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Volume 39, Number 2

FEBRUARY 1976

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## A Peek in the Publisher's Poke

EVERYONE IS familiar with the old expression, "Thar's gold in them thar hills," but a lot of folks do not realize there is also "gold in them thar washes." One man who does is Dowie Crittenden, of Twentynine Palms, California. In this issue, Dowie tells that "teller of desert tales, Harold O. Weight," just how he goes about getting his share, and passes along tips and tricks that he has learned from 30—yes, 30—years of dry washing for gold on the desert! Harold's camera gives graphic detail to a very interesting hobby.

Another avocation is covered this month by Mary Frances Strong who relates how Mary Pipes, of La Crescenta, California, carves objects out of diatomaceous earth. Being very soft, it is a most difficult medium to work with, but Mary has developed her techniques to a fine degree.

This month's feature artist, James Zar, makes the American Indian come to life in a distinctive style. In his large portraits, the subjects loom out of the background in a forceful manner and with amazing detail. Here is a young artist whose stature in the art world will surely rise.

Effective January 15th, our Book Shop and Art Gallery will be open on Saturdays from 10 to 3 for the convenience of all those who would like to visit us on their way through town. Drop in and say hello, and browse through our 300 books of the West. Also on display are selected work from all the artists who appear in *Desert*.

*William Kuyferts*

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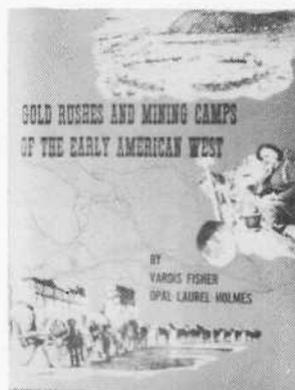
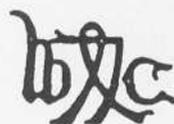
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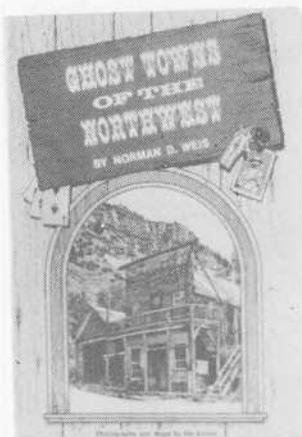
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# GREAT READING From

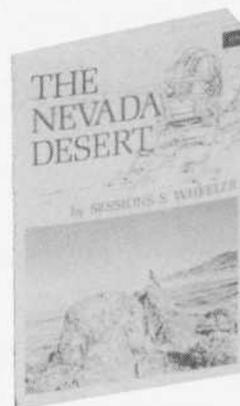
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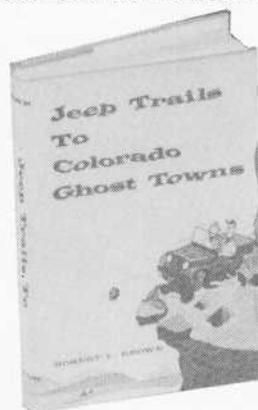
**GOLD RUSHES AND MINING CAMPS OF THE EARLY AMERICAN WEST** by Vardis Fisher and Opal Laurel Holmes. Few are better prepared than Vardis Fisher to write of the gold rushes and mining camps of the West. He brings together all the men and women, all the fascinating ingredients, all the violent contrasts 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.



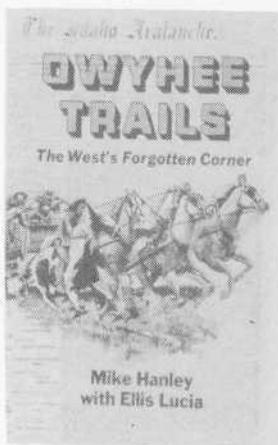
**GHOST TOWNS OF THE NORTHWEST** by Norman Weis. The ghost-town country of the Pacific Northwest, including trips to many little-known areas, is explored in this first-hand factual and interesting book. Excellent photography, maps. Hardcover, 319 pages, \$7.95



**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.



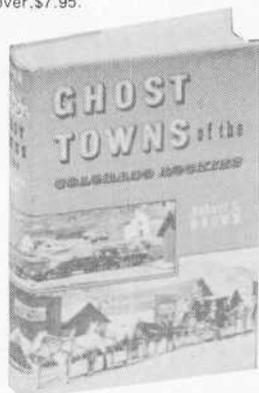
**JEEP TRAILS TO COLORADO GHOST TOWNS** by Robert L. Brown. An illustrated, detailed, informal history of life in the mining camps deep in the almost inaccessible mountain fastness of the Colorado Rockies. Fifty-eight towns are included. 239 pages, illustrated, end sheet map. Hardcover, \$7.95.



**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.



**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.



**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.



**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.

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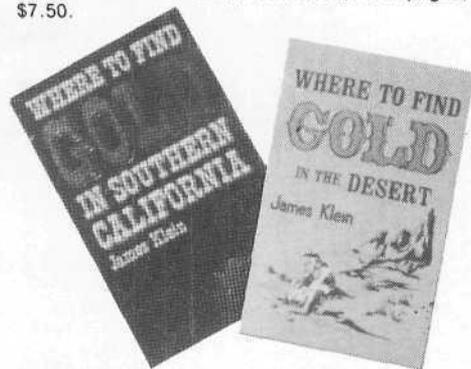
# BOOKS OF

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

**LOST MINES AND HIDDEN TREASURES** by Leland Lovelace. Authoritative and exact accounts give locations and fascinating data about a lost lake of gold in California, buried Aztec ingots in Arizona, kegs of coins, and all sorts of exciting booty for treasure seekers. Hardcover, \$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, route to gold fields, the Butterfield and Pony Express routes, CCC camps, World War II Installations, etc. Hardcover, extensive index, highly recommended, \$9.95.

**LOST MINES OF THE GREAT SOUTHWEST** by John D. Mitchell. The first of Mitchell's lost mine books is now available after having been out of print or years. Reproduced from the original copy and containing 54 articles based on accounts from people Mitchell interviewed. He spent his entire adult life investigating reports and legends of lost mines and treasures of the Southwest. Hardcover, illustrated, 175 pages, \$7.50.



**WHERE TO FIND GOLD IN SOUTHERN CALIFORNIA** by James Klein. Pinpoints areas around the Los Angeles basin such as San Gabriel Canyon, Lytle Creek and Orange County. Tips on how to find gold, equipment needed and how to stake a claim are included as well as the lost treasure tales of each area. Paperback, illustrated, 95 pages, \$4.95.

**WHERE TO FIND GOLD IN THE DESERT** by James Klein is a sequel to *Where to Find Gold in Southern California*. Author Klein includes lost treasure tales and gem locations as he tells where to find gold in the Rosmond-Mohave area, the El Paso Mountains, Randsburg and Barstow areas, and many more. Paperback, 112 pages, \$4.95.

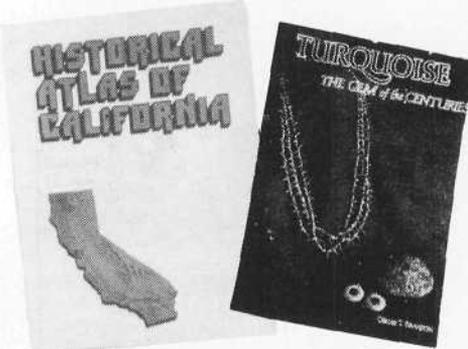
**PHOTO ALBUM OF YESTERDAY'S SOUTHWEST** compiled by Charles Shelton. Early days photo collection dating from 1860s to 1910 shows prospectors, miners, cowboys, desperados and ordinary people. 195 photos, hardcover, fine gift item, \$12.50.

**DEATH VALLEY SCOTTY TOLD ME** by Eleanor Jordan Houston. A fascinating and unusual account of famous Death Valley Scotty's adventures as told to the author while she and her ranger husband were Scotty's nearest neighbors in 1948. Some of these escapades have never been told before. Illustrated, 116 pages, \$1.75.

**MINES OF DEATH VALLEY** by L. Burr Belden. About fabulous bonanzas, prospectors and lost mines. Paperback, \$1.95.

**HOW TO DO PERMANENT SANDPAINTING** by David and Jean Villenor. Instructions for the permanent adaptation of this age old ephemeral art of the Indians of the Greater Southwest is given including where to find the materials, preparation, how to color sand artificially, making and transferring patterns, etc. Also gives descriptions and meanings of the various Indian signs used. Well illustrated, 34 pages, \$2.50.

**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.



**TURQUOISE, The Gem of the Centuries** by Oscar T. Branson. The most complete and lavishly illustrated all color book on turquoise. Identifies 43 localities, treated and stabilized material, gives brief history of the gem and details the individual techniques of the Southwest Indian Tribes. Heavy paperback, large format, 68 pages, \$7.95.

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

**ROCKS AND MINERALS OF CALIFORNIA** compiled by Vinson Brown, David Allan and James Stark. This revised edition will save you hours of time by the description and pictures of rocks and minerals found in this state. Color pictures with clearly developed keys show you how to identify what you have found and gives you fine tools to increase your ability as a field collector. Paperback, well illustrated with photos, locality maps, charts and quadrangle map information. 200 pages. \$4.95.

**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.

**RETRACING THE BUTTERFIELD OVERLAND TRAIL THROUGH ARIZONA** by Gerald T. Anher. This book was written to mark the physical route and station locations in the most hazardous segment of the Butterfield Trail—Arizona. The author's original intent was merely to find, follow and map the Trail, however, the long and difficult task resulted in putting this vital information in a book which makes it easy for others to follow, or to provide a delightful armchair journey over this dramatic route. Profusely illustrated with maps and photos, this book is a visual hand-tool to the explorer; an exciting segment of Americana to the scholar and historian. Large format, hardcover, \$9.75.

**COMMON EDIBLE & USEFUL PLANTS OF THE WEST** by Muriel Sweet. A description with artist drawings of edible (and those not to touch) plants along with how Indians and pioneers used them. Paperback, 64 pages, \$1.95.

**CALIFORNIA GEM TRAILS** by Darold J. Henry. This completely revised fourth edition is the most authoritative guide for collectors of rocks, gemstones, minerals and fossils. Profusely illustrated with maps and contains excellent descriptive text. Paperback, \$3.00.

**THE OREGON DESERT** by E. R. Jackman and R. A. Long. Filled with both facts and anecdotes, this is the only book on the little but fascinating deserts of Oregon. Anyone who reads this book will want to visit the areas—or wish they could. Hardcover, illustrated, 407 pages, \$8.95.



**RAY MANLEY'S SOUTHWESTERN INDIAN ARTS AND CRAFTS** is a full color presentation of the culture of the Southwest including jewelry, pottery, baskets, rugs, kachinas, Indian art and sandpaintings. 225 color photographs, interesting descriptive text. Heavy paperback, 96 pages, \$7.95.

**FOUR WHEEL DRIVE HANDBOOK** by James T. Crow and Cameron Warren. Packed into this volume is material gathered from actual experience and presented in a detailed manner so it can easily be followed and understood. Highly recommended for anyone interested in back country driving. Paper, illus., 96 pages, \$2.95.

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

# THE WEST

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**ENCOUNTER WITH AN ANGRY GOD** by Carole 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.

**EXPLORING DEATH VALLEY** by Ruth Kirk. Good photos and maps with time estimates from place to place and geology, natural history and human interest information included. Paperback, \$2.25.

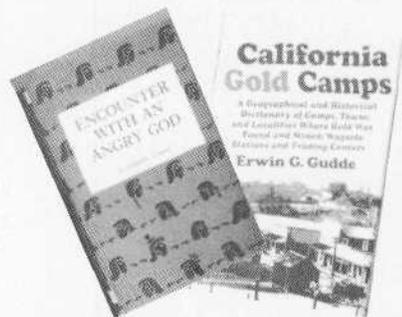
**DEAD MEN DO TELL TALES** by Lake Erie Schaefer. A sequel to **BURIED TREASURE & LOST MINES** by Frank Fish, the author knew Fish for many years and claims he was murdered. Her book adds other information on alleged lost bonanzas, plus reasons why she thinks Fish did not die a natural death as stated by the authorities. Paperback, illus., 80 pages, \$3.00.

**GOLDEN CHIA**, by Harrison Doyle. This book illustrates the great difference between the high desert chia, and the Mexican variety presently sold in the health food stores. It identifies the energy-factor, a little-known trace mineral found only in the high desert seeds. Also includes a section on vitamins, minerals, proteins, enzymes, etc., needed for good nutrition. Referred to as "the only reference book in America on this ancient Indian energy food. 100 pages, illustrated, Paperback, \$4.75; Cloth Cover, \$7.75.

**SPEAKING OF INDIANS** by Bernice Johnston. An authority on the Indians of the Southwest, the author has presented a concise well-written book on the customs, history, crafts, ceremonies and what the American Indian has contributed to the white man's civilization. A MUST for both students and travelers touring the Indian Country. Heavy paperback, illus., \$2.50.

**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. Guddé. Includes 7 excellent maps, in addition to a List of Places by County, a Glossary and Bibliography. Highly recommended. Hardcover, 467 pages, \$19.50.

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



**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.

**GHOST TOWNS OF ARIZONA** by James and Barbara Sherman. If you are looking for a ghost town in Arizona this is your waybill. Illustrated, maps, townships, range, co-ordinates, history, and other details make this one of the best ghost town books ever published. Large 9x11 format, heavy paperback, 208 pages, \$4.95.

**GEOLOGY FIELD GUIDE TO SOUTHERN CALIFORNIA** by Robert P. Sharp. Designed for people without any formal acquaintance with geology, this book provides some understanding of basic geological matters, furnishes descriptions of geological features and relationships in 9 natural provinces within Southern California and serves as a guide to geological features visible in Southern California that can be seen while traveling by car along highways. Well illustrated with maps and pictures, paperback, 181 pages, \$4.95.

**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.

**AMERICAN INDIAN FOOD AND LORE** by Carolyn Neithammer. The original Indian plants used for foods, medicinal purposes, shelter, clothing, etc., are described in detail in this fascinating book. Common and scientific names, plus descriptions of each plant and unusual recipes. Large format, profusely illus., 191 pages, \$4.95.

**GEM TRAILS OF ARIZONA** by Bessie W. Simpson. This field guide is prepared for the hobbyist and almost every location is accessible by car or pickup accompanied by maps to show sandy roads, steep rocky hills, etc., as cautions. Laws regarding collecting on Federal and Indian land outlined. Paperback, 88 pages, illus., \$3.50.

**TREASURE HUNTER'S MANUAL #7** by Karl von Mueller. Treasure, or treasure trove, many 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, \$6.95.

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



**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, \$2.99.

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

**ON DESERT TRAILS** by Randall Henderson, founder and publisher of Desert Magazine for 23 years. One of the first good writers to reveal the beauty of the mysterious desert areas. Henderson's experiences, combined with his comments on the desert of yesterday and today, make this a MUST for those who really want to understand the desert. 375 pages, illustrated. Hardcover, \$7.50.

**COLORFUL DESERT WILDFLOWERS** by Grace and Onas Ward. Segregated into categories of red, blue, white and yellow for easier identification, there are 190 four-color photos of flowers found in the Mojave, Colorado and Western Arizona deserts, all of which also have common and scientific names plus descriptions. Heavy, slick paperback, \$4.50; hardcover, \$7.50.

**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**

**THE CAHUILLA INDIANS** by Harry James. A comparatively small and little known tribe, the Cahuilla Indians played an important part in the early settlement of Southern California. Today, the Cahuilla Indians are active in social and civic affairs in Riverside County and own valuable property in and around Palm Springs. This revised edition is an authentic and complete history of these native Americans. Hardcover, illustrated, 185 pages, \$7.50.

# 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.



## MEXICO'S WEST COAST BEACHES By Al and Mildred Fischer

*Mexico's West Coast Beaches* is a new travel book covering the exotic vacationland known as the Mexican Riviera, and is complete with highway route maps, city street maps, photographs, and information on accommodations, restaurants,

transportation and sea-and-sand diversions.

Beginning with the "natural and nearby" El Golfo de Santa Clara and concluding with the "offbeat hideaway" of Manzanillo, the husband-wife writing team has produced a comprehensive guide to well-known and undiscovered beaches along the Sea of Cortes and the Pacific.

In addition to covering such noted resorts as Mazatlan and Puerto Vallarta, the authors transport the reader to the ever-popular Puerto Penasco and Choya Bay, to the serenity of Kino Bay, to the lure of fishing at Guaymas and San Carlos Bay, to undeveloped Huatabampito Beach, on to the jungle scene at San Blas, thence to brand-new beach developments at Rincon de Guayabitos and Bucerias, on to twin beaches of Melaque and Barra de Navidad, and to the bays of Santiago and Manzanillo.

In addition to pointing out en route attractions and giving detailed beach-by-beach descriptions, the book presents the most up-to-date information about tourist cards and car permits, trailer and motorhome traveling, fishing and hunting licenses and auto insurance. Conversion tables include easy-to-read dollars-to-pesos charts, highway signals and traffic signs, plus metric equivalents for distances, liquids, temperature and weights.

A complete listing of hotels, motels, trailer courts and restaurants appears at the end of each beach chapter. Although

the Fischers toured the Mexican beaches via motorhome, their book makes suggestions for air, auto, ferry and train travel as well.

Fully indexed, paperback, well illustrated, 138 pages, \$3.00.



## ROUGHING IT EASY By Dian Thomas

This unique ideabook on camping and cooking has been written for those people who love to camp, but hate all the bother and expense associated with it.

*Roughing It Easy* seeks to put the fun back into camping by supplying easy and economical ways to prepare foods, equip a campsite and organize a camping trip. It includes such things as: cooking bacon and eggs in a paper sack; cooking omelets on a No. 10 can; broiling steaks or hamburgers with only a newspaper for fuel; baking pizza in a simple reflector oven; building fires with steel wool and flashlight batteries; and many more novel, workable ideas.

This book can be used and appreciated by almost anyone who enjoys the outdoors. There are practical tips and ideas for both the seasoned and novice camper. Hunters, fishermen, backpackers, survivalists, scouts—even families who just cook in the backyard—will find many things of use in the book. Mothers, especially, should be pleased with the variety of ways to prepare outdoor meals and the fun projects they can employ to keep children entertained around camp.

Paperback, 203 pages, profusely illustrated, \$4.95.

## HANS KLEIBER, Artist of the Big Horn Mountains by Emmie Mygatt and Roberta Cheney

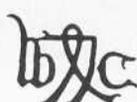
Hans Kleiber, Wyoming artist extraordinary, chronicled the outdoors that he knew and loved so deeply as well as any artist has done. He was devoted to both nature and art and combined the two in a lifelong romance with the Big Horn Mountain country of Wyoming. The legacy of superb etchings and paintings that he left is admirably presented in "HANS KLEIBER, Artist of the Big Horn Mountains."

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**TALES OF THE SUPERSTITIONS:**

The Origins of  
The Lost Dutchman Legend  
By Robert Blair

The endless quest for lost treasure in the mysterious Superstition Mountains of Arizona receives both a setback and a stimulus today with the publication of a new book which skeptically doubts that Jacob Waltz ever had a rich mine, but throws new light upon clues sought by those who nevertheless search for the mythical Lost Dutchman Mine.

Robert Blair, whose hobby for many years has been the literature of lost mine treasure, is the author of this intriguing new book. Published by the Arizona Historical Foundation in Tempe, Arizona, its president, Senator Barry Goldwater, reveals in the introduction that 35 years ago his store financed publication of a small book, *Trail of the Lost Dutchman*, by the late Barry Storm, which touched off an era of furious searching for a mine which this new book asserts may never have existed.

Carefully tracing the enigmatic career of Jacob Waltz, a native of the tiny kingdom of Wurttemberg, now a part of West Germany, the book reveals that Waltz was a day laborer in an early California gold rush before coming to Arizona in 1863, that he mined or held a claim to two or three modest lodes in Yavapai County, but never had a mine of record anywhere in the Superstitions.

Recognizing that many authors attribute Waltz's alleged but non-existent wealth to re-discovery of an ancient "Peralta" mine, Blair then shifts attention to persons of that name, rejecting the story of an Indian massacre of Mexican miners in the Superstitions, and revealing for the first time the actual location of a "real" Peralta Mine, more than 100 miles from the Superstitions.

The book then links the genuine Miguel Peralta and the mine he owned

with the greatest hoax perpetrated in Arizona history—the 15,000,000 acre fraudulent Peralta Grant, which resulted in a Missouri forger, James Addison Reavis, going to federal prison for attempting to defraud the federal government of land in central Arizona now valued at billions of dollars.

The author also shows that the search for other purported lost mines in the Southwest—especially the Lost Soldier Mine and the Lost Doc Thorne Mine—and the traditional account of discovery of the Silver King Mine had become entwined and confused with tales of the Lost Dutchman Mine.

