

EXPLORING IN THE CANYON OF DEATH

Remains of a People Who Dwelt in Our Southwest at Least 4,000 Years Ago Are Revealed

BY EARL H. MORRIS

ARUGGED gorge winds westward from the pine-clad slopes of the Chuska Range to lose itself in the multicolored wilderness of northeastern Arizona. Throughout the 25 miles of its length the mottled black-red walls rise, sheer or ragged, 500 to 1,000 feet above the tortuous ribbon of comparatively level land which forms the canyon floor.

The fingers of countless ages have caressed the cliffs and molded them into forms sublimely beautiful. Here, pillar-like, phantasmal colossi support a proportionate architrave; there, in massive stateliness, a mosque stands clear against the sky, while in the distance a detached pinnacle towers to a height of perhaps 1,000 feet, its lines light and graceful as those of the wing of a bird poised for flight.

A SLAUGHTER OF THE HELPLESS

Such is Cañon del Muerto, the Canyon of Death (see Color Plate VIII) and in the origin of the name there lies a story.

"In times past," as an Indian told me across the embers of our campfire, "the Navajo and the Mexicans were great enemies." Until, and even after, the occupation of the Southwestern Territories by the United States, they raided back and forth at every opportunity, each in constant dread of the other.

In the winter of 1804-05, as nearly as the year can be determined, the fighting men of a band of Navajo placed their women, children, and aged in a cave high in the rim rock, where they could not be seen by wayfarers in the canyon below, and rode away to follow their profession.

Before their return a party of Spanish soldiers, for Mexico was still a colony of Spain, marched down the canyon seeking vengeance. They were well past the cave when from the ledge an old woman, who in her girlhood had been a captive among the Mexicans, taunted them in their own tongue as men who walked without eyes. Thus advised of the hiding place, they

encamped beneath it, cutting off all escape, and sent a detachment, by a long and circuitous route, to the mesa top.

Riflemen crept out on a jutting promontory, whence there was a view of the cave, and opened fire on the defenseless occupants. Many fell before the first volleys, and the remainder crept behind and between the blocks of stone which form a natural rampart along the brink of the ledge. Then the riflemen directed their fire against the sloping wall of the cave, depending upon an occasional deflected bullet to find its mark.

When the marksmen judged their end accomplished, they signaled to the watchers below. The latter climbed to the cave, crushed the skulls of the wounded with their gun butts, christened the gorge the Canyon of Death, to commemorate their "victory," and retreated into the night of time.

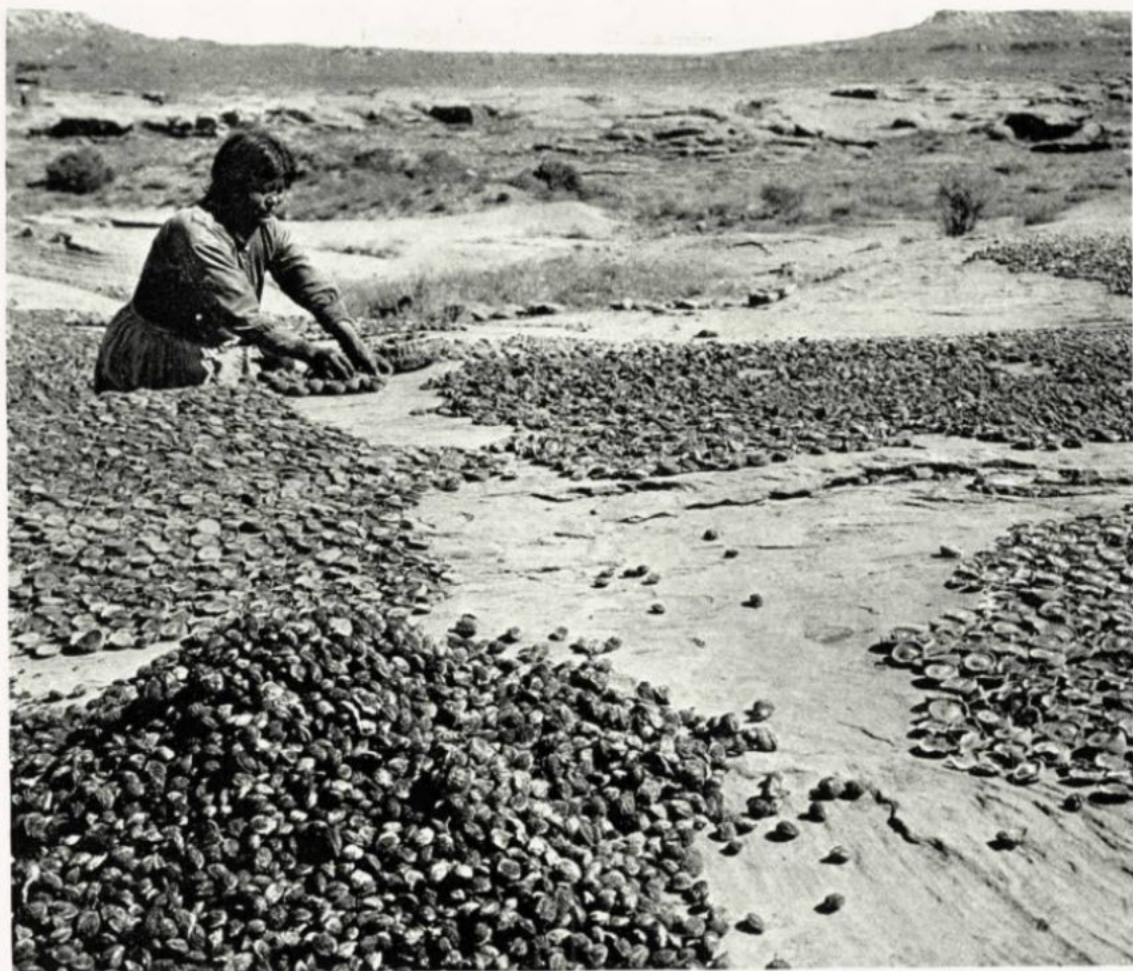
Because of a superstitious fear of the dead, since that day no Navajo has set foot upon the spot where nearly 100 of his tribesmen met their ignominious fate.

Although in recent years despoiled by white men, the cave still bears mute evidence of the tragedy—hundreds of white marks where bullets splashed against the cliff, bleached bones, and parts of ligament-bound skeletons lying in general disorder in the dust (see illustration, page 265).

WRESTING SECRETS FROM THE DEAD

This was only an episode in the history of Cañon del Muerto, a history written not in formal documents, but in the results of their occupation, left in the caves by the succession of peoples who for unnumbered centuries dwelt within.

Food substances, articles of dress, implements and weapons, domestic utensils, types of dwellings, and burial customs are the alphabet in which the story of people who knew not the art of writing is recorded; and these symbols the technique



Photograph by O. C. Havens

DRYING PEACHES IN THE HOPI VILLAGE OF ORAIBI: NORTHEASTERN ARIZONA

of the archeologist translates into the history of primitive culture.

During the fall of 1923 I began the study of the prehistoric ruins in Cañon del Muerto for the American Museum of Natural History of New York City. On a bright September day our expedition encamped in front of Mummy Cave. In the latter there stands a typical cliff dwelling, a masonry structure of 80 rooms, in one place three stories in height (see pages 270 and 271).

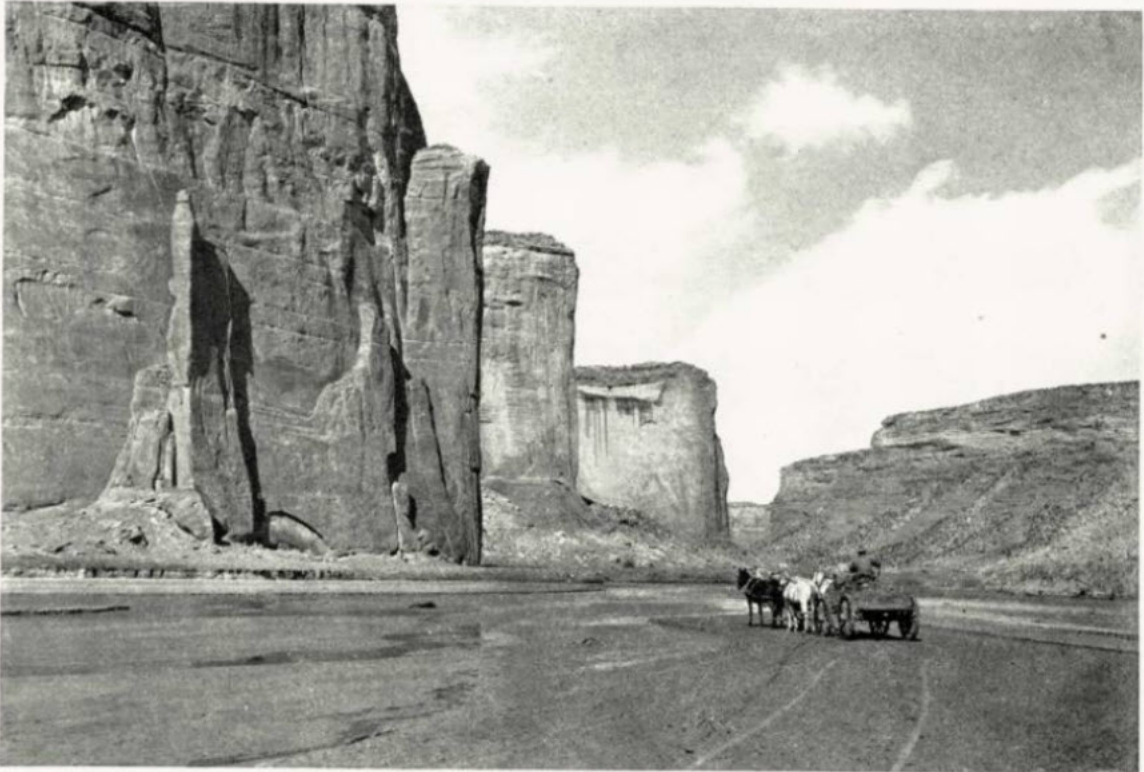
From the front of the building a blanket of refuse, principally ashes and sweepings, spreads down over the sloping rock to the top of the natural talus, 100 feet below.

