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ANCIENT DESIGNS AND MODERN MAN IN NORTH AMERICA
Destructive and Artistic Utilization of Indian Rock Drawings

I. Destruction, Vandalism, and Theft

Although short notes on natural and man-induced destruction of petroglyphs and pictographs may be found in many books and articles dealing with North American Indian rock art, only very few writers have directly addressed themselves in at least a few pages to this topic (7, p. 74–78; 16). And yet, as Campbell Grant (7, p. 74) aptly remarked, "the legacy of aboriginal rock art in the United States is being destroyed at an ever accelerating rate". The forces of nature, especially wind and water erosion, continue to exact their toll at unprotected sites, as they have for centuries. But it is the activities of modern man, more than anything nature can do, that pose the greatest threat to the survival of these ancient designs.

By far the largest number of rock drawings have been destroyed in the name of civilization and technological progress. House and road building activities and especially the construction of numerous hydroelectric or flood-control dams rank as the prime culprits in this respect. Literally thousands upon thousands of rock carvings and paintings have been submerged behind dams along the Columbia River in Washington and British Columbia, the Glen Canyon region of the Colorado River in Utah and Arizona, the Pecos and lower Rio Grande rivers in Texas, the San Juan and upper Rio Grande rivers in New Mexico, the Kanawha River in West Virginia, and the Susquehanna River in Pennsylvania. On the other hand, from archaeological salvage surveys in river basins threatened with imminent inundation have come at least two highly seminal rock art studies[15, 23] that have provided major stimuli for subsequent, intensified research in this hitherto neglected field of scientific endeavor.

Other human activities have also contributed their share to the increasingly prevalent destruction of petroglyphs and pictographs in North America. It is ironic to realize that at times even the best of intentions will ultimately injure or demolish the very rock drawings they were meant to protect. A few examples may serve to illustrate this point. In the Coso Mountains of California, the Department of the Interior has placed a plaque commemorating these sites as a National Historic Landmark and bringing the thousands of glyphs under the protection of the National Park Service. "But even they have moved a large boulder covered with petroglyphs and placed it totally out of context, just to provide a base upon which to fasten their plaque!"[1]. In Nine Mile Canyon, Utah, a rancher intent upon keeping potentially destructive visitors away from the rock drawings on his land has painted a warning in big letters right across one of the largest Fremont style pictographs in the area (Fig. 1). And recently, one misguided writer has seriously "challenge(d) . . .

the young people of America to go out" and do something about the fact that some petroglyphs are becoming difficult to recognize because of erosion: "By drilling out the pockmarks with a hand drill or chisel and mallet, they can be restored, without harm, to their original state and preserved for another period of time." Incredibly, a popular outdoors magazine saw fit to publish this singularly ill-conceived suggestion[20].

Year after year, ever increasing numbers of rock drawings are being defaced by mindless visitors who scratch, paint or spray names, dates and other graffiti over the old Indian designs. One report alleges that "a schoolteacher took a class of children to a site, furnished them with paint, and allowed them to cover the petroglyphs with their own daubs, thus ruining a good site"[21]. An unusual variant of this sort of vandalism has been perpetrated by the members of a Walt Disney film crew who overpainted carved elements of the Great Basin Abstract style in the Parker Dam region of the Mojave Desert in gaudy colors to render them more photogenic[25]. Even where rock drawings are out of immediate reach because of their location or because of the presence of protective barriers, they are not immune from wanton destruction since they serve as favorite targets for gun-toting halfwits. An example of damage by gun fire is illustrated in Fig. 2; these life-sized, half bird- and half man-like figures of the Interior Line style are located near Upper Dinwoody Lake, Wyoming, and were probably carved between A. D. 1500 and 1800[5].

At one aboriginal site, however, the names left by white men have genuine interest. From 1605 on, numerous Spaniards and then Americans scratched and chiseled their messages into the soft sandstone at the base of the towering rock in El Morro National Monument, New Mexico. Furthermore, as Fig. 3 documents, they had the decency to leave the Indian designs untouched. The inscription above the group of deeply incised bighorn sheep (the latter made by Pueblo Indians hundreds of years ago) reads: "Pasamos por aquí el Sargento Mayor y el Capitan Juan de Archuleta y el Ayudante Diego Martin Barba y el Alferez Agustin de Ynojos año de 1636" ("We passed by here, the Sergeant Major and Captain Juan de Archuleta and Adjutant Diego Martin Barba and Ensign Agustin de Ynojos, the year of 1636"). As an interesting aside it is worth mentioning that both Barba and Archuleta were later accused of aiding a rebellion during one of the numerous civil disturbances that plagued the Spanish in New Mexico, and were beheaded in 1643[3].