Although skeptical of lost treasures, the author has documented the book with more than 300 citations from public records, newspapers, and authors of earlier lost-mine tales. The book is well illustrated with photographs, maps and illustrations, including three newly-discovered signatures of the "Lost Dutchman" which prove that he wrote his name Jacob Waltz, and neither Walz nor Waltzer nor Weiser as some writers have insisted.

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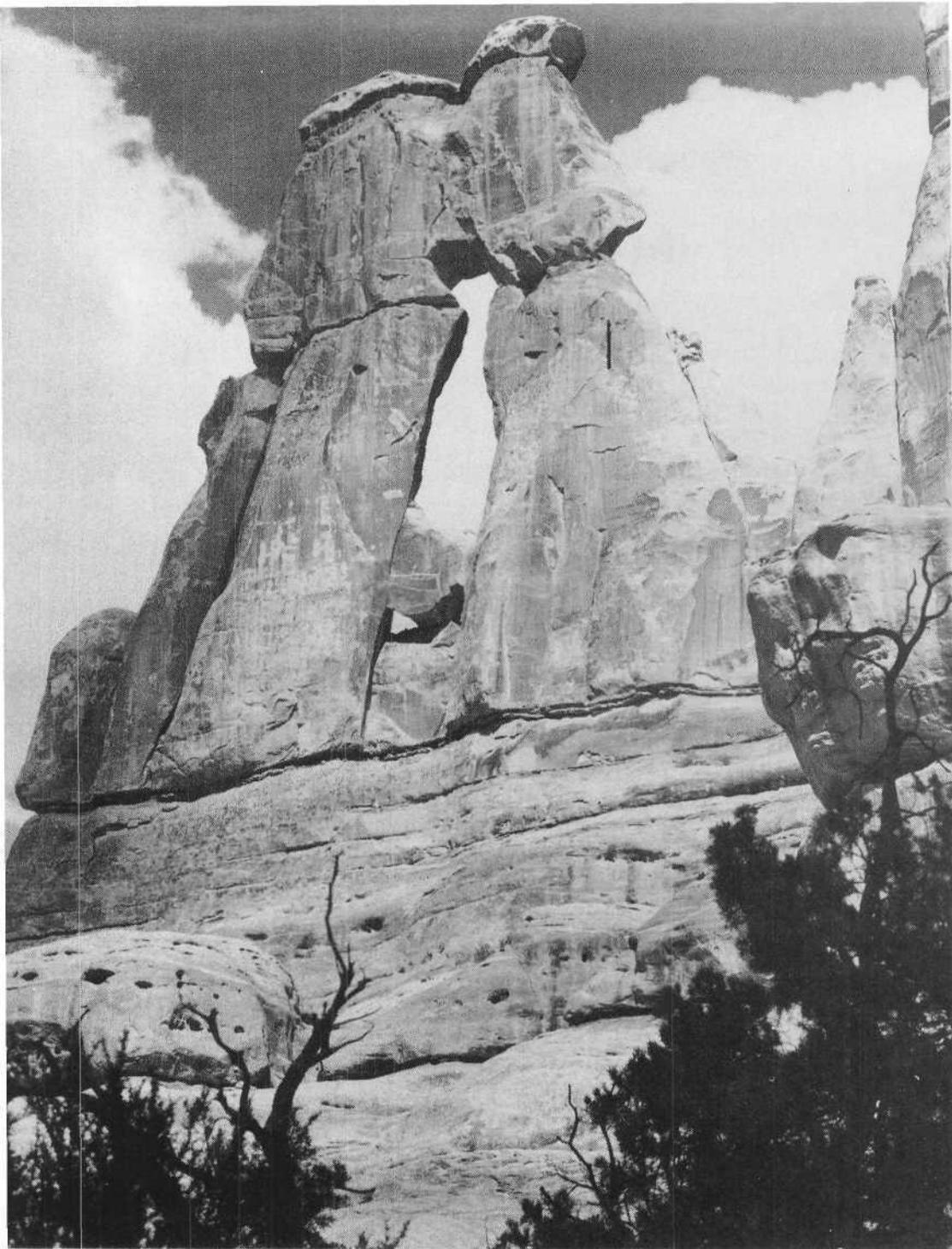
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# Druid Arch

by F. A. BARNES

*Druid Arch is massive, and is formed by near-vertical columns of rock joined together at the top. Photo copyright, F. A. Barnes.*

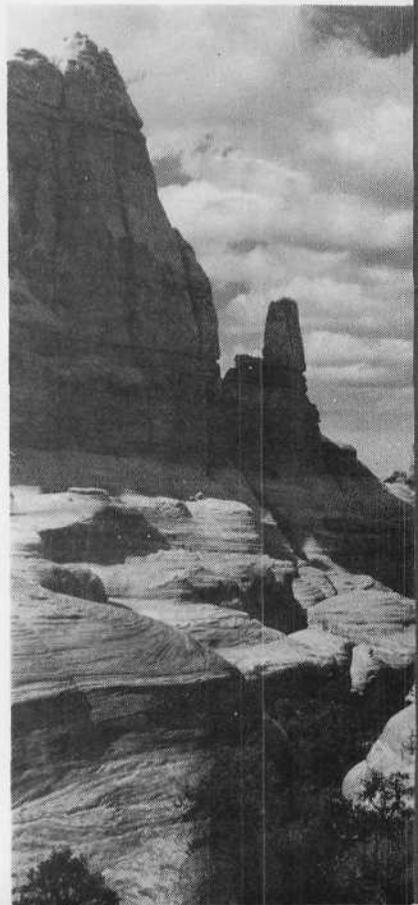


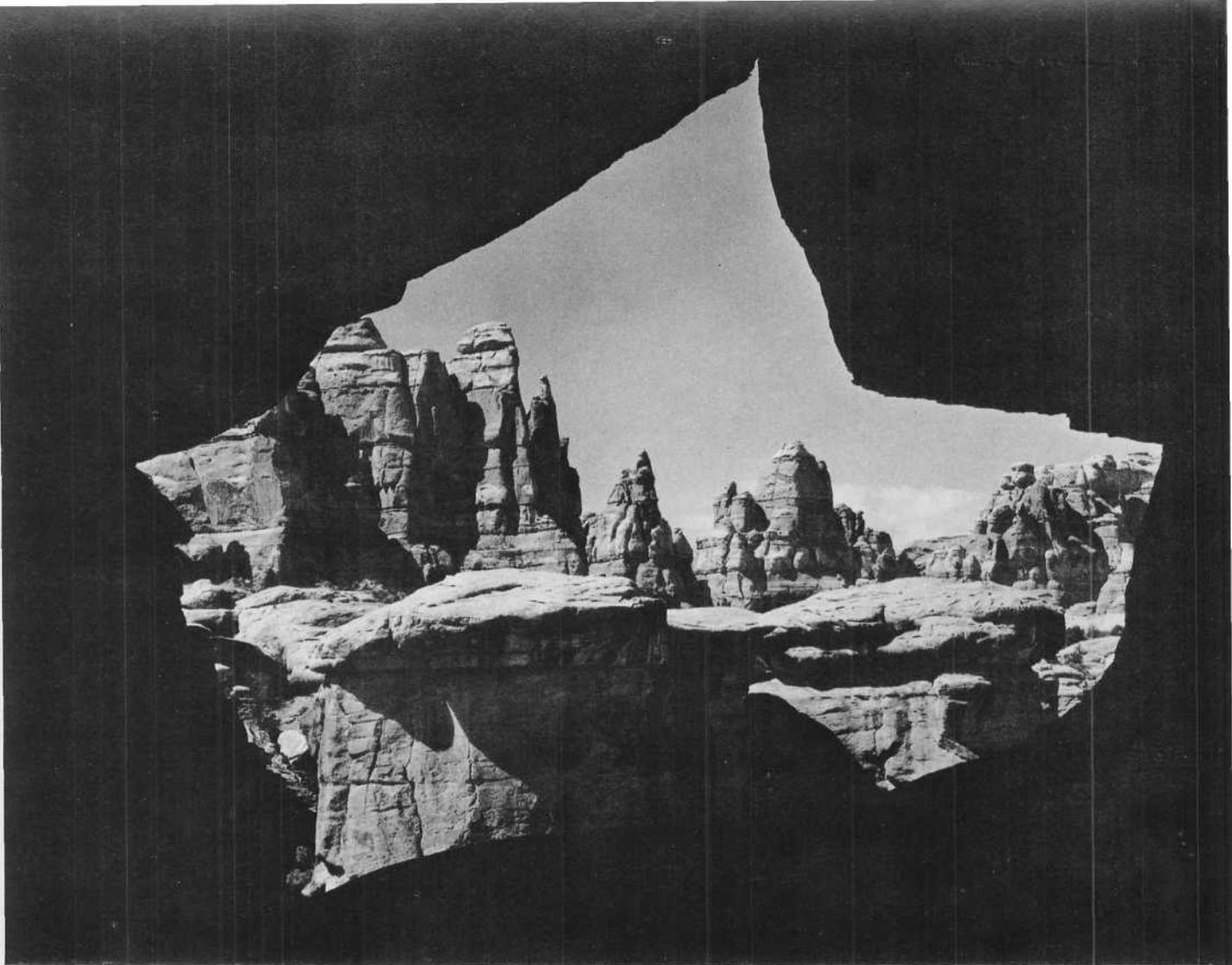
**H**ERE ARE spectacular natural spans by the hundreds in the general Four Corners region, but of these, a few are truly outstanding in beauty. One such is massive Druid Arch. This unique span is in the Needles district of Canyonlands National Park in southeastern Utah. It stands in lonely splendor at the upper end of a long and magnificent canyon system that eons of weather have carved from the colorful Cedar Mesa sandstone that dominates this part of the park.

The name of this deep, twisting gorge is Elephant Canyon. Infamous Elephant Hill, a stretch of tortuous Jeep trail that

gives access to the Needles backcountry, was named after this canyon.

There are two ways to get to Druid Arch. One, the most popular, involves a nine-mile round trip hike from near the base of Elephant Hill. An ordinary highway vehicle can safely travel the dirt road that leads to this trailhead. The other route requires a four-wheel-drive vehicle and takes longer, but offers a sampling of other park highlights. To use this approach, it is necessary to travel by four-wheel-drive vehicle over Elephant Hill and along several miles of Jeep trail, then by foot through the Joint Trail into Chesler Park (*Desert*, August





*Above: This "picture window" through a gigantic rock wall offers hikers a framed glimpse of red and white sandstone spires. Left: Elephant Canyon narrows to near impassability near its upper end. Druid Arch stands in lofty majesty in a gigantic alcove at the very end of this long and lovely canyon system.*

1974) and beyond, into and up Elephant Canyon. Park Service maps of the Needles district show both routes to Druid Arch.

The only way to get to the Needles district of Canyonlands National Park is via U.S. 163, from either the north or south. Between the towns of Moab and Monticello, Utah 211 heads west from U.S. 163 across high rolling desertlands set below the looming Abajo Mountains, then drops steeply down into lovely Indian Creek Canyon and on into the Needles entrance to the park.

Within the park, a paved road goes to a camping-picnic area. Beyond here, to the base of Elephant Hill, the road is graded dirt.

The hike to Druid Arch is not a casual affair. From May through September and sometimes before and after this long summer season, temperatures soar in this part of Utah. Hikers should prepare

for a moderately strenuous jaunt, with several very steep stretches and relatively little shade along the way.

There is usually water to be found near the trail at seeping springs or in slickrock potholes, but such water should not be considered potable without treatment, nor should hikers depend upon these sources of drinking water. Food and water for the entire hike should be carried, and clothing worn that is appropriate to the season.

The trails are marked, although in places these markings are not too apparent. Trail junctions are indicated by small wooden signs. Between these signs, the trail is noted by small rock cairns or by arrows painted on the slickrock. Hikers should stay alert for such trail markers, especially where the trail crosses expanses of slickrock.

Hikers should register at the

*Continued on Page 40*



**B**ACK IN 1874, Belmont was the bustling beehive of central Nevada. Its dry desert air throbbled with accelerated activity. Just over the hill, in East Belmont, the Combination Milling Company's 40-stamp mill hammered away at the district's rich ore. A plume of smoke drifted skyward from the smelter's slim brick stack, signaling the flow of molten silver. At a nearby kiln, a platoon of workmen stock-piled bricks for the construction of the new Nye County courthouse.

Belmont was a proud little town in those days, prosperous and pretty. It had been laid out on a gentle, south-facing slope of the Toquima Range, with a splendid view of the vast Ralston Valley. Maples and locusts, fed by ample springs, shaded its broad streets. The population, having swelled to 1,500 residents, had brought with it all the conveniences of a major metropolis. Stores and saloons lined the main street. There were four lawyers, a doctor, and a weekly newspaper. First class theatrical productions, starring such celebrities of the frontier stage as Lotta Crabtree, played at the Cosmopolitan.

Now, more than a century later, it's usually the raucous call of a pinon jay that shatters the silence. For the mills have been reduced to rubble, and the smelter's vault stands empty, its bare walls open to the curious and the elements. The courthouse, though still an impressive structure, wears a gaunt and vacant stare. The sad, sagging false fronts of store buildings face a dusty, deserted street, while sagebrush fills open doorways. By all reckoning the old Nye County seat is a ghost town.

However, Belmont has fared far better than many of its contemporaries. As any ghost town buff knows, a few splintered planks scattered among the sagebrush, or at most, a couple of crumbling stone walls, are all that mark the sites of dozens of desert mining camps. But Belmont has never quite given up the ghost. Although at times the population has dwindled to but a few hardy souls, their

# Belmont Never Gave Up the Ghost

by BETTY SHANNON

*Opposite page: The tiny Catholic church, which overlooks the 20th century mining camp of Manhattan, is one of Nevada's best known ghost town buildings. However, few know that the church served Belmont worshippers for nearly 30 years before it was moved to Manhattan around 1908.*

*Right: A row of buildings, once the heart of Belmont's commercial district. The brick building on the left is the infamous "Auger Hole."*

*Below: A back door view of the "Auger Hole."*

*The stone cellar served as Belmont's temporary jail.*

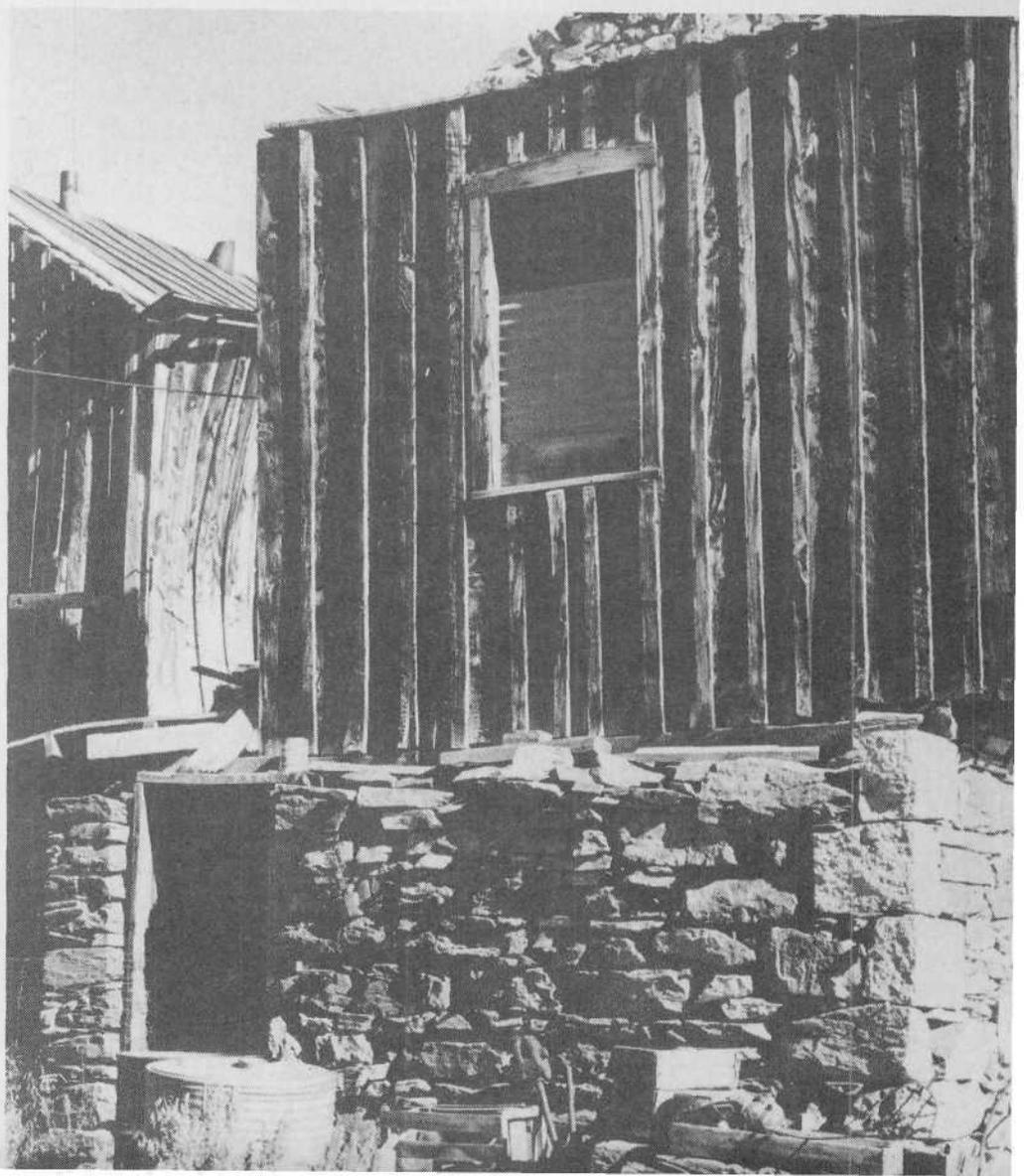


presence has prevented the town's total destruction by thoughtless vandals and souvenir seekers. Fortunately, for those who care, a picturesque fragment of another time, another way of life, has been preserved. You can still find 1870 on Belmont's Main Street.

Belmont's beginning dates back to 1865 when silver ore was discovered nearby. Within a year a 10-stamp mill was at work. The following year saw the erection of a 20-stamp mill, followed by the 40-stamp Combination mill in 1868. The rapid expansion of milling facilities was paralleled by Belmont's own growth. Unlike so many Nevada mining camps, water and building materials were abundant. Many buildings, especially those of the commercial district, were substantially built.

Belmont was soon recognized as an important trading center for the surrounding area. In 1867, it received another boost to insure its continued prosperity. The State Legislature passed an act transferring the Nye County government to Belmont. On May 15 of that year, the archives and public records were removed from Lone, a mining camp which had already seen its best days and which had held the distinction of county seat for the preceding three years.

Although Belmont's population was triple that of Lone, the new county seat sorely needed something that Lone had,



a courthouse. At first, the county offices were housed in existing buildings scattered throughout the town. The jail was a makeshift arrangement in the basement of a brick structure conveniently located across the street from the leading saloon. The upstairs, street-level portion of the building served as a courtroom during the week, while on Sunday the judge's bench was converted to a preacher's pulpit.

Finally, in 1874, \$34,000 was appropriated for the construction of a courthouse and jail. But by the time the handsome, two-story brick building was completed in 1876, two of the mills had already shut down and a good portion of the population had drifted on to new lands of opportunity. An 1880 count recorded only 400 residents. By 1887 mining had virtually ceased.

Ironically, the final, fatal blow can be attributed to a Belmont citizen. On May 19, 1900, a rancher and prospector named Jim Butler discovered a rich ore deposit near a Paiute water hole some 40 miles south of Belmont. Butler's discovery started a new silver stampede, and the town of Tonopah sprang into existence. Within five years Tonopah had gathered enough population to wrest the county government away from the, by then, almost deserted village in the Toquima Mountains.

Although one segment of the community amused themselves with dances, candy-pulls, and literary meetings, at one time there was another, a seamier side to life in Belmont. Belmont's miners were a cosmopolitan mixture of Irish and Cornish, natives of Mexico, and a few robust men from the eastern states. Their leisure time escapades frequently made news.