At one end of the refuse deposit the wind had uncovered human bones, and

there we began to dig. The first skeletons were badly decayed, and the only objects found with them were stone pipes.

Farther in, beneath a covering of cedar bark, there lay the body of a man mummified by desiccation. Buckskin moccasins with an insole of cedar bark inclosed the feet, and spiral leggings of the same material extended to the knees. A broad sash of buckskin encircled the waist three times. One end fell like an apron to the middle of the thighs, while the other was tossed diagonally across the breast and over the left shoulder.

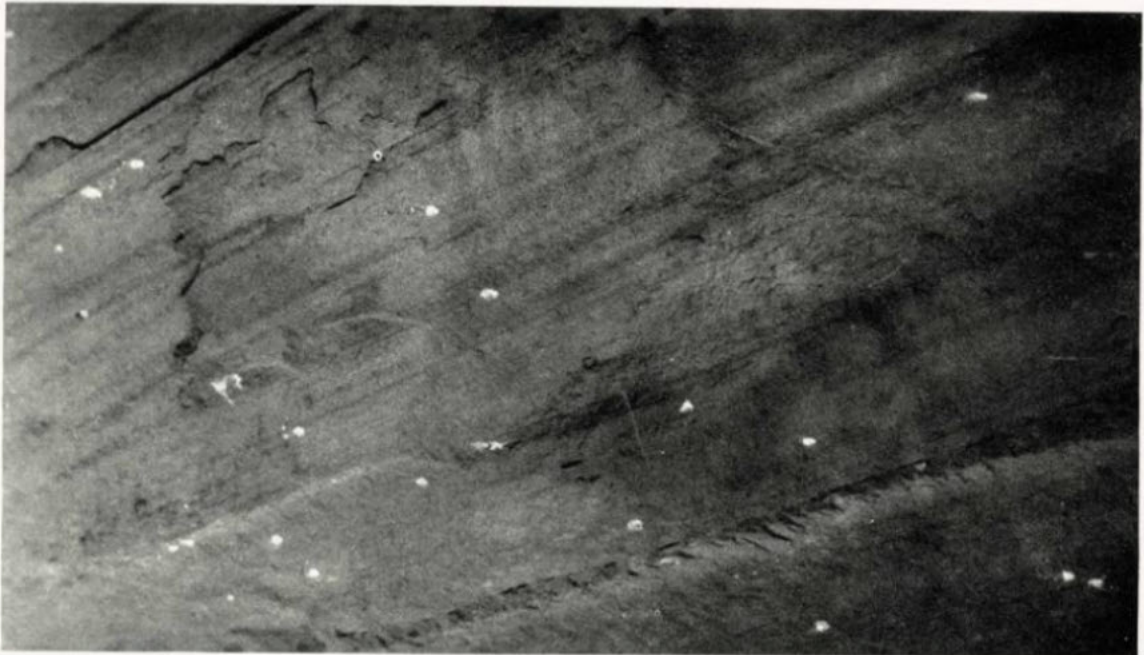
On the left wrist was a bracelet of shell beads, and by the right side a spear thrower. On the breast lay a wooden flageolet incrustated with white beads set in pitch, a sack made from the entire skin



Photograph by Edwin L. Wisherd

THE NATIONAL GEOGRAPHIC SOCIETY'S WAGON IN CAÑON DEL MUERTO

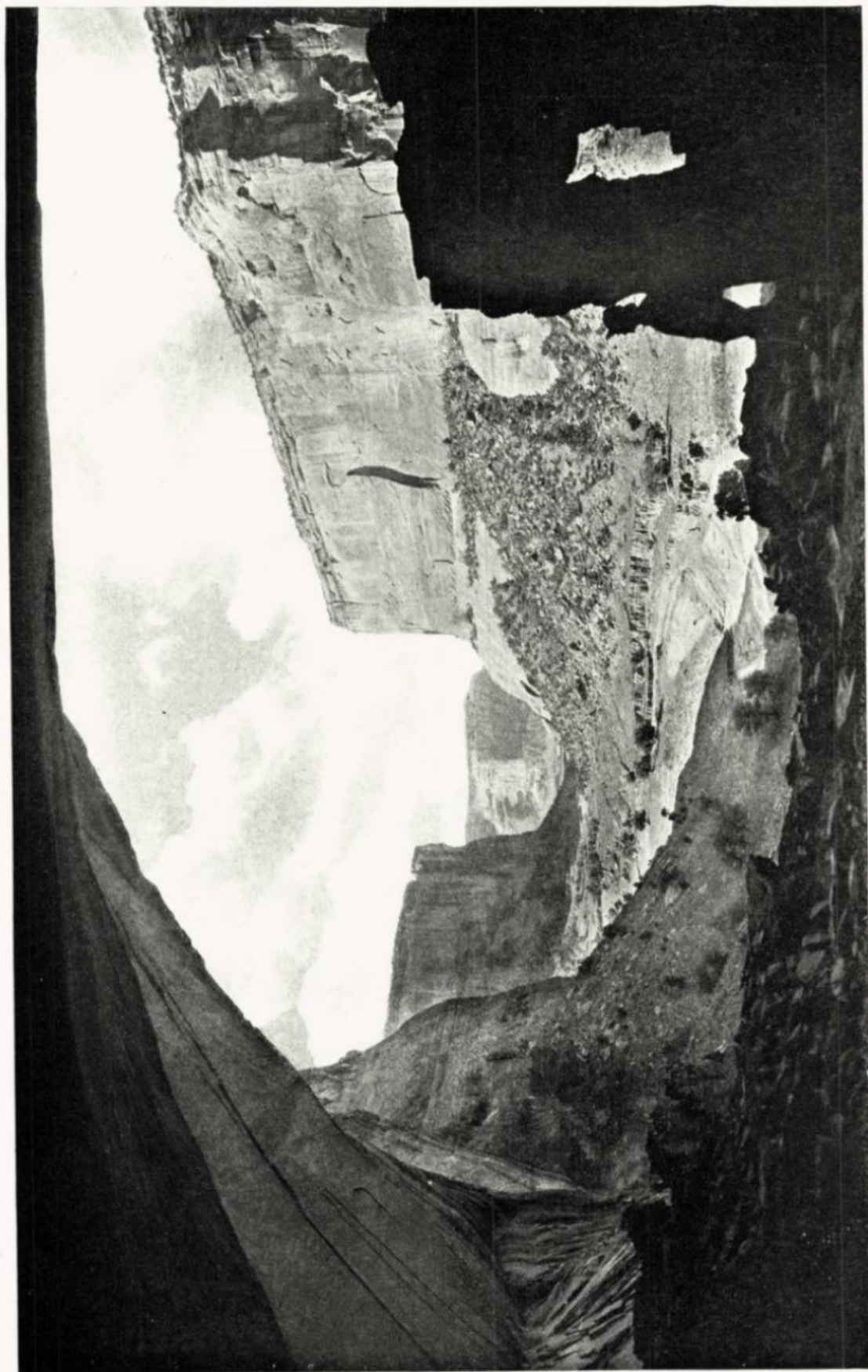
In connection with its work in the Chaco Canyon region, The Society sent a photographic party into the canyons of northeastern Arizona.



Photograph by Earl H. Morris

BULLET MARKS IN MASSACRE CAVE

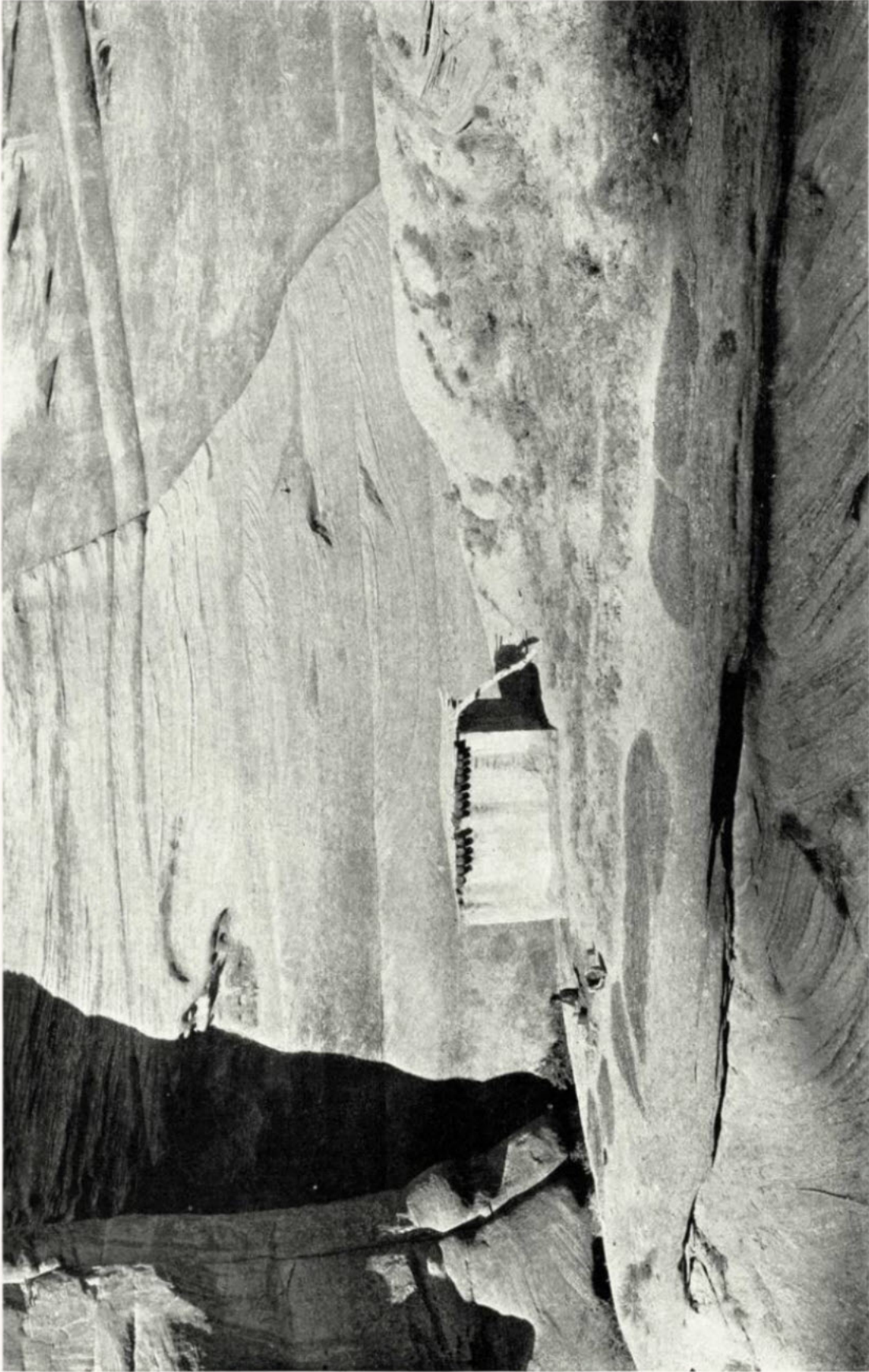
When the Navajo who had not fallen before the first volleys crawled between and behind the blocks of stone which line the front of the cave, riflemen on the ledge high above them began shooting against the rear wall, depending upon deflected bullets to complete the work of extermination (see text, page 263). Although more than a century has passed since the Spaniards splashed their lead against the cliff, the marks are as white and fresh as if made but yesterday.



