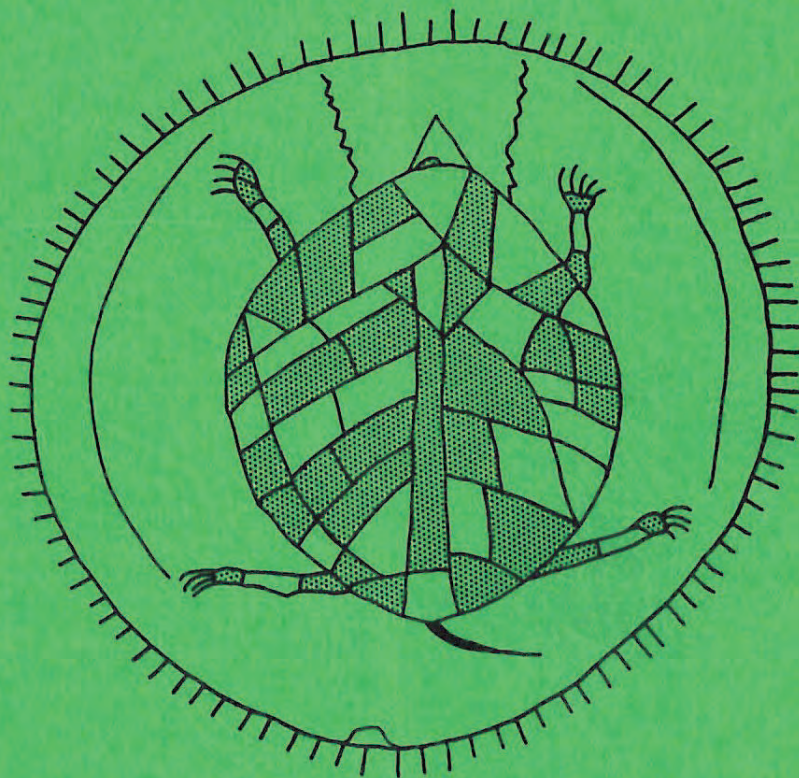


WYOMING
ARCHAEOLOGICAL
SOCIETY



**THE
WYOMING
ARCHAEOLOGIST**

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FALL ISSUE

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Editor's Notes

Our thanks to Rodger Budrow, Publisher of the Wyoming State Journal, Lander, Wyoming, for the very interesting article on Mr. Pat Finley who deserves so much credit for recognizing the importance of a "surface find" which developed into the very famous Finley Site, south-east of Farson.

Received a most interesting letter from Dr. Renaud, 1158 Marion St., Denver, Colorado, along with permission to reprint any of his wonderful reports which concern Wyoming. Written in early 1930's, the accounts of site discoveries are completely fascinating. Ted C. Sowers is certainly a misplaced Westerner being the Curator of the National Historical Park at Morristown, New Jersey. Unfortunately, we had to reduce the size of all of these original photographs and drastically cut so much description in order to conform to our limit of approximately fifty pages.

Held over, because of lack of space, until the Winter Issue is a reprint of the Brewster Site by Agogino and Frankforter with pictures by L. Steege. Also, an article on Scaffold and Tree Burials by Tom Steege and a Scaffold Burial near Torrington by Lou Steege

We all hope that Castle Gardens will be accorded monument status through action on part of the Bureau of Land Management. This is being considered right now, which makes this reprint even more timely.

WYOMING ARCHAEOLOGICAL SOCIETY, INC.

Summer Meeting, August 15, 16, 1964
Cody, Wyoming

Northern Big Horn Basin Chapter, Host Chapter

A total of 27 members and five guests registered the morning of August 15, for the summer meeting of the Society, with registration headquarters at the WyoFoto Studio.

A meeting of the executive council, but lacking a quorum, was held in the Mayflower Cafe beginning at noon, on Saturday. Introduction of members was made, and representatives from the four state chapters were in attendance.

The first order of business was a discussion on the problem of how the State Sales Tax could be handled. Secretary Belz had previously sent a letter to all chapters explaining the requirements of the State Sales Tax Law, in response to a question of a chapter raising funds by the sale of merchandise in order to raise funds to increase the chapter finances. Letter is on file. President Baskett ruled that, "Each Chapter will hence-forth be responsible for complying with the requirements of the Statues of the State of Wyoming".

The Treasurer's report was read, and was followed by a lively discussion on the expenditure of \$100.00. The payment for the award to Miss Harriet Washburn of Sheridan, under the Mulloy Scholarship to the University of Wyoming, for the 1964-1965 school year. President Baskett appointed a committee of: GILBERT, POWERS, (Sheridan); REA, (Casper); CASTLE (N.B.H.B.), to formulate and recommend a more positive set of standards for making the scholarship award.

Several members felt the designation for membership could be improved, and after opinions were heard, President Baskett appointed: STEEGE, WILLSON, R. CASNER, (Cheyenne); WEBER, (Casper); GOODWIN, (Sheridan); KINNAN (N.B.H.B.), as a committee for the purpose of formulating revised designations and requirements for membership in the Society, and to report their recommendations at the next annual meeting.

Action by the Legislative Committee has been nil up to this time.

Tom Knapp, (NBHB) brought it to the attention of the members that some extreme difficulty had been encountered by their chapter in obtaining the permit to excavate the cave site. It was the concensus that some changes in the existing procedures for obtaining permits was involved, and after additional discussion, Pres. Baskett appointed: WEBER, (Casper); KNAPP and KINNAN, (N.B.H.B.), to a committee to determine if, "Changes in Federal regulations for Excavation Permits, have been made", information to be presented to the membership at the next annual meeting.

Next discussed was the topic of Honorary Memberships, and although no conclusions were reached, President Baskett reminded the Chapter representatives that proposals for Honorary Membership are to be submitted by letter to the State Executive Board prior to, and will be voted by the membership at the next annual meeting.

Some mention was made regarding the free distribution of the Society publication, the WYOMING ARCHAEOLOGIST, to educational institutions, but no definite policy was determined.

The matter of Site numbering was discussed, and Secretary Belz reported he had all material from the River Basin Survey file, and as time permitted, the project was being

worked on. Considerable research is involved, and the compilations are taking longer than expected. It was anticipated a more complete listing would be available in the near future, and a more concrete procedure in force before the end of the year. Forms will be submitted to the Chapters for additional information in order to compile the needed information.

President next appointed all Chapter Secretaries as a committee to recommend some definite program, pro and con, regarding the idea of the State Society purchasing stationary supplies (letterheads, envelopes and membership cards) in bulk, then distributing the material at cost to the chapters as it is needed. It was felt this program would save the chapters money. Committee recommendation to be acted upon at the next annual meeting.

The meeting adjourned at 1:30 p.m., with a reminder to the members that the next annual meeting of the Society will be held in Casper, Wyoming, the first Saturday in April, 1965, time and place to be announced later.

At 2:00 p.m., the membership caravanned out Highway 120, 13 miles north of Cody, to visit the NBHB Chapter's site that has been in the process of excavation. "Doc" Kinnan, Chapter President gave a very interesting commentary on the progress of the dig, and a history of the area. On the return to Cody, a stop was made to view an area of sandstone cliffs, where there were surface groovings, with the appearance of a tool sharpening site. From evidence of numerous "fire-rock", the site appeared to have been a large campsite in years past.

At 4:00 p.m. on Saturday, the membership was rewarded by a very interesting trip conducted by Dr. Harold McCracken through his laboratory, in the Whitney Gallery. Viewed were materials being prepared for displays in the Gallery, and some of the artifact material removed from the Mummy Cave, at the North Fork Cave Site No. 1. Dr. McCracken commented on the evidence from the site that was displayed for the members of the Society, and we learned a great deal of the past, from his remarks.

Following a 6:00 p.m. picnic in the Cody City Park, a general discussion by the membership was held, and the proceedings of the Executive Council session were reviewed. The main topic of interest was in the awarding of the scholarship, and the salient items suggested for the committee's consideration were: How will the scholarship be awarded? Should items of participation in archeological work be considered? What grade year(s) will the recipient be? What college major(s) will be a consideration? Should an application form be devised and used? All members are urged to discuss the topic at Chapter meetings so the committee will be aided in their task.

On Sunday morning, August 16, the membership met for a tour of the Mummy Cave Site. Dr. McCracken and Bob Edgar explained and related the work that was being performed at this very important archeological site. We learned why the record has been so perfectly preserved at this location, and what archeological information has already been obtained. By a chart, Mr. Edgar related the various style artifacts, with datings, that have been found during the excavation. Narrated also were the difficulties encountered by the "diggers", and everyone was greatly impressed with the fine work being accomplished. The National Geographic Society has awarded a financial grant to the Whitney Gallery, in order that the work may continue. The National Geographic Society thus has the exclusive right to all photographs and the publication of all information of the Site. Dr. McCracken and his aides are to be commended for the splendid work they are doing, and we hope that sometime in the near future we will be able to view additional material from this famous site, displayed in the Whitney Gallery of Western Art, at Cody, Wyoming.