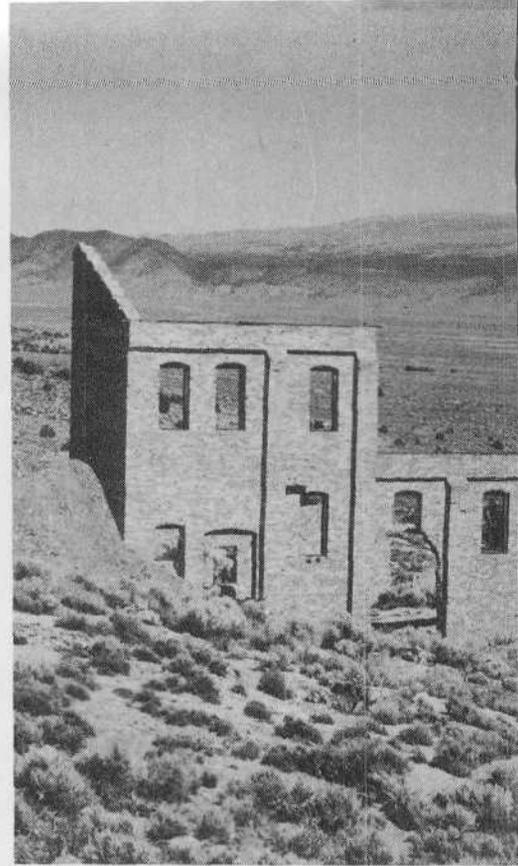
Sometimes it was amusing, as in this report from the *Reese River Reveille* on the aftermath of a Mexican Independence Day celebration. "Today upon the street red noses and goggled eyes strikingly remind one of pop-eyed frogs looking at you from mud ponds and bulrushes in hotter climates than this one. About a half dozen, more or less, are safely ensconced in the sheriff's private apartments."

But more often the news was of a tragic nature. Thompson and West's *History of Nevada* lists 11 homicides during Belmont's boom years, 1866 to 1875. But curiously, Belmont's most infamous act of violence is not even mentioned in the aforesaid volume, a respected source of Nevada's early history, although it did make the front page of the widely distributed western daily, the *San Francisco Chronicle*.

The grim facts first appeared in the June 5, 1874, edition under the headline, "Hanging at Belmont." The special dispatch stated briefly that 30 armed men had broken into the Nye County jail and strung up two of the prisoners.

But that was not to be the end of the tale. Subsequent issues brought to light more details. Eventually the grisly incident developed into a full blown controversy of rumors, accusations, and denials.

The victims were identified as a couple of miners named Jack Walker and Charlie McIntyre. The pair had been relative newcomers to Belmont. It was thought that they had previously worked in the coal mines of Pennsylvania. Walker was the older of the two and had a reputation of "having been around," while his companion was a young lad of perhaps little more than 18. Charlie McIntyre was



remembered as industrious, quiet, and with a fair amount of education.

According to the *Chronicle's* Belmont correspondent, the pair had been held in jail several weeks. Walker had been charged with shooting a man during a barroom argument, while McIntyre had already been tried for assault on the foreman of the Monitor mine, purportedly because the foreman had refused to pay the youth for work he had done. McIntyre had been found guilty and levied a \$200 fine which he could not pay, so was serving time at the rate of two dollars a day, when late on the night of June 3rd, a group of men, wearing hoods and robes hastily constructed of bed sheets, broke into the makeshift jail beneath the courtroom. The sheriff and his deputy, being hopelessly outnumbered, were powerless to stop the group, which after binding and securing the lawmen, proceeded to the cell occupied by the two eastern miners.

The men were gagged, bound, and beaten, but apparently still held a breath of life. So to finish the job, as quickly and quietly as possible, the hooded gang prepared to lynch the prisoners in their cell. Using a hand auger, twin holes were drilled through the floor of the courtroom above, down through the ceiling joists of the cell. The ropes were looped and knotted around the railing of the jury box, then dropped below.

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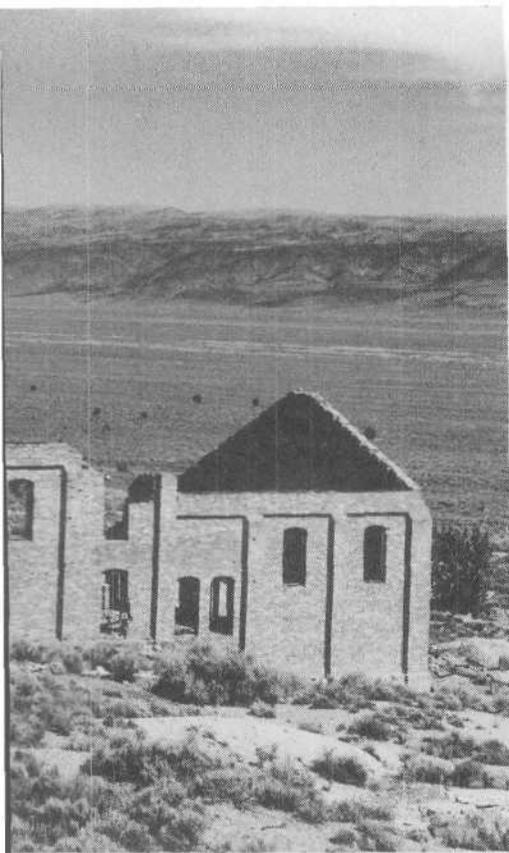
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*The walls are all that remain of the Highbridge mill in East Belmont.*

*The mill last saw activity during World War I.*

He claimed that both men were known troublemakers, Walker having acquired a bad record in other places. He denied that Charlie McIntyre was imprisoned because of money troubles with a mine foreman. But rather, "he had taken it upon himself to fight another man's battle" in an East Belmont brawl.

The sheriff explained that both men had previously escaped from jail. In fact, that is why he and his deputy were so easily surprised and overcome by the self-styled vigilantes. Both were caught in a deep sleep, because for two days prior to the unfortunate incident they had gone without rest or sleep while hunting the fugitives, having just returned them to jail that morning.

Furthermore, the sheriff offered, the coroner had been absent from Belmont at the time of the hanging, and as all the important citizens had come to the jail to view the bodies, he saw no need to hold a formal inquest. Finally, he blamed the poor jail facilities. The lynching had occurred, the sheriff reasoned, out of a need to see justice done. After all, the men had escaped once, it was feared they might try again.

Whatever the motive, whatever the truth, Jack Walker and Charlie McIntyre were buried the next afternoon a few hundred yards outside the boundaries of the hallowed ground of the Belmont cemetery. Pundits quickly dubbed the building that had been the scene of the brutal tragedy, the "Auger Hole." It remains a Belmont landmark.

One of Nevada's most photographed ghost town buildings is the tiny Catholic church which sits on a knoll overlooking the twentieth century mining camp of Manhattan. However, few know that the church served Belmont worshippers for almost 30 years before it was moved to Manhattan in 1908.

Belmont heaved one last gasp during World War I. A mining flurry briefly revived the old camp. A new mill, the Highbridge, was built over the hill at East Belmont, to process the extensive dumps left from the earlier mining activities. The walls of the magnificent brick building that housed the High-

bridge machinery still stands, a lone and forlorn silhouette against the blue Nevada sky.

Legend has it that before Jack Walker died, he pleaded with his executioners to spare the life of his cellmate, Charlie McIntyre, whom he swore was innocent of any wrongdoing. He warned the mob that if they murdered his young friend, the mines would never produce another pound of ore, that sagebrush would choke Belmont's streets. The water-filled mine shafts, the empty courthouse, the boarded-up store fronts—everywhere there are reminders of Jack Walker's final, bitter words. □

After the lynching the midnight mob encountered the night watchman just as they were emerging from the jail. He was warned not to arouse any of the citizenry. But after they disappeared into the gloom, the watchman did enter the jail whereupon he released the pair of law officers. Strangely, the victims' bodies were not cut down until the following afternoon. Nor was there any inquest into the deaths.

Following the lynching there was an uproar of indignation and disgust among members of Belmont's "straight-going" population. Rumors were rampant, hinting that certain mine foremen, superintendents, and above-ground operators, acting with the consent of the authorities, were responsible for the bloody affair. It was whispered that the deceased had been members of the Molly Maguires, a secret society composed mostly of Irish immigrants, then very active in the Pennsylvania coal mines, leading to the speculation that their only "crime" had been that of attempting to organize a union among their underground comrades. Some said that they had been given a chance to leave town a few weeks earlier, but they had failed to heed the warning.

Since the *Chronicle* story implicated the authorities, the sheriff replied to the charges, his rebuttal appearing in the San Francisco paper a few weeks later.

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# Western Collared Lizard

by K. L. BOYNTON

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**A**CCORDING to collared lizard standards, the most desirable desert real estate for a residence is a rocky canyon or hillside with cactus, creosote and sage dotted about sparingly, a good insect supply awaiting capture, and plenty of warm sunshine.

Perhaps this is because such a location offers so many fine rocky places to sit, basking sleepily in the sun, or alert and bright-eyed to stand up on, front legs stiff, neck outstretched and head held high as possible to get the best view of foe or prey. Or, for that matter, rocks make fine platforms on which to sit and look handsome, a desirable attribute since posing about seems to be a characteristic of the clan.

Small wonder, for when it comes to sartorial splendor, the western collared lizards have few rivals. Nor is it the male alone who dons colorful attire. Both sexes are tastefully done in background shades of greenish, brown, pale gray or yellowish, according to the tones of the local scenery, with perhaps rust-colored bands arranged across the body and brown spots dotted on the long pale tail. However, the gentlemen favor blue for areas on the throat and sides of the belly, while the gravid ladies, on the other hand, and not to be outshone, select orange or vermillion spots and streaks for their neck and body highlights. Both carry the clan emblem: double dark bars at the neck and shoulders.

*Mouth agape, the collared lizard presents a frightening appearance.*

*Photo by George Service, Palm Desert, California.*

These are good-sized lizards, measuring some four inches head and body, with a tail twice that long, and while stockily built, are fast enough when running on all fours. If speed is really called for, up they go on their hind legs. Front feet clutched to their chests, tail standing up behind, they rush along, looking as someone so aptly remarked, like miniature dinosaurs.

Predators, these lizards are insect fanciers, preferring good-sized prey such as grasshoppers, crickets, wasps or cicadas. They also tuck away spiders and mites and are not in the least bashful about adding other lizards to the menu whenever they can. One collared gentleman, for example, was found, upon investigation, to have an eight-inch whiptail lizard half digested in his stomach. His capture of this maxi-sized gastronomical delight, incidentally, was no small feat in itself, since whiptails are themselves very fast on their feet and quite adverse to being swallowed.

Collared lizards hunt by sight. Their eyes are well equipped for the job since

the photoreceptive cells in the retina are entirely of the cone type, excellent for seeing details and color. Cone cells, however, need good illumination to operate efficiently and since they are no good for night work, the lizards must end their dining forays when the daylight begins to fade. Night work isn't for them anyhow, because being lizards they are unable to keep their body temperatures up sufficiently within themselves and must depend on the warmth of the sun each day before they can get going. Their normal body temperature for activity is around 99°F and they have a high optimum range up to 107°. Chill slows them down drastically. In fact, an air temperature of at least 59°F is essential, as zoologist H. Fitch found in his classic study, before the lizards can even make a purposeful movement.

Such being the case, hibernation is in the cards during the cold months of the year. The lizards, although not very good diggers, select a spot back under an overhanging rock and dig several inches down into the soil, making an under-





ground chamber big enough to accommodate their body. There they curl up in the best hibernation position to conserve heat: head depressed, limbs held next to the body, and long tail tucked up close in a spiral. Eyes shut, absolutely motionless, they're coasting, so to speak, metabolically, barely alive. When spring comes and warms the earth, the newly aroused lizards appear once more on the scene, moving slowly and with poor coordination until the heat from the sun brings their temperature up to activity level.

As is to be expected, since they are predators, these lizards are alert and aggressive. All is not sweetness and light in their community. If in aggregations, the males fight among themselves establishing a dominance order. They also set up private territories and defend them vigorously, the male hostile pose being to spread the body out sidewise, extend the pouchlike skin at the throat, and rising tall on all four legs look as warlike as possible. The intruder male either runs or fights.

The females, being quite waspish in outlook, take no nonsense from anybody. Even a courting male, done so handsomely in his colors, head bobbing up and down in such a pleasant nodding courtship manner, is likely to get nowhere at all. If in a non-receptive frame of mind, the female puffs out her throat and "sidle hops," arching her neck and hopping stiff-leggedly in place, or stalking slowly off, behavior at once interpreted by the hopeful male as being exceedingly inhospitable.

Zoologists regard this sidle hopping bit as a fine defensive set up developed by the species. It protects unreceptive females from the advances of courting males without their having to use up energy fighting or running away. Equally interesting is the further evolutionary development wherein the receptive female, after copulation, changes her color style adding the aforementioned orange pigment spots and bars on the sides of her body and neck. Zoologist Fitch, considering all this, thinks that the orange color is a social signal seen by

the males and inhibiting their advances. In cases where it apparently does not work, zoologist M. Vinegar speculates, might well involve males too young to know the proper social conduct.

Once bred, the female retains viable sperm for a long time and as anatomist O. Cueller points out, this is a very good way of lengthening the period for fertile egg laying. As much help as possible is needed because the egg stage is a very chancy one since lizard eggs are subject to dessication, especially those of the collared lizard which are so thin-shelled. They must be laid where there is enough soil moisture to keep them from drying out and, in fact, actually to provide water to be absorbed for egg weight gain. Hence Mrs. C. Lizard digs under rocks to the moistest soil she can find, deposits the eggs and covers them. There may be two to 24 eggs, varying with the age of the female, the season and the general environmental conditions. Incubation takes 52 to 94 days and the hatchlings, once out, are on their own, coping the best they can with the hawks and daytime snakes and other hungry neighbors out to get them

The chosen environment of rocky hill-sides and canyons, with their sparse vegetation, does provide patches of shade, and the lizards do retire to these from time to time. Still, they are great sun lovers and are active in surprising heat and subjected to high solar radiation, a matter of interest to many a scientist who yearns to know how they can stand it. The team of V. Hutchison and J. Larimer found that desert lizards as a group seem to pick up much less heat from their surroundings than lizards that live elsewhere, and that the skin actually plays a big part in heat reflectance. The skin in many lizards undergoes color changes controlled by light and temperature, as anatomist S.R. Atsatt found. The collared lizard, for instance, is darker toned at low temperature, lighter colored at high temperature and light or dark depending on illumination at the intermediate temperatures. A lighter tone in the skin would tend to act as an aid in reflecting heat. But this is not the whole answer to the question: how does the lizard handle the intense ultra-violet radiation which, if it reached the internal organs of the body would be extremely damaging?

Biologist Warren Porter took it from



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Distinctive collar bars are shown in detail. Photo by Dr. R. B. Cowles, Los Angeles.

here. Testing various backboned animals for solar radiation through their bodies, he found that certain of the desert lizards, the collared among them, have a protective set-up that involves skin, muscles and importantly — the peritoneum, which is a membrane lining the body cavity. In the case of the collared lizard, for instance, some 10.6% of incident energy is reflected, 68.6% absorbed by the skin, 10.7% absorbed by the muscles. The black peritoneum, acting as a final shield, absorbs 3.9%.

Thus the amount of solar energy actually transmitted is a low and apparently safe 6.1%. So far, so good.

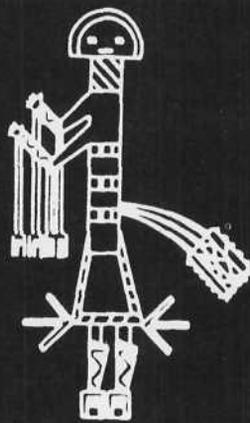
Now how do they keep their temperatures from skyrocketing when the desert heat hammers down? Testing, anatomists J.R. Templeton and W.R. Dawson were surprised to see that the collared lizard just naturally has a lower metabolic rate while resting at 104°F than do less heat-resistant animals of the same size. Further, when the temperature continues to rise, the lizards dissipate heat by panting, the rapid flow of air over the blood-engorged tongue stuck out of the mouth actually getting rid of some 1.3 times more heat at 111°F than is being produced metabolically by the body. With physiological pluses like these and patches of shade under plants and rocks to help, the collared lizards are well set up to handle the heat problem. Body moisture needs are supplied by their insect prey.

Behavior scientists got interested in the scholarly potentialities of the collared lizard. The team of V. Vance, A. Richardson and R.B. Goodrich selected eight candidates — five males and three females — and set about seeing what the animals could do in the way of problem solving. Besides a meal worm to

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Collared lizards have a big appetite. Here a sand lizard is the main course. Photo by Joe Orr, Los Angeles, Calif.

eat, the lizard that did the problem right also got to sit for three minutes on a warming plate, both considered as rewards by the lizards who dearly loved meal worms and likewise dearly loved sitting on the hot plate. A wrong answer, alas, netted a small electric shock.

The problem was to pick the box that had food and the hot plate in it. One box was black. Wrong. It had the shock. One box was white. Right. The boxes were interchanged in position at random, but the contents were always the same. Question: could the collared lizards discriminate brightness and if so could they associate it with reward and therefore pick the white box after that?

The lizards came up a ramp out of a damp holding tank to a platform where the choice had to be made: go on along the white alley to the white box, or up the black alley to the black one. The lizards always stopped on the platform and turned their heads first to one box and then the other. They never got over this, an indication of the old trial and error hangover. Each had five trials for five days a week and the zoologists figured that if the candidates could make an 80-100% correct choice for three consecutive days the criterion of the test would be met.

Well, the lizards finally made it — after 335 trials. When their score was compared with those of certain other animals tested, it came out that even turtles did better, and that the old lagging about on the platform the lizards did before making a choice was about equal to the performance of slow learners among laboratory rats.

If informed of this, the lizards might have inquired what the test had to do with getting along in the desert, where unless the turtle was a desert tortoise it wouldn't have such a swell score, nor would the most brilliant laboratory rat last long. They might have wondered privately, too, just how well a questing scientist set down minus accoutrements in collared lizard territory would do.

Viewed thus, the collared lizard score of 80-100% correct for three consecutive days in 335 trials is not bad, not bad at all. □

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# She Carves in Fossil Stone

by MARY FRANCES STRONG

photos by Jerry Strong

"I AM NOT AN ARTIST, must less a sculptor, but I enjoy trying," Mary Pipes shyly replied when I admired her fine work. Not only are her carvings beautifully done but she has chosen to use a most unusual medium — diatomaceous earth.

The fine detail yet simplicity of Mary's carvings show well the lady's natural talent. Some creations depict a little rabbit, ears laid back, crouching on the ground; a poodle with handsome haircut "sitting up"; doves of peace gracefully etched; a little Mexican sleeping; a cowboy strolling in town and a fiery dragon appears to be standing guard over his domain — these are but a few of Mary's brainchilds. Not driven by a need to do great numbers of carvings, she works spasmodically and it is a labor of love.

In discussing her method of carving and how she decides upon her next subject, Mary explained she observes nature, looks through both adult and children books, then sorts the various ideas in her mind. It is only when she makes her final decision on the project

that she begins to look for a suitable "chunk of material."

"How did you happen to use diatomaceous earth?" I inquired while visiting the Pipes attractive home in La Crescenta.

"It all began at the Los Angeles County Fair," Mary recalled. "I had no idea of carving but saw a craft display where 'Maple Rock' was being sold. A booklet telling how to carve came with each chunk and, on an impulse, I purchased a specimen and carving knife. At first I sat in the garage and carved, but now I usually work in the den. Maple Rock has a layered strata and is fun to work with. It comes from a mine in the Coalinga (California) area and quite a few people are using it for their carvings."

The many facets of rockhounding were not new to Mary when she took up carving. She has had long exposure to collecting and the art of lapidary from her husband. "Dusty" Pipes has been in the hobby for many years and does some excellent cabochon work.

Using "diatomite" (a term restricted to diatomaceous earth of quality and purity suitable for commercial use) fascinated me. "How can such a soft, chalk-like material be practical for figures with appendages?" I inquired. "There are limitations, of course," Mary responded, "and only a small percentage of deposits produce suitable material."

While diatomite is not a common carving material, it continues to be an important mineral commodity in lightweight, pozzolanic concrete; insulation; abrasives and filtration. It is in the latter field that a tremendous expansion in use has occurred. Industrial filtration processes have become very complex. Sugar refiners were the first to use diatomite but today chemicals, varnishes, waxes, metallurgical plating solutions, vegetable oil, animal fats, antibiotics and polluted water are among the many varied items employing this material for filtration.

Diatomite is a light-colored, very lightweight, sedimentary rock formed from skeletal remains of diatoms — microscopic, aquatic plants which live in vast numbers near the surface of lakes and seas. They have long been one of the main sources of food for marine animals. Diatoms (*Phyllum Tallophyta*) are single-celled, silica secreting organisms of which there are more than 25,000 known species.

They vary in form but needle- and cup-shaped are the most common. Both solitary and colonial by nature, they build ornate shells, or frustules, composed of two parts — one covering the other as a lid on a box. Due to their large numbers, the skeletal shells accumulate over large areas as diatom ooze. Later, subjected to geological forces (pressure, faulting, uplift, folding, metamorphism) the beds become consolidated into what we call diatomaceous earth and, in some cases, diatomite.