Since the summer of 1974, reports indicating that many petroglyph-bearing rocks are being stolen and carted off to be sold at a profit have become more frequent[6]. Sites in Owens Valley and in the Mojave Desert, both in California, are among those most often mentioned in this respect. For some time already, there has existed an extensive and lucrative market for archaeological artifacts obtained illegally in Central and South America, and it is apparent that North American petroglyphs are now destined to become part of it. However, the looting of rock art sites is not an entirely new phenomenon. Almost four decades ago, the masterpiece at the late prehistoric Plains petroglyph site of Castle Gardens, Wyoming, a fringed shield design with a large turtle composed of a mosaic of sixty engraved and also painted polygonal units, was cut out of the soft sandstone and taken away by thieves

(Fig. 4). In this case, the story has a happy ending, for "the stone containing the turtle was forcibly rescued by the late Mr. L. C. Bishop"[14] and may now be seen in the State Museum of Cheyenne, Wyoming's capital city.

How to contain and prevent the further spread of this deplorable and criminal practice, and indeed of all forms of vandalism, poses a difficult dilemma. A group of persons headed by Isaac Eastvold endeavors to stop the looting of petroglyphs in the Mojave Desert by means of regular "desert watch patrols" conducted by car and plane[6]. Critics contend that a handful of self-appointed vigilantes will not be able to control an area almost twice the size of the entire state of Connecticut, and have also pointed out that the considerable amount of publicity engendered by these efforts may alert even more potential vandals to the fact that there are riches to be had in the desert. Heizer and Hester, addressing themselves to this problem, recently challenged all those concerned about rock art preservation to make "enough noise directed at federal and state law enforcement officers so that they are forced to do something about it"[8]. Whatever the solution, if indeed there is one, it will not come easy.

II. Artistic Utilization

How much petroglyphs and pictographs may be utilized and enjoyed without having them destroyed in the process can be attested to by all those who copy these designs for scientific or artistic purposes. The most widely used method of recording rock drawings is undoubtedly photography, but other techniques have successfully been tried. One need only think of Forrest Kirkland's magnificent and accurate water color reproductions, made between 1934 and 1941, of innumerable Texas pictographs; they form the basis of W. W. Newcomb's lucid analysis of rock art in that state[10]. In recent years, many more artistically gifted people have followed Kirkland's example, differing only in the media they employ to accomplish their goal.

In the following paragraphs, the methods of five North American artists currently engaged in reproducing rock drawings will be presented. They have all kindly furnished me with written or printed material detailing their techniques and have given me permission to quote from their letters. The originals of all reproductions illustrated in this section (Figs. 5–9) are in the author's possession.

1. Rubbing Reproductions (Artist: Elfriede Tingleaf, Round Up, Rt. 2, Box 58, Apache Junction, Arizona 85220)

Rubbings are reproductions of incised surfaces made by laying paper or cloth upon it and using some marking substance. Elfriede Tingleaf has utilized this technique for years and has made numerous accurate and beautiful copies of petroglyphs in this manner. Natural surface features in the stone, such as crevices and irregularities, will also show up in the finished product so that a close approximation of the original results.

Elfriede Tingleaf described her method in a letter to the author dated March 24,

1975. After cleaning the rock with a soft brush, a piece of cloth (such as a portion of a bedsheet) of sufficient size is washed in clear water and is then secured to the rock with strips of tape. If the cloth is fastened too loosely, double images will be created; if it is attached too tightly, the roller movement may pull the tape loose. Needed are a palette (a metal tray or a piece of formica or masonite); a medium such as printer's ink, block printing ink, or oil paint; some cleaning fluid according to the medium; and a set of brayers (gelatine or soft rubber sponge rollers) measuring from 1 to 4 inches in width. The printing is done as follows: "Begin with a very small amount of ink or paint (about the size of a drop of water) and roll out very thin, rolling in at least two directions and being sure that the whole surface of the roller is evenly covered. To prevent roller streaks, wipe off edges before applying ink or paint to cloth. Apply thin layer of ink or paint to cloth using a light touch and staying within at least one inch of outermost edge. After glyph outlines and rock texture have been determined, continue to apply layers of ink or paint until the desired intensity has been achieved. Caution: applying ink or paint too thickly will result in smearing, loss of definition, and possible soaking through onto rock." The finished print is rolled between single sheets of newspaper for transportation from the site. Wrinkles are to be avoided since they can "crease-print" themselves into the rubbing.

The two rectangular-bodied bighorn sheep petroglyphs of Fig. 5 have been reproduced with this method. The bighorn or mountain sheep (Ovis canadensis) was an exceedingly popular motif with aboriginal artists throughout much of western North America. Those depicted are from a panel in Capitol Reef National Park, Utah, and belong to the Southern San Rafael style zone of the Fremont culture (17, p. 41–59). They were probably carved between 950 and 1200 A. D.