Following the visit to the Mummy Cave, the membership disbanded, and the summer meeting was closed.

Respectfully submitted,

Carlton W. Belz
Secretary-Treasurer

NOTE: For the benefit of those who have not been fortunate to visit the Whitney Gallery of Western Art, there is on display a simple but effective exhibit of "Joe", the mummified remains of a human some 1300 years old. Also displayed are archaeological objects associated with the mummy, and including some of the finest artifacts one would wish to see. Additional displays are planned for the future, after intensive investigate work is completed on the material obtained from the Mummy Cave Site, and we will all await the time we can view this interesting historical chronological record of ancient man in Wyoming.



Archaeological Society Members at Mummy Cave.

Photos by L. Steege

Archaeological Society Members at the Cody Chapter Site.



CHAPTER NEWS

GASPER CHAPTER

The Casper Chapter opened its summer's activities with a field trip to the Castle Gardens area, Natrona County, well known for its petroglyphs. Although rapidly deteriorating through weathering and vandalism, some are still in fair condition and some photographs were taken.

Enough surface evidence remains to indicate this was a large camp area, complete with buffalo wallow. Surface finds included two probable McKean points, scrapers, mano, varied "use" tools, various broken parts and knives. Only cursory examination of the area was possible due to strong winds and blowing sand. If valuable evidence of habitation does remain, it undoubtedly is deeply covered.

Twenty-five persons participated in this first field trip.

During the fall months, the Chapter plans to investigate an area identified as the Ormsby game run. Preliminary work has been done to the point of obtaining the permission of the landowner to dig the site. Although the site has previously been thoroughly disturbed, it is though that much valuable field experience may be gained.

Other plans for long range work includes a survey of the Casper Creek drainage area. Aerial assignments with their respective maps have been made. Weather conditions have delayed field work but we hope to have reports available for the Fall issue of the Wyoming Archaeologist.

In July, 6 members of the Casper Chapter made a field trip to the Turner-crest area to investigate an "effigy" report in that area in Johnson County. The site was located and a number of photographs and a diagram of the figure were obtained. A report will be made as to the worth of the figure when evaluation has been made. A scraper, a few points and a large deposit of selenite crystals were found in the general area.

During August, A Chapter picnic was scheduled and members of the Chapter attended the summer State meeting at Cody. No chapter activities were planned and no individual projects were reported.

By: Helen F. Bryant
Secretary-Treasurer

FROM

BUFFALO BULLETIN

July 30, 1964

ARCHEOLOGISTS STUDY OLD INDIAN CAMP LOCATION

An old Indian camp site, located east of U. S. 87 near Piney creek on the old Greub ranch, has attracted the attention of the Wyoming Archeological Society and the University of Wyoming, and members of that organization this week completed an extensive excavation of the area.

Director of the "dig" is George Frison, a nephew of Robert Frison of Buffalo, son of Paul Frison of Ten Sleep. Frison, a member of the Wyoming Archeological Society is doing graduate work at the University of Wyoming.

A number of other people from this part of the state who are members of the Sheridan chapter of the state archeological group also have been working on the excavation.

Although much more study will be given to the many things that have been found in the project, it appears that the camp site is that of Indians who lived in this area in the early 1700's.

The area first came to the attention of the state's archeologists about four years ago when Dr. Ray Bentzen, who was a member of a survey team of the Wyoming Archeological Society, noticed the area.

On June 10 of this year the actual work of excavating the site and locating the items of interest was started. Among those who are working with Frison on this project are Dennis Stanford, University of Wyoming undergraduate student, and Dr. William Mulloy, professor of anthropology at the university.

Mrs. Margaret Powers, who lives at Dayton, is the president of the Sheridan chapter, and she too has been actively involved in the project with other chapter members.

There are two components of the site. One is a cliff, about 25 or 30 feet high over which the Indians apparently drove buffalo and the resulting fall killed the animals.

At the base of this cliff are many buffalo bones and many tools. Although much study remains to be done on this project, it appears that the Indians were very late prehistoric. This would date them in the late 1600's or early 1700's. More information will be obtained from carbon 14 tests.

The second part of the site is located on a nearby hill where the Indians made their camp. A large number of lodge sites can be identified by the stones which were arranged in circles. Four or five of these lodge sites were excavated, and about 20 others are in the location.

The principle value of this particular site is that it involves just one cultural group. Many camping areas were in locations which were used

by several cultural groups down through the years, but this appears to involve just one group at one point in history.

It is hoped that much valuable information on a section of historical reconstruction that archeologists really know little about can be gained from this study.

While much work has been done in learning about earlier Indians of this country, little has been done on the late pre-historic tribes.

CHAPTER NEWS

SHERIDAN CHAPTER

During June and July, members and interested guests had an opportunity to learn archaeological field techniques from the University of Wyoming's Dr. Mulloy, George Frison and Dennis Stanford at a buffalo slaughter site and adjacent tipi ring area just north of Lake De Smet on Piney Creek.

An excellent article in the Buffalo Bulletin of July 30, 1964, describes the project. Weekends brought out a good number of members from Sheridan, Dayton and Buffalo, whole families in several cases. On weekdays, however, the number was reduced to a hardy few. As the site turned out to be quite extensive and potentially important, future excavation is being planned.

In August, several members attended the well-planned and thoroughly interesting state meeting at Cody.

By: Dorothy D. Goodwin

CHEYENNE CHAPTER VISITS HELL GAP ARCHAEOLOGICAL SITE

By
Henry Lloyd

On August 22, 1964, the Cheyenne Chapter made it's annual field trip to the Hell Gap site. The group which included some members of the Laramie County Historical Society left Cheyenne about 7 a.m. and arrived at the dig site at 9 a.m.

The visitors were conducted to the three excavation sites by Dr. Cynthia Irwin Williams, her mother, Mrs. Kay Irwin and other members of the expedition. The Hell Gap site is located within a gently sloping valley along the eastern slope of the Haystack Mountains about fourteen miles northwest of Guernsey, Wyoming. The geographical situation, water supply, proximity to extensive chert quarries (Spanish Diggings) and apparent abundant game made this region an ideal home for Early Man.

Site I or lower site has produced artifacts from the McKean complex in the upper levels. The most interesting complex of this site is the Frederick. This level or horizon presents perhaps the most impressive camp ground remains yet uncovered. The diagnostic projectile point of the Frederick Complex is a lanceolate, obliquely flaked, with straight or expanding sides, a concave base and well defined basal thinning. The site has also produced some of the Cody complex together with the Agate Basin. Late in the summer an Alberta floor was uncovered, and more work is contemplated in this area next season.

Site II or middle site is most interesting as it presents Folsom, Agate Basin and the Plainview-Midland complexes. The points of the last complex are of types that range from classic Midland or unfluted Folsom forms to the Plainview varieties.

Site III or upper site is especially noted for the Hell Gap Complex which it presents. This complex is dated at 8930 B.C. The last two weeks of excavations this season uncovered an almost classic cultural floor. Undoubtedly photographs of this floor will be used in text books as the ideal. It is anticipated that this excavation will be expanded during the next summers work.

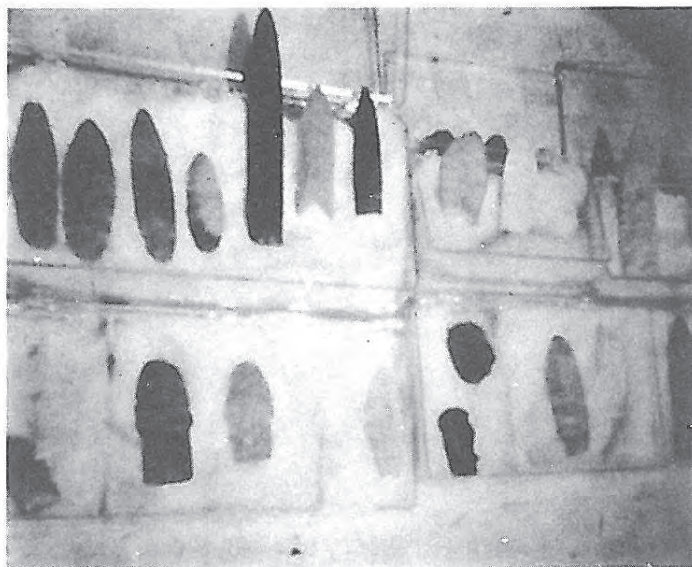
After the group visited the three sites, they returned to the camp area and were given a briefing on the summers work by Dr. Williams, and given an opportunity to see first hand some of the artifacts uncovered during the season. They were also able to see some of the casts of Hell Gap material made by Mrs. Irwin. Some of these casts were taken to Barcelona Spain to the International Meeting by Henry Irwin, and some to Russia by Marie Wormington.

