction #1 for information or reservations.

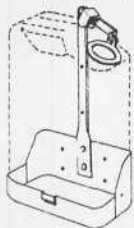
Visit Marta Becket's famous **AMARGOSA OPERA HOUSE**. You've read about this beautiful and unique attraction in *Desert* and *National Geographic*. See Marta Becket's program of dance-mimes. See her fabulous murals inside the Opera House. Performances Friday, Saturday and Monday Through April. Saturdays only in May, September. 8:15; doors open at 7:45. Telephone Death Valley Junction #8 for reservations. Tours welcomed.

The **AMARGOSA GENERAL STORE**, Death Valley Junction Service Station and **AMARGOSA POTTERY** are open. Opening soon . . . The Last Chance Salon, the desert's newest beauty salon. Space available for development.

For further information about **DEATH VALLEY JUNCTION** please write:

Death Valley Junction, Inc.  
P. O. Box 675  
Death Valley Junction,  
California 92328

## STOP THAT THIEF WITH LOCKSTRAP



A revolutionary new design secures all G.I. fuel cans to your carrier or holder and locks your filler cap. Attaches to back of carrier. All steel construction, zinc plated. Type B Only **\$7.50**  
PLUS POSTAGE. 2 LBS.

Send for FREE Brochure Showing  
Other Models to Fit Any Vehicle

DEALER  
INQUIRIES  
INVITED

1141 Wiltsey Rd., SE  
Salem, Oregon 97302



## FREE CATALOG



FUN & PROFIT  
WITH  
METAL DETECTORS

COMPASS, GOLDAK, MYTY-MYTE  
From \$59.95 to \$299.50

For the Prospector & Treasure Hunters. We have Gold Pans, Books, Topo Maps, Dredges, and many other Related Supplies. Mortar & Pestle — 1/2 Pt. size Cast Iron — Postpaid \$6.50.

**JACOBSEN SUPPLIERS**

9322 California Ave., South Gate, Calif. 90280  
Phone (213) 569-8041

## CREATE JEWELRY!

FOR GIFTS, PERSONAL WEAR OR PROFIT!

**FREE!** 200 PAGE  
CATALOG  
SHOWS HOW!

EASY TO DO, NO SPECIAL SKILLS

Earn Big Money in your spare time. Sell your creations for 2 to 5 times what you paid for them. This FREE CATALOG contains everything you need . . . send for hobby-crafts biggest and best catalog. Contains over 10,000 items . . . loaded with pictures — everything you need to get started at once.

SEND FOR FREE CATALOG

**GRIEGER'S Inc.**

Dept. 11, 900 So. Arroyo Parkway  
Pasadena, California 91109



## GIANT BINOCULARS!

These large-aperture binoculars are superb! Designed by **Novatron** *Insta.* to be the finest at any price, they equal or surpass models selling for UP TO TEN TIMES MORE! The incomparable instrument for long-distance or night time use they are endorsed by the world's foremost experts. Astronomers, big-game hunters, ornithologists, yachtsmen, four-wheelers — all agree — you must own a pair.

9x65 binoculars \$109.95 ppd  
10x70 binoculars 119.95 ppd  
11x80 binoculars 149.95 ppd  
20x80 binoculars 159.95 ppd

Please send check  
or money order to:

© NOVATRON, 1976



Novatron, Box 531-D, Big Bear City, Calif. 92314

# Rambling on Rocks

by GLENN and  
MARTHA VARGAS

## PRICE OF GEMS: Going Up and Up

WE HEAR many complaints about the high prices of gems and gem materials. Prices have steadily risen over the past decade, and they are expected to continue to rise.

The rise is due to a number of factors, least of which is rarity. There have been many recent discoveries of gem minerals, both well-known types, as well as new types. Thus, we cannot blame the price rises on the usual misconception of depleted mines.

The greatest single factor in the rise is demand. Over the past 20 years, many individuals have turned to gem cutting for a hobby. This number is greater than might be thought. According to our calculations, in this country alone, there are at least 10,000 people that have taken up gem faceting during the past 10 years. To pick just one foreign country, Australia, the number of faceters is rising at a surprising rate.

At the same time, a large number of persons have started buying gems as an investment. This is happening in most of the "developed" countries of the world. Certainly, many of these gems are being set in jewelry, but a large percentage is going into collections, or being put in safe deposit boxes.