Photograph by Edwin L. Wisberd

LOOKING DOWN CAÑON DEL MUERTO FROM MUMMY CAVE.

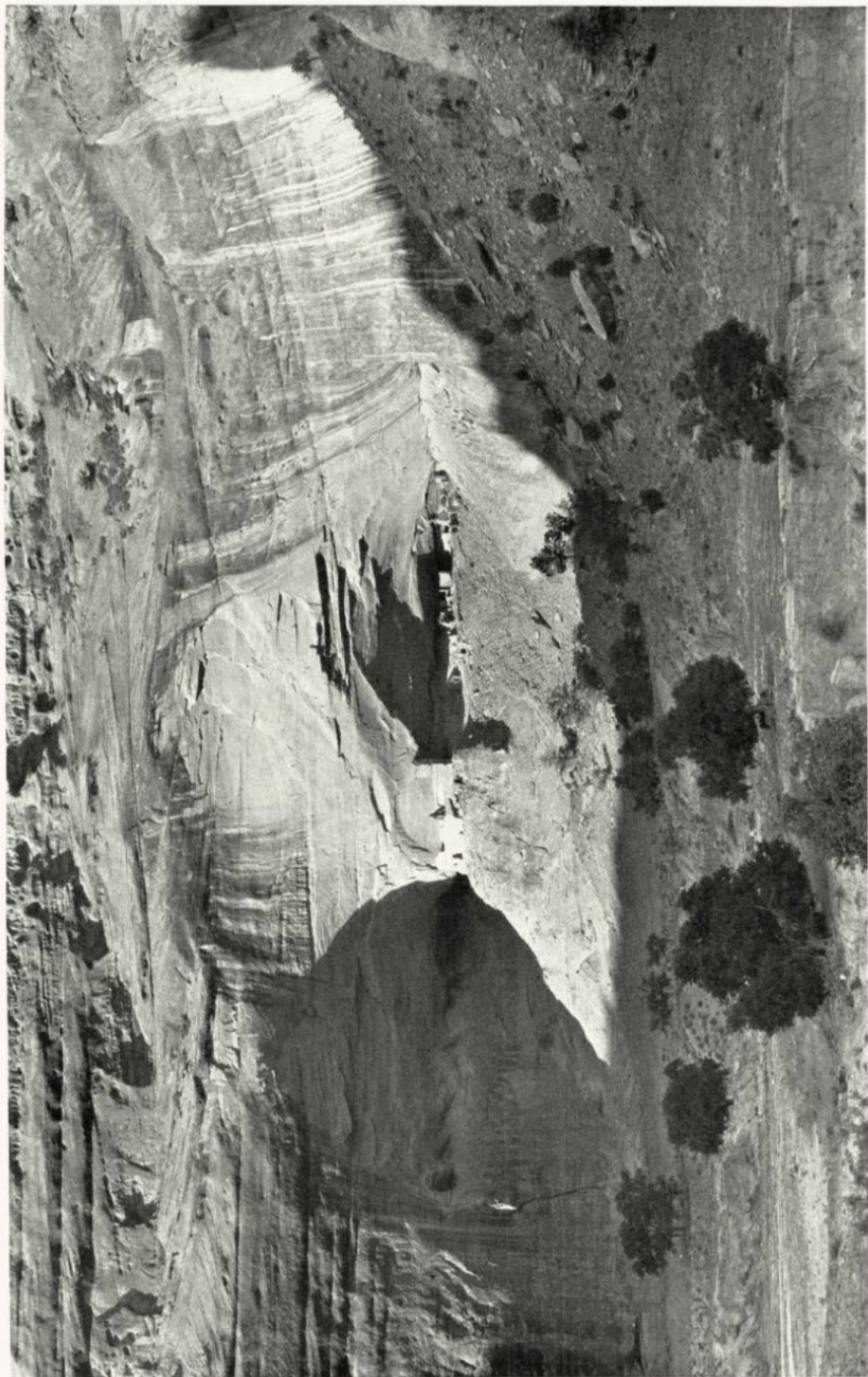
In this cave are the remains of a large cliff dwelling (see pages 268 and 269) which yielded many articles of dress, implements, and domestic utensils—“symbols which the archeologist translates into the history of primitive culture.”



Photograph by Edwin L. Wisberd

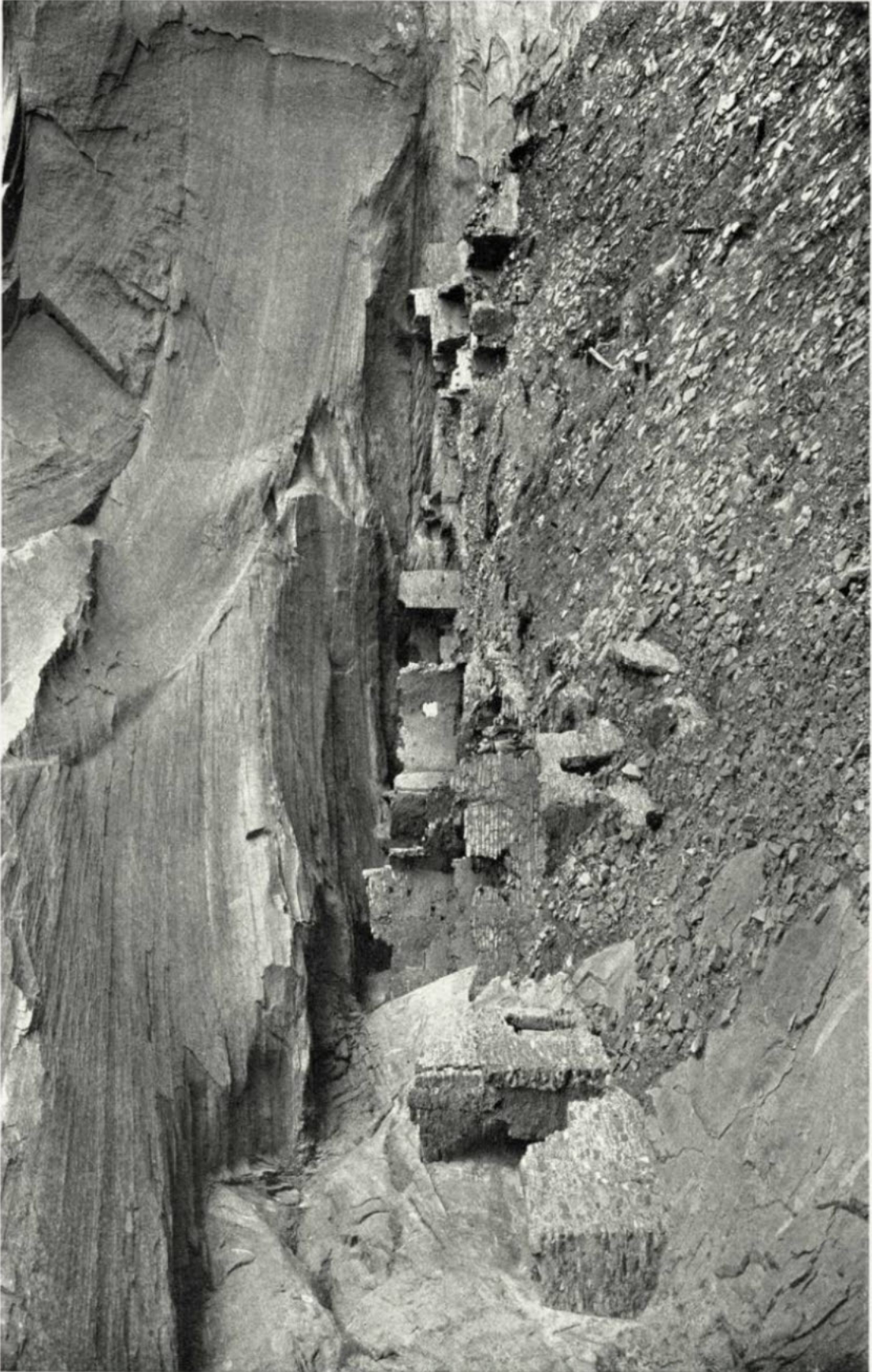
A NAVAJO WOMAN DRYING PEACHES: CAÑON DEL MUERTO

Because of a superstitious fear of the dead, neither this woman nor any of her tribe has ever set foot in the cave in this canyon, where nearly 100 of her people were shot down more than a century ago (see text, page 263).