After the visit to the Hell Gap site the group moved on to the Deercorn Spring on the Wyoming National Guard Range for lunch. Artifacts found on the surface on the surface in this area are generally Middle and late period.

The remainder of the afternoon was spent surface hunting on a ridge along the Hartville=Glendo road north of the Haushar Ranch. This ridge contains one of the numerous chert quarries in the area. Several very interesting finds were made including projectile points, side and end scrapers drills, and knives.

The Cheyenne Chapter anticipates at least three more field trips to the Hell Gap area in as much as the Peabody Museum and the National Geographic will support

the investigations for at least three more seasons. The field trips taken by the Cheyenne Chapter are proving very interesting and informative and it is felt that the group as a whole is deriving great benefit from them. It is indeed fortunate that one of the most important Archaeological sites on the North American Continent is located so close to this Chapter.



Artifact Assemblage

Photo by Durnford



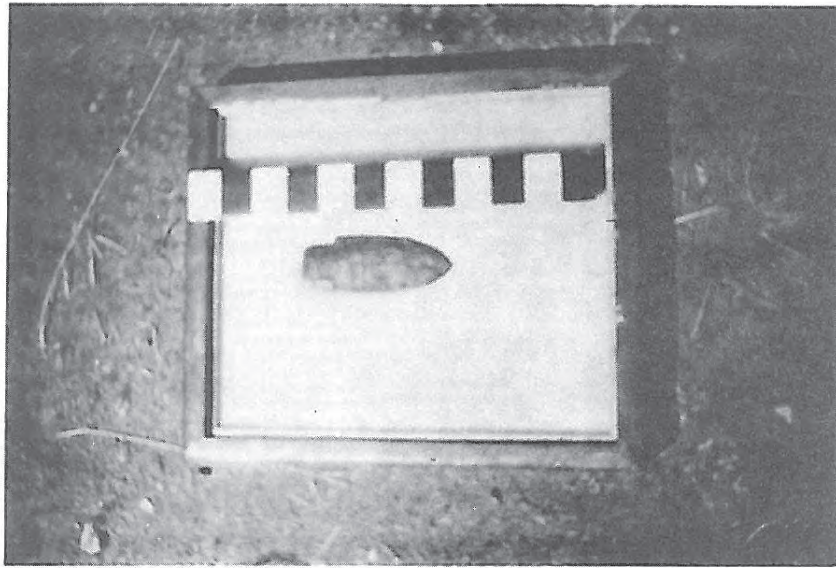
Site I

Photo by R. Casner



Site II

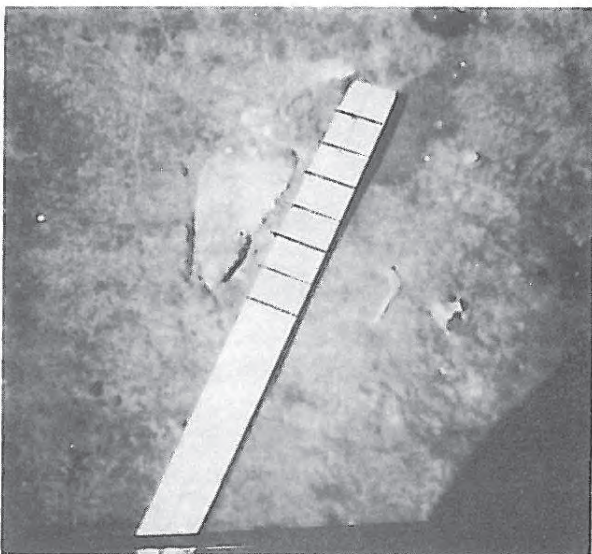
Photo by Durnford



Alberta Point
4 5/8 inches long - 1 3/4 inches wide

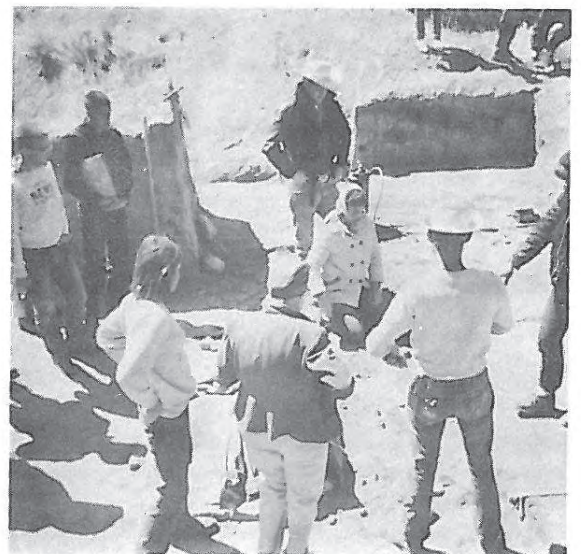
Found by Bert Mountain, July 12, 1964, in a blow-out near Keenesburg, Colorado. This is the largest and finest Alberta Point that we know of, and would grace any collection. This was excavated intact in a large dense block of compacted sand until a "kind" neighbor, without thinking, lifted it out of situ. Photographed by Paula Durnford during Bert's visit to Hell Gap Site.

Photo by Durnford



Knife from Site III in Cody complex level

Photo by R. Casner



Cynthia Williams pointing to knife.
Bert Mountain carrying his Alberta point.

BOOK REVIEW

BACK OF HISTORY

Revised Edition, by William Howells

This paperback book (the current bonus for a 2 year subscription to Natural History magazine) is another valuable addition to the library of those interested in the significance and interpretation of archaeological evidence of the life of man. It discusses in an informal and readable style the basic elements of man's social organization and its development from the time of the earliest hunters around the world to the rise of the Bronze and Iron Ages in Europe and the Middle East and the start of history as we know it. Additional evidence and examples are furnished by primitive societies still in existence in remote corners of the world. The functions of all aspects of culture are covered - from kinship to language to religion to the invention and diffusion of knowledge and skills. While not a thrilling or exciting book, it is one well worth reading to enlarge our knowledge and understanding of the study of mankind.

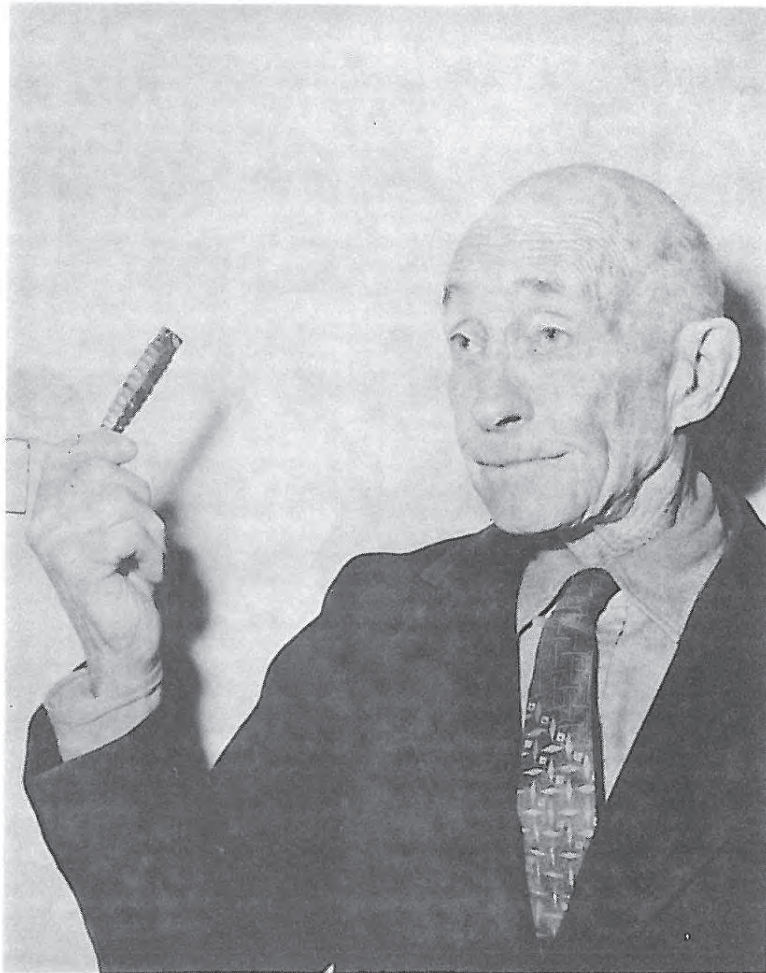
This book is aptly, however unintentionally, illustrated by that remarkable documentary film "The Sky Above - The Mud Below". This is the account of a French expedition's encounter with primitive and cannibalistic tribes while crossing the island of New Guinea. By boat and on foot the expedition entered a world thousands of years removed from today yet only a few air miles from the modern capitol of Hollandia - a fascinating and fantastic story.