Our experiences in selling faceting materials have sometimes been very surprising. We have often seen the market flooded with a gem species to the extent that most dealers have a large supply, and wholesalers are very overstocked. After a period of no more than two years, the supplies have become normal. In about five years, the material became scarce. Finally, the gem material became nearly impossible to find. This chain of events has taken place, in most instances, in less than 10 years. To name only a few, kunzite (the lavender form of

spodumene), brazilianite, danburite, sphene and axinite are good examples. It should be noticed that none of the above are the popular gems such as aquamarine, amethyst, topaz or garnet. These have never really flooded the market.

We have often wondered where all of these many pieces of moderately popular gem materials have gone. Even though we are involved in selling them, we find it very difficult to believe that a huge surplus can almost completely disappear in such a short period of time. The only logical answer to the disappearance is that many people have put away a few pieces, either in the rough state, or as cut gems.

This "hoarding" of gems (if we may call it that) has given rise to a new industry. In this country, a large number of people are cutting gems for the connoisseur. Up to 20 years ago, virtually all gems were cut in the Orient or Germany. Here, there were perhaps no more than two dozen gem cutting houses. Many of the gems that they cut were recutting jobs; gems damaged by wearing, or very poorly cut foreign gems.

Today, the new gem cutting firms make a practice of cutting excellent gems for the collector or jeweler. Virtually all of their work is done from rough materials, and very little from previously cut gems. We are personally acquainted with many of these gem cutters, and others are our customers. All buy only the best gem materials and produce excellent cut gems. The era of poorly cut gems is drawing to a close.

Previously, we mentioned the well known gem materials; aquamarine, amethyst, topaz and garnet. These, and other popular types are also in short supply, but their scarcity is due to other factors as well as the above. It is true that the present-day collector desires these also, but the difficulty in obtaining them begins in the country of origin.

Gems have always been cut in the Oriental countries that produced them, and the rough stones seldom reached the market. Recently, the practice has spread to other producing countries. Brazil and South Africa now have very comprehensive cutting industries and discourage the exportation of the rough materials. Even the less-developed African nations, such as Tanzania, are taking up the practice.

There is good reasoning behind the



cutting of gems in the country of origin. The greatest rise in value of a gem material takes place at the time of cutting; when it changes from a shapeless piece and becomes a gem. Previously, this rise took place in another country. Now it takes place at "home."

The economics of the transition from "shapeless mineral to gem" goes further. An industry at home employs local talent. Thus the countries that mine the gem minerals gain by virtue of the producing of the gem, and the cutting process creates new jobs that did not exist before. We can lament the scarcity of gem materials due to these actions, but we can certainly sympathize with their intent and applaud them for their initiative. We are not convinced that they are cutting gems of good quality, but the practice is working for them. We can recut the gems if we do not like them.

Another factor that affects the rise of prices of gem material in the country of origin is inflation. Recent reports from Brazil tell of a 23 percent inflation in less than a year. We are experiencing inflation in this country also, but not to that extent.

Speaking of inflation, this thought should be pursued a bit further. Here at home, all prices are rising; there should be no reason to feel that gems should not rise also. Thus, part of the rise in gem prices can be attributed to economic conditions. Obviously, however, gem prices have risen at a rate greater than our own inflation rate.

After relating the factors that have contributed to the rise in prices of gem materials, a question must be answered. Are the gems worth the new prices? We definitely think so.

As stated above, a large percentage of the gems now on the market are of better quality than in the past. It is true that some of the newer gem cutting industries do not produce what we think are well cut gems, but they certainly are much better than the poorly cut gems that have originated in the Orient. The American gem cutter almost makes a fetish of producing a well cut gem, and there are signs that the thought is spreading.

The higher prices for gem materials have encouraged more people to look for gem deposits. This has resulted in the discoveries of some new gem materials, and new deposits of the older varieties.

The higher prices have made the buyer more selective, forcing the miner to sort more carefully and offer only good materials.

The poorer materials that were always a large part of nearly all large quantity purchases are beginning to diminish. All of this tends toward raising the quality of the finished product in general. We are delighted with this trend, as we have often complained about wasted effort on poor materials, or worse yet, fine gem materials being poorly cut.

One interesting sidelight of this chain of events is the new gem materials. We will devote a column to these in a later issue, but we would like to mention one at this time. The discovery of a green garnet in Africa has forced us to revise much of our thinking about garnets.

This material, a variety of the grossular species, evidently derives its color from a vanadium impurity. At first, it was thought to be due to the usual chromium, but investigation has shown that a large amount of vanadium is present in the deeper colored pieces. Chromium is there, however, so it is possible that the combination may be found to be the cause of the color.

