# MUMMIES, SANDALS, SNARES FROM MOGOLLONS' CAVE

By PAUL S. MARTIN
CHIEF CURATOR, DEPARTMENT OF ANTHROPOLOGY

FOR SEVERAL SEASONS the Southwest Archaeological Expedition of Chicago Natural History Museum has explored various ancient villages near Reserve in Pine Lawn Valley, west-central New Mexico. The villages were composed either of pit houses or surface, multiroomed apartment houses with masonry walls. They ranged in date from about A.D. 300 to A.D. 1000 and were inhabited by the Mogollon Indians, who differed greatly from the Cliff Dwellers.

By Gustaf Dalstrom
Artist, Anthropology

Restoration of Mogollon 'Fashions' in 6th Century A.D.

In addition, the writer, as leader of the expedition, and Dr. John B. Rinaldo, principal assistant, have discovered the camp sites of Indians who knew no pottery and practiced no agriculture and who eked out an existence by gathering nuts, roots, and berries. These people, known now as the Cochise Indians, lived in Pine Lawn Valley about 4,000 to 5,000 years ago.

But we were up against a most difficult situation. All the materials recovered up to 1950 consisted of tools of stone and bone and smashed bits of pottery.

How could we completely visualize the daily life of these people from such meager data? How could we find out about their dress, their skill as craftsmen?

### CAVE HOLDS ANSWERS

The answer: "By digging in a bone-dry cave."

If such a cave could be located and if neither rain nor snow had ever dampened the dust, rubbish, and prehistoric "junk," then we could state, not guess, how the Mogollon Indians wore their hair, how they dressed, how they took care of their babies, what crops they grew—in short, how they lived from day to day.

These facts, in and of themselves, are interesting but not too significant. The importance of such knowledge lies in what it contributes to our history of mankind, what it can tell us about the ways in which men settled specific problems in the past, and what gaps it can help to fill in formal history, which deals mostly with kings and queens, battles, and empires. But what contributions to our knowledge can the history of these preliterate Mogollon Indians make? Who discovered agriculture and when and where in the New World? What contributions will our cave-facts make to the science of botany? What trade took place? In other words, what can we learn from the past?

### THE 1950 DIG

Before answering these queries in part, let us pass to the expedition's actual dig of 1950.

We found a dry cave—bone-dry—the deposits of which had never been injured by rain or snow, for dampness would rot all the materials we most wanted. The cave, about 150 feet above the Tularosa River and about 25 miles from camp, was located only after several years of arduous search.

When we first saw it we wondered if this cave, which we dubbed Tularosa Cave, would give us the materials we so eagerly sought. Would it help answer some of our questions? It was a gamble—a big gamble—but it paid off. We "hit the jackpot."

The dry materials, sandals, snares, bows and arrows, corn, and other objects poured into our laps, as it were, faster than three of us could catalogue them. About 3,500 specimens were uncovered all told.

But first, what about the digging?

It was slow, dusty, and disagreeable. We came home at night looking like coal-miners and eager for a shower. Special respirators and goggles had to be worn; otherwise no human being could have stood the fine dust, which was so thick that one could not see his hand before him. Artificial lights had to be used. The digging was uncomfortable but the results were magnificent.

At this writing, when most of the materials await careful analysis, we cannot announce final details. But we can enumerate some of the more spectacular finds.

### 200 SANDALS UNEARTHED

In a terrain such as that near Tularosa Cave, where sharp volcanic rocks protrude, where there are many thorns and much gravel, protection of the feet was of paramount importance. In their search for game and wild foods, in their long tramps to trade or visit distant shrines, the people had to have footgear. And the answer to this lay in sandals. And sandals they made, for we found about 200 of them—some in good shape and some worn out. Since skins and hence leather were scarce, wild fibers were utilized, mostly yucca fibers.

To obtain meat, ingenious methods were resorted to. Of course, some game was killed by means of the spear-thrower in early times and by bows and arrows in later times. But much game was captured by means of snares, big ones and little ones. In one cache we found eleven large snares, made of braided rope, each one about six feet long. At one end were ties for fastening the snare to a stake or a tree; at the other end was a large noose, made with a slip-knot. A large noose such as this would easily snare a wild pig, a mountain sheep, or a deer.

And speaking of snares and knots, we found that these early people knew all the knots that we know, such as square knots, grannies, slip, half-hitch, and sheet-bend.