A second current film is highly recommended to members old and young and their children. - "The Island of the Blue Dolphins" is a beautiful picture portraying the life of the remnants of the Chumash Indian tribe on the Santa Barbara Historical Society, the Museum of the Southwest, and 2 groups of the Pomo Indians, among others, with consequent regard for authenticity. Of particular interest is the daily challenge of existence in a fishing and food gathering economy, the basketry and crafts, the ingenuity and resourcefulness required for life itself in these circumstances.

By: Dorothy Goodwin

From - WYOMING STATE JOURNAL

Roger Budrow - Publisher
Lander, Wyoming



Pat Finley and one of his Yuma points.

In 1940 - 24 years ago - an engineer working on the Eden irrigation project between Lander and Rock Springs found an arrowhead which proved that Indians lived there about 7,500 years ago.

That was big news in archeological circles. Up until then, no evidence had been found that Indians had lived around here so early as that.

The discoverer, who recognized immediately the importance of what he had found, is O. M. Finley, better known as Pat, who is now 80 years old and living with his son Fred Finley and family on their East Fork ranch.

Pat Finley was from Scottsbluff, Neb. In 1940, he was project engineer for the Eden Valley irrigation project, beyond South Pass. He was supervising the development of the irrigation project which took water from the Little Sandy Creek to irrigate approximately 10,000 acres in the Eden and Farson areas.

"On a Sunday morning in the Spring of 1940, my wife and son Fred and I were hunting artifacts about 4 miles east of Eden and somewhat south," he recalls.

"There were no buildings in the area, but there was a good spring and the sand dunes started not far east of the spring.

"There had recently been some hard winds from the west, and we considered the time about right for artifact hunting along the western border of the dunes.

"East of the spring and perhaps one-quarter of a mile distant, I found several artifacts, some of which I considered to be Yuma culture. Before this, I had found two Yuma points southwest of Gering, Nebraska, when the Nebraska University expedition had quit work and was about to leave, so I was familiar with the culture. I later gave these points to Nebraska University.

"While I was examining the artifacts which I had picked up east of the spring, my wife and son caught up with me and we all began searching for more artifacts.

"I decided that there must be a campsite in the immediate vicinity, I was careful not to disturb the ground more than necessary to prove a campsite, but did do some careful scraping of the soil, enough to uncover a few more artifacts and some decalcified bone fragments."

These bones were those of prehistoric bison.

"Previously, I had found a broken Folsom point at the edge of the spring, but we did not find the campsite.

"I wrote to my friends, Harold Cook and his wife, of Agate, Nebraska, asking them to come and examine what I had found. After they had carefully dug or scraped for 2 days and had found several Yuma artifacts and some more bones, Mr. Cook decided that the site should be investigated by expert authorities and suggested Dr. Edgar Howard who, at that time, was doing similar work for the Museum of the University of Philadelphia.

"Mr. Howard was not free to come at that time but the University sent Linton Satterthwaite Jr. and Charles Bache, part of the Museum staff, to proceed with the work. Mrs. Bache accompanied the men and helped at the site.

"It was laid out in 1-meter squares. The following year Mr. Howard came out, studied the situation, and continued with careful excavation."

After the report of the existence of this Yuma site by Dr. Howard was printed in American Antiquity magazine, the site was visited by archeologists from all parts of the world.

Altogether, there were 79 squares excavated, each 1 meter by 1 meter. The work yielded 28 artifacts, 17 of which were spear points and 11 others, in addition to those previously picked up by the Finleys and Dr. Cook.

GLASS TRADE BEADS AT FORT LARAMIE

By
Robert A. Murray

The museum collections at Fort Laramie National Historic Site contain somewhere in excess of 25,000 trade beads. Of these, at least 99% are made of glass. Most of these beads were recovered from archeological excavations related to the restoration of the post trader's store.¹ Test trenching on the site of Fort John yielded an additional quantity,² and of course numerous surface finds of the more common types have been made.

The trader's store at Fort Laramie served as an active center for Indian trade from its opening in late 1849, until 1869, when treaty terms theoretically confined the neighboring tribes north of the North Platte River.³ The post commander, however, made provision for small parties to come to the post. Together with Indian scouts and the families of interpreters and other employees, this made for a limited continuation of trade through 1875.⁴ Fort John served as the prime Indian trading post of the region from its construction in 1841 until its occupation by the Army in 1849.⁵ Its predecessor, Fort William (not yet precisely located), was active from 1834 to 1841.⁶ One might say, then, that the beads in the Fort Laramie collections should be a fairly representative selection of the types traded and used in the area, 1834-1875, a relatively narrow time-span in archeological terms.

IDENTIFICATION AND CLASSIFICATION OF BEADS

Most ethnological works dealing with beads are primarily concerned with beadwork, the utilization of beads. While they give valuable information on Indian beadwork techniques, and detailed information on styles of beadwork, their identification of beads as such is at best imprecise.⁷ Modern archeology provides evidence that many of the more common bead types changed little in appearance over periods of several hundred years.⁸ During the Fort Laramie period, Venice had been for centuries a leader in bead production, but Britain, France and the Czech states were all producers of beads.⁹ No really satisfactory criteria for segregating beads of various points of origin are available. It does not seem impossible that the assembly of data from archeologically recovered beads, exhaustive research in historical sources, and chemical analyses of glass types and beads from known sources might one day enable students to identify many bead types much more precisely. Until that time, it does not seem profitable to set up an arbitrary typology. Rather it appears more useful to assemble descriptive data on beads from any given site, using such information as apparent manufacturing technique, size and nature of glass.

Basic glassworking techniques are widely described, and at the same time appear to give distinctive characteristics to the beads produced. On this basis, the beads in the Fort Laramie collections might be divided into:

- those made from drawn glass tubing
- those made by winding glass around a mandrel
- those made of pressed glass
- those made of blown glass

Fort Laramie beads will be discussed under these basic headings, with supplementary observations on modifications of these forms, and on size ranges and colors present.

TUBULAR BEADS

The making of tubing for glass beads is widely described, and appears to vary little from place to place and from time to time.¹⁰ A mass of fluid glass, picked up on a pipe, had a central cavity formed by blowing. With pressure maintained to keep the cavity from collapsing, the mass could be manipulated with tools to produce the desired cross-section. Then, at a certain heat, it was seized with tongs by two workmen and drawn rapidly to a length of as much as a hundred and fifty feet (figure A, plate I). The resultant tube preserved the interior and exterior cross-sectional shape of the original mass, and tapered gradually from the ends toward the center.¹¹

The workmen then broke the long tube into sections from two to two-and-one-half feet long. These sections were sorted by women and children for approximate diameter and broken into bead-lengths by running them against a simple measuring device and breaking them over the edge of a fixed chisel with a blunt tool.¹² These simple sections of tubing served as beads without further alteration. (Number 9098, Plate II) An individual bead of this type appears cylindrical, but actually has a slight taper. Some samples are closely sorted for length and diameter, others vary widely. One specimen of tubular glass beads has been altered by coating them with a white paint (Number 8101, Plate II).

At Fort Laramie, tubular beads with a circular inside cross-section and a hexagonal outside cross-section are much more common than those of cylindrical appearance (Number 8102, Plate II). Alterations of this type tubular bead are common. A single sample (not illustrated) appears to have had the corners rounded by tumbling. A number of others have been ground (as evidenced by striations) with additional facets, usually one or two sets (Numbers 8110, 8109, and 8112, Plate II).

The "common beads" used for beadwork (and most numerous in finds at Fort Laramie and elsewhere) were made from short sections of drawn glass tubing. These sections were mixed with sand and wood-ashes or with graphite and plaster. The glassworkers placed the mixture in a pan, and brought it to sufficient heat to soften the glass. When stirred, the ends of the tubes rounded off through the combined effects of stirring and the surface tension of the near fluid glass.¹³ In some factories a rotating vessel of iron in a specially made furnace accomplished in the same result (Figure B, Plate I). In either case, the packing mixture kept the beads from adhering to one another, and kept the center cavities from collapsing.¹⁴ The resultant bead has the shape of a flattened spheroid, with a smooth-edged center perforation. The taper of the tubing from which the basic sections came must have given a rather continuous graduation of diameter within a given batch. Variation in

the accuracy of breaking off the sections results in some variation in length, and much variation in the nearness to parallel of the flattened ends. (Assorted sample, Plate II, and Number 3311, Plate II).