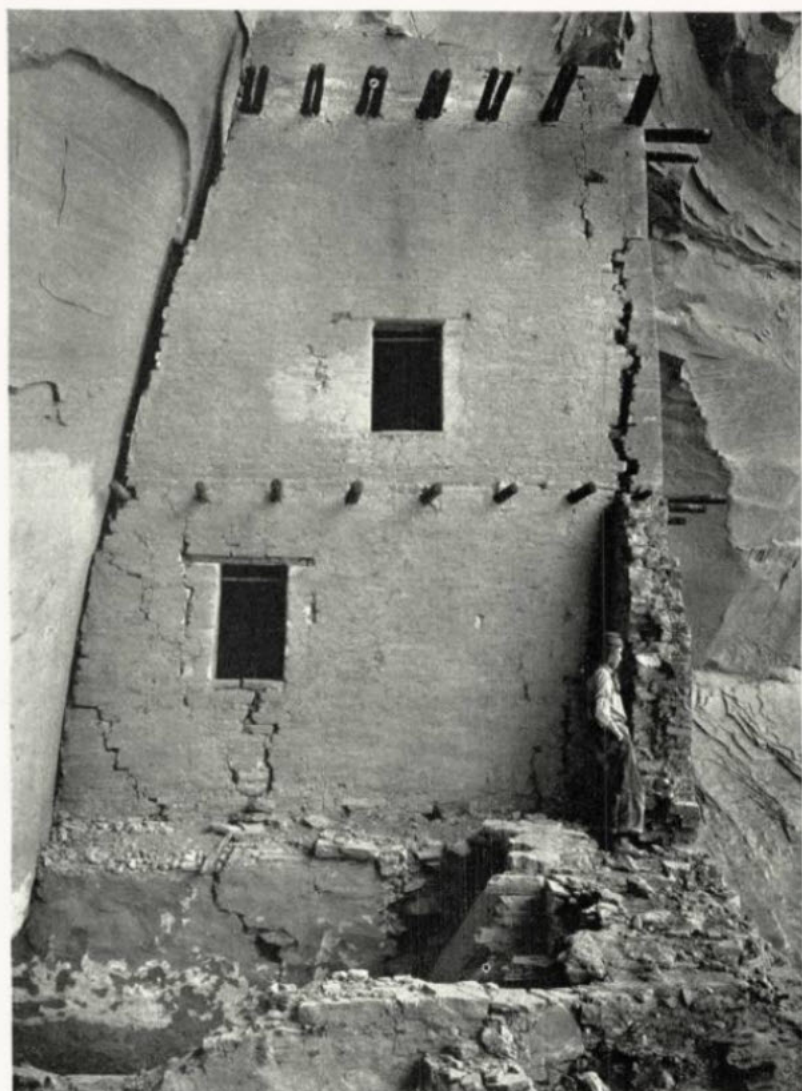
Photograph by Edwin L. Wislerd

A PREHISTORIC CLIFF VILLAGE IN MUMMY CAVE (SEE, ALSO, OPPOSITE PAGE.)



Photograph by Edwin L. Wislerd

A DETAILED VIEW OF THE PREHISTORIC CLIFF VILLAGE IN MUMMY CAVE (SEE, ALSO, PRECEDING PAGE)



Photograph by Edwin L. Wisherd

A THREE-STORY CLIFF DWELLING IN MUMMY CAVE
(SEE TEXT, PAGE 264)

of a small animal, containing a pipe and smoking materials, and a number of bone implements.

A basket lay beneath the head, another was inverted over it, and a blanket made of cords wrapped with strips of rabbit skin enveloped the entire frame. Evidently, when animate, the shrunken body had been that of an important personage in the ancient community.

EARS OF CORN THOUSANDS OF YEARS OLD

As we trenched upward, following the rock, which sloped at an angle of 45 degrees, we cut through various cribbings of stones, logs, and brush built as retaining walls to hold back the refuse and thus

increase the area of the cave floor.

Eventually we came to a large series of storage bins. These were rude inclosures of irregular form from two to six feet in diameter and of varying depth. Large, thin slabs of stone set on edge composed the walls, the joints of which were sealed with mud made tough with shredded bark, reed leaves, or corn-husks. The roofs of only two were in place.

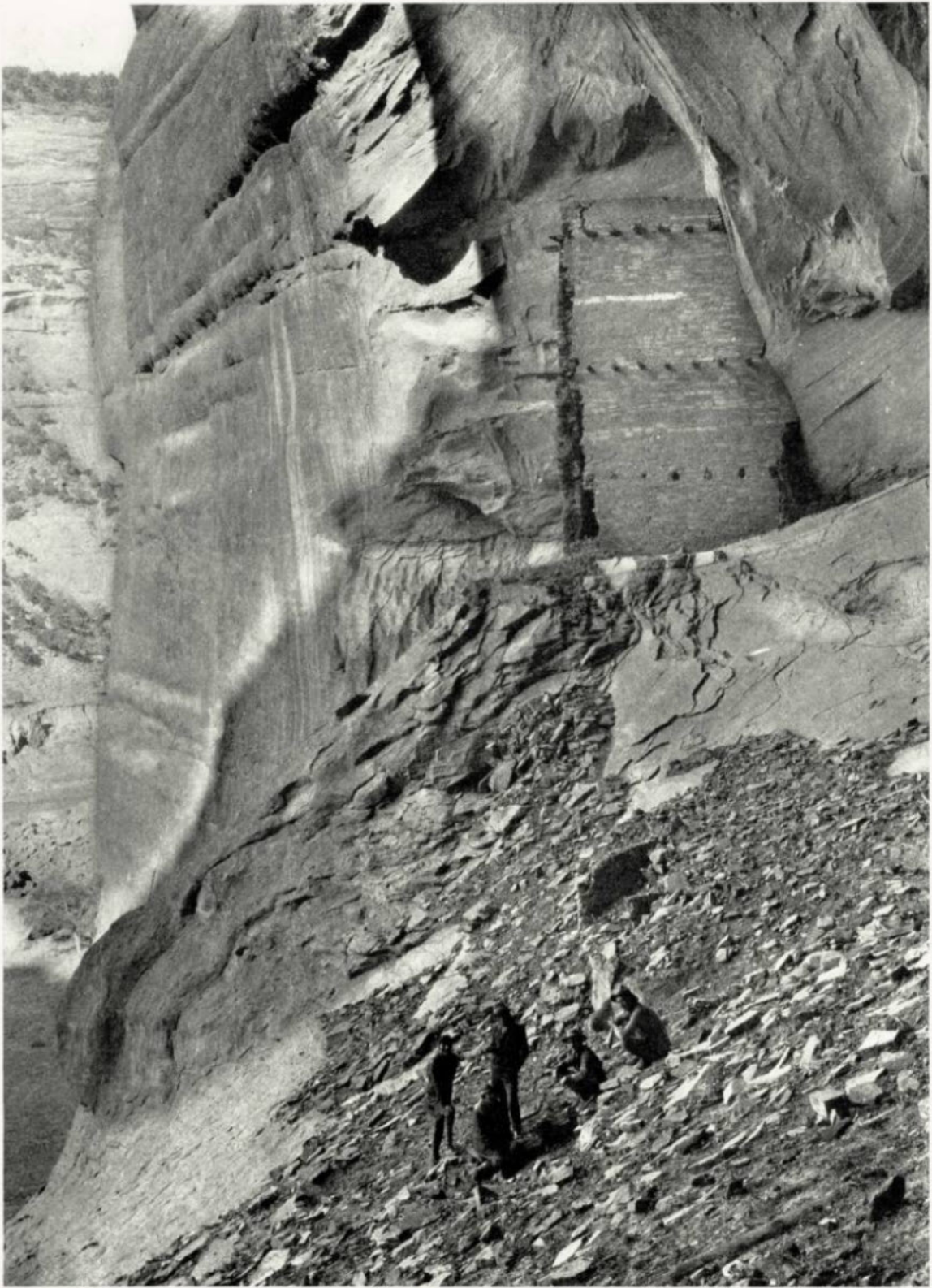
Resting upon the tops of the slabs in each case was a jug-like neck of adobe reinforced with sticks. The covers were slabs of stone worked down to nearly circular form. In one of the storage cysts there were 700 ears of corn, which, although thousands of years old, were as bright and fresh as if recently gathered.

In another there was a heap of slender gourds of the kind from which bottles

and dippers were made, and in a third a quantity of seeds of a variety which the Navajo still grind as a substitute for flour.

As the rubbish resulting from occupation accumulated in the cave, the cysts farthest down the slope were allowed to become filled with it, and contained, naturally enough, many discarded objects. In such places we found hundreds of cloth sandals, many of them handsomely ornamented both in colors and raised weaving; baskets, arrows, knives, agricultural implements, and a variety of minor objects too numerous for individual mention.