2. Linoleum Block Reproductions (Artist: Kay Sutherland, Ph. D., El Paso Community College, 6601 Dyer, El Paso, Texas 79904)

In a letter to the author, dated March 14, 1975, Dr. Sutherland describes the method she has been using as follows: "The rock art in the El Paso area is so beautiful that one cannot help but try his hand at reproducing the petroglyphs and pictographs. I do not have artistic experience, so I began with the simplest form of reproduction, linoleum blocks. The materials needed are easily accessible and inexpensive: a commercial piece of linoleum or linoleum tiles from a store (the latter being considerably cheaper but a bit more difficult to work with); then a set of linoleum cutting tools, various inks, a roller, and a press – the most expensive item which, however, is optional since a spoon may be used instead. I take the photographic slide of the rock art, project it on the wall, hold the linoleum block up and copy the picture onto the block with a piece of paper and carbon paper. Be sure to put the slide in backwards so that your finished piece will be frontwards. Once the drawing is on the block, the linoleum is carved out with the tools. The main decision you have to make is whether to carve out the design (in which case you get a negative image) or to carve out the background (in which case the image will be positive). After the carving is made, ink is spread on the block with a roller, a piece of paper is put on the block, and the paper is pressed against the block with a spoon

or a press. To make variations in ink color, a Q-tip may be used to put on the ink."

Fig. 6 shows Kay Sutherland's linoleum block reproduction of one of the 115 painted masks thus far identified in the Hueco Tanks area near El Paso, Texas. At no other locality in North America are mask depictions more plentiful, or more elaborately stylized, than at these sites. A solid and an outlined subtype have been distinguished[9]. The solid masks usually occur in small niches, crevices and recesses which probably served as religious shrines[10, 22]. These masks belong to the Eastern Phase of the Jornada rock art style of the Mogollon culture and were probably painted between about 1050 and 1400 A. D. (18, p. 95–122). The Jornada style heralded the arrival, from a source further south (in Mexico), of a new ceremonial complex characterized by masked supernaturals identical with or similar to those of the still existing Pueblo kachina cult of northern Arizona and northern New Mexico[19].

3. Cor-Ten Steel Reproductions (Artist: Fred J. Myers, 1523 Nineteenth Street, Denver, Colorado 80202)

During the past few years, Fred J. Myers of Denver has become known through his Cor-Ten steel reproductions of rock art motifs from the American West. He has created numerous solitary figures, copied from photographs, as well as several large murals measuring up to 14 feet in length and incorporating as many as 130 individual design elements (letter to author, March 12, 1975). Many of his artistic wall hangings and free-standing sculptures have found their way into collections and exhibitions in the United States and abroad.

Cor-Ten steel, a grade available since 1933, "is about 40 percent stronger than conventional structural steels and, if left unprotected, it forms a very fine, dense, tightly adhering oxide coating (rust) which is self-sealing. The fact that the coating is naturally beautiful as well as permanent and economical was not truly recognized until the late Eero Saarinen elected to use COR-TEN Steel in the bare condition for one of his projects in the late 50s. The resulting Deere & Co. headquarters building at Moline, Illinois, was recognized almost immediately as a masterpiece by architects, artists and the public alike, leading to the use of exposed COR-TEN Steel in thousands of other structures and, more pertinently, numerous sculptures over the past decade" (24, p. 8–9). It may be pertinent to note here that the deep purple-brown oxide coating that develops with time closely resembles the natural desert varnish that covers so many petroglyph-bearing rocks in the American West. Cor-Ten steel plates flame-cut with fine definition and may be procured from: US Steel Corporation, Art and Sculpture Inquiry Office, Room 1100, 208 South La Salle Street, Chicago, Illinois 60690.

The illustrated reproduction (Fig. 7) represents the petroglyph of a horned anthropomorph, probably a shaman, from Nine Mile Canyon, Utah. Because of the recency of its manufacture, this Cor-Ten steel sculpture is still uncoated. The rock drawing was made by Indians of the Fremont culture between 950 and 1200 A. D. Horned and otherwise decorated human figures, such as this one belonging to the Northern San Rafael style zone, are characteristic of all Fremont rock art styles[17].

4. Latex Mold – Plaster of Paris Reproductions (Artist: Betty Lu Conner, La Roche Jaune Arts, 2020 Beverly Hill Boulevard, Billings, Montana 59102)

This technique was first refined by Kermit Horn, erstwhile student at the University of Utah, and has been further developed and extensively applied by Betty Lu Conner to rock art in the Montana High Plains[2]. What follows is Mrs. Conner's own description of the method (in a letter to the author, April 8, 1975).

"A mold is taken at the site of the actual petroglyph. To do this, I use RTV Liquid Latex that can be purchased at hobby shops (RTV stands for 'room temperature vulcanizing'). In the field this means smearing on layer after layer of the latex and usually coming back a second time to peel off the hardened mold. At home I take the original mold and put edges around it in a 'natural' way with modeling clay, then pour a rock out of plaster of Paris. I tint the water before adding the plaster with powder paint to get the right color of the original. In Montana, a combination of brown, black and yellow seems to approach our sandstone. Other areas might well be redder or browner. After the rock is poured and before it sets up I add a wire mesh cut the approximate size of the mold and with a wire hanger in it. When the rock has 'set' I spray it with a plastic spray and touch up the carved lines with a slightly lighter color paint than the rock itself." Betty Lu Conner also makes plain "rocks" on which she paints pictographs, using her husband's photographic records of the originals.