The United States is the world's largest producer of diatomite. Three-quarters of this production comes from California with Nevada, Oregon and Washington following in order of importance. California also has the world's largest diatomite quarry near Lompoc.

I felt sure that many of *Desert's* readers have had a secret desire to try their hand at a little carving but just didn't know how to get started. When Mary Pipes told me, "If I can carve,

*Opposite page:  
Only the simplest  
of tools  
are necessary  
for carving  
soft material.  
Here, Mary is  
beginning an  
alligator. It is  
roughly laid  
except for some  
fine detail  
on the mouth.*

*On the far right  
is a block  
of "Maple Rock"—  
diatomaceous earth.*

*Right: This  
plaque-type of  
carving is not only  
decorative but an  
excellent selection  
for a first project.*



*With the exception  
of a cord-wood  
and hack saw,  
this carving  
will be completed  
with the  
few tools shown.*



*Left: A fiery dragon well displays Mary's natural talent.*

*Below: The simplicity of some carvings is readily noted in this little rabbit. You almost expect the ears to rise, eyes to open, and to see him hop away.*

hand, many ideas will probably come to mind. When the decision is final, make a rough sketch of the subject. You can also work from photos, etc.

"When I decided to carve the dragon," Mary remarked, "I made a sketch as usual. Once I started carving I digressed almost immediately." This will happen but a sketch, photo or picture provides a model from which to begin work. Figure the approximate size you wish your carving to be and make note of this on your sketch. In the beginning, it is best to make compact and massive carvings. Appendages break off very easily and skill should be developed before attempting such carvings.

*Step Two* is very simple. Now is the time to obtain a suitable chunk of diatomite (or other comparatively soft material of your choice). You can collect your own or purchase it from one of the many dealers carrying carving material.

*Step Three* requires transferring your sketch to the rough material by drawing. Excess material may now be cut away with a cord-wood saw or any saw with rough, large teeth. Use a hacksaw where only small pieces are to be removed. It is also important to have a level base before starting to carve.

*Step Four* involves the actual carving. Scrape off excess material but do not use a rasp or file on diatomite. This is a job for your paring knife. Work until the planned figure is formed except for fine detail. Mary switches back and forth to various areas. Use the paint brush to sweep away the dust from the area you are working.

*Step Five.* Carve in all the fine detail using dental tools or carving tools. Take your time and keep dust brushed away from your working area.

*Step Six* begins the final finishing of your carving. Carefully go over it with 00 steel wool to smooth. Be extra cautious as the detail will easily erase. You should make the carving as smooth as possible without disturbing any detail.

*Step Seven.* Using a soft cloth, treat the carving to as many coats of mineral oil as is necessary to saturate it. The oil must penetrate thoroughly. Place carving in 120-degree oven and bake until you can rub it without getting any oil on your hand. This will take approximately three to four hours. Remove from oven and let cool.

*Step Eight.* If you wish to darken the

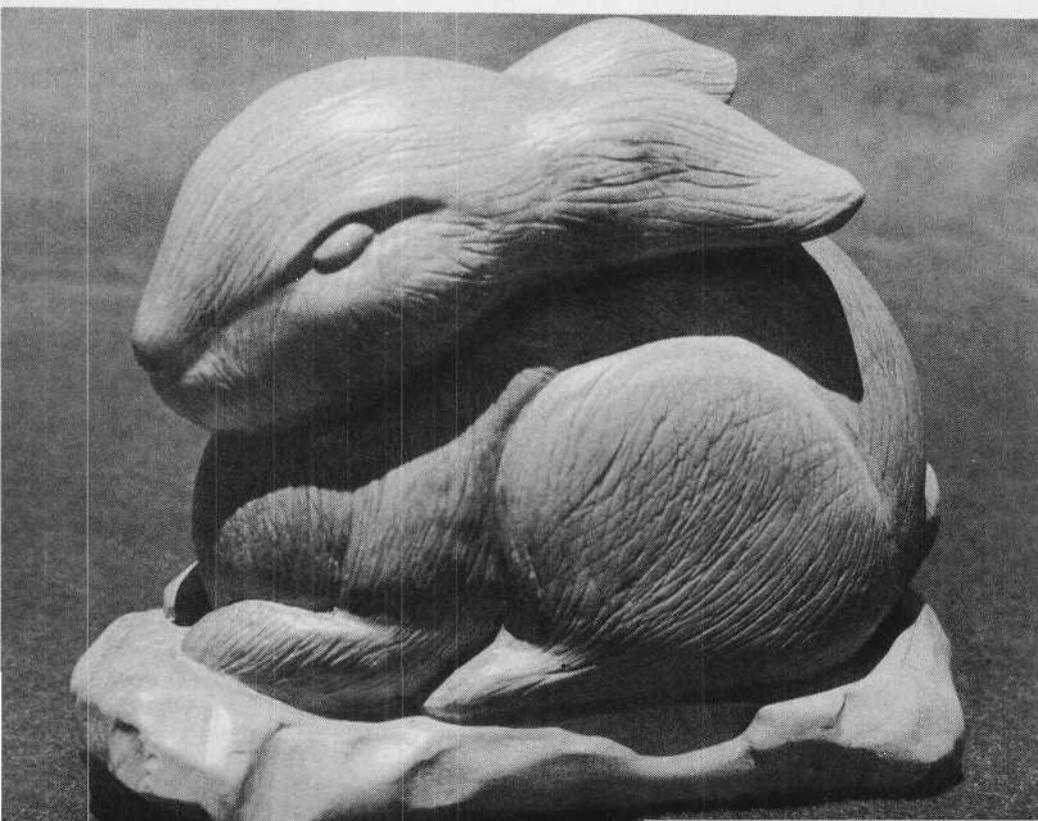
anyone can," I promptly asked her to share her methods with our readers. She was happy to do so. Here it is, step by step.

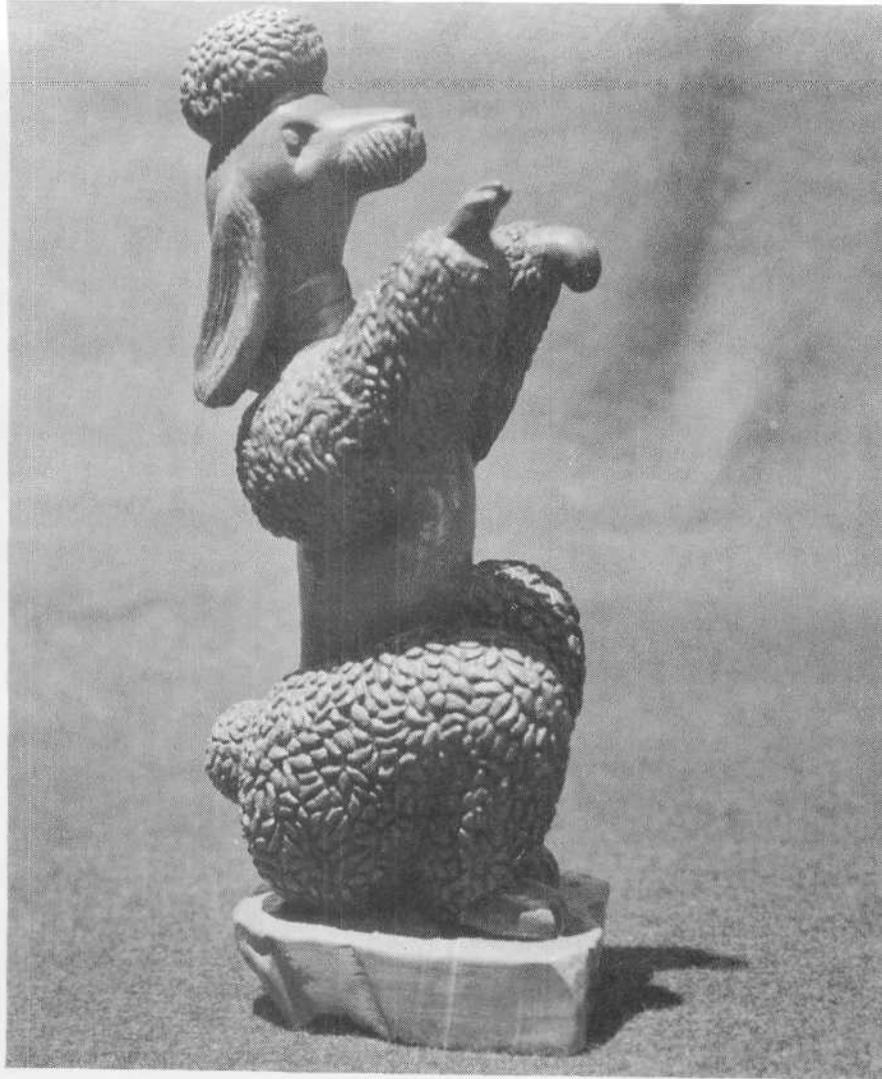
The tools needed are very simple and inexpensive. Power tools do not work well on diatomite due to its softness.

Tool List: Good, sturdy paring knife;

stylus for etching in design; dental tools for fine detail; small paint brush for removing dust, and a Miller Falls small wood carving set.

*Step One.* First of all it necessary to have in mind what you wish to carve. Books and magazines are a good source of ideas. Once you decide to try your





Great detail in conjunction with smooth surfaces has been used here to emphasize this "regal poodle."

carving or highlight certain areas, brush with brown shoe polish. Carvings can also be painted with water colors or oil at this point if desired. Be sure the carvings are thoroughly dry before final rubbing and spraying.

*Step Nine.* To apply a polish, hand rub the carving with nylon. Mary uses panty hose because they have the advantage of being lint free. Rub until the texture suits your taste. The final finish is now applied. For a natural-looking finish, brush on Deft Clear Wood Finish (interior, semi-gloss). For a glossy finish, use Flecto Varathane (#90 gloss, crystal clear, liquid plastic). Let dry and your carving is completed.

The art of carving is almost as old as Man himself. It began when primitive man made his first tools, then progressed to the creation of personal ornaments, cave decorations and items for use in commerce. Down through the centuries, carving advanced to become one of the world's great art forms as sculptors created their masterpieces.

In our great-grandfather's time, men took pride in their "whittling." But this art form more or less died out among the common man. It wasn't until the hobby of rock collecting began to grow by leaps and bounds that the latent talent among average folk began to surface again.

During the last three decades, some remarkable "treasures in stone" have been carved by the hobbyist. Their beauty of form and artistry rival the famous works of the Masters. Our modern hobby sculptor has run the gamut of materials from the most precious of gems to diatomaceous earth. From them all, he has produced great beauty to behold.

Mary Pipe's carvings in fossil stone are delightful, pleasing to the eye and exhibit considerable artistic skill. They seem to prove that Man can do anything he sets his mind to. Without benefit of training in the art of carving, Mary has created beauty in stone. We, the observers, are privileged to have the pleasure of enjoying her work. □

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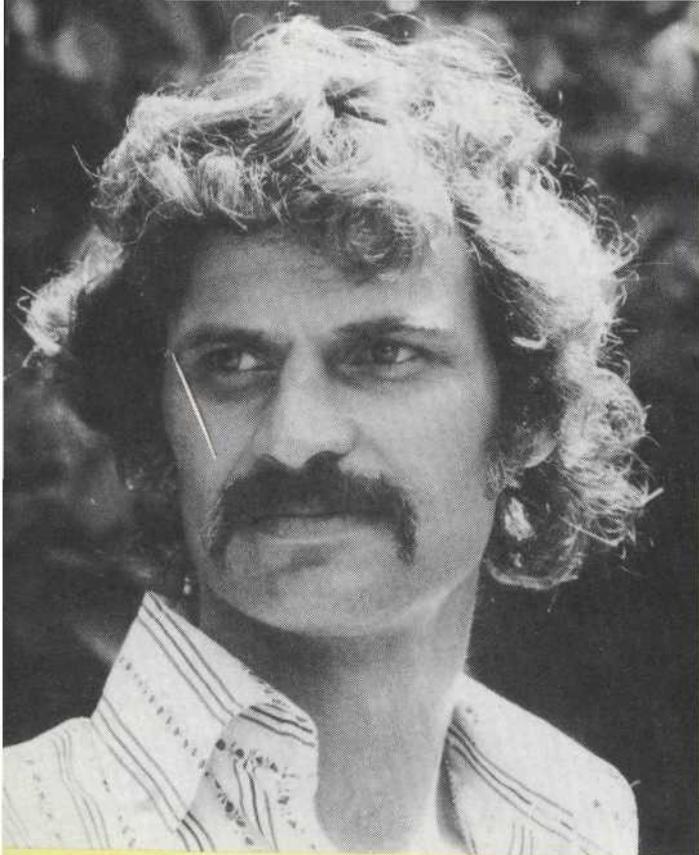
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For further information about DEATH VALLEY JUNCTION please write:

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## WESTERN ART

*"Miguel"*  
Tribe: Yuma,  
22" x 28", Oil,  
Courtesy  
Peterson Galleries.

## CHRONICLER OF THE PAST

by NICK LAWRENCE

**T**HE RESURGENCE of western art the past several years is a result, in one form or another, of a rather significant cultural regression—a throw-back to our history of the West; an integral segment of our current wave of nostalgia.

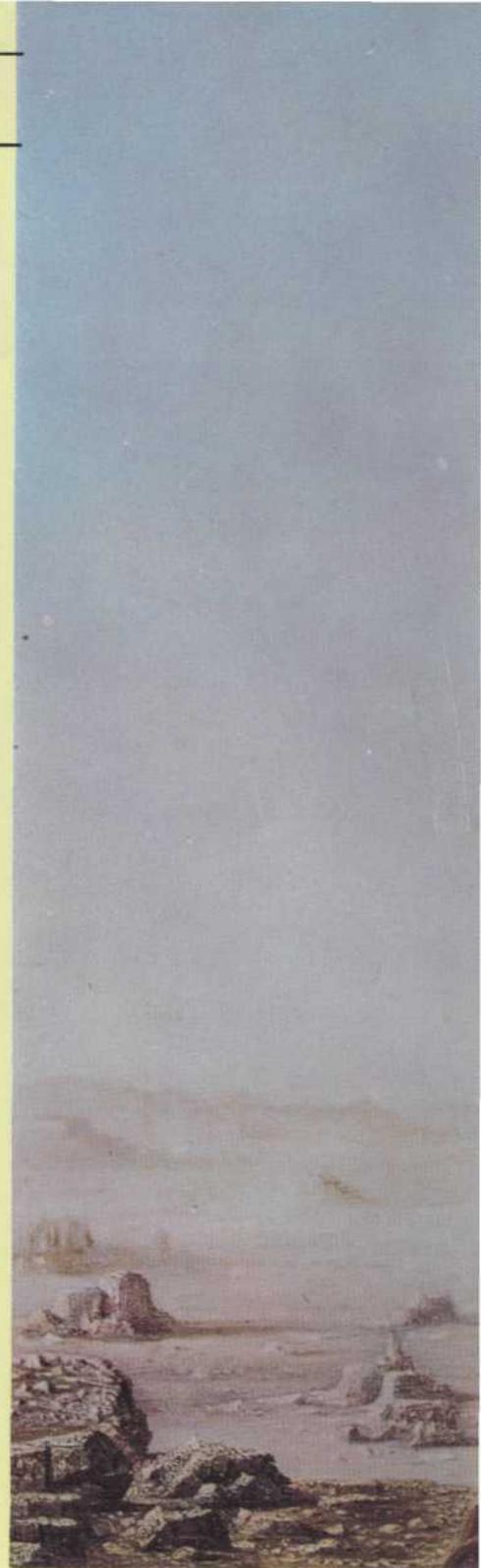
With this renewed interest by western art patrons throughout the country, and not surprisingly a very strong patronage in the art centers of Europe, our traditional American masters of this theatre of art have enjoyed an overwhelming surge in demand. The Remington's, Russell's, and more recently the Frank McCarthy's are stripping previous economic standards to bits.

Remington set a western art auction record in 1973 of \$175,000. Extremely

prolific, meticulous with the authenticity of his subject matter, he left an estimated 2,800 works at his death in 1909, and not surprising in light of the current trend, these works, together with other masters of the field, do not even begin to satisfy the market.

There are few contemporary western artists producing ultra-exceptional work. In the opinion of artists themselves, Frank McCarthy is probably the best western artist today. He paints with incredible realism possible with oil on masonite (which is an extremely difficult technique that only the very best accomplish with any worthwhile results). Buck McCain is producing some very credible work specializing in very large oils. One of the fine newcomers is James Zar.

Zar, like McCarthy, paints with a realism that is absolutely stunning. Unlike McCarthy, whose composition encompasses magnificent sweeping landscape with action characters, Zar's subjects loom from the canvas with a fantastic aura of mystic. Specializing in the American Indian, Zar has been able to capture the sweep of the history of our 'first' Americans as few artists have done. Painting with tremendous power





and technique with use of color tones seldom seen, Zar's balance and subject structure are overpowering.

A student of the American West, Zar, in planning a painting, does very significant research into the tribal history, regalia, and facial characteristics in addition to regional study for landscape and background setting. A composite of the subject is then drawn to approximate final proportions at which time his great

talent takes over for the final work.

His most dramatic works are portrait in nature with subject, regalia, and landscape in total complement. The remarkable detail work is extraordinary, a la McCarthy. A recently completed work, however, is a departure in that a full posture oil of a Mohave Indian, "Desert Dweller", just might be Zar's most impressive work to date in terms of pure painting technique.

Zar has not always been enamored with the American Indian as subject matter. "My catharsis from surrealism to the realism of the American West and our 'first' Americans came about very suddenly after a trip through the southwest and the plains of the midwest when the opportunity presented itself to visit several reservations," he explained.

"I have always been interested in our Indian heritage, history, and culture.



Left:  
 "Desert Dweller"  
 Tribe: Mohave,  
 15" x 30", Oil,  
 Courtesy, Hartman Gallerie  
 Below:  
 "Wolf Robe"  
 Tribe: Cheyenne,  
 24" x 30", Oil,  
 Courtesy,  
 Mr. & Mrs. Patrick Sullivan

After seeing these people on their 'reservations', the grandness that was theirs became a very emotional experience for me and ultimately has influenced my subject matter professionally."

One is so very aware of the strength in the subjects of Zar's paintings that one wonders if he possesses a special insight. "Because of the fierce pride and deep reverence this land has worn upon their faces," Zar clarified, "I feel they are our true chroniclers of the past. In addition, mysticism and religion are mankind's highest order of awareness and the American Indian of the past has had little or no acknowledgement for his unique contribution in this area to our American character.

"Each Indian I choose to paint has motivated me this degree because he, or she, seemed a mirror of this inner quest; a person frozen to the significance of their own personal vision."

What sets apart the exceptional arti-



sans from mass mediocrity is not only basic talent — in some cases genius — but a common denominator . . . versatility. Oil on canvas is Zar's forte; however, his work with oil on treated cardboard is not short of magnificent. His pencil sketches exude a dimensional quality that only the very best technicians are able to produce.

James Courtney Zar's formal art education at San Jose College, the San Francisco Art Institute, and private studies under the dynamic Keith Finch, represent 15 years of mastering his craft. Group shows include the Horizon Gallery, Venice; Fiengarten Gallery, Los Angeles; Santa Barbara Art Museum; Hartman Gallerie, Thousand Oaks; Peterson Galleries, Beverly Hills; a one-man show University of Santa Clara.

Zar's work, in addition to this publication, is featured on the cover of the *International Artists Directory* (1976); contributing art *Arizona Highways Magazine*; *New Mexico Magazine*, Bicentennial Issue, January, 1976. He is currently teaching art for the ABC Unified Adult District, Norwalk, California. □



Right:  
"Dillon"

Tribe: Yankton Sioux,  
16" x 20", Oil,

Courtesy  
Peterson Galleries

Below:

"Horse Capture"

Tribe: Atsina,  
24" x 30", Oil,

Courtesy  
Mr. & Mrs.  
Raymond Capps





3

1. Here I am, ready to go. The ground I'm placering at present can't be reached by automobile. A horse would have trouble with part of the trail. So I pack everything I need on my back. Except for the shovel and pick, I made all this equipment myself—even the bucket. When I first came to Twentynine Palms, I asked everybody: "How do you make a dry washer?" Nobody seemed to know, so I made my own. I've improved and improved, to make it as light and sturdy as possible—aluminum and stainless steel. But the past 20 years I haven't been able to think of anything to make it lighter or better. I am carrying some stuff in my hand—my half-inch screen and an aluminum pan to dump the concentrates into—but they can be fastened onto the dry washer too. And as a rule I like to have both hands free, one for a walking stick, and the other for balance or whatever. I always use a walking stick because it's good for balance with a load on your back, and also for knocking rocks over or flipping rattlesnakes out of the trail. It's just handy. 2. I've got about half a mile to go up this wash. No trail. Sometimes I work two or three miles away from the car, and this kind of

# DRY WASHING FOR DESERT

**D**RY WASHING for desert gold is not a lost art, but since World War II it has been almost a lost occupation. Week-end hobbyists, yes. And probably here and there a few old-timers who know a spot to work paying gravel when they need some extra change. But how many men have been working dry placers, year in, year out since then?