In addition to these, we found digging-sticks for planting corn, rush mats, cradles, whistles or flutes, beads, fragments of cloth (some of which had colored designs), fur and feather blankets, string aprons, ornaments, bags, tobacco pipes, cigarettes, "martini" sticks with juniper berries impaled like olives, wooden spoons (just like those sold in the 10-cent stores today), hair nets, baskets, cloth bags, religious fetishes, and a doctor's bag containing herbs and "tools." But no hats of any kind.

### FASHIONS CHANGED

One thing that interested us was the discovery that styles changed among the prehistoric Mogollon Indians just as they do today. So Paris or no Paris, styles come and go.

What sorts of vegetable foods did these Indians cultivate and eat?

The No. 1 item was corn. Now we have found a very early, primitive type of corn called pod corn, which may date at 400 B.C. or several centuries earlier. Corn is supposed to have originated in South America, but our corn may rank among the earliest and most primitive. Popcorn was also grown, and it was popped on the ear! Our corn may not settle the question as to the place in which corn originated, but it may greatly help botanists trace the history and development of this important cereal.

At about the same time that corn became known to these Indians, beans, squash, pumpkins, and gourds were also planted and cultivated. In addition to these cultivated plants, we found that the Mogollon Indians also ate walnuts, piñon nuts, grass seeds, sago-lily bulbs, and yucca and cactus fruits. So, with some meat, these people fared very well.

### MUMMIES FOUND

But the big finds of the season were two mummies. These are the first to be surely identified with the Mogollon culture and may date at about A.D. 600 or earlier. The hair on these fellows had been trimmed in a "GI" haircut style. One mummy wore a string apron and was wrapped in a fur robe. Each body had been laid on a soft bed of grass and carried to the grave on a large rush mat. A deerskin robe was placed over the body, then more soft grass, and then dirt.

Complete stratification, like a layer cake, of all periods of Mogollon history from perhaps 2500 B.C. to A.D. 1300 was laid bare

in the cave. Here were buried the treasures and castoff pieces of a civilization that flourished before Rome was great and which came to an end at about the time our ancestors in Europe were setting forth on the Crusades. It was like cutting a great section out of history and looking at it layer by layer, page by page—just as it was laid down—the earliest, first or deepest in the cave, and the latest, on top of the deposits.

## PHOTO CONTEST OPENS

The Nature Camera Club of Chicago and Chicago Natural History Museum will present the sixth Chicago International Exhibition of Nature Photography at the Museum during February. All persons interested in nature photography—both amateur and professional photographers—are invited to send their best nature pictures for entry in this contest. Deadline for entries is January 15. The judges will be: Conrad Emanuelson, photographer; John W. Moyer, Chief of the Museum's Division of Motion Pictures, and Dr. Rainer Zangerl, Curator of Fossil Reptiles; R. Marlin Perkins, Director of Lincoln Park Zoo; and Merrill Tilden, photographer.

The exhibition will be composed of two divisions, prints and transparencies. No more than four entries may be submitted in either division. There are three classifications in each division. They are: *Animal Life*—animals, birds, insects, tracks, nests, etc. (no domestic animals); *Plant Life*—flowers (except formal arrangements), trees, shrubs, fungi, etc.; *General*—scenery, geology, clouds, etc. (not included above). Prints (except from foreign contributors) must be mounted on 16″ x 20″ mounts. Color slides or transparencies should not exceed 3¼″ x 4″.

Silver medals and ribbons will be awarded in the various print and slide classifications. Entry forms and a complete resume of conditions of the contest may be obtained from the Museum. Entries should be sent to the Museum.

The exhibition will be held in Stanley Field Hall of the Museum, February 1 to 28, inclusive. There will be two special Sunday projections of color slides at 3 P.M. on February 11 and 18.

## U.S. LANDSCAPES—

(*Continued from page 3*)

harbor a rich plant-life. Three types of these subtropical deserts can conveniently be recognized: the California desert, marked by the creosote bush; the succulent desert, chiefly of Arizona and California, characterized by the abundance of cacti; and the thorn or small-tree desert, of California, Nevada, and Utah. The real appeal of the desert itself cannot be doubted, regardless of how it is divided according to the plants growing in the different areas. Whether the traveler is visiting the desert in northern Arizona, at the edge of that vast eroded area of a thousand tints, appropriately named the Painted Desert, or crossing a zone of the bizarre Joshua trees scattered sentinel-like down the long slopes of southwestern Nevada, or in a seemingly endless tract of mesquite and acacia, covering much of Arizona, California, and other areas, or feeling lost in the fantastic atmosphere created by a forest of the great columnar cacti, the sahuaro, his sense of beauty will be quickened, his interest aroused.