The artist adds that the latex mold taking does little or no damage to the Montana sandstone but cautions that in areas where the sandstone is softer the rock might sustain injuries.

Each plaster of Paris reproduction constitutes an extremely faithful copy not only of the original petroglyph but also of every natural feature on the surface of the rock. At the same time, the artificial rock is stronger, cleaner and lighter than its counterpart in nature. While these splendid reproductions make interesting wall hangings, they are – more importantly – accurate records of the petroglyphs that are safe from the depravations caused by weather, time, and vandals.

The finely incised, highly detailed "dancing warrior" figure (Fig. 8) chosen as an illustration of the results of the latex mold – plaster of Paris method is from a panel located near Joliet, Montana. Nearby are drawings of Indians hunting deer or elk, many of the men on horseback and using guns. These petroglyphs are thus from the historic period. Furthermore, the realistic and sophisticated manner in which they have been depicted betrays European influence. In the 1830s, white artists (especially George Catlin and Carl Bodmer) painted Indian scenes at various locations on the northern Plains, and the fact that the natives subsequently adopted some of their techniques is well documented[4]. The elaborately costumed dancing warrior from Joliet displays the braids and high pompadour characteristic of the coiffure of the Crow Indians (2, p. 22–23).

5. Serigraphic Reproductions (Artist: Douglas Mazonowicz, 50 West Eleventh Street, New York, New York 10011)

Douglas Mazonowicz, an English-born artist now residing in the United States, has devoted the last sixteen years to accurately copying innumerable prehistoric cave and rock drawings in France, Spain, North Africa, and (most recently) the United States. Traveling exhibitions of these reproductions have been arranged by the Smithsonian Institution of Washington, D. C., and have earned the artist accolades of acclaim. Illustrations and descriptions of many of the rock and cave art reproductions have appeared in several articles and two recently published books[12, 13].

Douglas Mazonowicz utilizes a silk screen printing process (serigraphy) that he has recently described[11]. Colored photographic slides are projected onto a large sheet of drawing paper which is attached to the studio wall, and the image is copied with black ink. When placed beneath a screen of silk which is stretched over a timber frame, the lines on this mastercopy are clearly seen through the mesh, thus providing a guide for working on the screen itself. "Basically, serigraphy is a stencil process. The mesh of the silk allows printing ink to be pressed through it with the use of a large squeegee – a rubber blade fixed into a wooden grip – on to a paper placed in position under the screen. The most important task for the artist/printmaker is to 'block out' areas of the silk, permitting the color to penetrate on to the paper only where required. In short, he makes a stencil, and repeats the process for each color used in completing the print. The most difficult part of the process, and yet to me the most fascinating, is the actual work on the screen itself – simulating as close as possible the various textures of the cave walls or tomb backgrounds . . ."[11].

Some of Douglas Mazonowicz's unique, accurate and beautiful serigraphs measure as much as 8 by 4 feet and took two or three months to complete. The reproduction illustrated in Fig. 9 represents the red and white painting of a shaman depicted in Horse Canyon (The Maze) of southeastern Utah. It is one of the few more nearly naturalistic human images of the mysterious Barrier Canyon style and may be a few thousand years old (17, p. 65–83, 128–135; 25). The antlered headdress, a sac mask decorated with dots arranged in lines, details of apparel, plantlike objects, and a small bird approaching the figure from the viewer's left are recognizable.

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ZUSAMMENFASSUNG

Der Autor befaßt sich mit der Gefahr der Zerstörung, der die indianischen Felsbilder Nordamerikas ausgesetzt sind, sowie mit ihrer dokumentarischen und künstlerischen Wiedergabe mittels verschiedener Techniken. – Zahlreiche Fundstellen sind durch Baustellen und durch Überflutung durch Stauseen bereits zerstört oder in Gefahr, durch rezente Namenskritzelungen verunstaltet zu werden. Dazu kommt der illegale

Abtransport petroglyphentragender Steinplatten. Der Schutz dieser Denkmäler ist ein überaus schwieriges, aber unerläßliches Unterfangen.

Hinsichtlich der Wiedergabe werden die Techniken von 5 Künstlern beschrieben (Abreibung, Latex-Abguß, Linoldruck, Cor-Ten-Stahlskulptur, Serigraphie). Künstlerische Gestaltungen der Reproduktionen schließen wissenschaftliche Exaktheit im Prinzip keineswegs aus.