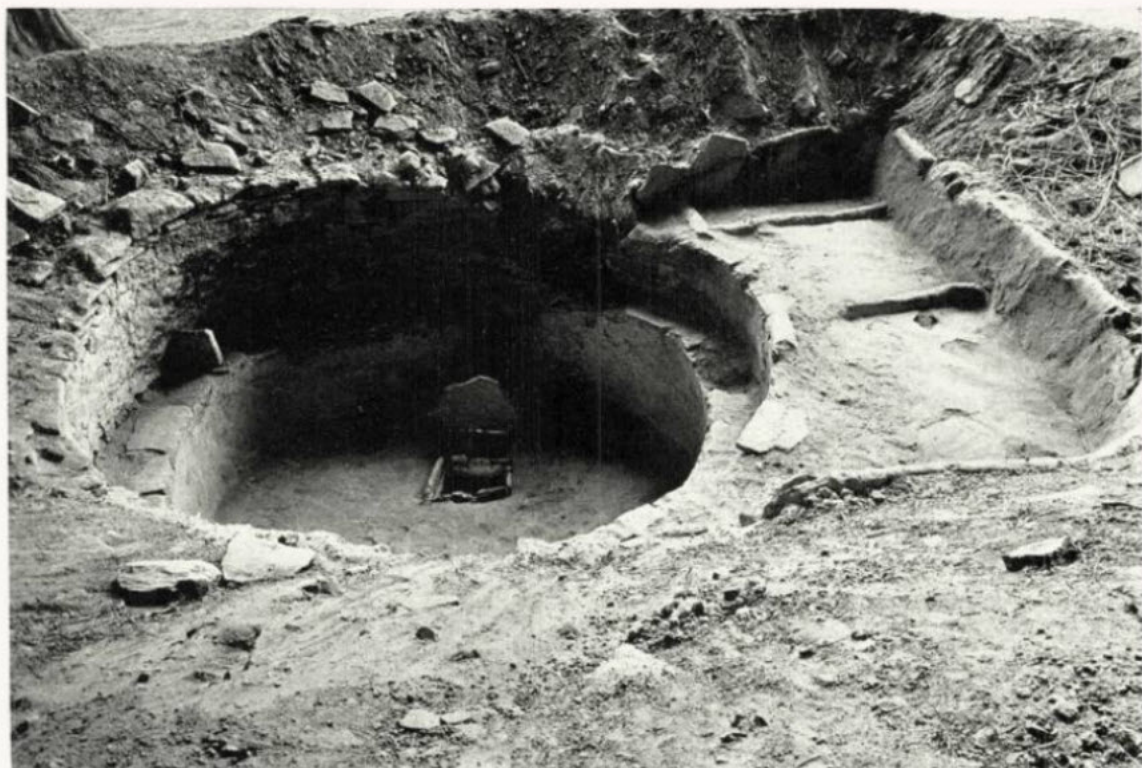
In the center of each cluster of storage cysts there was a dwelling chamber, a rudely circular structure 12 to 25 feet in



Photograph by Edwin L. Wisherd

TWO-STORY CLIFF HOUSE IN MUMMY CAVE

From the front of the dwelling, a masonry structure of 80 rooms, a blanket of refuse spreads down over the sloping rock for a distance of 100 feet (see text, page 264).



Photograph by Earl H. Morris

A CAVE SANCTUARY

Often the inhabitants of the caves disturbed and destroyed the graves and dwellings of their predecessors. Here, in the construction of a masonry kiva, a ceremonial chamber, the cliff dwellers dug down through a previously existent slab house. The part of the latter which was not demolished they made use of as an enlargement of the underground room.

diameter. The walls had been of posts set leaning inward, and plastered over with mud, and the roofs of logs covered with earth. Fire—perhaps accidental, perhaps incendiary—had destroyed one of these rooms and with it the possessions of its occupants.

On the smooth earth floor surrounding the sunken fireplace were several pottery vessels, and elsewhere lay charred baskets, sandals, planting sticks, and practically every sort of article manufactured by the inhabitants.

Beneath the masonry cliff dwelling three culture levels were recognizable (see text, page 300).

A MAGNIFICENT MOSAIC ORNAMENT
FOUND ON BREAST OF A MUMMY

Around the corner of the cliff from Mummy Cave was a cemetery. Bones lying about the mouth of an animal's burrow gave the clew, and we set to work with the expectation of rich finds. The bubble of our hopes, however, was soon

punctured, for destruction had preceded us. A deep recess had been packed full of bodies of all ages, accompanied by quantities of burial offerings, enough of them at least to transform the spot into a charnel place, when fire of unknown origin gained access to the grotto.

For days we worked through an 18-inch layer of calcined bones smoked black or burned an ashy white and more brittle than icicles. There must have been more than 100 bodies in the original heap.

The meager fragments of specimens recovered from the wreckage poorly repaid our efforts, but the unexpected, which always holds a beckoning finger before the archeologist, brought us our reward in the end.

In front of the burned area a pit had been dug in the talus and three bodies placed in it. They lay back downward, one on top of the other. As I was removing the earth from the breast of the second, there were glints of blue in the mold upon my trowel.

A few strokes with a brush laid bare a magnificent mosaic ornament which had been worn around the neck. It was a large, skillfully fashioned ring of hard wood solidly incrustated with turquoise set in gum, each piece highly polished and accurately shaped to the space it was to occupy (see illustration to right).

A mouse had dug its burrow past the pendant and in so doing had detached a few of the stones. These were recovered by passing the adjacent earth through a fine screen.

Altogether a part from its intrinsic beauty, this pendant was the most ancient piece of mosaic work thus far discovered in the Southwest; hence the little group of excavators gloated over it as if it had been a king's ransom.

A few moments later we stared at each other in blank astonishment, for on the breast of the third skeleton there lay a second pendant precisely like the first, except that there was included among the mosaic elements a large rectangle of iridescent abalone shell.

A CAVE DISCOVERED HIGH UP IN CANYON WALL

While we were still at work on the "boneyard," as we called the charnel place, my wife reported the existence of an obscure cave in a side canyon not far from camp. With the binoculars a line of mountain sheep and human figures, painted in white on the rear wall, could



Photograph courtesy American Museum of Natural History

A TURQUOISE MOSAIC PENDANT

This breast ornament, $3\frac{1}{4}$ inches in diameter, made of turquoise set on wood with gum, is the most ancient mosaic thus far found in the Southwest. It was preserved in recoverable condition as if by a miracle, for the skeleton with which it was found was so badly decayed that the bones could be rubbed to powder between the thumb and forefinger.

be discerned, proving that the cave had been occupied (see page 292).

A half hour's climb brought us directly beneath it, but face to face with a ledge 30 feet in height, worn smooth by the sandstorms of ages. The aborigines had pecked foot-holes in the rock, but these were so badly weathered that they were no longer of any use.

The one of us deemed of least account in mundane affairs was called upon to make the ascent. This he did, lying flat against the rock, working himself for-

ward inch by inch with his hands, and depending upon friction to keep him from slipping. Once on top, he tied a rope to the butt of a stunted tree, and, with this to hold to, the others clambered up without difficulty.

A moment later we were in the cave, looking out upon a scene never before beheld by human eyes; never before, because ledges had crashed down and generations of trees had grown and rotted since the last of the ancients departed.

CHILDREN'S BODIES PACKED LIKE SARDINES IN A GRAVE

Turns in the canyon cut off the view to the left and right, with the effect that below us lay a vast pit, its slopes cluttered with jagged blocks of stone and dotted here and there with gnarled cedar trees. At the very bottom, along the drainage course, there was a crooked line of very large spruces, so distant that they seemed like parlor Christmas trees. Smaller conifers fringed the rim rock opposite us, and above its towering red expanse there showed a ribbon of clear blue sky (see page 293).

There were a few intact rooms at one end of the cave, fallen masonry covering most of its area, and retaining walls, bastionlike, at the front of it. Where two of these met at a sharp angle, a pair of mummified feet protruded from the débris.

The tightly folded body was wrapped in a feather-cloth blanket. Three slender poles lay lengthwise above it and three shorter ones in the opposite direction. Upon these was spread a mat made of reed stems, which in turn was covered by one of neatly plaited rushes.

On the left wrist there was a bead bracelet composed of lignite disks one-twenty-fifth of an inch in diameter, and at the right of the head were a pottery bowl and drinking vessel. In a niche at the back of the cave were two handsome vessels—a large one, a dull-white, flat-topped vase, with vivid black decoration; the other a red, spherical canteen provided with two loop handles, and a bail braided from strands of human hair.

Some matron in the old days had filled these vessels with dried sunflower petals and hidden them away against the fu-

ture—a future which for her never dawned.

The largest cave in Cañon del Muerto was three miles below our camp. It was a blustery morning late in October when we set out, each with a backload of tools, cameras, and what not, to begin work there.

On the way we were not permitted to forget a baconless breakfast, for every now and then our own footprints blotted out those of the bear that during the previous night had devoured our last slab of meat which had been left hanging from the limb of a tree just outside the tent door. Once within the great cave, however, so minor a point soon passed from mind.

Near the western end of the 1,100-foot shelter the corner of a slab cyst like those in Mummy Cave was visible in the bank of a pit opened by some relic-hunter.

I thrust my shovel into the débris which filled it, and when I raised the blade there was the skull of a child upon it. The cyst was triangular, the sides being three feet in length and the base three and a half feet. It appeared to have been completely filled with the bodies of infants and small children. Each one was wrapped in a padlike mass of soft fiber made from leaves of the yucca plant and shrouded either in a fur or feather-cloth blanket. They were packed in as tightly as sardines in a tin.

After I had removed the 14th, my fingers touched a corrugated surface which at first I thought to be the ribs of a shrunken body. When the dust was brushed away it proved to be the side of a basket so large that had it been two inches greater in diameter it could not have been placed in the cyst. Inside it were the skeletons of four more children, two of them with bracelets on the left wrist, each a strand of white beads interspersed with pendants of abalone shell.

AN ANCIENT GRAVE ROBBER LEAVES A CLEW

The neighboring areas were literally full of graves. In several the bodies were so well preserved that the features appeared as lifelike as those of the mummies of the Pharaohs. When we lifted the one shown in the accompanying illustration

from the grave pit (see page 297), we turned it on its side to permit the dust to sift out of the wrappings.

Amid the dust were two beautiful sets of turquoise, once elements of a mosaic. We searched for the ornament to which they belonged, but found no trace of it.

Months later, while I was preparing the mummy to be photographed for this article, another bit of turquoise was found beneath the chin, and across the breast my brush laid bare the deep impression of the rim of a basket which had been inverted over the head. Farther down, just below the end of the breastbone, there was a depression where a large oval pendant half an inch thick had settled into the flesh.

The story was now as clear as if set in good bold type. Centuries ago some aborigine had partially opened the grave, removed the basket which covered the face, reached beneath the wrappings, and withdrawn the coveted ornament. In so doing he loosened and lost the three turquoises, which remained to convince us that in ancient America, as well as in Egypt, grave robbers plied their trade.

If the Fates continue to be kind, some day they will guide my shovel to the bones of the one who in this case preceded me, for upon his breast the great pendant may still repose.

WOMAN'S MUTILATED MUMMY YIELDS RARE ORNAMENT

A few days' work in this cave so increased the bulk of our collection that two four-horse teams were necessary to freight it out of the reservation and over the 100-mile stretch between our camp and Gallup, New Mexico, the nearest railroad point (see map, page 232).