The finest of this garnet equals or surpasses the color of the finest emerald. In other respects, the garnet is superior to emerald. It has a higher refractive index, thus producing greater brilliance. Hardness is about the same for the two, but the garnet is not as brittle as the emerald. The best part of the comparison is that the green garnet is approximately one-tenth the price of comparable emerald. Emeralds have never been easy to purchase as rough stones, and thus have been difficult for the amateur gem cutter to obtain. The green garnet is not on the market in large quantities, but certainly is in better quantities (and also better quality) than emerald. This, coupled with the much lower price, is a bonus attributable to the rise in gem prices.

We are not overjoyed with the constant upward trend of gem prices, but we are elated with the long-needed upgrading of gem materials and practices in cutting. There is still a long way to go, but with buyers becoming more knowledgeable, and demanding better gems, quality can only go up. When we look at the rising quality, and compare it to the rising prices, then the prices are not as bad as first thought. □



## Windmill

Unique lawn decoration. Turns in slightest breeze. Adds rustic charm. 4 1/2 ft., 8 ft. & 10 ft. sizes. **BOXED.** Free Color Literature. Send to Ornamental Windmill Sales, 10336 DeSoto, Chatsworth, Calif. 91311. 213-341-2672.

## WAGON WHEEL RESTAURANT

*Tombstone's Finest Dining  
1880's Atmosphere*

**LUNCH - DINNER  
SUNDAY SMORGASBORD**

Visit Our Museum Bar

Corner 4th and Fremont Tombstone, Ariz.



**22 Years Before  
"Peanuts"  
were  
Introduced  
at Barnum's  
Circus,**

Covington manufactured hand & foot powered grinders for Gem Coral & Sea Shells - never losing their leadership. They now offer a selection of over 200 modern pieces of Lapidary Equipment & Accessories.

### Deluxe Gem Tumbler

Rugged, compact for pros & beginners. Mod. 250D, Sh. Wt. 18 lbs.

**\$64.65**



### 8" & 10" Koolerant Controlled



#### Trim Saws

Heavy duty throughout. Complete with Power Feed & Cut-Out. Switch & Motor. Mod. 157d-10" Sh. Wt. 45 lbs.

**\$283.55**

### Ultra-sonic Drill

Drill the hardest stones in seconds with 20,000 pulses per second. Uses ordinary silicon carbide grit. No soldering. No retuning. American made. Ship wt. 47#.

Model 638D.

**\$1,885.00**



**COVINGTON** Since 1848  
Box 35, Dept. D., Redlands, CA 92373

Please accept my order for the following items,

and ship at once:

Enclosed is my:

☐ Check  
☐ Money Order

Gem Tumbler

Drill

Trim Saw

Free

Catalog

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_

Zip \_\_\_\_\_

Be sure to enclose postage. Calif. Buyers Add Tax.

# The Trading Post

## • BOOKS-MAGAZINES

JEWELRY, GEM and mineral how-to-do craft books, field guides with maps. Free book list. Gembooks, Box 808DM, Mentone, Calif. 92359.

BURIED TREASURE! An unrivaled collection of "Where To Look" and "How To Search" books. 25c. Treasure, Box 1377-D, LaCrosse, Wisc. 54601.

FREE COPY UNIVERSAL Magazine. Send name and stamp to: Reverend Paul, Box 1537-D, Palm Desert, Calif. 92260. One Year Subscription \$5.00

"GEMS & MINERALS," the monthly guide to gems, minerals, and rock hobby fun, \$6.50 year. Sample 25c. Gems & Minerals, Box 687DM, Mentone, California 92359.

KITCHEN BIBLE—Feed 2 to 100. Alaskan experiences, game cookery, make bananas, autobiography. Great gifts. \$3.95. Marge Stav, 3217 26th Ave., W., Seattle, Washington 98199.

"CAMPER SPECIAL" Rockhound, Treasure Hunter, Fisherman. First time offered recipes. This one will make you a "Hit" with your "Group." \$2.00 to "Gems," P.O. Box 3222, Dept. 7G, Quartz Hill, Calif. 93534.

DESERT MAGAZINE back to 1940. Complete your set now while back issues are still available. Wes Reber, 222 S. Rancho Ave., Sp. 13, San Bernardino, California 92410.