Beadwork investigators make much of two sizes of beads, which they refer to as "seed beads" and "pony beads".¹⁵ The mass of common beads in the Fort Laramie collections does not seem to bear out the existence of two size-ranges as distinct manufacturing products. Taken without regard to color or character of glass, common beads at Fort Laramie progress steadily from .04" diameter to .23" diameter! Considering different individual groups of given color and glass type, found as groups, one finds such size ranges within a group as:

.04-.05"
.05-.06"
.05-.07"
.06" (very uniform)
.06-.07"
.06-.08"
.07-.08"
.08-.09"
.08-.10"
.09-.10"
.10-.16"
.11-.14"
.12-.15"
.12-.18"
.13-.14"
.13-.16"
.14-.16"
.14-.15"
.15-.17"
.20-.24"
.21-.23"

Since a given color and kind of glass may be represented over a number of these brackets, it appears possible that sizing was done by some convenient method, such as screening of the assorted sizes produced from the processed tube sections. Beadwork specialists indicate further sorting for uniformity prior to use by the Indian women doing beadwork.¹⁶ Beads smaller than .06" have such a fine perforation that they are difficult to string on either thread or sinew. Beads larger than about .16" appear to yield undesirable coarseness of design. Within these general limits, though, there are a number of usable size ranges.

The Fort Laramie collections contain common beads in a wide variety of color, including:

clear, transparent	dark green transparent
slightly milky, transparent	dark green opaque
uncolored translucent	deep green opaque, with
white translucent	iridescent surface
white opaque	yellow transparent
light blue translucent	yellow translucent
light blue opaque	deep yellow translucent

medium blue translucent	dark yellow opaque
dark blue transparent	yellow orange transparent
dark blue opaque	bright orange opaque
blue gray translucent	pale pink tinted transparent
light green transparent	pink opaque
medium green transparent	red transparent
light green translucent	bronze color opaque, iridescent
light green opaque	black opaque

Common beads further processed by grinding on random facets have been found at Fort Laramie, in both lilac-transparent, and black-opaque glass (Number 8122, Plate II).

An interesting variation of the common bead is drawn from a composite tubing, yielding beads with a white-opaque core and a red-transparent exterior. These are plentiful at Fort Laramie, in all common size ranges (Number 8090, Plate II). In addition, one notable specimen is at hand (Number 8084, Plate II). The writer has examined much Oglala Sioux beadwork of the 1860's to 1880's, in which the small sizes of these red-and white beads were present. Its use as a child's necklace-bead has been noted by Ewers. ¹⁷

A final variant of the common bead at Fort Laramie is one made of opaque-white glass, coated with a pearlescent lacquer. This occurs in three size-ranges, .04"-.05", and .09"-.10", and .13"-.16".

MANDREL-WOUND BEADS

These beads are also referred to as "wire-wound". The process involves heating a rod of glass to the melting point, and drawing out a thin thread of glass from it, catching the thread and winding it in spiral fashion on a rotating, tapered iron mandrel. ¹⁸ After the glass hardens, it can be slipped off the mandrel. This technique facilitates the production of larger, thicker-walled beads of more variable design than those of tubing. The making of each individual bead is under the control of the workman, and such beads are thus subject to more variations in workmanship.

Mandrel wound beads are easily identified by their visible spiral grain-structure. The simplest of these are rather poorly made, consisting of a single turn of a coarse rod around the mandrel (Numbers 8060, 8061, and 8062, Plate III). These may have been made in rapid succession, a whole string of them prepared on the same mandrel, since some samples appear to have been broken off at their small ends, and several beads will occasionally be found attached to one another. A given group will sometimes show evidence of a continuous mandrel taper (Number 8062, Plate III).

Some of these hastily-wound beads were further processed by grinding on facets (Number 8118, Plate III).

One sample of single-turn wound bead is coated with coral-colored lacquer (Number 8137, Plate III). It may be one of the type mentioned by Orchard as having been made before the availability of coral-colored glass. ¹⁹

Many of the small red, white and blue beads of this type are very neatly made of many turns of a fine strand of glass, (Numbers 8068, 8071, 8074, and 8078, Plate III).

All of the mandrel-wound beads are of moderate to large size, as will be seen in Plate III. Both their general size range, and observation of these types of ethnological specimens indicates their main use was for necklaces, charms and other specialized decorative items. Mandrel-wound beads with modifications appear in small numbers. One sample, of near-turquoise colored opaque glass, appears to have been wound in conventional fashion, then manipulated while still hot to obtain irregular facets (Number 8097, Plate III). Number 8080, Plate III, is a mandrel-wound bead of very dark red opaque glass, further processed by inlaying a rod of white glass in a spiral for three full turns around it.

The most complex mandrel-wound bead at Fort Laramie is of red transparent glass, with a spiral inlay consisting of a twisted cane of blue and white opaque glass making three full turns (Number 8081, Plate III).

PRESSED GLASS BEADS

Only a few pressed glass beads are present at Fort Laramie. All have the mold-parting mark characteristic of pressed glass items (Numbers 8125, 8138, 8167, and 8189, Plate IV).

BLOWN GLASS BEADS

One sample of this method of bead-making has been found at Fort Laramie. These beads (Number 8126, Plate IV) appear to have been blown from a tubing placed in a mold, producing a connected "chain" of beads, broken apart after being removed from the mold. The uniformity of both the pressed glass and blown glass beads suggests machine production, and might place them near the end of the period.

It appears noteworthy that none of the complex inlaid polychrome beads such as the Crows and Blackfoot tribes favored (20) have been found at Fort Laramie.

It is hoped that this paper will stimulate closer examination and more precise recording of bead finds by both professionals and amateurs.

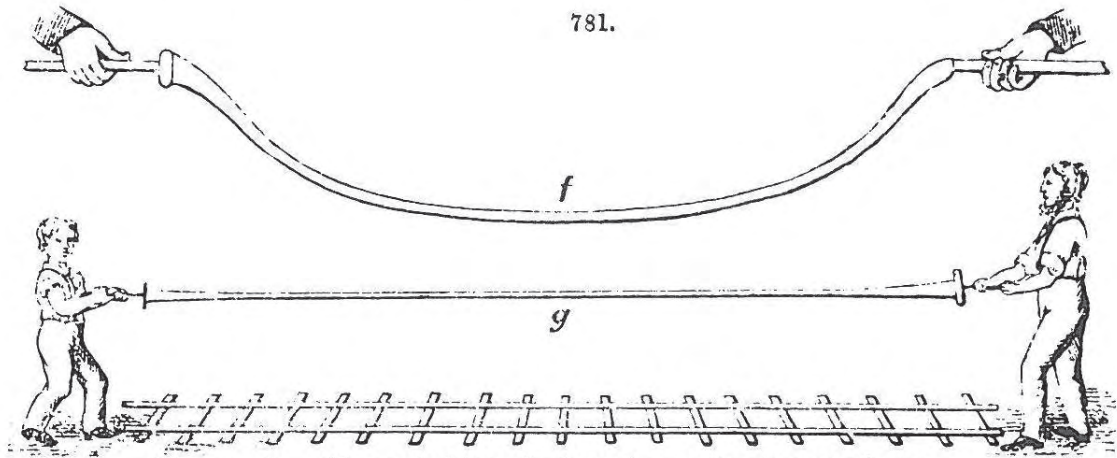


Figure A. Glass tubing being drawn by two workmen
(from Spons' Encyclopedia of the Industrial Arts,
Manufactures, and Commercial Products, p. 1072)