Throughout the ensuing months the lure of the canyon called imperatively, with the result that October, 1924, saw us again encamped among the sage and cacti.

At the close of a five weeks' campaign the freight teams once more trekked Gallupward laden with a precious cargo.

Many of the finds were fully as spectacular as those of the preceding season. In the grotto which had sheltered the looted burial an old woman had been interred back downward, with knees point-

ing vertically upward, as was the custom.

In the course of subsequent building activities a slab floor had been laid only four inches above the trunk. Necessarily the raised knees had offered an obstacle to its construction. In consequence the builders twisted off the legs and threw them down along the right side of the torso. Doubtless they also removed the baskets and other burial offerings which had been visible above the wrappings.

It was just before midday when I lifted the blanket-swathed trunk from its age-old resting place and laid it, with more disgust than reverence, upon a near-by ledge. Throughout the noon hour my thoughts were filled with sentiments more forceful than polite concerning the vandals who had deprived us of the spoils which I felt certain had been placed with the carefully wrapped remains.

Lunch over, as we waited for the blood to cease pounding in our ears after the climb from the valley floor to the cave, Owens, my helper for nearly a decade, said, "Let's see what is under that blanket."

I raised one edge of it and gave a shout that was occasioned not by pain or disappointment. Encircling the withered left wrist was a cuff five inches wide, composed of 200 perfectly matched *Olivella* shells with a single set of extraordinarily fine turquoise at the center. This time the laugh was on our side, for the robbers had overlooked an unusually handsome ornament and one unique among archeological material from the Southwest (see page 298).

"THE BURIAL OF THE HANDS"

In another portion of the cave we came upon "The Burial of the Hands." On a bed of grass, side by side, with palms uppermost, lay the ligament-bound hands and forearms of an adult. The severed elbows touched the wall of the cyst, thus proving that the burial as it was found was complete, and that the rest of the body had never been included in the interment.

Touching one radius were two pairs of unworn sandals with patterns in black and red, probably the most exquisite specimens of their kind that have survived for the inspection of modern man. Against



Photograph by Earl H. Morris

A MAZE OF ROCK PAINTINGS

The caves of the Canyon of Death are a veritable picture gallery. Upon the smooth rock faces are depicted tens of thousands of snakes, birds, men, and animals, as well as geometric patterns. Many pigments were used—white, yellow, blue, green, red, and black. In age the paintings vary from the red square-shouldered men drawn by the Basket Makers to charcoal drawings done by the present-day Navajo.

the other forearm was a small basket nearly half full of long, crescentic beads of white shell.

Heaped upon the wrists were three neck cords. One bore a single pendant of abalone shell as large as the palm of one's hand, and another two smaller ones of the same colorful, iridescent material. The third breast ornament was a masterpiece. Lashed at short intervals to the neck cord, and overlapping like links of armor, were 18 shell rings, each about three inches in diameter. As worn, they formed a tinkling white collar which reached from shoulder to shoulder.

Covering the entire cluster of treasures was a basket nearly two feet in diameter.

NOTES OF AN ANCIENT FLUTE CONJURE UP SCENE OF SAVAGE POMP

Several explanations of this "Burial of the Hands" could be written, but probably not one of them would come near to the truth of the mystery which lies behind it.

Our last great find was separated from

the hands only by the thickness of an upright slab. Beneath a stone floor there lay nearly a wagonload of cedar bark and grass, crowded into a space six feet by three. The surface of it was bright and fresh, as if it had been deposited but yesterday. However, at a depth of a few inches it changed to a mass thoroughly carbonized, but not reduced to ash.

Since the charring did not extend to the outer limit of the inflammable material in any direction, the fire could not have been set after the burial was completed. Spontaneous combustion seems out of the question; hence it appears not improbable that fire was buried with the dead.

As my fingers reached the offerings with the first body, I cursed the destructive agencies—decay, erosion, burrowing animals, vandals, fire—which so often had conspired to thwart us. A large basket had lain over the head, and on the breast were beads of wood and of yucca seeds, a stone pipe, and many other objects



Photograph by Earl H. Morris

A VIEW DOWN CAÑON DEL MUERTO FROM PICTOGRAPH CAVE

On an autumn afternoon black shadows creep across the valley floor, the streamlet lies like a silver ribbon flowing in the trail of a snake, green cactus patches alternate with yellow fields of corn, the northern cliffs tower flaming red beneath their crown of black-green forest, and the rocks in the foreground, full struck by the waning sun, blaze with ruddy gold.

charred beyond recognition—a taunting mass of ruin.

But again the frown of Fortune ended in a smile. The blackened knees of another body were beside the skull of the first. As we worked downward along the thighs, the burned area became smaller and smaller, and finally ended where the fire had smothered out, just as it reached the trunk.

The body was that of an old man, surely once a priest or chief. Beside the usual offerings of beads, baskets, and sandals, there lay above his buckskin wrappings a flute, one end beneath the chin, the other between the thighs. By the left shoulder was a basket containing an enormous stone pipe and many thick hanks of human hair, each wrapped and tied at the center with a cord.

Along the left side was a mass of wooden objects, all readily perishable, hence extremely rare in perfect condition. Conspicuous among them were bone-tipped flint flakers with which knives and

projectile points were made, several spears, four handsomely wrought spear throwers, and three more flutes.

I picked up one of the flutes, shook the dust and mouse dung out of it, and placed it to my lips. The rich, quavering tones which rewarded even my unskilled touch seemed to electrify the atmosphere. In the distance Navajo workmen paused with shovels poised, seeking the source of the sound. A horse raised its head and neighed from an adjacent hillside and two crows flapped out from a crevice overhead.

Our little group was motionless for a dozen heartbeats, which seemed as many minutes. In the weird silence it was as if time had been halted in its flight—nay, turned back—for in swift array there crowded through my consciousness the scenes of grief and mourning, of savage pomp and ceremonial, amid which the tones of that instrument had last echoed from the selfsame cliff that now glistened under the rays of the setting sun, which



POSING WITH HIS TROPHIES

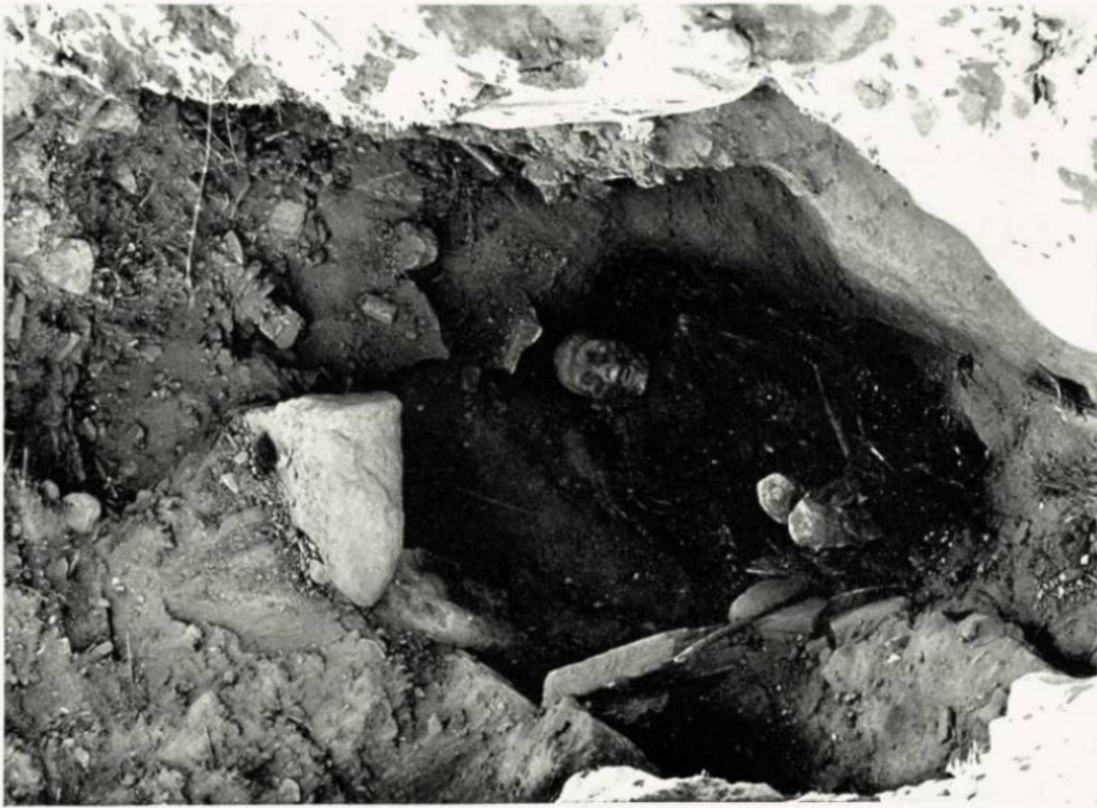
In jovial mood, Owens, whom the author describes as "the best digger in all the Southwest," dons as a hat a basket which for a few centuries lay over the head of a mummy, and holds before him a sheaf of three huge oaken blades which he found beneath a cliff-house floor.