Dowie Crittenden of Twentynine Palms, California has — for 30 unbroken years.

Dowie sold his electrical engineering business in Los Angeles in 1945 and moved out to Twentynine Palms. To retire? Well, today he is still working three days a week, Monday, Wednesday and Friday, dawn to dusk, at physical labor many men half his age could not handle. He lets up only during the hottest period, and in those 30 years he practically has re-placered the entire Dale Mining District southeast of Twentynine Palms, with pick, shovel, and self-designed, hand-operated dry washers.

Dowie was always interested in gold mining. Then in the depression years he went up into Southern California's San Gabriel Canyon and found a lot of un-

employed men placering the canyon for bread and beans.

"There were two old men," Dowie said, "and one showed me what he had gotten—a little bottle with three little pieces of gold, the largest about as big as the head of a shingle nail. I asked him what he thought it was worth. About a dollar, he said. Would he take a dollar for it? Yes!

"So I forked out a dollar right quick. That was my first gold and that really started me. Every summer my wife and I had been vacationing at Hobo Hot Springs on the Kern River. (They call it Miracle Hot Springs now.) So I started taking a gold pan up there and scraping out the crevices and washing the decomposed granite along the river bank. I did that about 10 summers, then we moved out to Twentynine."

It took Dowie about six months to get set up for the entirely unfamiliar field of desert dry washing. When he started work, it was at a place where he knew there should be gold — Dave Poste's mining claim in the Dale District, with Dave's permission, of course.

"Those days my wife used to go out

placering with me," Dowie recalled. "The first day on Dave's claim, she asked me what she should do.

I said: 'Well—sit down right here and start screening the gravel.'

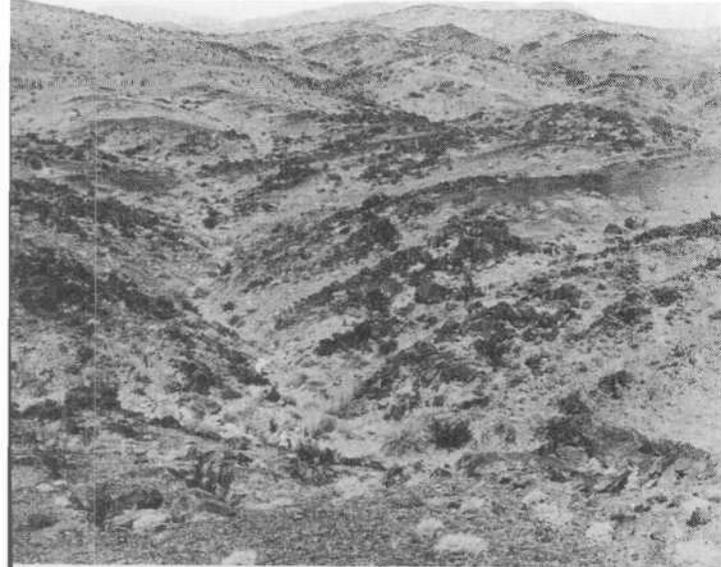
"She did. And right away she found a nugget about as big as the end of my thumb. Quartz and gold, all put together like a piece of jewelry. It was a beautiful thing! Then we found a couple of nuggets about the size of peas.

"And I looked at them, and I thought: 'What is this? It can't be gold — there's too much of it!'

"It was gold, but there wasn't too much. In all the work I did there, I recovered about an ounce and a half, and that first nugget weighed half an ounce. I've gone back every year to try again, but I never again found anything like that. It just happened — but my wife is always bragging."

That was 1946-47. From there Dowie moved to the canyon below the Iron Age, the biggest iron mine in the Dale District, where he worked for about two years.

"Iron is considered to be the mother of gold," he said. "Of course there's iron



hiking, my equipment can't be just hung on me haphazardly. The dry washer weighs 16 pounds, and I carry it on my back with two straps that come around over my shoulders. My lunch and tools go into the bucket, and that hangs on hooks fastened to the front of the straps. Then I stick shovels, picks and anything else like that through the bail of the bucket and back through the feet of the dry washer, as you can see here. To balance the dry washer, I can pull the shovels out ahead of me, or if the bucket is heavier I can push them back. I can really tune it in that way until it just hangs perfectly. I can hike a couple of miles with this outfit on my back, and it isn't tiring at all. You don't even know you've got it on. The cans at the right of the dry washer are an example of how I save weight. I fill them with sand and they make a flywheel with the weight just right to carry the

# ERT GOLD

everywhere. But where there's heavy iron, there's very apt to be gold. Especially in the Dale District. There's always—almost always—fist-sized iron

by  
**HAROLD O.  
WEIGHT**



crank up over dead center and operate the belt. It saves four pounds. 3. This little wash in the center is the one I'm working now, in the Dale District about 20 miles southeasterly by road from Twentynine Palms. I've been mining in the Dale District for 30 years now, and all the big washes already had been placered before I arrived. I'm that little white object just above the junction of the two small washes. For several reasons, all the gold isn't recovered the first time. 4. Here is where I start this wash. You learn by experience to choose where most of the gold is likely to be. Lots of times I've settled down in a canyon and found real good gold and thought, "I've really got it!" Come back next day—go up stream, down stream—you don't find a thing. It isn't just luck—but I can't put my finger on how I choose. I'm just going to work here. You can see behind me a lot of large rocks I have stacked up. You have to remove the big rocks first. Then with this hoe-shovel—I made it out of an old army shovel welded to a longer handle—I scrape off all the overburden to get down near the bedrock. 5. I'm in the gravel now, getting close to bedrock—but not close enough yet. When you get down to within about an inch of bedrock, then you start scraping up the stuff to run through the dry washer. The rest you just throw aside, so you don't have to run so much worthless stuff. You don't miss much gold, as a rule, if you take what is within an inch of bedrock. Of course, there's always the exception. The gradient of the stream—the depth to bedrock—might make a difference. And sometimes the gold is light and sort of—well, lacy. Or it may have a little rock sticking to it, which lowers the specific gravity so it might be found higher up. So it's a good idea to take 15 or 20 minutes and run a couple of buckets of your top stuff. You have to kind of feel it out. 6. It's obvious here that I'm down to where I think there's going to be some gold. So I'm shoveling everything through my screen. I'll screen enough gravel to fill the bucket, which holds about 55 pounds, run that through the dry washer, then repeat until I have cleared the area to bedrock. I work about a five-foot section to bedrock. Then when I start the next section, I pull all the coarse overburden back over the bedrock I've just worked to get to the gravel easier. In order to run and get the gold out, the gravel has to be absolutely dry. Even out in this dry desert, if you get a lot of rain in the fall, it will stay wet all winter. You can wait a month, go out, dig in—and it's as wet as it ever was. In cases like that, if you're straining at your bit, you've just got to take the gravel home and dry it. When I found rich spots that were wet, like that, I used to load up to 900 pounds of gravel in my car, bring it home, dry it on the front porch, then sweep it up and run it in the back yard. [Better reach some kind of understanding with your wife before you try this.]

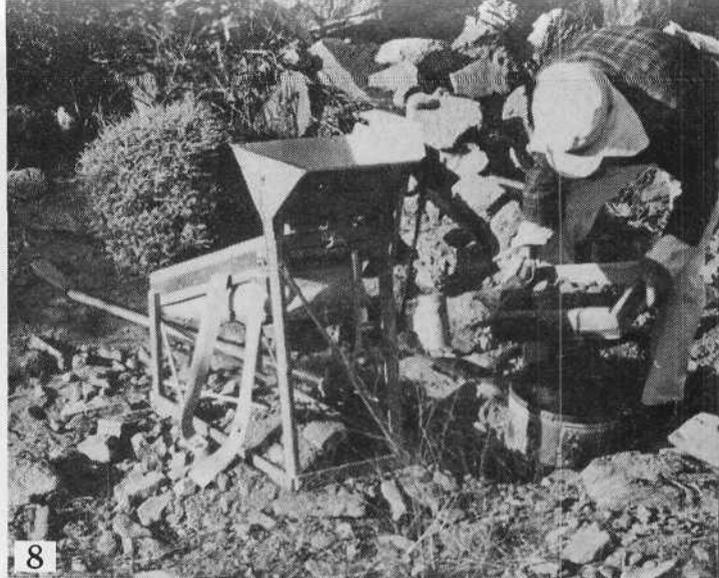
Continued on next page





7

7. The richest gold is apt to be right on bedrock, and in the little holes and crevices there. You can't just shovel that up. Here I am scraping and sweeping bedrock and crevices to be sure I miss nothing. What I gather, I put in the bucket and run with the rest of the gravel. As you can see, this isn't the usual whiskbroom. They wear out fast, and I make mine out of old brooms I take apart. The scraper, which I made out of stainless steel, has a sharp narrow point. The other side is a flat piece of shovel I cut and bolted on. Both sides are replaceable, and I have to replace them every six months or so. That odd thing on my right hand is a special glove which covers just the thumb and forefinger I use to hold the whiskbroom, because the work makes them rough and dry and they crack. The piece of white cloth sewed on pro-



8

8. While actually screening the gravel, you can see how I hold the screening box with my elbows on my knees. The knees support the weight and you can shake the devil out of the screen without breaking your back. At the same time I'm looking through the rock too big to go through the screen to be sure I don't throw any nuggets away with the waste. Usually I'll also stand up with the screen and kind of paw through it before I throw the stuff away. I'm using a half-inch mesh screen now. A lot of nuggets will pass through a quarter-inch mesh. But in 30 years I've found a lot that wouldn't. So if you use a quarter-inch, and then can't see those nuggets that won't go through—or if you don't look carefully—you can throw away a lot of gold. But you can see a half-inch nugget.

nuggets where there's any good gold. But again—there's iron without gold, and sometimes gold without large iron."

The Iron Age canyon proved to be one of the exceptions. Dowie averaged about 35 cents a day there — day in, day out — with only one "large" nugget, which looked like a lima bean and was worth \$7.50.

It wasn't always that lean through the

years, or even Dowie might not have kept on. At his Pinto Mine, about four years ago, he hit a hot spot that averaged \$12 a day for two weeks. Three years ago, same place, he washed out a 2½-ounce nugget—his largest yet. And working a little wash at the edge of Pinto Basin one day, he found a nugget an inch and a quarter long, an inch wide, and a quarter-inch thick.

"I couldn't believe my eyeballs. Took it out, took another shovel full — there was another almost as big. Just like that. I got \$78 in gold that day. But that was all there was—two big ones, two tiny ones. Nothing more."

With the price of gold around \$160 an ounce, desert dry washing is a whole new ball game. It is possible, Dowie thinks, that somewhere in the desert



11

11. After I've run a bucket or two through, I take the riffle board out to see what I've got. The concentrates, behind the riffles, are what is left of 50 to 100 pounds of gravel run through the dry washer. I dump these concentrates into the aluminum pan you can see just beyond the dry washer. At night I run all the concentrates I have gotten through the dry washer again, and get about half a coffee can of reconcentrates. I take these home, pan them with gold pan and water, and get all the gold out. I always wear white pants and white shirt, as you can see here, because I have learned by experience you can work comfortably in about ten degrees hotter temperature if you wear white clothes. And I take a painter's white cap and sew on a kind of fringe that hangs down over my upturned collar. Sort of French Foreign Legion effect. That not only keeps off the sun, but also the flies and bugs, and the wind on a cold day. 12. To check the concentrates, I reverse the riffle board, tilt it back, and tap it. As the lighter stuff slides away, you can see the black iron sand which has collected in back of the riffles. Black makes a good background for bright gold, and if there is any it will show up against the black sand. Most of the gold is usually on the first riffle, but occasionally you will find some down to about the third riffle. Once in a great while even farther down, depending on how heavy and how smooth the gold is. If you do much dry washing, wear a dust respirator. The little one I'm wearing is very popular with miners.



12



9

9. I've started to run the first bucket of screened gravel through the dry washer. I'm using my bucket as a kind of auxiliary hopper for the dry washer. If I didn't, I'd have to keep filling the regular hopper or have one that is three to four times larger. That would make the dry washer heavier and more bulky, a little harder to handle and to store in your car. So I lean the bucket over the edge of hopper and fill it with gravel. Then I just hold the bucket there and turn the dry washer crank. As the gravel moves down over the riffle board, more gravel feeds by gravity from the hopper through little canvas funnels onto the riffle board. As the level keeps going down in the hopper I keep tilting the bucket to refill it, until the bucket is empty. It works very fine. 10. Here you see the dry washer in actual operation. When I turn the crank, the belt operates a bellows under the riffle board, which has a canvas bottom. There's no vibra-



10

there are spots that were missed, or not worked for a long time, that would pay well.

"Not in the Dale District, though. I doubt there's a canyon in the district where I haven't sunk a shovel. And I have found, in the past 10 years, a few canyons that hadn't been placered that had pretty fair gold. Probably the old-timers didn't bother because there

wasn't any iron in them.

"Elsewhere — who can tell? There might be good canyons out in the desert somewhere. With the price of gold now — if I was a little younger, I probably would be doing a lot of prospecting."

On these pages, for those who are younger and want to prospect, Dowie tells in his own words a few of the things he has learned in 30 years. □

tion of the riffle board—the bellows blows the air through from underneath. The first machines I made vibrated up and down and sideways, and everything else. But I found that just caused me to lose gold. This is simpler, better and more effective. It's a pulsation made by air only, and it keeps the gravel raised up and just kind of floating down over the riffles. It's almost the same as if water was running down a sluice box. The light stuff floats over the riffles and off the lower end. Because they are heavier, black sand and gold catch behind the riffles. As the upper riffles are cleared, more gravel comes down from the hopper.



13

13. When I first start—when the weather is cool enough in the fall—I run through maybe 20 or 30 buckets in a day. Then, as I get used to it again, and the days get longer, I run up to 100 a day. Let's see—100 times 50 would be 5000 pounds. Over two tons that I actually put through the dry washer, in addition to all the rock I move and screen to get the gravel I run. But sometimes—when I'm rerunning piles of old concentrates—I've run as much as five tons through this machine in one day. The kind of wash you're working has a lot to do with the amount you run. Washes up to 15 feet wide—that's as wide as I usually work—a foot might be the average distance to bedrock. 14. The shadows are lengthening and I'm heading back for the car. Usually I leave home while it's dark and get back at dark. It makes a work day of 10 or 11 hours—a long day for this kind of work. And how much gold did I get for my 10 or 11 hours today? Well, it wasn't one of my better days. About \$2.00 at the new price of gold. But it wasn't one of my worst, either. At least I got enough to pay for my gas. Lots of times I don't. Obviously I don't do it for the money. I could make 10 times as much several other ways. It's a good hobby and a healthy one. But it's hard work, and often it doesn't pay. But I love to do it. It's just a lot of fun. I'd rather do it than eat. □

14



# Las Golondrinas ...

## where the Spanish past still lives

**B**ETWEEN Santa Fe and Albuquerque, Interstate 25 flashes out across the land — a concrete laser beam, flying an arrow's path across the New Mexican hills — four lanes of roaring traffic by day, an endless stream of lights after dark. Past the bars and the

billboards, the power lines and the race track, an ever-flowing metallic blur races toward a desert horizon, forming a perfect symbol of the modern Southwest.

It is incredible to realize that a mere three miles away from this din and roar, there lies a tiny, near-forgotten world —

three centuries removed from the present one.

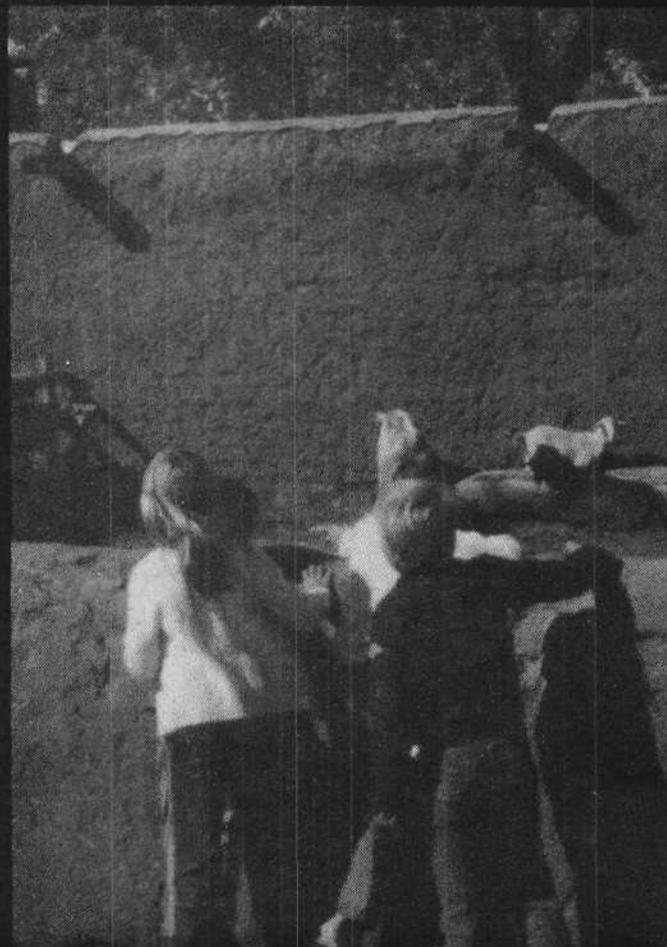
Ten miles south of Santa Fe, a white-on-green freeway sign announces the Cienega exit. Few travelers turn off here, but those who do quickly enter a different realm. A narrow, winding road, lined by crooked cedar fence posts, dips and curves past fields, adobe homes and crumbling pinnacles of volcanic rock till it reaches a sheltered hollow, a cottonwood-crowned circle of gentle hills.

Here, out of sight and sound of the 20th century, there is the smell of pinyon smoke. There is the distant ringing of a chapel bell and the braying of donkeys. Adobe walls, still wet and darkly stained by the early morning rain, begin to steam as the autumn sun breaks through the clouds.

Patient, ever-enduring burros stand beneath their burdens of firewood, waiting to have their noses stroked. A spotted pig snuffles in a trough, and goats and sheep nuzzle at their hay. From somewhere far off comes the clang of a blacksmith's anvil.

Inside the thick-walled rooms that encircle the *placita*, the light is soft and there is the warm smell of candle wax. In the weaving room, women are carding wool and from the *Salon y Capilla* comes the strum of guitars and the dull thunder of dancing boots. Outside, hot, fresh loaves of bread are being lifted from the *hornos* and near the corrals, an old man

by  
**JACK  
KUTZ**



*Las Golondrinas Corral— a popular attraction for children.*

*Hornos  
in the Placita.*

stirs a blackened kettle of homemade soap.

"I can remember my mother making soap this way," he remarks. "She used ashes and rain water."

Across the valley, on the edge of the Mill Pond, a giant waterwheel turns and grinds wheat. To the southeast, there are orchards, a winery and sweet, crisp apples. Above it all, are the cottonwoods.

It is Harvest Festival time at El Rancho de Las Golondrinas, and the Spanish Colonial past of New Mexico has, like Brigadoon, come back to life for a single day. Once a year, descendants of the original settlers demonstrate the crafts of their heritage.

The crowds that throng the ancient paths of the Ranch of the Swallows on this day trod on history with every step. The *conquistadores* have walked there before them; Spanish soldiers, sandaled priests and *campesinos*—the men of the land—all have been here, left their mark and passed on.

According to the earliest records, the tiny settlements on Cienega Creek dates back to 1650, back to a royal purchase by the Vega y Coca family and the days of the Spanish Empire. In those days, it was called *el paraje de los alamos*—the stopping place of the cottonwoods. It was the last stop before Santa Fe on the fabled Camino Real—the 2000-mile-long royal Highway from Mexico City.