FOR SALE—Desert Magazines, assorted 1952-59, \$1.50 each, complete year 1960-1966, \$8.00 set. Lapidary Jr., assorted 47-64, \$1.50 each, complete set 65-68 \$8.00 for a year. Gems and Minerals 1958-60, assorted \$1.00 each, complete year 1961-65 \$7.00. Stoneback, 32742 Alipaz, St., Sp. 167, San Juan Capistrano, Calif. 92675. 714-493-3785.

## • 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.

## • GEMS

SHAMROCK ROCK SHOP, 593 West La Cadenita Dr., 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, Calif. 92270. Phone 346-2812.

## • GEMS

BEGINNERS STUDY MATERIALS. Minerals, gemstones, fossils, woods, gold, collections, others. Catalog 25c. Mineral Lore, 3004-D Park Avenue, San Bernardino, California 92404.

## • MAPS

MAPS, MAPS, MAPS to anywhere! 6000-map catalog \$7.95. Travel Centers of the World, P.O. Box 1673, Hollywood, Calif 90028.

MAPS, OLD STATE, RAILROAD, COUNTY Maps 70-110 Years old. SASE, Northern Map, Dept. DM, Eagle River, Wisc. 54521.

WATERPROOF STRIP MAPS Pacific Crest Trail. 80 feet of maps, Canada to Mexico, \$19.75. Rogers, Box 1907, Santa Ana, California 92702.

LEGENDARY MALARRIMO BEACH, Baja California—First detailed map of "Costa de la luna," (coast of the moon). 13"x27" beautifully drawn and colored plus new facts and impressions by the first person to explore the coast alone and on foot. Send \$2.00 to: Maps by Furtado, Map M-1, P.O. Box 14698, Long Beach, Calif. 90814.

## • MINING

ASSAYS. COMPLETE, accurate, guaranteed. Highest quality spectographic. Only \$6.00 per sample. Reed Engineering, 2166 College Ave., Costa Mesa, California 92627.

## • OLD COINS, STAMPS

SILVER DOLLARS, 1800's - early 1900's, \$5.50. 10 different \$49; 20 mixed \$94; 100, \$442. Guaranteed. Wholesalers, Box DM-13041, Tucson, Arizona 85732.

## • PROSPECTING

PROSPECTORS, TREASURE HUNTERS, Metal Detector Enthusiasts, join the Prospector's Club of Southern California. Send for free copy of club publication "Treasure News," 8704 Skyline Dr., Los Angeles, California 90046.

REACH A SELECTIVE audience with a Classified Ad in The Trading Post section of Desert Magazine for as little as \$5.00 monthly.

### 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.

## • PROSPECTING

BEAUTIFUL CHUNKY Natural Gold Nuggets, \$3.00, \$5.00 and \$8.00 sizes. Also: Packet of black sand and gold and instructions for panning practice, \$1.00. Prospector Jack Ward, Box 380, Sandia Park, New Mexico 87047.

LEARN PROSPECTING FOR GOLD and other precious minerals, join Gold Prospectors Association of America and receive one years subscription to Prospectors News (magazine), membership card, patch, decal, large gold locations map, information service, instruction packet and more. Send \$5.00 to G.P.A.A. National Headquarters, P. O. Box 10602, Eugene, Oregon 97401.

DRYWASHERS! GOLD CONCENTRATORS! Guaranteed to recover minerals, gold. A hobby that pays for itself! Write to: Nick's Nugget, P. O. Box 1081, Fontana, California 92335. (714) 822-2846.

POWER GOLD DREDGE—Build your own for less than \$100, sluice box and and rocker plans, maps, THing guides. Free details. Creations Unlimited, P.O. Box 253-DM, Corinne, Utah 84307.

## • SEEDS & PLANTS

GOLDEN BARREL CACTUS 2"x2", three for \$5.00; also seedlings for dish gardens. Send SASE for list. Desert Hill Cactus Growers, Box 123, Corona, California 91720.

## • TRAVEL

PICTORIAL TRAVEL GUIDE to the canyonlands of southeastern Utah, with photos, maps and text by Desert Utah Associate Editor, F. A. Barnes, 48 pages, \$2.50 postpaid. Jeep trail map of the Moab area, \$1.00 postpaid. Order from Canyon Country Publications, P.O. Box 963D, Moab, Utah 84532.

## • TREASURE FINDERS

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

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.

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



## • MISCELLANEOUS

**PROFESSIONAL ART BY MAIL**—The only one of its kind you have been looking for. Courses approved by California Dept. of Education. V.A. Approved. Send for Free Brochure. Roy Keister College of Fine Arts, 15800 Highland Dr., San Jose, California 95121.