Photographs by Earl H. Morris

AN EXCAVATOR WEARING A GAS MASK IN MUMMY CAVE

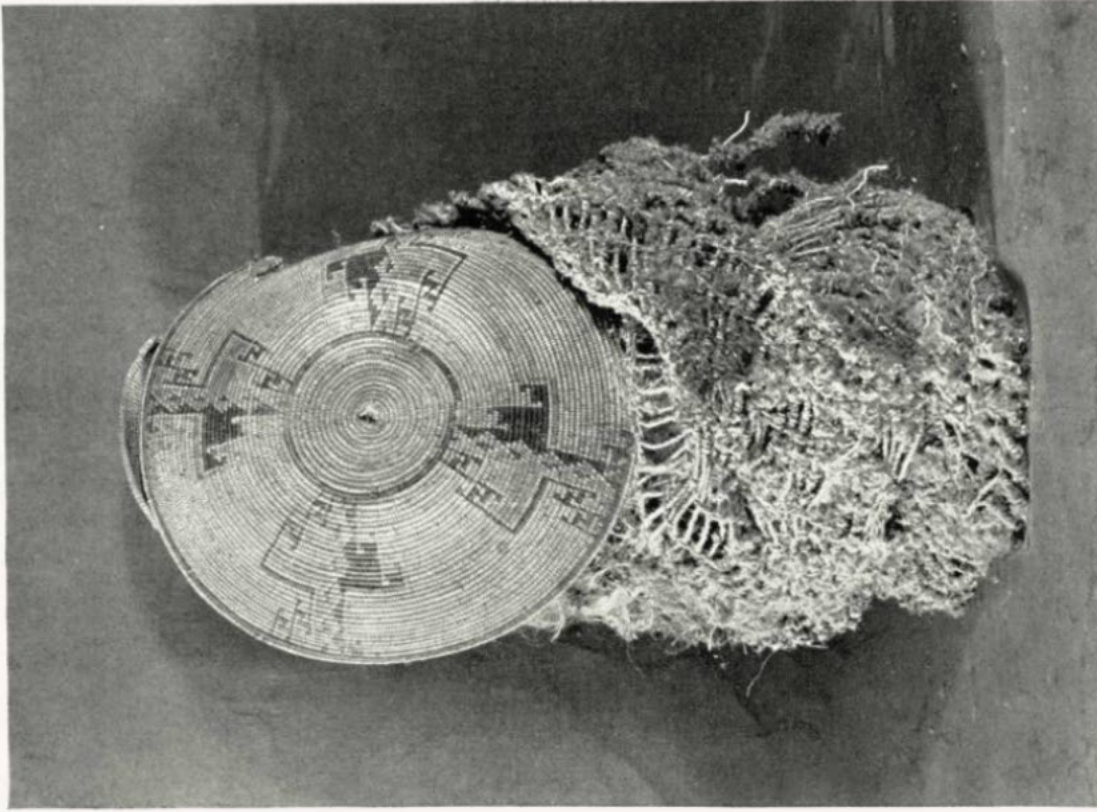
A gray pall always hangs above the pits where the workmen search for treasures of the past. The fine dust, blended of ash and filth and human waste, will exact its toll if not excluded from the lungs. Hence one labors for breath behind a mask of wet cloth or sponges.



Photograph by Earl H. Morris

A BASKET MAKER OF LONG AGO: CAÑON DEL MUERTO

His grave was a bark-lined crevice between the foot of the cliff and a natural block. Unmindful of his presence, later occupants of the cave raised the floor full five feet by the gradual deposition of refuse and building waste. The Basket Makers probably came to Arizona from Mexico long before the time of the Pueblo culture, which had passed its zenith in 1540, at the time of the visit of the *conquistadores*.



Photograph courtesy American Museum of Natural History

THE BURIAL BUNDLE OF AN AGED WOMAN

In preparation for interment, the body was flexed so that it occupied the least possible space, padded with fiber of the yucca plant, and laid across a feather-string blanket. Two bowl-shaped baskets, one within the other, were placed beneath the head and a very large one inverted over it; then the blanket was folded over to inclose them. A corner of the blanket has been turned back to reveal the magnificent basket.



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THE POTTERY MAKER

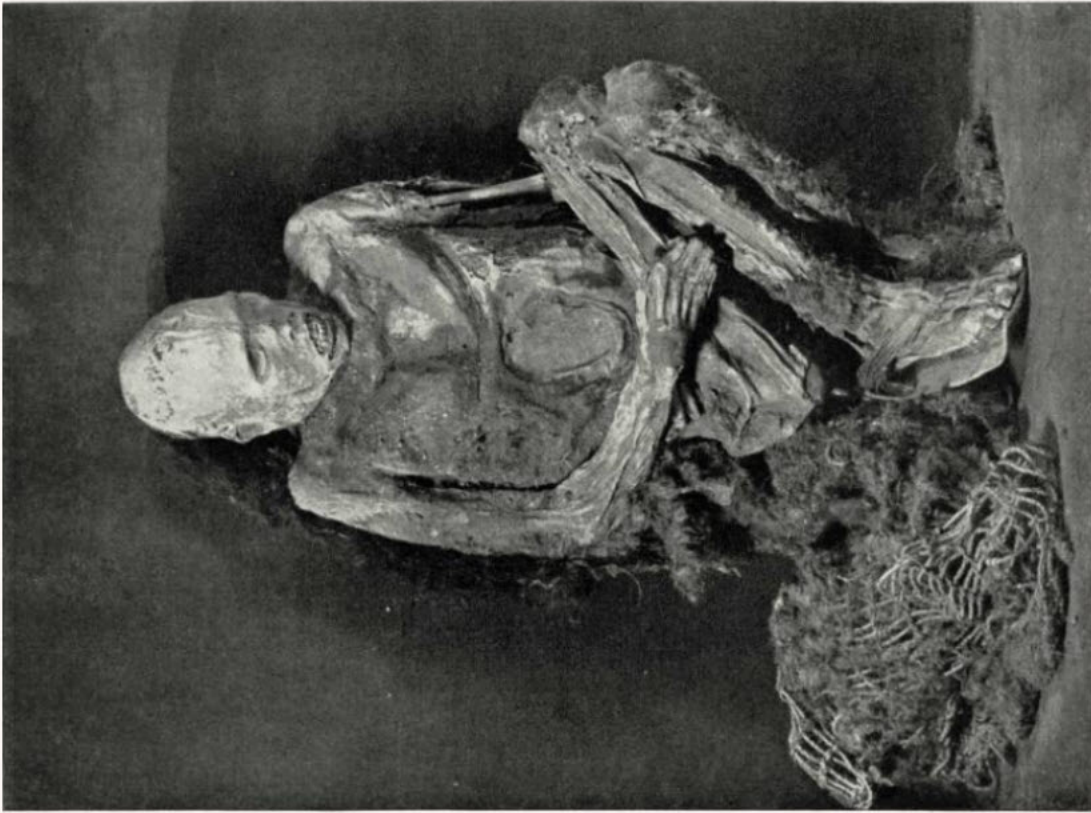
The Indian Pottery Makers were products of a higher civilization than the Basket Makers. The former achieved the greatest development of their art in pre-Columbian America at Pueblo Bonito (see text, page 239). This worker is one of the Hopi Indians, who have inherited some of the skill of the ancient pueblo dwellers.



Photograph by Earl H. Morris

**AT THE BRINK OF THE SLOPE IN FRONT OF THE GREAT CAVE;
CAÑON DEL MUERTO**

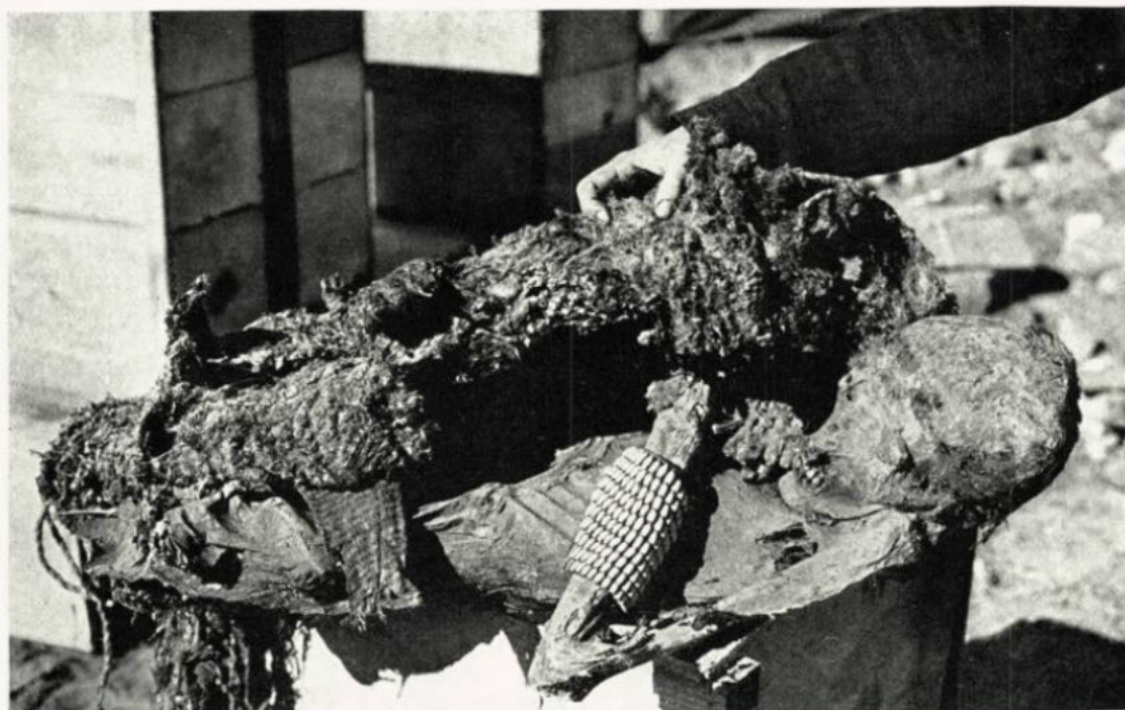
It was Mrs. Morris who freed the specimens of the dust of ages and of the filth left upon them by a far from cleanly people. Desirous of seeing the patterns which washing would bring out upon the baskets, she waited eagerly while the photographer made the exposures necessary before the contents of the grave could be removed.



Photograph courtesy American Museum of Natural History

**A MUMMY FROM THE LOOTED BURIAL, HIS WRAPPINGS
LAID ASIDE**

The impression of the large, oval, turquoise mosaic which had been removed in pre-Columbian times may be seen just above the left wrist (see text, page 291). The mark of the basket which once covered the head is also visible across the breast. These "mummies" are merely desiccated bodies, since embalming was not practiced by any native American people.