SUMMARY

The destructive as well as the artistic utilization of North American Indian rock art by modern man is briefly discussed and illustrated. Numerous ancient rock drawings have been destroyed by house and road building activities and especially by the construction of hydroelectric and flood-control dams. Countless other petroglyphs and pictographs have been and continue to be defaced by persons who carve, paint or spray their graffiti over them. More recently, the theft and illegal sale of petroglyph-bearing rocks has gained in importance. The containment and prevention of such deplorable activities pose a serious dilemma for all who wish for the survival of these irreplaceable archaeological treasures.

The artistic utilization of rock art in North America has also gained momentum in recent years. The methods of five artists currently engaged in copying rock drawings have been described. In two of them (the rubbing process of Elfriede Tingleaf and Betty Lu Conner's latex mold – plaster of Paris technique), the copying is done directly from the glyph-bearing surface; as a consequence, the reproductions closely resemble their originals. In the other three methods (Kay Sutherland's linoleum block technique, Fred J. Myers' Cor-Ten steel process, and Douglas Mazonowicz's serigraphy), photography is interposed between original and copy, and the degree of artistic freedom is comparatively greater.

ACKNOWLEDGMENTS

The contributions of the five artists mentioned in this article have already been acknowledged in the main body of the text; without their generosity, the paper could not have been written. For assistance in locating some of the rock art sites illustrated, I am indebted to Mr. & Mrs. Stuart W. Conner, Billings, Montana; Mr. John V. Davis, El Paso, Texas; Mr. Ted C. Ekker, Green River, Utah; Colonel and Mrs. Howard C. Price, Jr., Price, Utah; and Dr. Kay Sutherland (Toness), El Paso, Texas. Mr. Herbert A. Fischler, Brooklyn, New York, printed the photographic enlargements, and Ms. Ursula Arndt, Brooklyn, New York, drew Fig. 4-B.