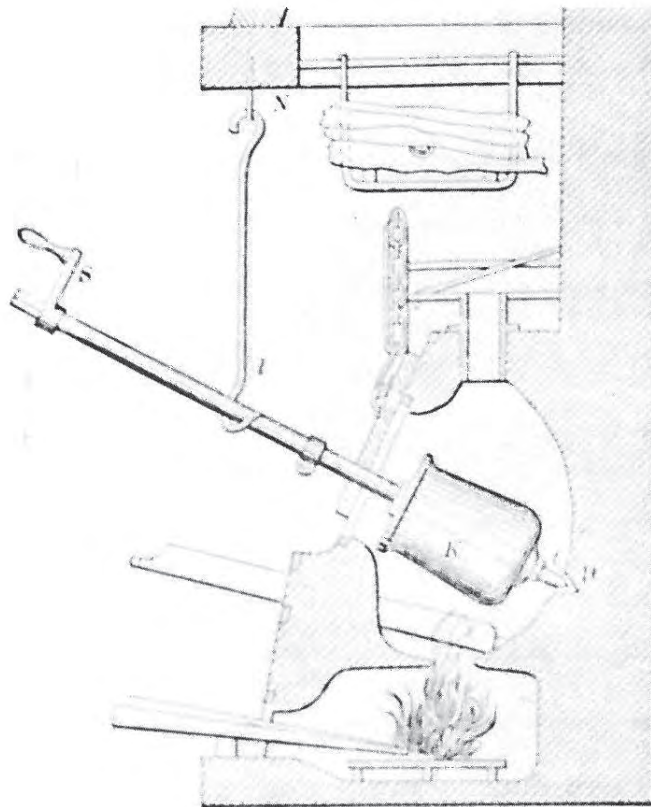
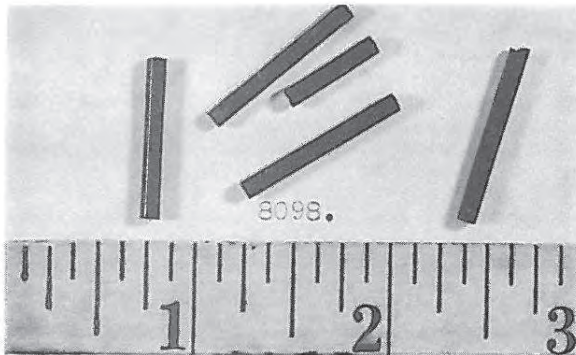


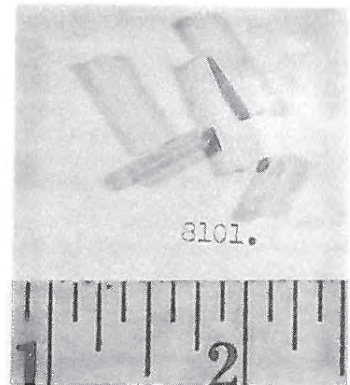
Figure B. A furnace used for finishing common beads.
(from Knight's American Mechanical Dictionary, p. 254)

GLASS TRADE BEADS AT FORT LARAMIE

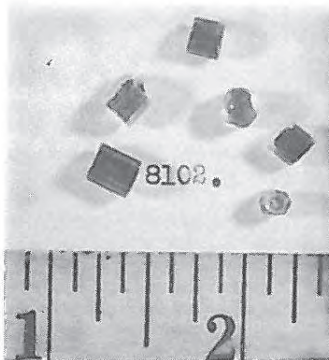
Robert A. Murray



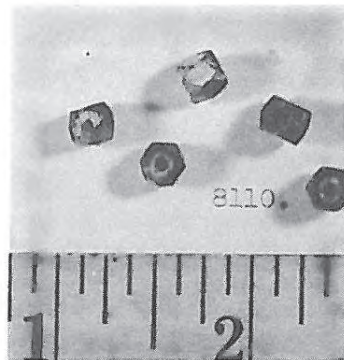
8098 drawn glass tube,
deep red translucent



8101 drawn glass tube,
white paint coated



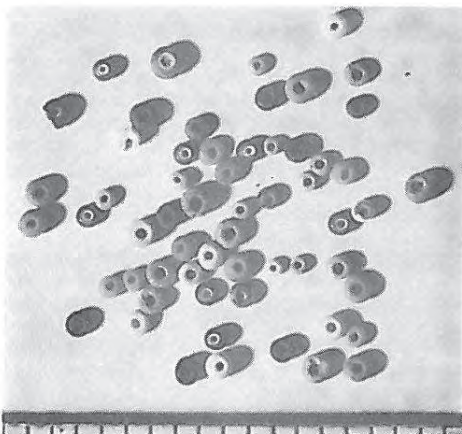
8102 hexagonal
tubing, clear



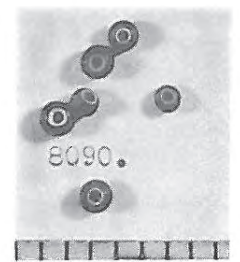
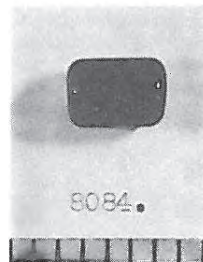
8110 hex. tube,
ground facets, blue



8109 hex. tube,
ground facets, blue
8112 same, green



Assorted common beads
3311 irregular, common, white



8084 & 8090, red transparent
exterior, white-opaque interior



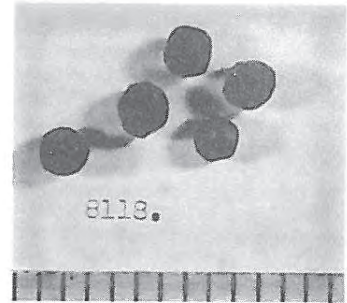
8122 common black opaque
with random-ground facets

GLASS TRADE BEADS AT FORT LARAMIE

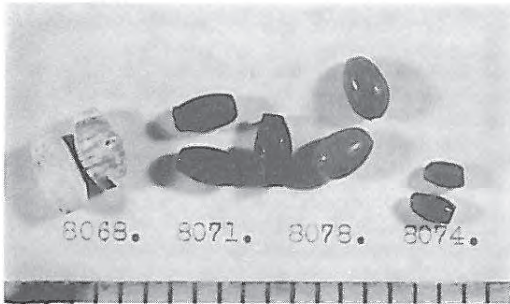
Robert A. Murray



8060 green transparent
8061 clear transparent
8062 amber transparent
Crude single-turn beads,
some surface-scale from
long period underground



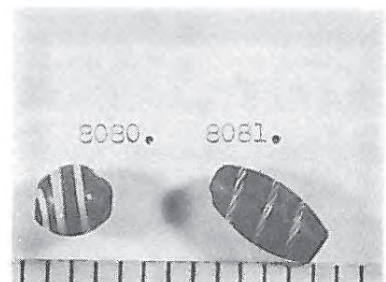
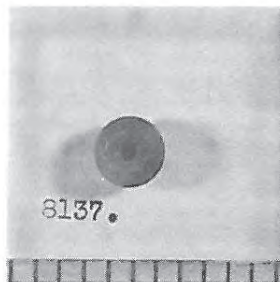
8118 crude single-turn
wound beads, deep-green
transparent, random facets
ground on.



8068 white opaque with
some scale
8071 deep red translucent
8078 opaque light blue.
8074 transparent red

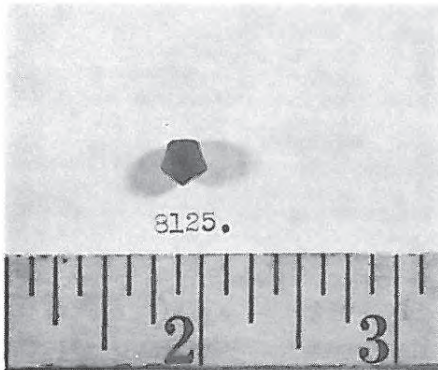
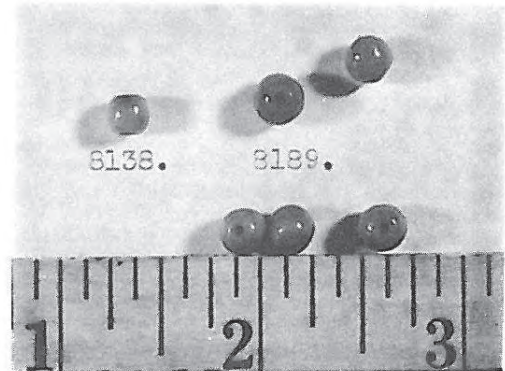


8075 light-blue opaque
8077 very light-blue opaque



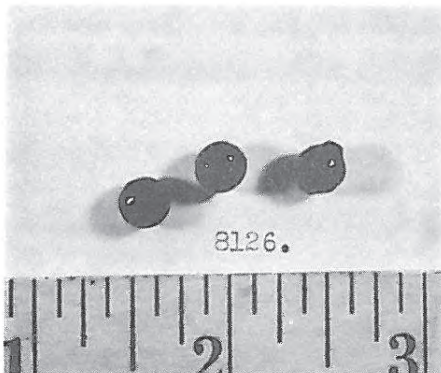
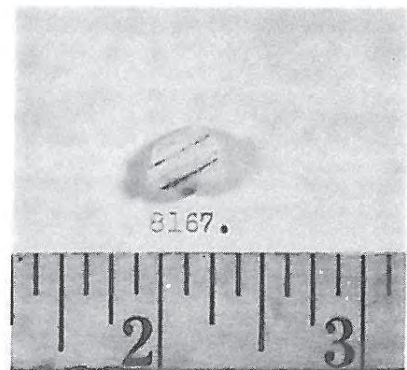
8079 turquoise-green opaque, **pressed-facets**
8137 single-turn wound, white glass with coral-lacquer
8080 deep red opaque, with white inlay
8081 red transparent, with blue-and-white inlay

8138 pressed-glass,
coral colored
8189 pressed-glass,
light-blue opaque



8125 pressed-glass, red opaque

8167 half of a pressed-glass,
white-opaque bead, with raised
equatorial-belt



8126 blown-glass, black-opaque,
regular facets, appears to be
blown-in-mold

GLASS TRADE BEADS AT FORT LARAMIE

By: Robert A. Murray

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14. Ibid.
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Lyford, op. cit., p. 56-58.
16. Lyford, op. cit., p. 57.
17. Ewers, op. cit., p. 33.
18. Orchard, op. cit., p. 82.
19. Orchard, op. cit., p. 86.
20. Orchard, op. cit., p. 89, Ewers, op. cit., p. 33.