A RARE ARMLET WOVEN OF CORD AND SHELLS

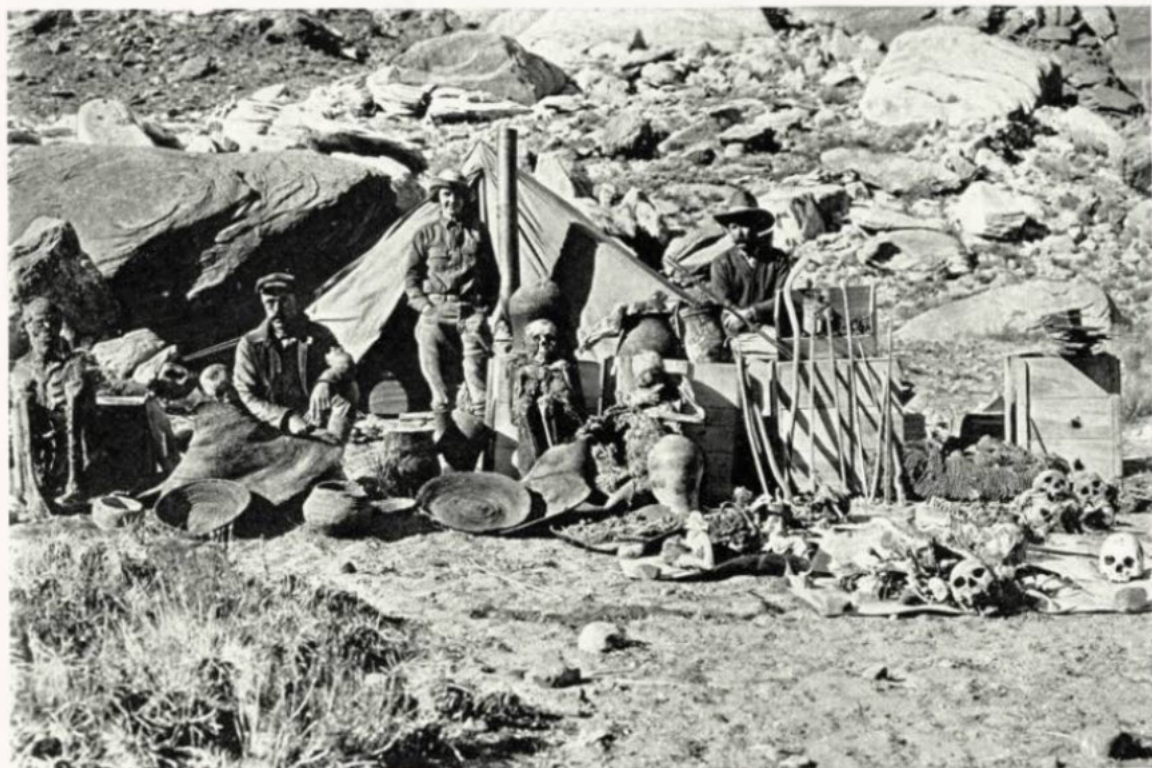
Usually the aboriginal grave robbers were disappointingly thorough, but occasionally there was a slip in their technique. They twisted off the legs from the body of this old woman and removed the baskets which were about the head, but they failed to raise the feather blanket which concealed an ornament unlike anything previously unearthed in the Southwest (see p. 291).



Photographs by Earl H. Morris

THE GRAVE OF A CLIFF-DWELLER BABY

The body was swathed in a feather-string blanket and lay on a mat of plaited rushes. By the head were single fragments from each of two pottery bowls, and beside the chin was a little jar filled with squash seeds. Upon the breast was a rattle made of five walnut shells strung on a cord. The baby's cradle, made of cottonwood bark, had been broken and the fragments placed as a covering for trunk and limbs.



Photograph by Earl H. Morris

PACKING DAY IN CAMP

During the bothersome task of adjusting mummies, pots, and baskets inside a limited number of crates, Mrs. Morris, Tatman, and Owens were almost envious of the mummies seated in the foreground.

for a brief moment had broken through the dark clouds masking the November sky.

DUST A MENACE TO LIFE

The preceding paragraphs record merely the most striking events during our explorations in Cañon del Muerto. Nothing has been said of days of tedium; of barren trenching, of measuring, of photographing; nor of the dust, which is a menace both to life and comfort. The least disturbance of the earth in these caves, where there has not been a drop of moisture for millenniums, stirs up a gray cloud so dense that sometimes one cannot discern even the outline of an assistant a shovel's length away (see page 294).

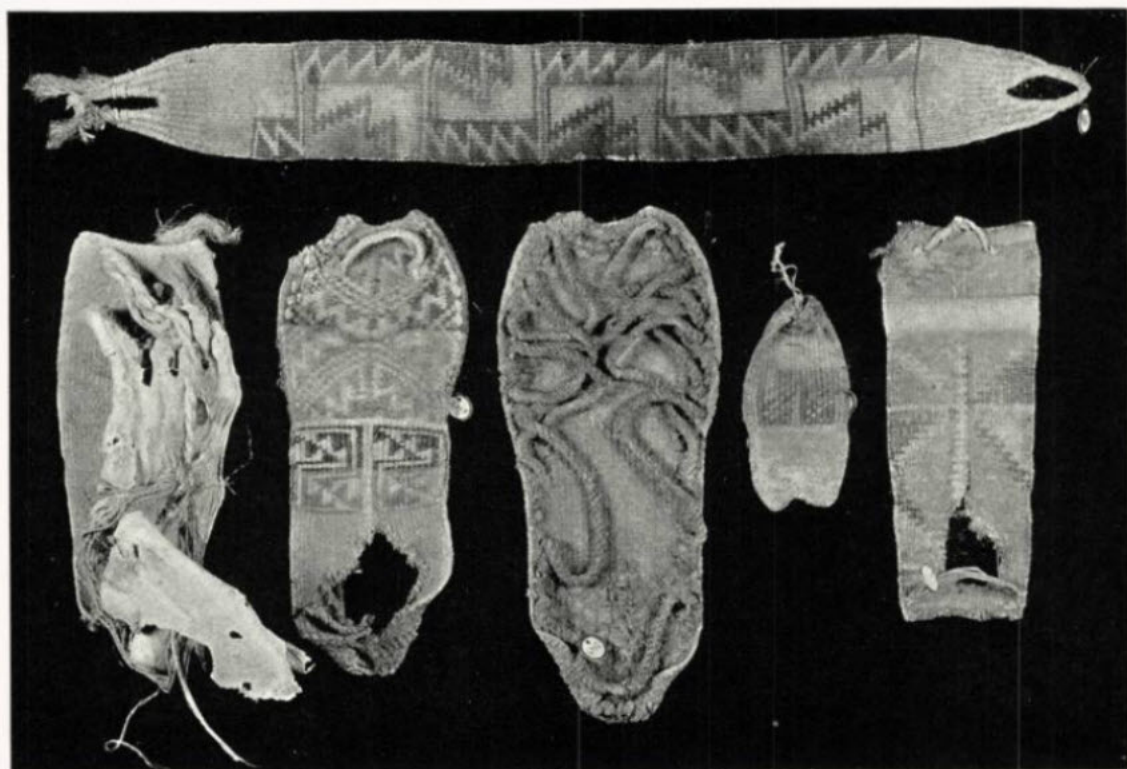
To work in such places, one must breathe through several thicknesses of moist cloth or face the consequence, which is a violent chill with a tendency to develop into pneumonia.

Nor have I mentioned the months of careful study which will be necessary before the thousands of specimens will have

told the last detail of their story. That story will reveal the cultural history of the aborigines of the Southwest previous to the arrival of the Spanish conquerors. Already the chapter heads have been translated and a brief of the pages written, but it will be many a year before the last paragraph is filled in.

Probably the exact date of the first human inhabitation of the Southwest will never be known, but by a conservative estimate it was all of 4,000 years ago. The first settlers of whom a trace has been discovered were an extremely long-headed people of medium stature. They were undergoing transition from nomadic to sedentary existence under the compelling influence of the cultivation of maize. This cereal, together with the few wild fruits and seeds which the barren environment afforded, augmented, of course, by the none too plentiful game supply, provided them with food.

Although their tools were of few types, and made exclusively of stone, bone, and wood, they were skilled artisans in several lines. They were past masters in weaving



Photograph courtesy American Museum of Natural History

MASTERPIECES OF PREHISTORIC TEXTILE ART

Aside from fur- or feather-string blankets, and narrow aprons in the case of the women, sandals were the only clothing ordinarily worn by the early inhabitants of the caves. Upon their footgear and upon their burden straps they lavished the utmost care, decorating them in colors, and in raised patterns produced by baffling, intricate manipulations of the weft threads.

and basket-making, and no Southwestern people has surpassed them as workers in wood. However, they had not learned to use the bow and arrow; to make pottery or to build walls of masonry.

These so-called Basket Makers, who probably emigrated from some part of the territory that is now Mexico, occupied the Southwest unmolested for a considerable length of time. Eventually, however, there came among them a roundheaded stock, bringing with it new manners, customs, and arts. From a blending of the two, there resulted the beginnings of the Pueblo culture, which, although it had passed its zenith before 1540, still survives.

The simple culture of the Basket Makers marks the beginning, and the creditable civilization which flourished in Pueblo Bonito, made familiar to the scientific world through the explorations of the National Geographic Society under the direction of Mr. Neil M. Judd, marks the culmination of aboriginal advancement in the Southwest (see pages 227 to 262).

The three or more cultural periods

which intervened need be only mentioned. The caves of northeastern Arizona were occupied during the entire range of the inhabitation of the region by sedentary agricultural peoples, and after the latter had departed, after even Pueblo Bonito had been given over to prairie dogs and owls and drifting sand, the Navajo arrived and found Cañon del Muerto a congenial dwelling place. To-day, in riding through it, one passes an occasional stunted peach orchard, a cornfield, a melon patch, or a squalid hut, and if one remains long enough, one becomes acquainted with the 40 or 50 Indians who now inhabit it.

They are a dwindling remnant. Within a few generations their blood will be extinct, or else their life and customs will have become so changed, as a result of contact with our own civilization, that they will no longer be real Navajo.

Thus, as far as aboriginal peoples are concerned, this gorge is truly a canyon of death, and the Spanish raiders struck deeper than they knew when they named it Cañon del Muerto.