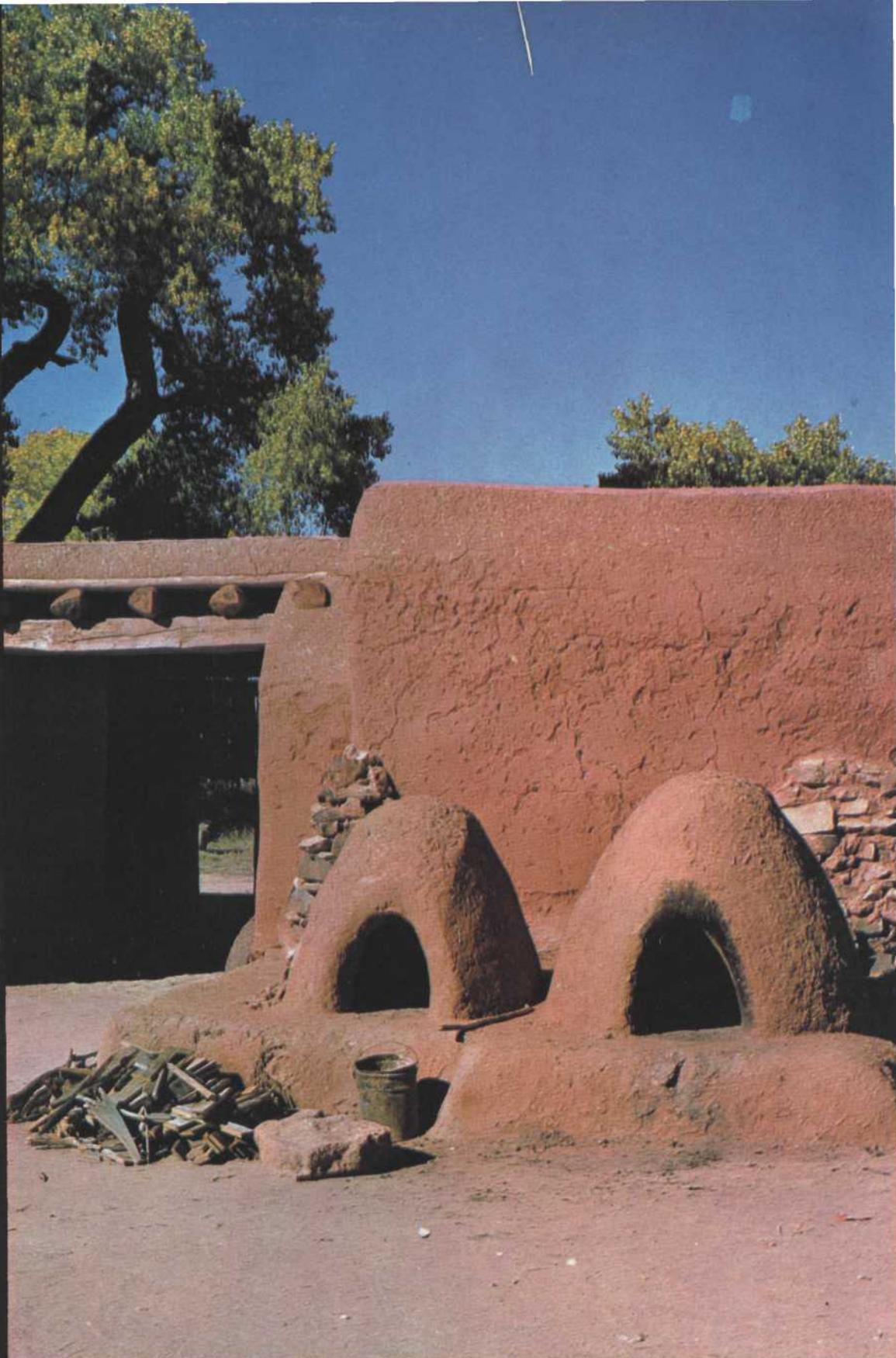
One can easily imagine the excitement at Los Golondrinas when a caravan arrived. Surely the bells must have rung when the dust of the ox carts first ap-

peared on the horizon. There must have been feasting, gaiety and laughter, music and wine, gossip and prayers.

It was the end of an odyssey. It was 10 miles from Santa Fe, six months from Mexico City, years away from the courts

of Spain. It was the edge of an empire—a precarious foothold on the northern perimeter of a vast and unknown wilderness.

Life was simple in this frontier settlement; Spanish colonialists became self-





"Grandmother's House."

sufficient — or they did not survive. Today, everything in this faithfully restored "living museum" reflects that ingenious simplicity, that incredibly aesthetic pragmatism that was to eventually evolve into a rich, unique and enduring Spanish American culture.

In Las Golondrinas, everything served a purpose. And, oddly enough, as a result, everything was beautiful.

The walls of the Rancho are thick, thus resisting both heat and time. The windows are deep and shuttered, and the doors are cut low — to keep the warmth in and the animals out. In the Manuel de Baca house, a cozy "shepherd's bed" rests above the hearth, softened by sheepskins, warmed by the fires.

In the wall nearby, a cupboard has been set into the cool adobe, serving as a primitive refrigerator for storing cheese and bread. The more perishable items — meat and butter — were suspended in

the wall, outside in the placita. Close by, the *dispensa del tendejon* held troughs of corn, grains, dried fruit and herbs.

Harvest time at Las Golondrinas was always the best time of all. It was the bountiful time, when the crops were in and the storage sheds and cellars were full. It was a time for giving thanks, a time for celebration.

And yet, it was also a time of grave danger, for it was then, during this season of plenty, that the marauding Indians struck. Down from the northern plains rode the raiding Utes and out of the western deserts came the warring Navajos, mounted on horses which, ironically, had been introduced to the Southwest by the Spanish themselves.

Today, one has only to climb the wooden ladder inside the defensive tower of the *torreon* and peer out through the narrow slotted windows, to recapture the feel of those perilous

times. Once, the inner walls of the tower were hung with arms and ammunition; emergency food and barrels of water were kept in readiness at all times. From the *torreon*, one can see the fields, the duck pond and the hills; it is easy to understand a settler's willingness to fight and die for these things.

After the era of the defensive communities passed, the "recruit families" began moving into New Mexico's three northern valleys — into Truchas, Trampas and the Santa Barbara. Their mountain villages, too, are represented at Las Golondrinas.

A short walk down from the rancho takes one past the original Colondrinas mill, the blacksmith shop and the tilting wooden crosses of the *descanso*, or funeral rest stop, on past the fields and up to the Sierra Village complex. Here, an entire New Mexico mountain village has been faithfully reconstructed, log by log.

Most of the buildings in the Sierra Village came from Mora, New Mexico, east of the Pecos high country on the western edge of the Llano. Before they were disassembled, each building was carefully photographed from all angles and every board and beam was tagged with a metal number. Then they were transported to Las Golondrinas and reassembled on the gravelly slopes above the fertile fields.

The first homes in New Mexico's mountain villages were simple *jacals* whose walls were rows of upright posts, set in the ground and chinked with mud. Later, better adobe houses were built, each with a high-pitched roof to shed the winter shows. Both types of dwelling are represented in the Sierra Village, along with storage barns, a pigsty, and a hen house with blurry glass windows. At the highest point on the slope, a tiny family chapel stands, and its ancient bell can be heard for miles.

The village's most popular attraction is always "Grandmother's House." It was a part of Spanish tradition that the *albietos*, the old people, should have a house of their own, close to their relatives, thus insuring them both privacy and convenience. It was also customary for one of the *nietos*, the grandchildren, to live with the old one and care for her needs. Surely it was a delightful and enriching experience for both the woman and the child.

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The "Grandmother's House" at the Sierra Village is faithful in ever detail — right down to the bright, red geraniums in the windows. One gets the feeling that Grandma has just stepped out for awhile, and she will soon be back.

If the visitor to the little mountain village is fortunate, he may have the pleasure of meeting a most remarkable man — the caretaker, Rafael Lobato.

Rafael is many things — a poet, a gardener, a collector and, above all else, a pleasant conversationalist. In the Casona Mora, he has spread a long table with the produce of his gardens — medicinal herbs, corn and beans.

Things grow in Rafael's fields that grow nowhere else in the world. For example, he modestly displays a sack of black and white beans, grown from seed that was discovered in a pitch-sealed woven basket in an Indian ruin near Silver City, New Mexico.

Rafael opens an ornate old hutch and shows his visitors his treasures — a lovely collection of handcarved wooden figurines, old matchboxes, candleholders, and the tin crown of a Santo.

Beyond the Sierra Village, the pathway slopes down, crosses a wooden bridge and approaches the mill pond. Here, amid cattails and cottonwoods, stands the giant *Molino Leger de Sapello* — The Leger Mill. The enormous waterwheel along the eastern wall of the two story brick building groans ponderously as it turns under the weight of the water, while inside there is only a soft whir as the big grinding stones rotate and flapping conveyor belts move the milled grain over screens, sifting it into bags.

East of the Molino, the land rises gently, and the visitors find themselves walking across the top of a low hill above the fields. Before them stands the *penitente morada*.

Perhaps no other aspect of Spanish American culture has attracted more attention and been more poorly understood than the strange religious practices of the *penitentes*. Reports of voluntary flagellations and literal re-enactments of the crucifixion date back to the earliest settlements and continue almost to the present day. Little is ever said, however, about the vital role played in early New Mexican communities by the Brotherhood of the Penitentes. It must be understood that while cruel self-atonement was an important part of the

penitente way of life, the Brotherhood also provided needed medical care, welfare to improverished families, made judicial decisions and gave spiritual advice to people living far from the courts of the land and the established churches.

The opportunity to actually enter a *penitente* meeting house is a rare one. Visitors find themselves automatically talking in whispers. But the main nave is bright with candles; the alter is a colorful work of art and the *morada* is not frightening — it is lovely.

Back outside, the wind whispers through the grass in the Campo Santo — the holy ground of the cemetery — as if to speak for all the souls who have lived and died, worked and dreamed, suffered and loved throughout the long centuries of Las Golondrinas. The day is growing old now and the visitors begin drifting back slowly, down the paths and across the fields. Behind them, candles are being blown out, and doors and windows are being closed and shuttered. Las Golondrinas is nestling down into its shadows, preparing itself for another long night.

At the *entrada*, the gateway to the Rancho, many visitors turn around and take one last look behind them. Near the gate, there is a wooden sign, bearing these words: "Quien ignora el pasado no construira nada nuevo y permanente." (A person who does not know the past cannot building anything new and permanent.)

*Es verdad!* These words are true. Las Golondrinas has much to teach us— about the good and simple things of life, about beauty and hardship, pride and humility, life and death. Las Golondrinas stands today—as both a monument, and an example.



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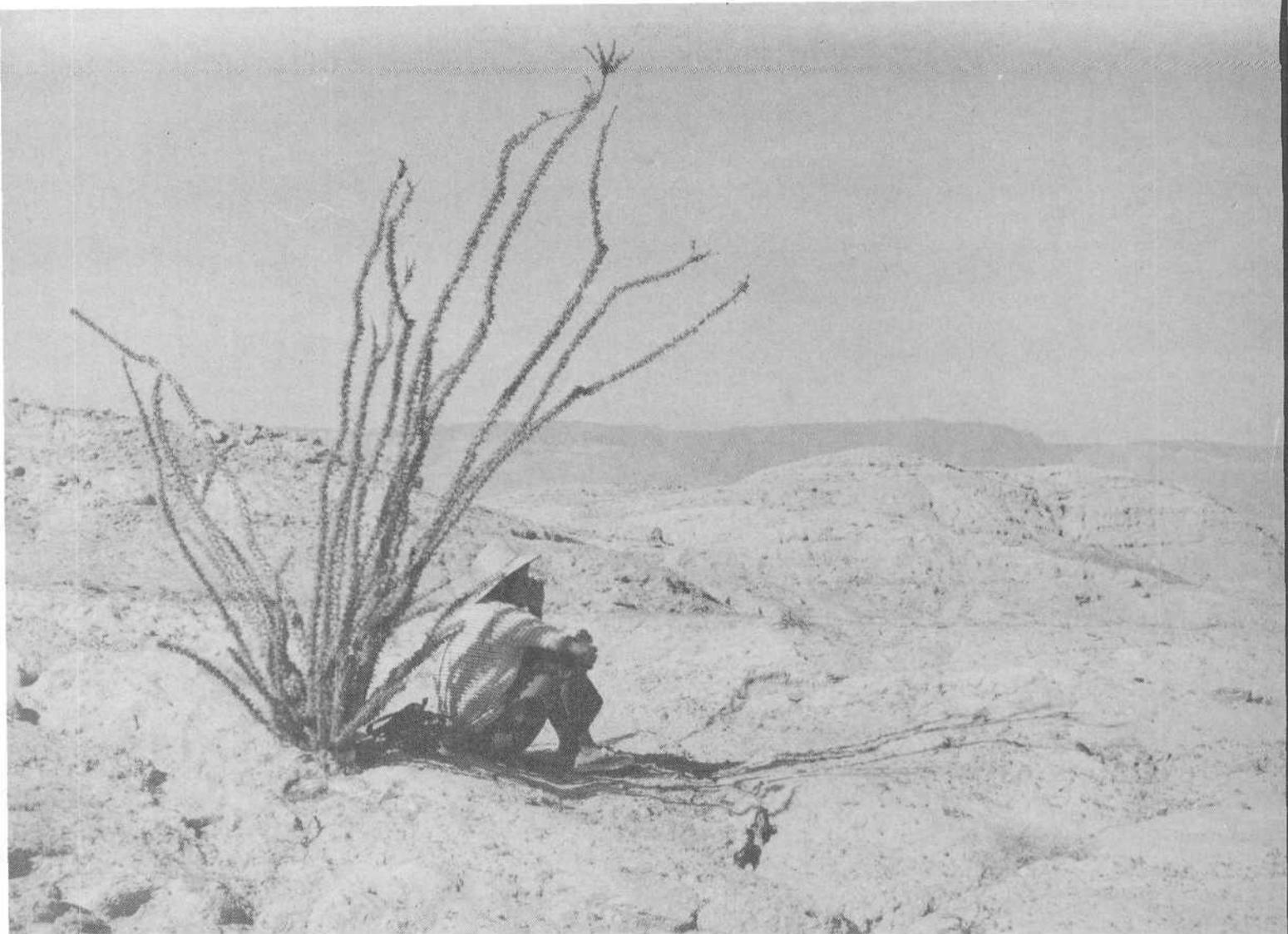
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*Once this identical spot in the Anza-Borrego Desert was covered with tall trees, rich grass and abundant water.*

# The Time Machine

by MARVIN PATCHEN

**W**ITH THE sun directly overhead, the twisting, eroded canyon walls offer little shade in the jumbled badlands in the Anza-Borrego State Park. A single ocotillo plant, the only color of green that can be seen for miles, gives a few fingers of shade. If you were to sit long enough under this ocotillo, what you would eventually see in the way of animal life would be a few jackrabbits, snakes, lizards, insects, occasionally a kit fox or coyote looking for a ground squirrel or kangaroo rat and very few birds overhead.

But if you could sit in this *same* spot and project yourself back into time to an almost incomprehensible one to twelve million years, you'd probably be sitting comfortably under a tall tree with abundant leaves. Rather than the tan and brown maze of the badlands, you'd be in grasslands with gentle rolling hills. Perhaps nearby there would be a fresh water lake, and you would see camels, antelopes, horses, mastodons, mam-

moths, deer, bears, rodents, rabbits and many other animals come to drink. Also, you might see some sabertooths, often misnamed saber-tooth tigers. Although the sabertooths were cat-like, they were not tigers.

Again placing your time machine into reverse, you would see the grasslands and meadows disappear and the entire area become a sea, and then the sea would disappear and the grasslands would return and the land would rise and fall again. The process would go on for millions of years and if you stop your time machine in year 70,000,000 B.C., the era of the giant reptiles, you might see a dinosaur rambling by or a giant reptile flying overhead.

How do we know all this? Paleontologists, who study fossils, and the geologist, who understands the formations of the earth, create time machines that enable us to look back into the beginning of life on earth.

My wife and I became interested in paleontology when we met Leonard Bessom of the Los Angeles County Museum on one of our hikes in the badlands. Although we had hiked in many "badland" formations before, we had not realized that they were often rich in fossils, and our eyes were not "tuned" to look for them in their hiding places among the jumble of rocks and sandstone concretions.

When Bessom showed us a few small scraps of fossilized bone, it was the beginning of a gradual process that trained our eyes to filter out what was not fossil and home in on the specimens.

An extremely important point is that it is illegal to collect fossils unless one has a permit from the particular governing agency of the land on which they are found. Collecting permits are only granted to accredited paleontologists who have a specific project in the area. In the case of the Anza-Borrego State Park, one of the few collecting permits is issued to George Miller of the Imperial



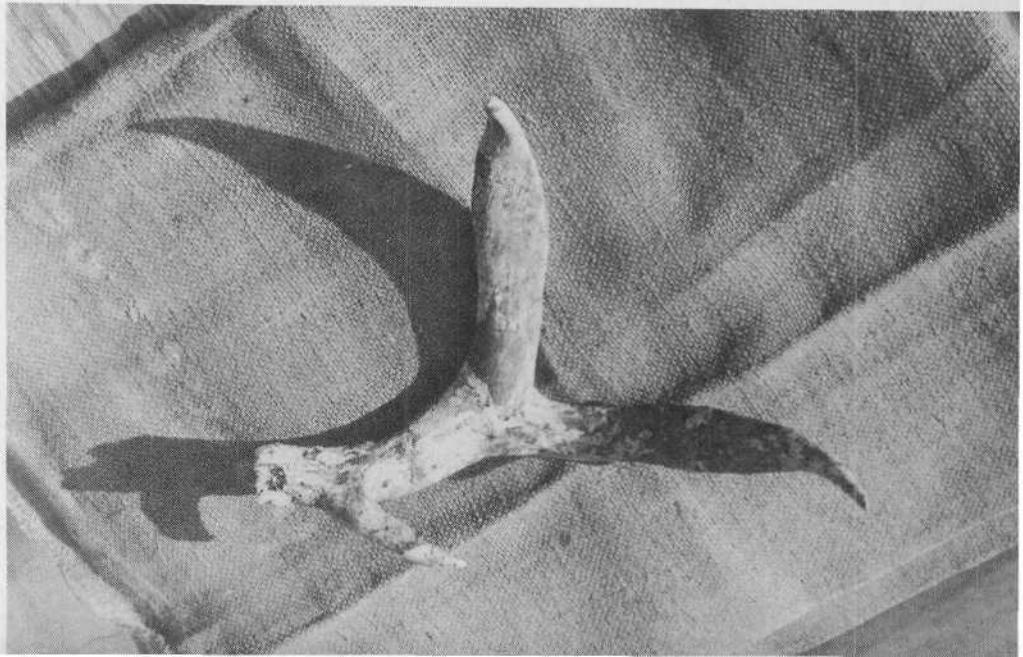
*It is difficult to tell fossilized bones from the surrounding rocks. However, with experience locating specimens becomes easier.*

Valley College Museum. George, who lives literally at the door to the badlands, spent many years at the Los Angeles County Museum working extensively on the La Brea Tar Pit site. Miller also teaches very popular adult classes in paleontology in Borrego Springs and at the Imperial Valley College in El Centro, California.

In the beginning it was rare that we came across a specimen that was worthy of attention. Other than fossil teeth and tortoise shells, only fossil bones with the ends intact or articulations can be identified. A bone with no end is virtually useless regardless of its size unless it can be correlated with an identifiable

specimen. Vertebrae (back bones) are also difficult to identify as they are of similar design in all types of animals. Because a vertebra comes in many sizes on a particular animal, it is difficult to tell whether you are looking at a small vertebra of a large animal or a big vertebra of a smaller animal.

When we found a collectible fossil, we would mark the site with a rock cairn and then tell Mr. Miller about it and within several weeks or months we would lead him back to the site. This system worked for a while except that the badlands are such a maze and so many of the small side canyons look alike, it became difficult to remember exactly where some



*This antler of an ancient deer was found in many pieces by my wife. Ralph Danklefsen, a student in George Miller's paleontology class, restored the fossil to its original shape.*



Inside this plaster of Paris jacket is the bone of a giant mastodon which will be taken to the laboratory for reconstruction.

sites were located.

In time, we began to discover more and more fossils as our eyes became better trained. Because of the number of sites and our elementary knowledge of what really was interesting to George, we began carefully marking the sites and if the fossil did not require extraction and was in a good solid shape, we would bring it to him for appraisal. Soon we had more sites than we could keep up with and began having difficulty re-finding their location.

When school season started, George asked us to lead his class on their Sunday field trips to our various finds so they could be recorded. In recording a site, it is given a field number and its location identified on an aerial photograph. Each specimen is carefully wrapped and then placed in a sack marked with the identifying number, the date, and the name of the collector. A card is also filled out giving the general location, various collecting data such as type of soil and whether the specimen was found on the surface or buried, which is called *in situ*. Later, the specimens are taken to the museum and if it is not obvious what animal they are, they are identified by using reference material.

Most all fossil finds are now being computerized on a world-wide basis so that scientists can have inter-continental

relationships between the discoveries. As there are over a *million different* bones of all shapes and sizes from the animals of that era, you can imagine the enormous knowledge paleontologists must have to identify a species.