S U R V I V A L

By: Helen F. Bryant

You are 'way out there somewhere on a search for the antiquities. Things have - or maybe they haven't - been going pretty all day when - whoops! -- there you are out in the middle of nowhere, stranded, the nearest assistance any distance in any direction. Now what? Well, let's start walking -- NO!

With the possible exception of food, your normally-equipped vehicle has everything you need to survive and await help for days if you will just stay put. How come? Because your basic needs are relatively simple:

- (1) Shelter - supplied by the cab or body of your unit.
- (2) Water and a drinking cup - water from your radiator, cup can be your fuel strainer bowl or a hubcap. If the water is rusty or dirty, it can be strained through cloth if it is contaminated by anti-freeze - well, let's just hope you thought of that before you left home and carried an adequate supply of water, or that there is enough snow or a handy stream.
- (3) Stove and matches - for the stove, why, your tires, of course, set ablaze with gas siphoned from your gas tank with the windshield wiper hose or the radiator hose. No matches? Well, light a piece of paper with your cigarette lighter (car or personal). A tire will burn for four to six hours. Better start with the spare, somebody just might come along and give you a tow - there's lots of antiquity hunters and rockhounds running all over these parts these days, you know.
- (4) Blankets - your upholstery and seat covers. Cut them free and to size with window or instrument gauge glass. Even the foam rubber can be used to protect your feet.
- (5) First aid supplies - tourniquets from windshield wiper hoses; sunburn and windburn salve from crankcase oil.
- (6) Signal flares - tires or oil in a hubcap can be burned and send billowing clouds of black smoke skyward; a rear view mirror that can flash brilliant sunrays for many miles; and unscrewed sealed beam pointed in any direction at night as a signal - or - use that horn.

Another little tip on shelter - unbolt your hood, use a hubcap, air cleaner, or the shovel you might have remembered to take along, to pile the earth around the hood and build a wind screen.

Trapped in the snow? Make a boot from an inner tube, laced with wires from the electrical system, to protect your feet. That food would be tastier nice and hot? Use the dipstick and heat away, over that tire fire.

We're all too canny and experienced to be so totally unprepared? Fine. The "other guy" who reads this might return to hunt another day.

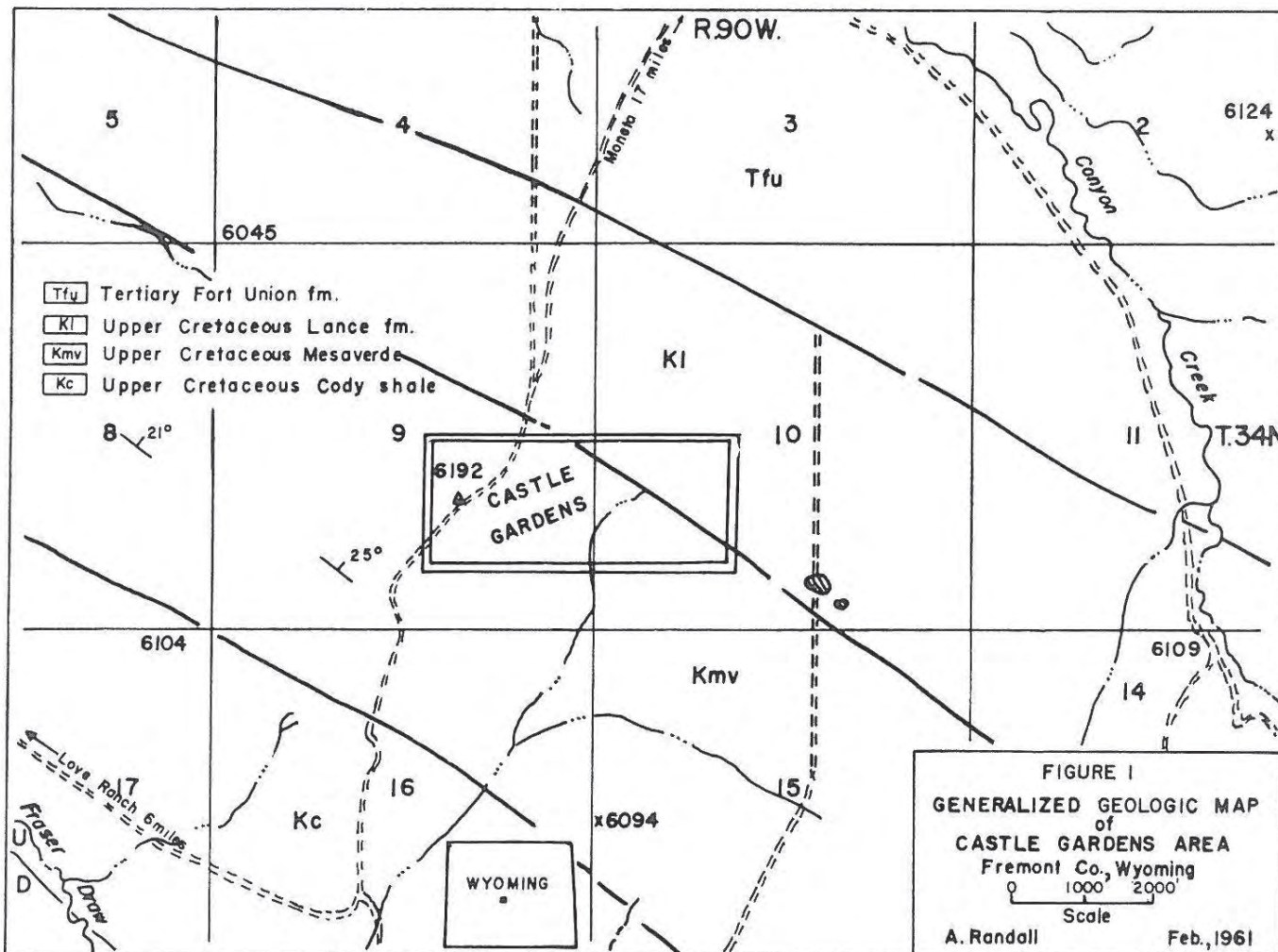
PICTOGRAPHS AND PETROGLYPHS

of the

CASTLE GARDENS AREA,
Fremont County, Wyoming

Reprinted with the permission of
Arthur G. Randall
and the

Wyoming Geological Association
Symposium on Late Cretaceous Rocks
Sixteenth Annual Field Conference



By

Arthur G. Randall

INTRODUCTION

Location of Area

The Indian pictographs and petroglyphs of the Castle Gardens are located nearly 18 miles south of the town of Moneta in sec. 9 and 10, T. 34 N., R. 90 W., Fremont County, Wyoming (see scale). The area is noted as the Indian Beer Gardens on the General Land Office Plat which was surveyed in May, 1893.

The writer has used and quoted the work of E. B. Renaud freely.

GENERAL CONSIDERATIONS

Definitions

Pictograph. - Pictograph is a sort of mongrel word, linguistically speaking, as the first part of the compound comes from Latin, "Pictura", a picture; while the second part is of Greek origin, "Graphos", from the verb, "graphein", to write. Hence, we have "picture writing" as the essential meaning and this justifies the layman calling pictographs "Indian writing" (Renaud, 1936, p. 3). Renaud gave the following more comprehensive definitions: "A pictograph is a sign or figure standing for an idea, representing an object, animal or person, or recording a fact. It may be drawn, painted, carved, or made in any other graphic manner. It may be produced on stone, wood, skin, or any other substance. It may be a conventional mark, a mnemonic sign, a symbol, or a more or less realistic representation."