**JULIAN EPITAPH**—weekly publication from old mountain gold mining town. History, humor, small town news. Unique gift item. Yearly, \$10.00. Box 764, Julian, California 92036.

**CCIN INVESTMENTS** For Retirement and Profits! Complete Information included in our Detailed Publication! \$2.00 Postpaid. Coins, Box 1377-D, LaCrosse, Wisconsin 54601.

**NEW PENDULUMS**, one gold, one silver, antenna rods, priced right. Seven-day trial. Stamped envelope, Mercury Magnet, Anson, Texas. Rt. 3, Box 100. 79501.

**HISTORICAL RESEARCH**—legends our specialty—scholarly investigation in the world's archives and on location. Cave Canyon Research, Vail, Arizona 85641.

**NATURE STICKERS** for bumpers, campers, windows, painted surfaces. Copyrighted. All weather. 4"x15". Remove easily. "The Desert-Thirst Quencher of the Soul." "Nature's Wonderlands, Enjoy-Don't Destroy." "Camping Families Have More Fun." 75c each, 3 for \$2, 10 for \$5, 100 for \$40. Public Affirmations, Box 2204, La Habra, California 90631.

**DESERT MAGAZINE BINDERS** (used) for years 1937 to 1961. Don't cut your issues, preserve them in these hard-to-find, large binders made especially for the early issues. Limited quantity. \$2.50 if picked up at our Book Shop, 74-425 Highway 111, Palm Desert, Calif. (\$3.50 each if mailed, with minimum order of 3 binders.)

**HELP SPREAD THE SPIRIT.** Set of 3 different bumper and window-type stickers with official gov't bicentennial emblem and motto. Rugged. Removable. Self-stick. Vinyl. Rush \$2.00 (includes shipping costs) to Patriotic Products Co., 3078 Miraloma Ave., Anaheim, Calif. 92806. Don't delay. Do your part!

**HYDROPONIC GARDENING** made easy. Do way with the conventional concepts. Save money and time. Automatic Feed System has no pumps or timers, saves on nutrient. Do you wish to grow tasty vegetables, beautiful flowers or bedding plants? Send for our book "New Simplified Hydroponic System for Home Gardeners." The book also provides valuable information for building the structure to plant care. Send \$5.00 to A&R Enterprise, 2602 No. 80th Pl., Scottsdale, Arizona 85257.

**FREE GIFT CATALOG!** Low, low priced gifts. Write Gifts for All Occasions, MD1, Box 77, Queenstown Road, Severn, Maryland 21144.

**THE NOVELTY SHOPPE.** Turquoise Jewelry, Rocks, Imports, Curios, etc. A smile is the shortest distance between two people. Box 36, 806 W. Dickinson, Fort Stockton, Texas 79735.

# 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"x25" 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"x45". **\$4.00**

## ROADMAP TO CALIFORNIA'S LOST MINES AND BURIED TREASURES

Compiled by Varna Enterprises, 38"x25" 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

## REPLACEABLE SUBSCRIPTION FORM

July 1976



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

☐ Check here if you wish this issue replaced.

☐ ENTER A NEW SUBSCRIPTION ☐ RENEW MY PRESENT SUBSCRIPTION

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

☐ SEND GIFT SUBSCRIPTION TO:

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

Sign Gift Card: "From \_\_\_\_\_"

☐ 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 \$4.50 (Includes tax and postage)

Date Binder(s) with Year(s) ☐ Undated

## LAKE POWELL BY AIR

*Continued from Page 35*

Powell are spring and early summer, when moderate breezes are blowing from the north or west. During late summer, fall and winter, still air and atmospheric inversions generally allow fumes from the giant coal-burning plant near Page to accumulate over the lake, obscuring its vistas.

Amateur photographers who want to capture the beauty of the lake from the air will find several hints helpful. Beware of over-exposure, Lake Powell country is very bright. Avoid photographing through smudged or dirty windows, or taking pictures at an acute angle through even clean windows. Keep the camera level left-to-right,

*Labyrinthine Navajo Creek canyon is the first major side-canyon above the dam on Lake Powell. Boaters can travel its tortuous twistings for miles, yet only from the air can its full complexity be grasped.*





### 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*

### Enjoy Our

New Modern Motel  
Kitchenettes  
New Camper Park  
Complete Utilities

### Relax in Our

Hot Mineral Baths  
Hydro Therapy Massage



## Tecopa Hot Springs Resort

*Old West Hospitality*

Phone 714-852-4373

*Crisp Clean Air*

*Warm Winter Sunshine*

Tecopa, California

especially if the horizon shows in the viewfinder. Use a polarizing filter for color film. This will improve color, reduce glare and reflections from the landscape and also eliminate reflections from the plane's windows. Non-photographers will find that polarizing sunglasses enhance viewing from the air.