Although fossil plants and invertebrate animals are important, our particular quest is for fossil vertebrates (any animal form with a backbone) that have lived in Southern California as recently as 5,000 years ago, to 300 million years ago. In the badlands, fossils are from the Plio-Pleistocene age and range from one to seven million years old. In the Coso Mountains of California, the age of the fossils is in the Pliocene age, roughly 11 million years ago. Near Barstow, California fossils have been found in the Miocene age (25 million years ago) and in the El Paso Mountains there's evidence of life from the Paleocene age, 63 million years ago. In Death Valley, fossil fish have been found that are perhaps four million years old. Paleontologists judge the age of the fossil by the age of the geological formation it is found in.

Quite often fossils that are buried literally fall apart when exposed to air. Thus a glue-like substance called glyptal is spread over the bone to help hold it together. When a fossil is in such a condition so that it cannot be removed intact without falling apart, it is jacketed in a

cocoon of plaster of Paris and then carried out to be later taken apart in a laboratory. This jacketing process can involve a lot of hard work. Many times the specimens are found on sides of cliffs in barely accessible locations. Working areas have to be made so that the quick drying plaster can be applied to wet strips of burlap and the trail constructed so that the heavy jacket can be carried out. Depending on the size of the fossil, the earth is dug around the specimen and it is slightly undercut eight to twelve inches below the bone. Once the plaster has dried, the undercutting continues until the whole "egg" can be turned over and carried out.

Fossils do not have to be large to be important. Tiny birds and rodents were also a part of the ancient life and their miniature bones are collected and sent to other parts of the United States where specialists in micro fossils identify the finds. Even fossilized dung, known as coprolite, is collected as it gives the scientific clues as to what type of food some animals ate and even more important, that they also contain the tiny bones of lizards, birds, rodents and other small vertebrates.

By identifying each site on the aerial photo, it is possible to see patterns of fossiliferous areas. Often specimen sites will run in a straight line for miles where

a certain formation has been twisted so that it now is part of the surface. This is known as the strike.

One abundant area of fossil finds in the badlands is in the rubble of light-colored sandstone and concretions. The shapes and colors of the concretions are almost identical to that of the fossil, so it takes a good eye to pick them out. On the other hand, many excellent specimens are found by first-time prospectors. Sometimes the bones seem to leap out at you once you've set your mind to find them. There's no particular type of formation that is overlooked. On the edges of sandy washes, in hard sandstone cliffs, in rocky gullies, on the flatlands and on ridges. If one finds a bone down low, you work your way up to the top of the ridge and if you're on top, you try to locate specimens that washed down hill.

My wife once found a particularly interesting specimen high in a narrow canyon draw. It was in a brown sandstone concretion shaped like a giant loaf of French bread. In the end of the loaf was the lower jaw of an ancient horse that had been compressed sideways so that both sides of the jaw were no more than three inches apart. Recently, State Park Ranger Dan Tuttle discovered a large mammoth tusk in the Borrego Badlands. After several millions of years of hiding, a spring rain washed away its earth covering and the large tusk could be seen from over a quarter mile away.

George Miller's classes are enjoyed by people of all ages and the field trips are especially pleasurable when a new site is discovered and the class, depending on the individual mountain goat ability, fans out to find additional specimens.

How do you tell a fossilized bone from a contemporary bone? It's not too difficult. Contemporary bones are usually white and chalky and might have the cut of a butcher's blade. They also are generally lighter in weight than a fossil. If there's any doubt, simply light a match to the bone and if there is any odor of meat, it's contemporary.

If you should ever come across a fossil tooth, an antler or a bone with either a socket or joint, mark the spot with a pile of rocks and some sort of trail markers so the location can be found again, then tell a park ranger about your find. If outside a park boundary, notify a university or museum who will pass the information

on to the appropriate paleontologist. It is best that you do not touch the specimen as it is very possible to damage it, but even more important is accurately pinpointing the site so it can be found again. A specimen without locality data is worthless.

Don't let your imagination carry you away. State Park Ranger George Leetch tells of the time two men excitedly came to the Ranger's Station exclaiming that they had found giant dinosaur bones. After a long trek to the site, they turned out to be nothing but typical sandstone concretions, but the men who had found them argued and were angry at George for not accepting them as fossils.

As our prospecting and excavation techniques began to improve, Miller asked us to do our own site reporting. He equipped us with an aerial map and other necessary paraphernalia so that

when we bring a specimen to him, all he has to do is identify it without the necessity of backtracking to record the data and location. If the fossil requires special excavation, we generally leave it in place so that it can become a class project, allowing others to learn excavation techniques. We are not yet to the point where we can identify or name the species other than the basic bones of the more prevalent horse and camel. However, fossilized giant tortoise shells, which are up to five inches thick, are easy to identify.

If there were no fossils or archeological sites to discover, my wife and I would still be ardent desert hikers. The added knowledge of the desert's life span enhances the pleasure of our walks while we let the archeologists, geologists and paleontologists pilot us on trips of a million years in our time machines. □

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## DRUID ARCH

Continued from Page 11

beginning of the trail at the base of Elephant Hill, or at the beginning of the Joint Trail approach. This is a safety precaution that should not be overlooked.

From the base of Elephant Hill, the trail to Druid Arch climbs steeply onto a benchland of sandflats and slickrock. Surrounding this relatively level stretch of trail are tall colorful spires, fins and domes of sandstone. Lovely views of more distant parts of the park are occasionally visible from the trail.

After two or three miles of this elevated travel, the trail plunges abruptly down into Elephant Canyon. At the head of this steep drop, a short spur trail goes to a shaded, grotto-like

overlook. From here, it is possible to look down into Elephant Canyon and beyond to the rows of soaring, redrock spires that give the Needles district of the park its name.

Once in Elephant Canyon, the trail follows the dry wash bottom up the deep, winding gorge. Occasionally, the trail climbs onto ledges above the wash in order to get around unscalable dry waterfalls.

At one point along the canyon bottom, a small sign indicates where the trail from Chesler Park enters from the west. Those who hike to Druid Arch from this direction should watch carefully for this inconspicuous sign upon their return.

Toward the end of the trail, Elephant Canyon changes dramatically. The sheer canyon walls grow closer and the skyline above becomes still more spectacular with towering, monolithic masses of

multi-hued sandstone. Sheltered pools of water reflect these pinnacles from shadowed alcoves, and voices echo eerily and repeatedly.

Druid Arch stands in lofty majesty within a giant amphitheater at the very end of Elephant Canyon, but may not be noticed at first because it stands edge-wise to the lower canyon. To see the gigantic span in all its glory, it is necessary to clamber up rock ledges to either side of the span.

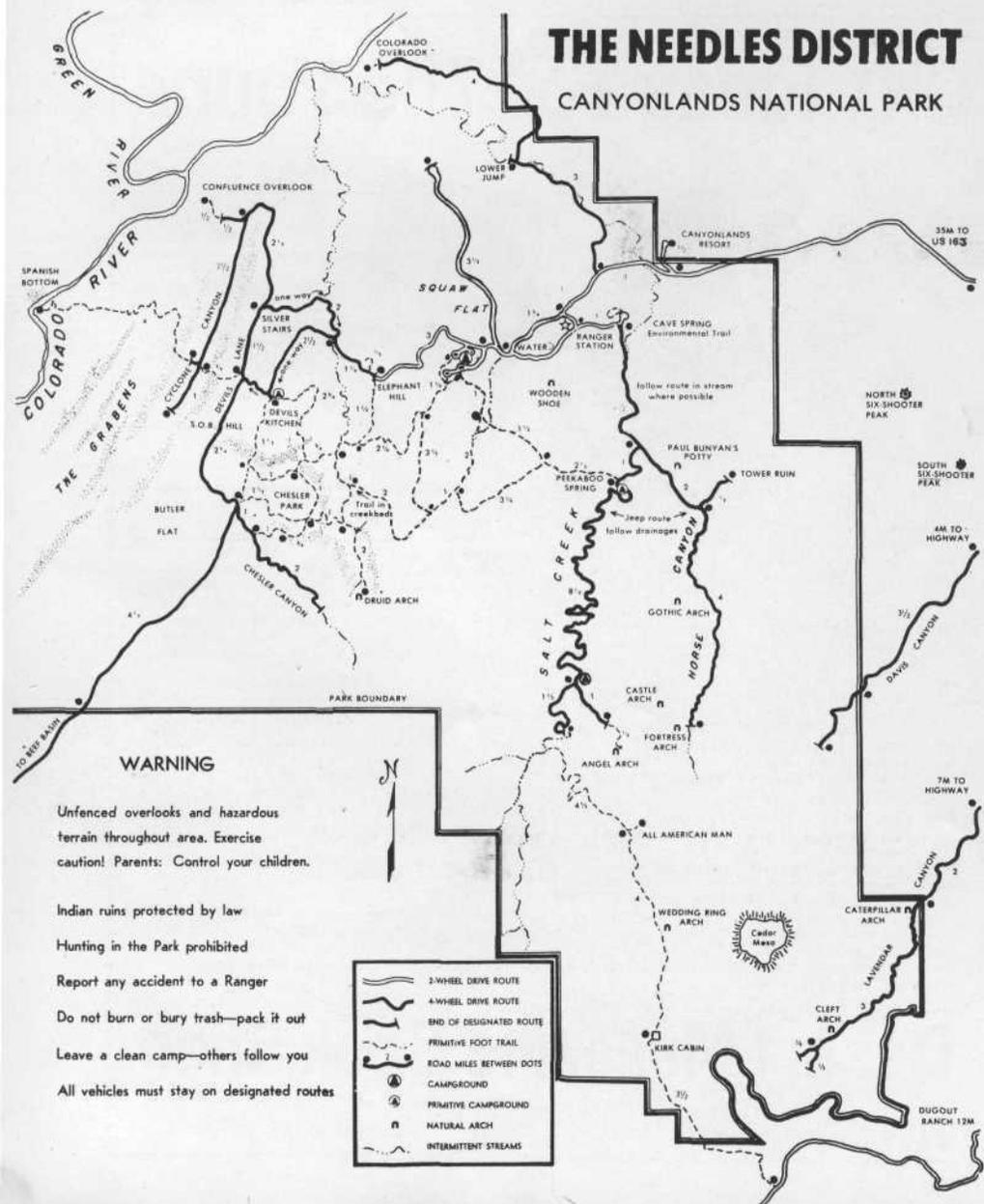
Druid Arch is so huge, so tall, that it is difficult to photograph. The canyon where it stands is so narrow that it is a challenge to get back from the arch far enough to take it all in with a standard lens. Photographers might bear in mind that a wide angle lens is worthwhile on a hike to Druid, and that an overnight stay at the arch is necessary if the span is to be photographed by sunlight from both sides.

Druid Arch is not shaped like most arches in canyonlands country, with an oval opening beneath an arching span of weathered sandstone. Instead, Druid is made up of gigantic, leaning columns of stone still joined together at the top. These form narrow, vertical openings reminiscent of the human-placed stones at Stonehenge, in England. Although any relationship between Stonehenge and the ancient order of Druids is highly questionable, the name "Druid Arch" has now been formalized on Park Service and Geological Survey maps, and few park visitors seem to notice or be concerned about the misnomer.

Indeed, by any name this unique natural span would be breathtaking, spectacular and beautiful beyond description.

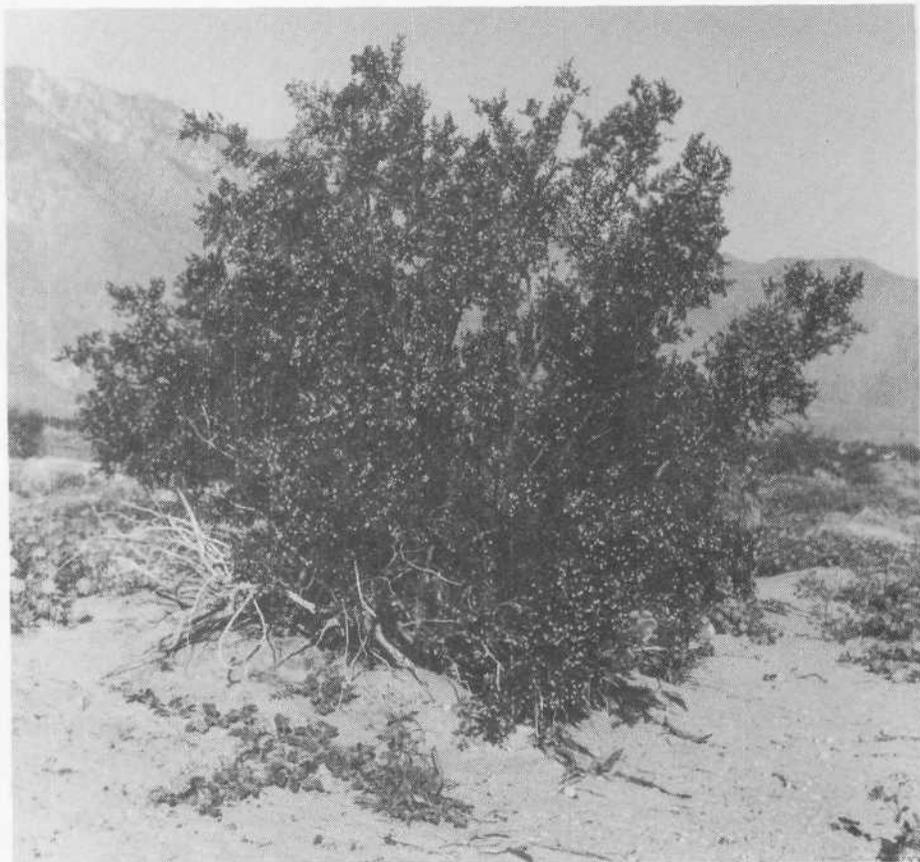
The return hike from Druid Arch retraces the same route, whichever approach was taken, but the return is anything but boring. Canyon features are seen that were missed on the way in, and the warm evening sunlight paints the canyon walls and spires with brilliant color. In certain seasons, the last wisps of clouds from afternoon thundershowers drift by overhead, tinted fiery hues by the lowering sun.

A one- or two-day hike to Druid Arch is not just an ordinary hike. The trails to Druid are special, all the way, and the arch itself is one of the most outstanding in the country. Altogether, an adventure you won't soon forget. □



# Desert Plant Life

by JIM CORNETT



ANYONE WITH the slightest interest in desert natural history should learn to identify the most common of desert plants, the Creosote Bush. It is a staple food source for a wide variety of animals—from desert iguanas to kangaroo rats. In addition this perennial has been used extensively by primitive man.

Mature plants are from two to over ten feet in height, depending upon the environmental conditions at the particular locality. In the windy San Geronio Pass area of Southern California, these plants reach only 24 inches as the continuous winds stunt their growth. Given near ideal conditions, however, the numerous branches rise well beyond the reach of an adult man. Such is the case in the Algodones Dune area of Imperial County, California.

The leaves of the Creosote are a vivid green, although during the fall months when the soil is exceedingly dry the foliage turns brownish, reflecting a shortage of water. The Creosote Bush is strictly a desert plant, having adapted to

endure prolonged periods of drought. But even this hardy desert shrub can succumb if water does not eventually become available.

Spring turns out an array of yellow flowers which attract many animal species—from bees to hummingbirds. As May and June near, these colorful flowers give way to white, hair-covered seed pods which cover the entire plant. Some bushes may appear white from a distance, completely adorned in their ripening fruits.

The botanist knows this plant as *Larrea tridentata*, a member of the Caltrop Family. There is only one other genus in this family found throughout the Southwest deserts: the genus *Fagonia*. This is unusual as most successful plant families are represented by numerous genuses, not just two. Yet there can be little doubt that the Caltrop Family, as typified by the Creosote Bush, is a high successful plant family.

A single article cannot bring out all of the other stories about this plant. I'll write more next month. □

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# Rambling on Rocks

by  
GLENN and  
MARTHA VARGAS

## BOLEO: Known for its Unique Minerals

IN THE DECEMBER issue of *Desert*, Choral Pepper wrote about the copper mines at Santa Rosalia. This article revived an urge to write about these mines. Our desires to travel in Baja California began many years back, and reached a partial fulfillment nearly 20

years ago with our first trip into this unique wilderness. That initial trip only fired us to greater desires to go again.

The thing that probably created the first urge to visit Baja California was the unique minerals to be found at Santa Rosalia, a mining town about midway down the peninsula, on the Gulf of California. First, however, we must tell something of the history of the mines.

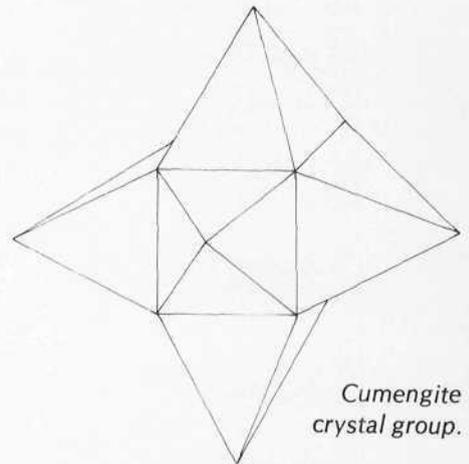
Information about paying copper ores to found here were first brought to the attention of the world in the 1870s. They were undoubtedly known much earlier, but this was a land of no roads, no seaports, and very few people. Dreams did not mature rapidly, and news of them did not travel at a great pace.

In 1885, the claims of a number of small miners were purchased by a French company, called the Boleo Mining Company. The word *boleo* is the French word for copper, and the first name given to the community was Boleo. This name for the town still appears in mineral literature, and will probably always do so. The Mexicans of the area did not like the name, and evidently never used the name Boleo, but called the town Cachanilla. The name is not used now, being replaced by Santa Rosalia.

The French company, part of the Rothschild interests, built a small French town as part of the operation. Even today, the first look at the town, so unlike anything else in Baja California, is almost a shock.

Soon, ore flowed from the mines in good quantities, and the company became very prosperous. Almost immediately, the miners began to find some

unique copper minerals. The first to be noticed was in the form of small (less than one-half inch) cubes with a deep blue color. Obviously, it had to be named boleite! Along with this mineral, which at that time had never been found anywhere else in the world, was found another new mineral, also deep blue, in the form of a six-pointed star. This was



Cumengite  
crystal group.

named Cumengite, after the local French mining engineer, Cumenge. It was these two minerals that fired our desire to visit Baja California.

Both are very unique minerals. First, they are members of a group known as the halides, which contain the gases fluorine, chlorine and bromine. As these gases are rare, so are the minerals composed of them.

Second, they are in the form of twinned crystals. Boleite is always in the form of cubes, or slight modifications, but it is not a cubic mineral. The cube is the result of three intergrown crystals, each lying between opposite faces of the cube. Obviously, three crystals cannot occupy the center of the cube at the same time. Each crystal has an "hour glass" or double pyramid shape within the cube. The drawing shows two crystals, A & B, lying vertically and horizontally, with the front face of the cube removed. Each portion of each crystal is designated by the letters a, a and b, b.

Each pyramidal portion is based on one of the cube faces, pinches off to a point at the exact center of the cube, and then expands to a second pyramid at the opposite face. The twinned crystal, mineralogically called a trilling, is essentially made up of six pyramids, two for each of the triplets, joined together to form a virtually perfect cube. This is one of the most unique types of twinning in all the mineral kingdom.

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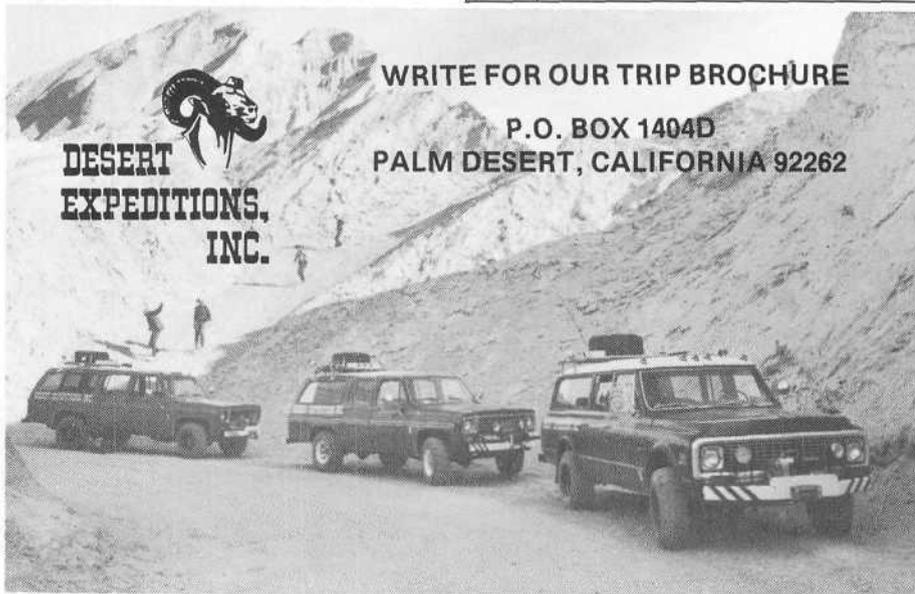
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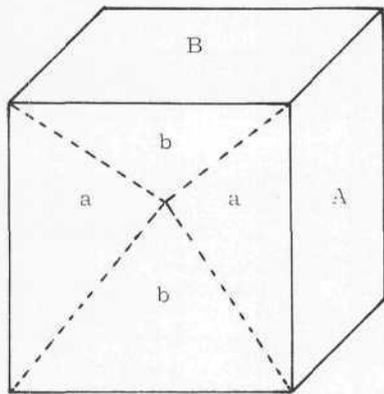
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Boleite may be interesting, but cumengite goes it one better. This mineral forms as acutely pointed pyramids, but evidently will form only on the faces of a twinned boleite crystal. Thus a crystal of cumengite is really a grouping of six pyramids, each fastened to a face of a boleite cube. These are magnificent things, and almost unbelievable.