Fig. 1

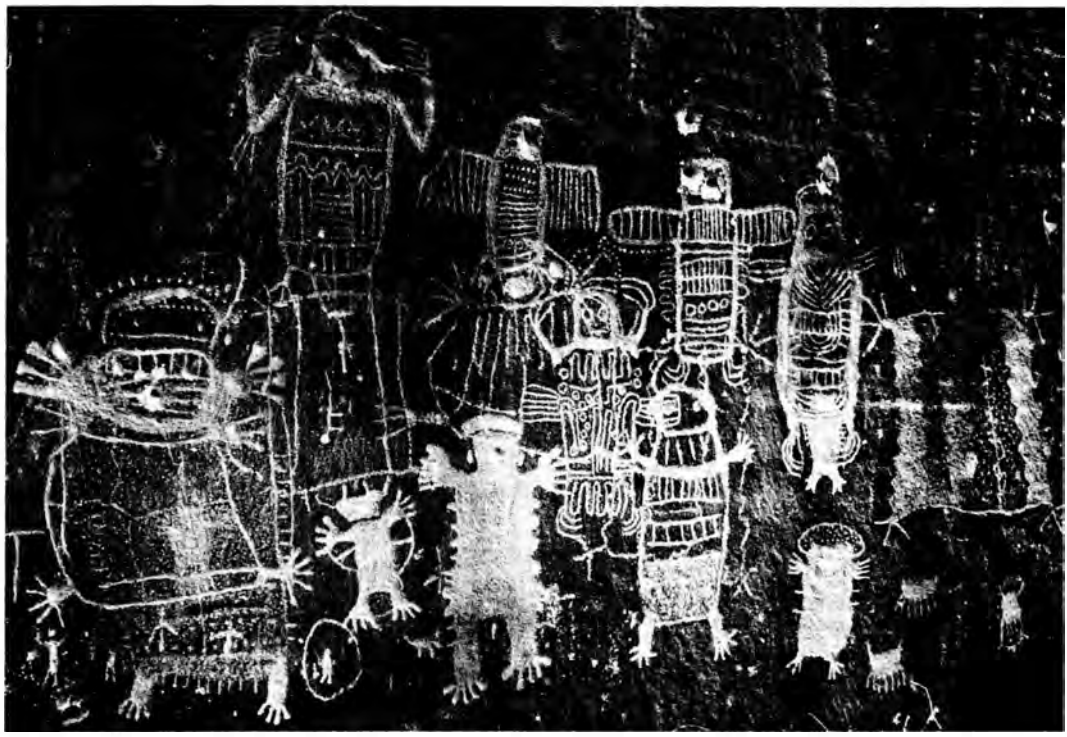

Fig. 2

Fig. 3

Fig. 4a

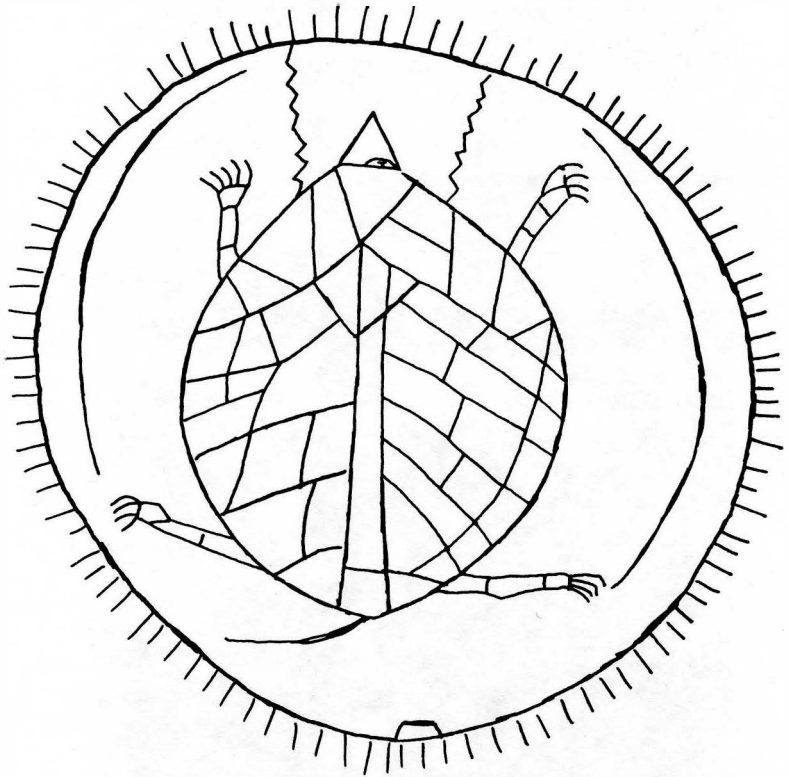

Fig. 4b