Here we may fittingly conclude our travelogue devoted to some of the more striking formations of plants, especially of forests, seen in various parts of the country. It is scarcely necessary to remark that the picture presented is fleeting and impressionistic.

## *STAFF NOTES*

**Byran Patterson,** Curator of Fossil Mammals, is at the University of California, presenting a series of lectures on fossil mammals and related subjects . . . . **Dr. Paul S. Martin,** Chief Curator of Anthropology, recently conducted a seminar in archaeology at the University of Arizona. **Dr. John B. Rinaldo,** Assistant in Archaeology, and Dr. Martin attended an archaeological conference at Flagstaff, Arizona. With **John W. Moyer,** Chief of the Division of Motion Pictures, Dr. Martin showed the Museum film "Archaeologists in Action" in Reserve, New Mexico, where it was of particular interest to the people of the community because it was "shot" right in their vicinity . . . . **Miss Elaine Bluhm,** of the Department of Anthropology, spent two months as cartographer for an expedition of the University of Utah. During the summer she also assisted Dr. Martin's Archaeological Expedition to the Southwest, cataloguing the material recovered from the excavation of Tularosa Cave.

### Technical Publications Issued

The following technical publications were issued by Chicago Natural History Museum during the last month:

Fieldiana, Geology, Vol. 10, No. 9. *The Temporal Region of the Permian Reptile Diadectes.* By Everett Claire Olson. September 29, 1950. 16 pages, 6 text figures. $0.20.

Fieldiana, Geology, Vol. 10, No. 10. *A Middle Devonian Octactinellid Sponge from New York.* By Eugene S. Richardson, Jr. October 5, 1950. 10 pages, 5 text figures. $0.25.

Man is certainly stark mad; he cannot make a worm, and yet he will be making gods by the dozens. —*Montaigne*

## SUNDAY LAYMAN LECTURES BEGIN THIS MONTH

The new series of programs on Sunday afternoons by Paul G. Dallwig, The Layman Lecturer, begins in November with the presentation each Sunday of the month (November 5, 12, 19, and 26) of a new subject just added to his repertoire, "Life—What Is It?" This marks the return of Mr. Dallwig to the Museum after an absence of several years. In his current lecture he will discuss such questions as the following: How did life start? Where did it start? Was it placed on this earth by divine power? By cosmic rays? By a combination of chemical substances? Is it electricity? The latter part of this lecture will be illustrated with the Museum's exhibit on human birth (Hall 19).

The lecture will begin at 2 P.M. and end at 4:30 P.M. Midway there will be an intermission for tea and other refreshments in the Museum Cafeteria. Mr. Dallwig will repeat the same subject on each of the Sundays during November. In December his subject will be "The Caveman Knew His Way Around"; in January, "Living Races and Their Way of Life"; in March, "Behind the Scenes in Our Museums"; and in April, "The Romantic Story of the Diamond." During February Mr. Dallwig will be on a lecture tour and therefore will not appear at the Museum.

Members of the Museum may use their membership cards to attend these lectures without advance reservations. All others, except out-of-town visitors and representatives of the press, must make advance reservations to attend the Sunday lectures. Reservations may be made by mail or telephone (WAbash 2-9410). The lectures are free.

### Norfolk Island Pine Added To Hall of Foreign Woods

Norfolk Island pine with its well-spaced whorls of horizontal branches is a favorite house plant and extensively cultivated outdoors, as in California and Florida. Not directly related to the pines of the northern hemisphere, Norfolk Island pine (*Araucaria excelsa*) belongs to the family Araucariaceae, found in South America, Australia, various islands in the South Pacific, and the Philippines. Named after tiny Norfolk Island located between New Caledonia and New Zealand, the only place where it grows wild, this tree attains a height of 200 feet and a trunk of 10 feet in diameter. The cones of this species are large, woody globes measuring 5 inches across. Its strong and durable wood is much used in shipbuilding.

The large board exhibited in Hall 27 (Hall of Foreign Woods) is a gift of O. A. Oaks, of Wilmette, Illinois, an ardent wood collector, who has previously given the Museum other valuable foreign woods. The specimen was prepared for exhibition by Preparator Mathias Dones.