Cumengite is so rare, only found at Boleo, that they grace very few collections. In virtually every collection (ours included) they are really mislabeled. Almost without exception the label reads "Cumengite," but really should read: "Cumengite on Boleite." With tongue in cheek, we might take this a bit further and state that the label should read — "Cumengite crystals on Boleite trilling twin."

Mining at Boleo went well until the 1920s when good ore became difficult to find. The Boleo Company decided to sell their holdings while there was an operation. There were no takers, and the company began to operate at a loss. Finally, the depression and labor troubles put them out of business in 1953.

This left a great void in the economy of the area, and two years later a Mexican company, sponsored by the government, resumed operations. Just past this time, we made our first trip to the area.

When we arrived at the mines, we were astounded at the poor quality of the ore. We watched trucks (the narrow gauge railroad had fallen apart) disgorge loads of "ore" at the mill. To us, it was really ordinary dirt, containing a few flecks of blue and green. We made friends with the man in charge of the area where the trucks dumped the ore, in hope that a few good specimens might be retrieved. He soon dashed our hopes

by saying that we would see almost none. He then offered us the privilege of choosing any specimens that we wished from the shelves of his small office. The specimens resulted from his activity of collecting samples for assaying. He must have had to search carefully for a sample worth assaying, and when he found some, he took more samples than necessary.

His generosity knew no bounds, and he gave us samples of ores that he had gathered at mines where he had worked previously. His generosity and hospitality was one of the first of many such kindnesses that we were to receive in our travels in this beautiful land.

Our next attempt was to find someone in the town that might furnish us with specimens of boleite and cumengite. We met the last Frenchman left over from the early days. He spoke excellent English, and almost laughed at us when we asked about buying the two minerals. He related a story of how the Mexican government tried unsuccessfully to obtain specimens for museums in Mexico City. They were able to find one or two boleites, but not cumengite. All the specimens had gone to France!

We met a third person, an Australian dentist, Dr. McKinnon, who had been the town's only dentist for many years. Dr. McKinnon was everyone's friend, and soon became one of ours. We found him to be an expert on many things. He was a horticulturist, and asked us to bring date seeds for him to plant at the various springs in the area. He was a gun expert, and had a collection that resembled a small arsenal. On one trip, we even found that he practiced medicine. He dropped his dentist tools (crude as they were) and went to the drug store with us to be sure we got the medicine we needed. It worked!

Others took pity on the two *Americanos*. The Chief Mining Engineer for the mines dropped his work and escorted us to the Cumenge Tunnel, the discovery site of cumengite, and to the mine that had produced the most boleite. He then apologized for the fact that he had to go back to work, but made us promise that we would stop back at his office to let him know we were safely back. He said he might worry about us.

The Cumenge Tunnel had caved in, and the dump outside did not contain a fleck of blue. The boleite mine was

simply a deep hole of enormous proportions that needed ropes and other equipment to begin any type of investigation. We sadly retraced our way back to town and fulfilled our obligation to the engineer, who was not surprised at our emptyhandedness.

Next month we will tell of other experiences and developments at Santa Rosalia. □

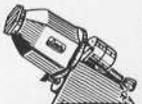
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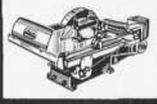
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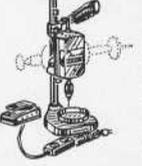
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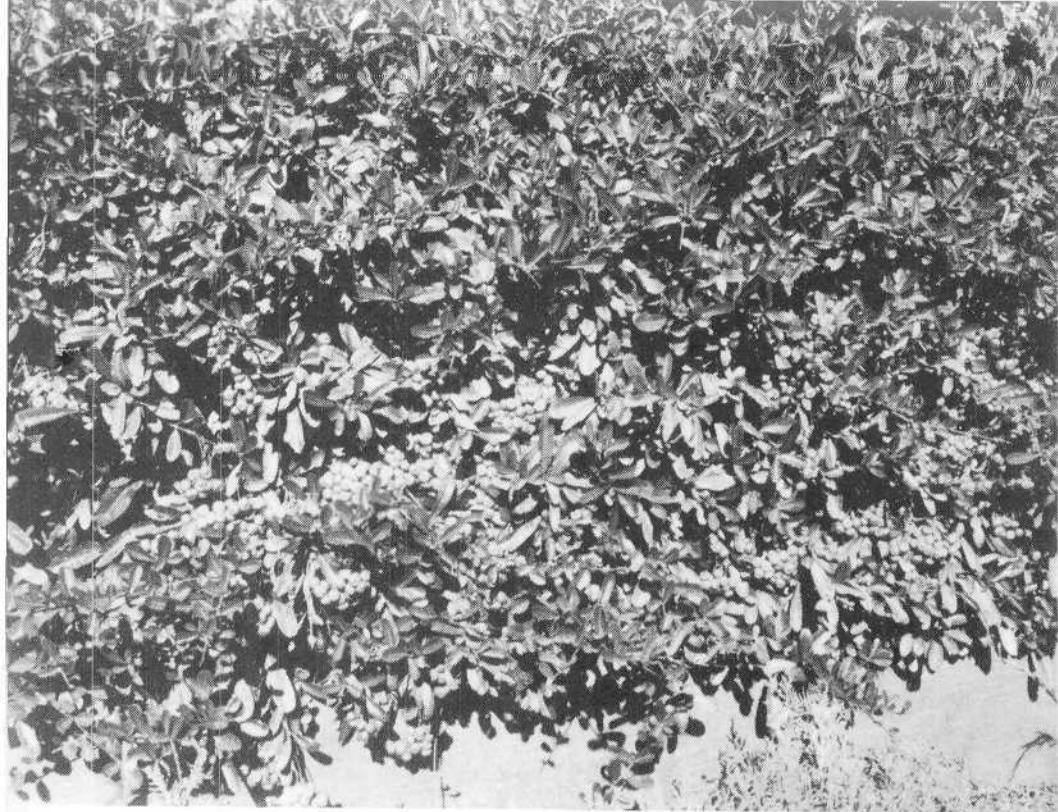
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# Letters to the Editor

Letters requesting answers must  
include stamped self-addressed envelope

## A Real Treat... Pyracantha Jelly

by HELEN PETERSON

**S**URE, you can eat the pyracantha berries! The old tale that they are poisonous holds no merit. After watching the robins and waxwings come in hordes each spring and strip the hedges of the scarlet berries, I decided we could eat them, too.

It is true that the birds actually act queer after gorging themselves. Sometimes they can't fly and act as if they were drunk. I've watched them for hours on end from our window overlooking the hedge and given a little time, they always make it. I think they simply eat until they're so stuffed they can't wobble.

After experimenting again and again, I've finally come up with a pyracantha berry jelly recipe which has gained the approval of all our friends.

We gather all the baby food jars we can muster in the neighborhood and filled with the rosy pink jelly, we place a Christmas seal on the lid of each jar and

they make a tasty little gift to hand out to visitors.

So if you live in Southern California or wherever the beautiful pyracantha berry bushes grow, why don't you enjoy them a second time by making some of the tasty pyracantha jelly.

### PYRACANTHA JELLY

- 3 quarts of washed berries
- 3 cups of water
- Juice of 1 grapefruit
- Juice of 1 lemon
- 1 box powdered pectin
- 4½ cups sugar
- Pinch of salt

Boil berries in water 20 minutes. Add grapefruit and lemon juice and strain through jelly bag. Should make 3½ cups juice. Combine juice and pectin, bring to boil. Add sugar and pinch of salt and bring to a full rolling boil for three minutes. Pour into sterile jars and seal with paraffin. □

### Mural Referral . . .

Having lived in nearby Kingman for a year, I'd like to pass along the story that was told to me about the murals, or picture rocks, as some of the local people call them: The Chloride murals are a creation of the then Curator of the Mohave Museum, Roy Purcell. Artist/Curator Purcell took leave of his duties at the museum and "hermitted" in the Cerbats near Chloride where he planned and worked out his technique, that of using bits of broken china and pottery, painted various colors, and glued onto a painted mural background, giving a sort of abstract three-dimensional effect. After his practice studies—the murals—he returned to his post at the Mohave Museum in Kingman and used the technique to decorate the walls of this unique building.

Travelers going through Kingman would find the museum, located on W. Beale St., (near the junction of U. S. 66-I 40 and U. S. 93) on highway 93 on Kingman's west side, a very interesting place to visit. For not only would they see this unusual and talented artist's work, but they could also look at small dioramas depicting early Indian life of that area; archeological and pioneer history of northwestern Arizona; the Andy Devine room, which houses a pictorial biography of that actor and some of his personal belongings he has donated to the museum, as well as local flora and fauna.

Mr. Purcell, the last I heard, is Curator of a museum in southern Nevada.

MRS. MARY E. VEAZEY,  
Dearborn Hts., Michigan.

### Of Jacks and Jennies . . .

I enjoyed the article "Death Valley, '75," in the November issue, but must take a stand on the caption of the photo on page 19 and I quote: "The remnants of a Cousin Jack structure, brought to the desert country by Welsh miners . . ." Even the Welsh people will be surprised at hearing themselves described as Cousin Jacks, when they are Taffies! Cousin Jacks are like me—born and raised

in Cornwall, England and only Cornishmen can claim this name. Americans have created a title of "Cousin Jennie" for female counterparts and I suppose that's what I am, but I never heard it in Cornwall.

KATIE KICK,  
Virginia City, Nevada.

### Purple Glass Inquiry . . .

I wish to purchase new glassware to leave in the sun for "purple-ing."

Perhaps some of your readers would be able to tell me what type(s) of glass will turn purple in the sun?

A. H. BUCHMAN,  
Los Angeles, California.

*Editor's Note: I personally do not know anything about turning purple in the sun, although I've turned red a few times. If some reader can help Mr. Buchman, they will automatically go to the "head of the glass."*

### Caught Napping . . .

Unless the earth has started revolving in the opposite direction, the caption for the centerfold photo of Mulege, Baja in the December issue is very wrong.

Mulege is on the east side of Baja and looks out almost due east across the Bahia Concepcion. The small pointed hill, El Sombrerito, is about two miles due east of Mulege. I believe this photo was taken from the old Club Aero Mulege Hotel grounds, some time around 6 A.M., in early March or late October. The caption should read *sunrise*.

CLARK DENNHARDT,  
San Diego, California.

*Editor's Note: This reader got up before breakfast and caught me asleep.*

### Kudos for Chia . . .

The article in the December issue of *Desert* titled "A Seed Worth Its Weight in Gold" by Harrison Doyle was perused with avid interest. The article was indeed enlightening and educational about the plant Golden Chia.

As stated, the leading energy food seed, its medicinal and nutritional value as related in the article is most unique and outstanding. Cooked with any kind of breakfast food, it could easily become the foremost energy health food. It will be highly beneficial in keeping individuals salubrious. Nature has provided the various seeds, herbs and roots for mankind, but it takes the knowledge of individuals to seek out the plants to keep us as healthy human beings.

ELMO MENETRE,  
Truth or Consequences, N.M.

# 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.**

JANUARY 18, Sylmar Gem Dandies Gem and Mineral Club "Showoff of 1976." Masonic Temple, 1112 N. Maclay, San Fernando, California. Free parking, admission and demonstrations. Food, dealers.

JANUARY 15 through Season, Living Desert Reserve, Palm Desert, California, Special Programs on different aspects of the Natural History of the Deserts, Monday and Wednesday nights at 7:30 PM. Guided Nature Walks every Saturday at 9 AM and Sunday at 3:30 PM. Call 714-346-6555 for details.

JANUARY 31-FEBRUARY 1, Orange Coast Mineral & Lapidary Society's 26th Annual Show, National Guard Armory, 612 E. Warner, Santa Ana, Calif. Dealer space filled. Free admission and parking. Outstanding exhibits.

JANUARY 31-FEBRUARY 1, The Spirits of 76 in Glass, sponsored by the Southern Nevada Antique Bottle Collectors, 11th Annual Bottle Show and Sale, Convention Center, Las Vegas, Nevada. Contact: Karen Perraro, 515 Northridge Dr., Boulder City, Nevada 89005.

JANUARY 31-FEBRUARY 1, California Barbed Wire Collectors Association's Antique Barbed Wire and Collectable Show at the Colonial Country Club, 25115 Kirby at Menlo, Hemet, California. Barbed wire, fencing tools, bottles, insulators, date nails and more. Free. Write: Amos Ulberg, 21100 Highway 79, Space 309, San Jacinto, California 92383.

FEBRUARY 8-12, Abraham Lincoln Birthday Observance at Mission San Luis Rey, California. Related documents of his assassination to be displayed. Public invited.

FEBRUARY 13-15, Tucson Gem and Mineral Society's 22nd Annual Show, Tucson Community Center Exhibition Hall, 350 S. Church St., Tucson, Arizona. Dealer space filled. Admission \$1.00 adults, children under 14 free with adult.

FEBRUARY 21 & 22, Annual Santa Clara Valley Gem & Mineral Society Show, Santa Clara County Fairgrounds, 344 Tully Rd., San Jose, Calif. Adults, \$1 donation, children 12 and under free. Dealers, exhibits, Rock Swap.

FEBRUARY 22-29, Desert Botanical Garden's 29th Annual Cactus Show, Papago Park, Phoenix, Arizona. Free admission. Oldest and largest show of its kind with a striking variety of displays.

MARCH 5-7, Phoenix Gem and Mineral Show "Spirit of '76," sponsored by the Maricopa Lapidary Society. State Fairgrounds, Phoenix, Arizona. Overnight parking for campers in fairgrounds. Field trip March 8. Richard Canterbury, Chairman, 2050 W. Dunlap, Phoenix, Arizona 85021.

MARCH 6 & 7, "Artistry from Nature," 14th Annual Show, Ventura County Fairgrounds, Ventura, California. Dealer spaces filled, camping available. Chairman: Ed Rogers, 3462 Minna, Oxnard, California 93030.

MARCH 6-7, Castro Valley Mineral and Gem Show, "Stars, Stripes, and Stones." Alameda County Fairgrounds, Pleasanton, Calif. Exhibits, dealers, demonstrations. Admission charged. Parking and camping. Contact Phil Clarke, 1600 - 151st Ave., San Leandro, Calif. 94578.

MARCH 6-8, Bicentennial Celebration at Old Mission San Antonio, Jolon, Calif. Many events depicting De Anza trek.

MARCH 13 & 14, Modesto Gem & Mineral Show of Mother Lode Mineral Society, Stanislaus County Fairgrounds, Turlock, California. Working exhibits, many special exhibits, free parking, food, camping. Donation 75c, children under 12 free accompanied by an adult.

MARCH 13 & 14, 35th Annual Los Angeles Lapidary Society "March of Gems," Workmen's Cultural Center, 1619 Robertson, Los Angeles, Calif. Dealer space filled. Demonstrations, Lectures, Displays, Free Admission and Parking. Chairman Vic Alonso, 3451 Motor Ave., Los Angeles, Calif. 90034.

MARCH 13 & 14, 1976 Needles Gem and Mineral Club's Annual Spring Parade of Gems, Elks Club, 1000 Lily Hilly Dr., Needles, California. Exhibits, Field Trips, Food, Prizes. Dealers filled. Alberta Frye, Chairman, P. O. Box 762, Needles, CA 92363.

MARCH 19-21, 16th Annual Southwest Gem and Mineral Show, Villita Assembly Hall, 401 Villita Street, San Antonio, Texas.

MARCH 20 & 21, Sequoia Mineral Society's 38th Annual "Gem Roundup," Memorial Building, Dinuba, California, dealers filled. Chairman: Sam Carlson, 2102 Merced St., Selma, California 93662.

MARCH 27 & 28, Roseville Rock Rollers, Inc., 5th Annual Gem and Mineral Show, "Nature's Wonders." Placer County Fairgrounds, Main Exhibit Hall, Hwy. 65 and All American Blvd., Roseville, California. Admission, 50c. Dealers, demonstrations, exhibits, ample parking and camping.

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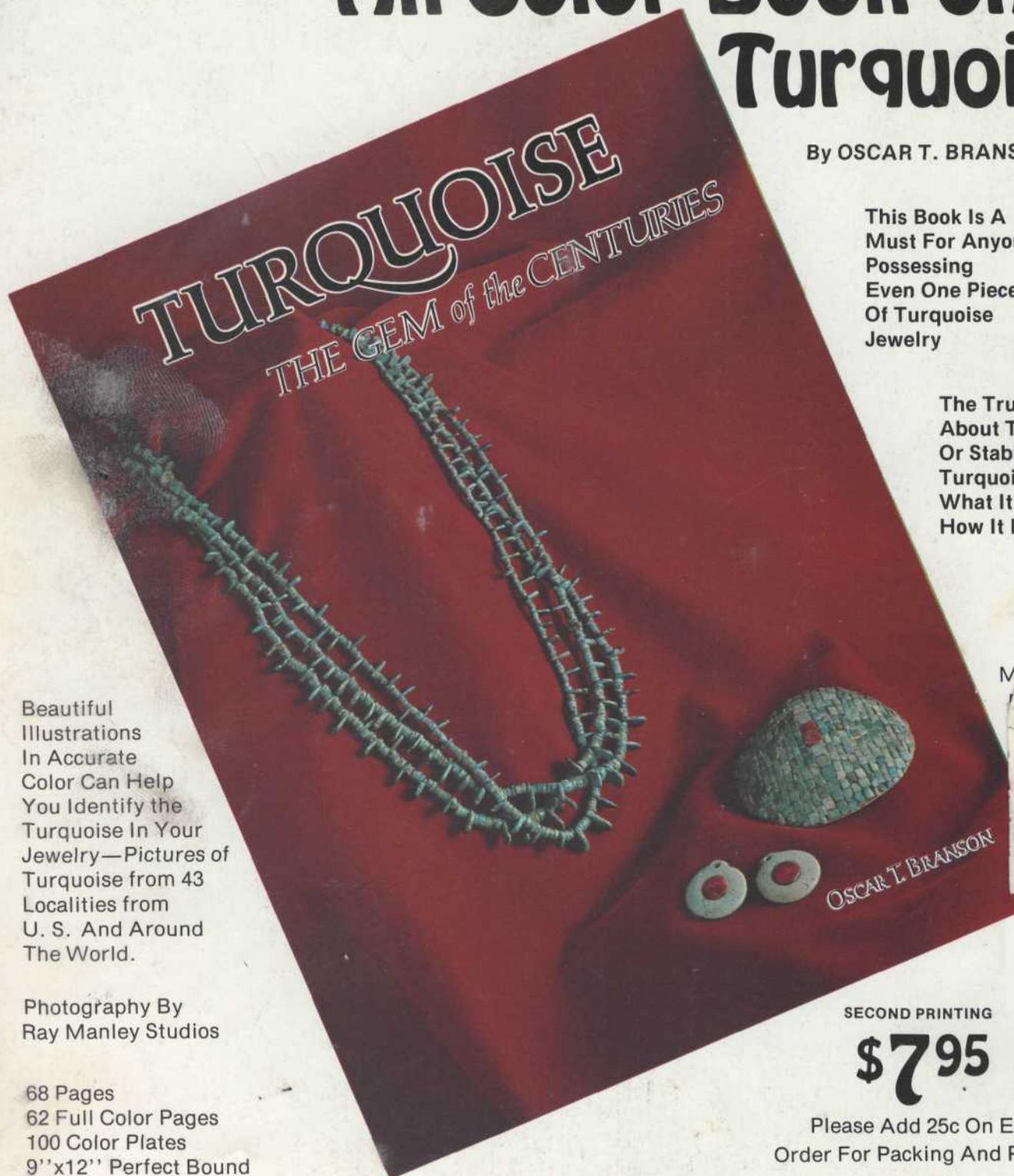
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