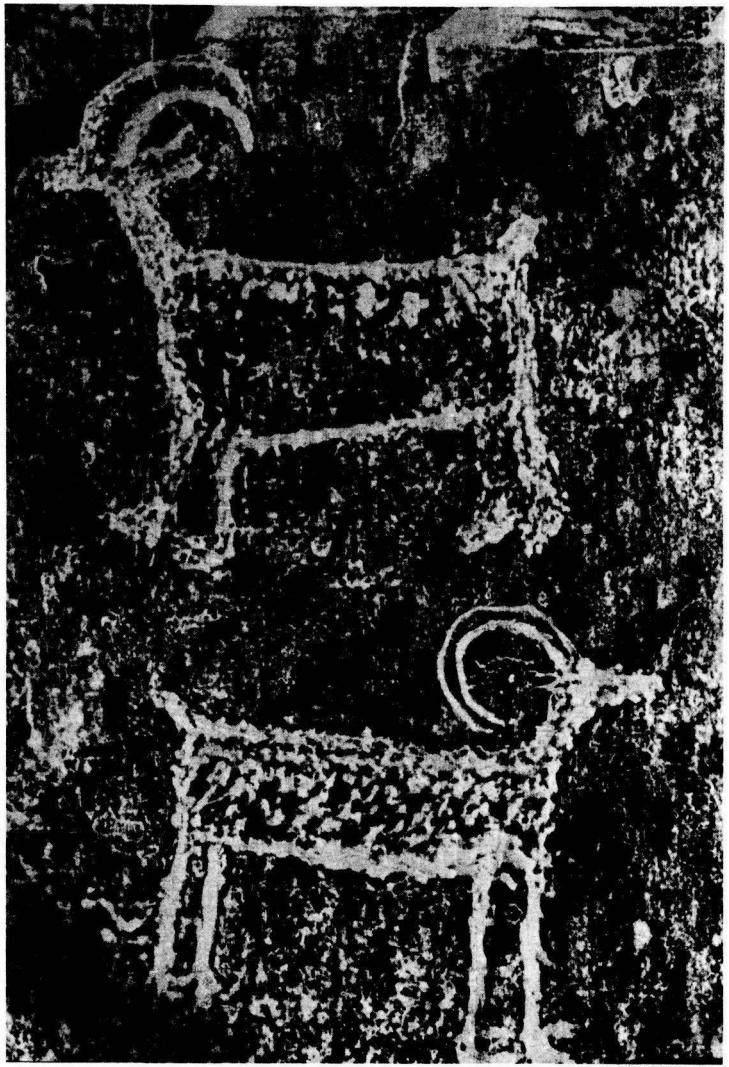

Fig. 5

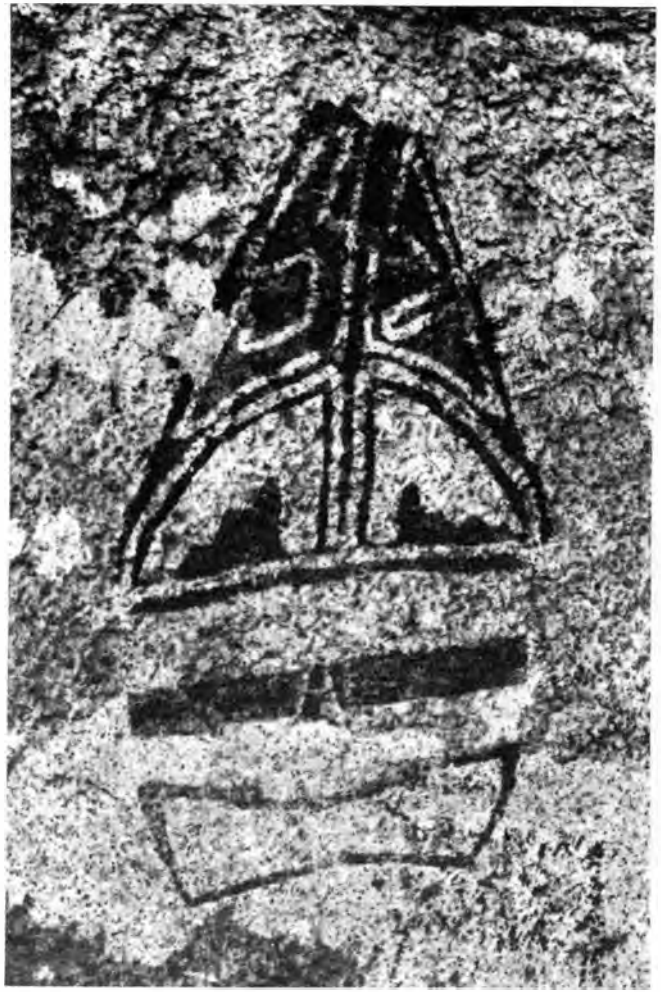

Fig. 6a

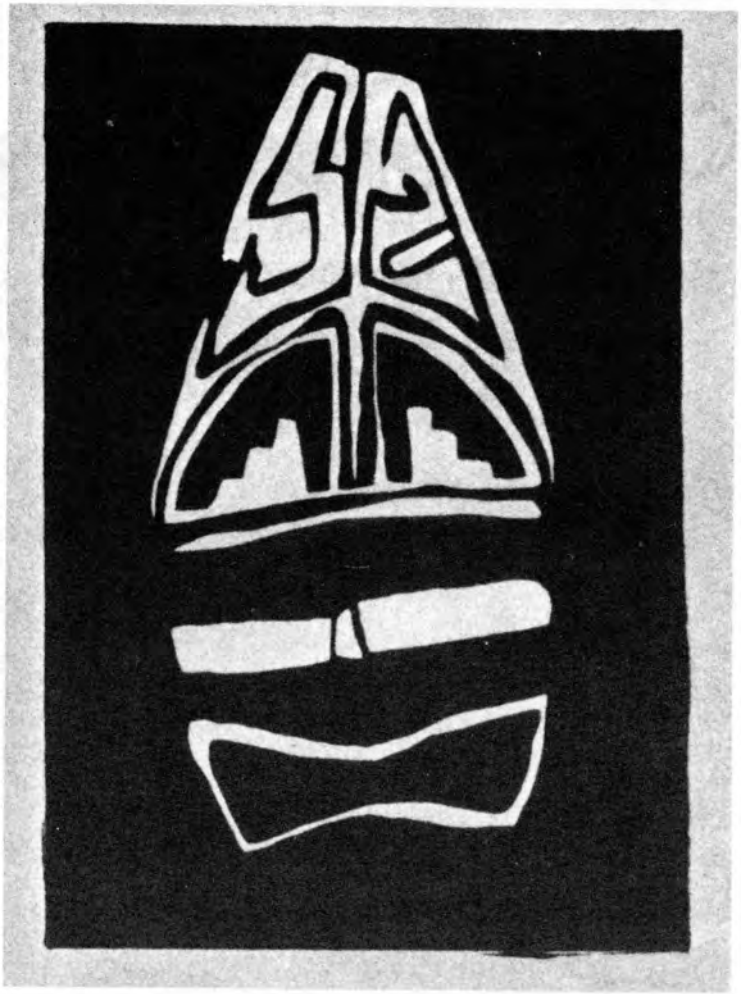