Those flying above Lake Powell for the first time will immediately be struck by the novelty of what they are seeing. The tortuously twisting lake and its equally distorted side-canyons, the broad, rock-walled bays and the strange mountains that border the lake will seem like another world. Indeed, the lake and its surrounding terrain are so unusual that the area has been used as a setting for science fiction movies about "other planets."

Of course, there are those who view flying much like 127-year-old Charlie Smith, oldest living American, who says, "Why should I go up in the air for? There's ground I ain't been on yet." But Lake Powell visitors who have firm convictions of this sort are certainly never going to grasp the full magnitude and spectacular beauty of the vast and colorful desert-canyon reservoir that Glen Canyon Dam has created in southern Utah. □



# Letters to the Editor

Letters requesting answers must include stamped self-addressed envelope

## Readers' Queries . . .

For many years I have been an "on and off" subscriber (but nevertheless an avid reader, when the purse strings would allow it), of *Desert Magazine*. It is the same fine publication today that it has always been, and both my husband and I are glad to see no changes.

However, I need some help. I would like to ask if some of your readers could put me in touch with someone who knows where I can purchase a print, or painting of the "Red Caboose."

I saw one on the wall of a motel room in the Benson Motel, in Benson Arizona, last January. After returning home, I wrote the manager of the motel to see if I could buy it, but never heard from him.

The picture is so true to a scene we have seen many times in our years of being in the desert that I am hoping I can obtain one for our living room wall. We are getting too old to travel anymore, and I'm sure this picture would help our "arm-chair" travels.

IDA C. CURTIS,  
Wilmington, California.

I have enjoyed your magazine for so long. We lived in Yuma, Arizona 15 years, and you can guess that I loved that desert!

My question concerns an old railroad switch padlock that was unearthed near Yuma during an excavation job. It had the letters C.P.R.R. Even old railroad men have never heard of this R.R.

I'm hoping some of your readers can solve this mystery.

BERTHA E. PIERCE,  
Benson, Minn.

Do you have any information on a peculiar large dark blue rock called the "Devil's" rock, or "Death" rock, located north of Kingman, Arizona, high up in the Cerbat Mountains? This geological oddity is supposed to kill any living thing on contact, and has apparently been seen close-up by at least one Indian or white man.

It can be classified as a "treasure" because of its being a rather unique source of an unknown type of energy.

HAROLD A. ALLEN,  
Salt Lake City, Utah.

# Calendar of Events

This column is a public service and there is no charge for listing your event or meeting—so take advantage of the space by sending in your announcement. We must receive the information at least three months prior to the event.

MAY 29-31, American Indian Crafts and Art Show & Sale, Goodman's Hall, 10 Jack London Square, Oakland, California. Admission, Adults \$2.00, Children \$1.00.

MAY 29-31, 12th Annual Gold Country Classic for 4WD and dune buggies, presented by the Sacramento Jeepers, Inc., 9 miles east of Sloughhouse, California on Highway 16, 20 minutes from Sacramento. Geared for the family off-roader. Camping area available.

JUNE 5 & 6, Rockatomics Gem and Mineral Society's 10th Annual Show, 8500 Fallbrook Avenue, Canoga Park, Calif. Free admission and parking. Chairman: Bud Goesman. Dealer space taken.

JUNE 19 & 20, Art by the Sea will be held in the Ventura, California Fairgrounds. Professionals, amateurs, and special children's exhibits will be on display. Oils, water colors, leather, glass, sculpture and crafts. Write to P.O. Box 1269, Ventura, Calif. 93003.

JUNE 27-JULY 4, Prineville Rockhounds Pow Wow Association's 17th annual encampment. Dealers, displays. Admission, parking and evening entertainment free. Write to Prineville Rockhounds Pow Wow Assn., P.O. Box 671, Prineville, Oregon 97754.

JULY 4, Bicentennial Treasure Hunt in Virginia City, Nevada. Collectible coins and metal detectors. Fun and entertainment for everyone. Entry fee postmarked before June 15th is \$10. Late fee is \$15. R.F. Taylor, 1910 N. Peters St., Carson City, Nevada 89701.

JULY 17 & 18, Culver City Rock and Mineral Club, Inc., 15th Annual "Fiesta of Gems" Show. Veterans Memorial Auditorium and Rotunda, Overland at Culver Blvd., Culver City, Calif. Dealers and working demonstrations. Admission free. Write: Ginger Cane, 4108 Olympiad Dr., Los Angeles, CA 90043.

JUNE 20, Annual Fiesta at Mission San Antonio, Jolon, Calif. 205th Birthday Celebration. Special Fiesta Mass at 11:00 a.m. Delicious barbecue served from 12 noon to 3 p.m. Colorful free entertainment program throughout the afternoon. Public invited.

JULY 17 & 18, Annual Fiesta and Barbecue at Mission San Luis Rey, near downtown Oceanside, San Diego County, Calif. Free entertainment by Mexican and Spanish dancers and vocalists; American folk singers. Beef barbecue on Sunday and a complete Mexican din-

ner served both Saturday and Sunday. Public invited.

AUGUST 14 & 15, Utah Treasure Club's Bicentennial Treasure Hunt Jamboree to be held at Knolls, 85 miles west of Salt Lake City, Utah. Gold panning, bottle and treasure hunts. Native dances by local Indian tribes; music and songs. Write to: Utah Treasure Clubs, Inc., P.O. Box 16223, Salt Lake City, Utah 84116.

SEPTEMBER 4 & 5, Calaveras Gem and Mineral Society, Inc., Jewels of Calaveras, Frogtown, Calaveras County Fairgrounds in the Mother Lode County. (Not held during the Jumping Frog Jubilee.) Chairman: Earl Klein, 1899 Martin Blvd., San Leandro, Calif. 94577. Camping, Field trips, etc.

SEPTEMBER 11 & 12, Sequoia Gem & Mineral Society's 10th Annual "Harvest of Gems and Minerals" show. Redwood City, Calif., Recreation Center, 1120 Roosevelt Ave. Dealers space filled. Chairman: Bill Byrd, 1332 Acacia Ave., Milpitas, Calif. 95035.

SEPTEMBER 10-12, Gem and Mineral Show sponsored by the Wasatch Gem Society, University of Utah Special Events Center, Salt Lake City, Utah. Chairman: James C. Bean, 213 Leslie Ave., Salt Lake City, Utah 84115.

SEPTEMBER 10-12, El Cajon Valley Gem and Mineral Society's 3rd Annual Gem & Mineral Show, Parkway Plaza Shopping Mall, El Cajon, Calif. Displays, guest exhibits and working demonstrations. Dealers. Contact: Robert Silverman, 1409 Teton Dr., El Cajon, Calif. 92021.

SEPTEMBER 18 & 19, Long Beach Mineral and Gem Society's 32nd Annual Show, Signal Hill Community Center, 1708 East Hill St., Signal Hill, Calif. Free.

SEPTEMBER 25 & 26, Centinela Valley Gem and Mineral Club's "Harvest of Gems" Show, Hawthorne Memorial Center, El Segundo Blvd., and Prairie Ave., Hawthorne, Calif. Dealers, displays, demonstrations, prizes and food. Free parking.

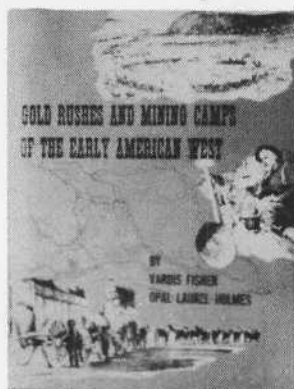
SEPTEMBER 25 & 26, El Monte Gem and Mineral Club, Inc., 10th Annual "Magic in Rocks" Show, Masonic Temple, 4017 Tyler Ave., El Monte, Calif. Chairman: Ruth McBlain, 4737 Cogswell Rd., El Monte, Calif. 91732.

SEPTEMBER 25 & 26, Carmel Valley Gem and Mineral Society's 17th Annual Show "Jubilee of Jewels," Monterey Fairgrounds, Monterey, California.