Fig. 6b

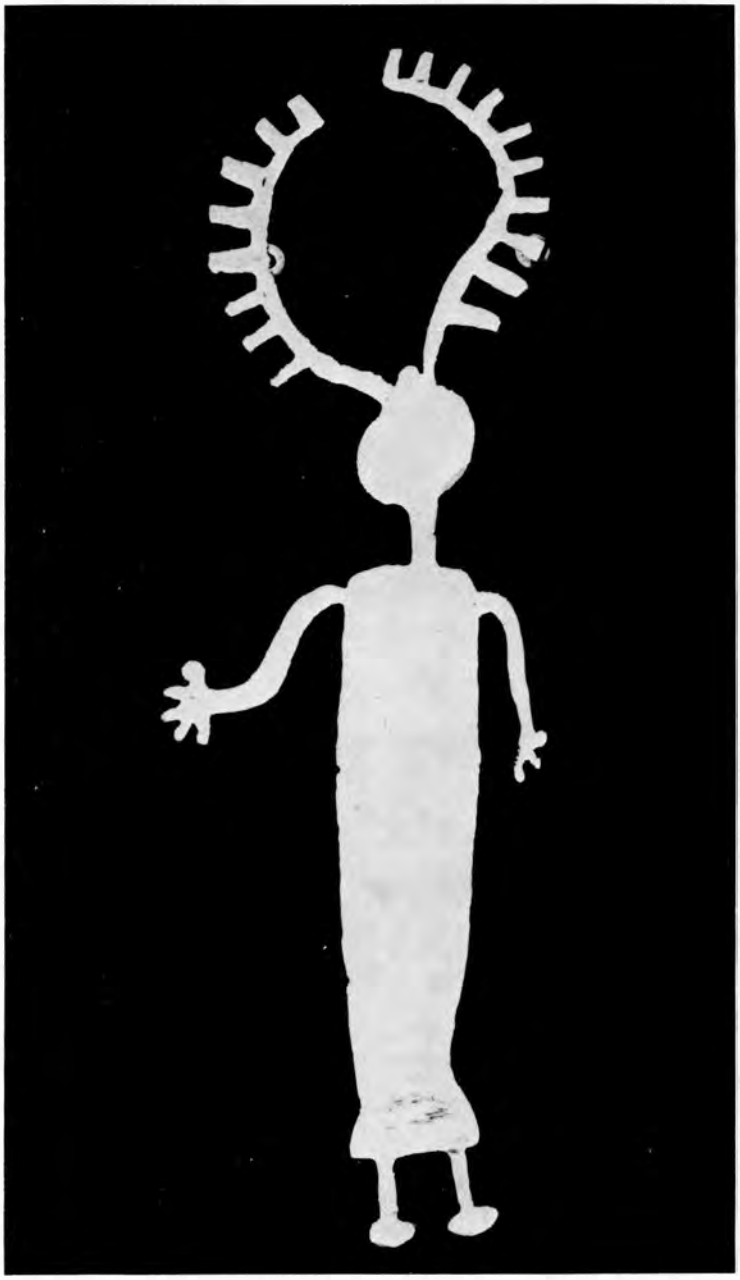

Fig. 7

Fig. 8a

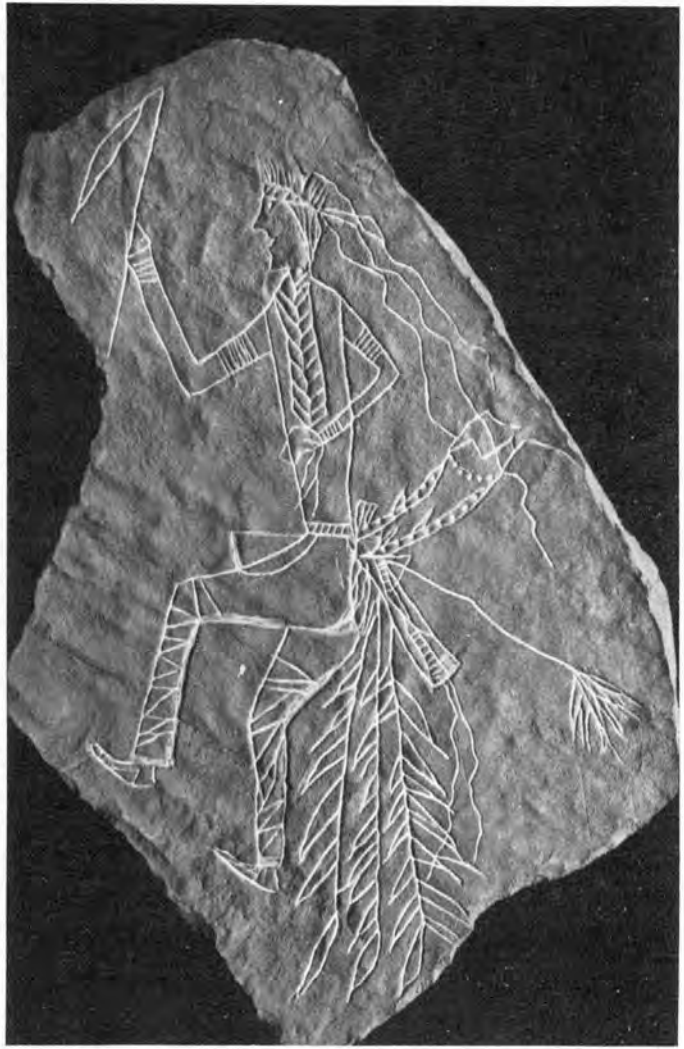

Fig. 8b

Fig. 9a

Fig. 9b