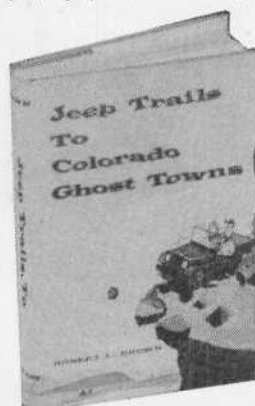
# GREAT READING From

## CAXTON PRINTERS

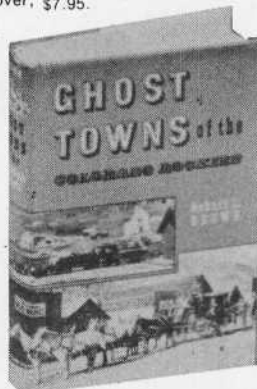
WXC



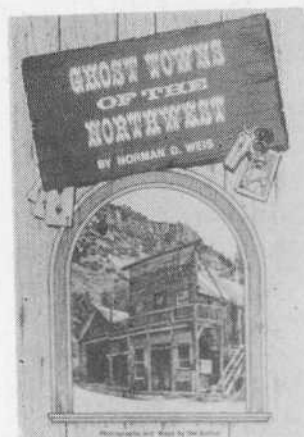
**GOLD RUSHES AND MINING CAMPS OF THE EARLY AMERICAN WEST** by Vardis Fisher and Opal Laurel Holmes. Few are better prepared than Vardis Fisher to write of the gold rushes and mining camps of the West. He brings together all the men and women, all the fascinating ingredients, all the violent contrasts which go to make up one of the most enthralling chapters in American history. 300 illustrations from photographs. Large format, hardcover, boxed, 466 pages, highly recommended. \$17.95.



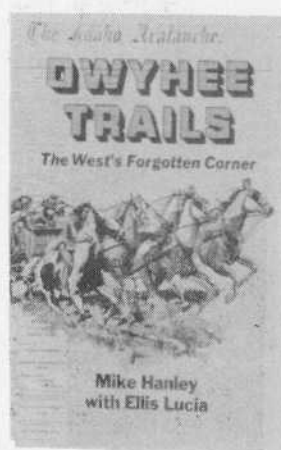
**JEEP TRAILS TO COLORADO GHOST TOWNS** by Robert L. Brown. An illustrated, detailed, informal history of life in the mining camps deep in the almost inaccessible mountain fastness of the Colorado Rockies. Fifty-eight towns are included. 239 pages, illustrated, end sheet map. Hardcover, \$7.95.



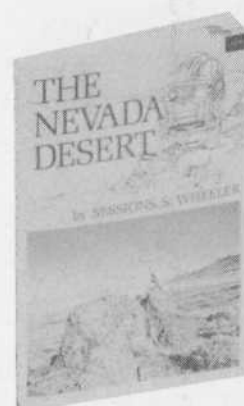
**GHOST TOWNS OF THE COLORADO ROCKIES** by Robert L. Brown. Written by the author of Jeep Trails to Colorado Ghost Towns, this book deals with ghost towns accessible by passenger car. Gives directions and maps for finding towns along with historical backgrounds. Hardcover, 401 pages, \$7.95.



**GHOST TOWNS OF THE NORTHWEST** by Norman Weis. The ghost-town country of the Pacific Northwest, including trips to many little-known areas, is explored in this first-hand factual and interesting book. Excellent photography, maps. Hardcover, 319 pages, \$7.95.



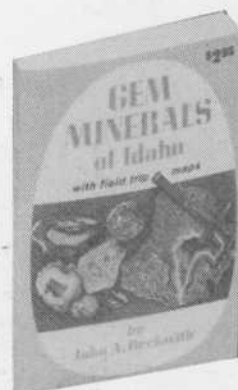
**OWYHEE TRAILS** by Mike Hanley and Ellis Lucia. The authors have teamed to present the boisterous past and intriguing present of this still wild corner of the West sometimes called the I-O-N, where Idaho, Oregon and Nevada come together. Hardcover, 225 pages, \$9.95.



**THE NEVADA DESERT** by Sessions S. Wheeler. Provides information on Nevada's state parks, historical monuments, recreational area, and suggestions for safe, comfortable travel in the remote sections of western America. Paperback, illustrated, 168 pages, \$2.95.



**SOUTHERN IDAHO GHOST TOWNS** by Wayne Sparling. An excellent reference describing 84 ghost towns and the history and highlights of each. Excellent maps detail the location of the camps, and 95 photographs accompany the text. Paperback, 135 pages, \$3.95.



**GEM MINERALS OF IDAHO** by John A. Beckwith. Contains information on physical and optical characteristics of minerals; the history, lore and fashioning of many gems. Eleven rewarding field trips to every sort of collecting area. Slick paperback, maps and photos, 123 pages, \$3.95.

Send check or money order to

**Desert** MAGAZINE

Box 1318,  
Palm Desert, Calif. 92260

California residents please add 6% tax  
plus 25c handling charge