Petroglyph. - Petroglyph is another word of mixed origin. "Petra" in Latin means rock; "Glupos" comes from the Greek verb, "gluphein", to carve. The dictionary states that a petroglyph is a carving on rock, especially a prehistoric one.

Simply, the word, pictograph, shall be reserved for drawn or painted symbols, and petroglyphs are carved, pecked, or incised figures or symbols.

Petroglyphs are more abundant than pictographs in the Castle Gardens area. Pictographs will be preserved only if they are located in sheltered places where their pigment will be protected against the natural elements.

Criteria for Dating

The problem of dating petroglyphs and pictographs is difficult. There is no safe key to their correct interpretation, nor is there an accurate means of dating them. However, certain criteria may give help in establishing a relative chronology for a more or less extensive district (Renaud, 1936, p. 5-8).

Technique. - First of all, through the observation of a particular number of figures or group of petroglyphs at the same site or at neighboring sites, it has been determined that some were made of shallow pecked dots forming irregular lines and seldom intelligible designs; usually these are so old that they have been partly erased by the elements. More frequent are the figures or symbols made of broad and shallow pecked lines; still others finely done, the contour lines being narrower, deeper, and much more regular. Finally, a few are incised or engraved. These variations of techniques and execution, when associated with other characteristics, are suggestive of

various periods with progressive improvement means and result.

Patination. - A very important criterion of age for a petroglyph or pictograph is the respective degree of patination or weathering. It has been observed that figures made of shallow, broad, irregular pecking usually are darker and more polished; they show almost the same color and general appearance as the natural surface of the "Dakota" sandstone or the basalt cliff on which they are traced. This is clearly indicative of antiquity. Those more finely pecked are of lighter color and more dull, being less weathered and, therefore, of younger age. Finally, some are practically unpatinated and look rather fresh and so may be considered of recent work.

Style. - Usually when petroglyphs have been judged old on the basis of technique and degree of patination, they consist of simple signs or symbols, dots, circles, straight or wavy lines. The younger ones are more or less realistic representations. Thus there is an important difference in style.

Furthermore, these observations of differences in technique, style, and degree of patination, when associated at one site or in a restricted district, may serve as a guide in a broad grouping of the petroglyphs in various successive periods. For instance if a petroglyph represents a horse with a rider it could be no older than 1680 or 1690 (it is believed by the best informed scientists that the horse began to appear in the Western Plains at the end of the 17th century and became frequently used by the Plains Indians in the first half of the 18th century).

Superimposition. - One of the safest keys for recognizing the respective periods of the different styles and techniques is the study of superimposition of two or more figures. It is quite evident that one cutting over another is more recent than the one under it. In a few instances two, three, and even four figures showing differences in patination, style, and execution, have been recognized in superimposition and thus their respective age can be determined. They later serve as guides in assigning isolated figures of the same site or district to similar periods.

Comparison. - When one visits and studies the petroglyphs and pictographs of Wyoming, systematic comparison should be kept constantly in mind. According to (Renaud, 1936) there is a striking similarity between the simplified and conventional figures painted in the caves and rockshelters of the Iberian Peninsula and the petroglyphs on the canyon walls and boulders of our sites on the High Western Plains, whether from Wyoming, Colorado, South Dakota, or New Mexico.

DESCRIPTION OF THE PETROGLYPHS AND PICTOGRAPHS

All of the figures in the Castle Gardens area have been classified into four types (Renaud, 1936). All of the figures are incised, some deeply, others lightly, a certain number show more or less clear evidence of paint.

First type

David Love, while still a student at the University of Wyoming, described the Castle Gardens figures and served as a willing guide and assistant for Mr. Renaud in 1931. Love's report concerns the first and smallest category which comprises the simplest drawings. Love states that: "Deeply incised parallel lines, generally in groups of from three to eight, drawn vertically on the cliff face are common. They vary in length from a few inches to several feet and may be tool grooves. Simple drawings of large arrows, natural size bear tracks, trees, and tipis can be observed.

The trees drawn are similar to the pines growing in the neighborhood. There is one drawing of a plant greatly resembling corn. A few signs common to many of the American Indian tribes are found on the cliffs. The symbol for rain consisting of a horizontal line with many vertical lines extending downward from it, the zig-zag mark denoting lightning, and the wavy line indicating water (or a snake) are associated or grouped together."

Second type

The second class of petroglyphs is thus described by Dave Love: "The designs of this small group are usually bordered by straight lines on two sides or by rectangles. Alternating and zig-zag lines are the chief features of those designs bordered only by two straight lines while the rectangles contain crosses, squares, triangles, "ladders" and zig-zag lines in varying combinations. In a number of cases a square was drawn, of which the outside was covered with close and regularly spaced rays and the inside contained two crosses surrounded by alternating bands of wavy and parallel lines. A figure with the same outline as the German "Iron Cross" occurs in several places." This series is truly geometric in form and constitute a clear contrast with the first group described.

Third type

This type is the most striking class of petroglyphs that occur on the cliffs in the Castle Gardens. These consist of figures inscribed into circles so that they form regular shields. Before starting his drawing, the prehistoric Indian smoothed carefully the surface of the rock by rubbing the soft sandstone by means of a flat or slightly convex one-hand mano-like implement. Several of these tools have been found at the base of the sandstone cliffs.

These engraved and painted discs are found everywhere and as many as nine grouped close together. They average 40-50 centimeters in diameter although a few are smaller. On many the colors are still visible. The colors used at this site were strong green, pale orange, and purplish red and in one sandstone, white. The red and orange-yellow colors were probably derived from the deposits of hematites and limonite in the area.

In general the circles are filled with one figure. In one it is a warrior with large arrows or spears pointing down, the feathers painted white; in another it is a big water turtle in three colors; which in the past few years has been chipped out of the cliff and removed); and still another an elk or deer is pictured.

Fourth type

The fourth class of figures are found widely scattered on the cliffs of the district. They are numerous and varied, always incised and often deeply, never painted and usually naturalistic in intent, although the drawings are quire commonly reduced to a few suggestive lines. They represent people and animals. The people fall into four main types. The first and most common type has pointed shoulders, a round featureless head and face, sometimes eyes and mouth are indicated, neck, arms, and legs are rectangular and without proper width. The second type is in every way similar to the first type, but the shoulders are square, the neck broad and the hair less rarely drawn. The third and smaller group comprises a few figures, much less stiff than those of the

*Editor's Note: The stone containing the turtle was forcibly rescued by the late Mr. L. C. Bishop and now may be seen in the State Museum in Cheyenne.

the previous classes; the garment is longer; these figures also seem to be dancing; and the sexual parts never show. There are only a few examples of the fourth group, that of warriors with circular shields and long spears.

GEOLOGY

The Castle Gardens are located adjacent to the contact of the Upper Cretaceous Lance and Mesaverde formations. These rocks dip northwest on the average of 25 degrees toward the axis of the Wind River Basin. Dave Love describes this picturesque spot and at the same time explains the origin of its name: "In Central Wyoming, over 20 miles south of Moneta, the jagged edges of an eroded anticline are projected sharply above the surrounding plain. Thus over an area about 6 miles long by 1 mile wide there is a series of vertical cliff-faces, the long axis of which runs east and west and whose perpendicular faces front to the south. Since the wind has carved many of these vividly colored sandstone rocks into fantastic shapes and sizes the landscape is dotted here and there with green pines, cedars and berry bushes, the effect is one of some medieval castles surrounded by quaint gardens-hence the name, "Castle Gardens."

Most of the "castles" are formed within the white, massive, cross-bedded sandstone of the upper Mesaverde formation. This sandstone probably correlates with the Teapot sandstone member of the Mesaverde formation in the Powder River Basin.

AGE

All of the pictographs of Castle Gardens are not of the same age; they are eroded to different degrees by the wind and rain; they are of different styles; and although their general technique is similar, some are very simply and deeply incised, whereas others are more complex and lightly traced.

However, whatever can be made out of grouped resemblances and contrasting differences, it seems reasonable to state that these petroglyphs are very likely quite old, in fact prehistoric, that is to say dating previous to any contact with the whites. Observations in the Castle Garden area show that the pictographs and petroglyphs are entirely lacking of the horse; and that the figures due to erosion are so highly placed that they cannot be reached, a condition which could hardly exist when they were drawn. All these observations suggest at least a fair antiquity, such as several centuries, for the petroglyphs of Central Wyoming.

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PETROGLYPHS OF CASTLE

GARDENS

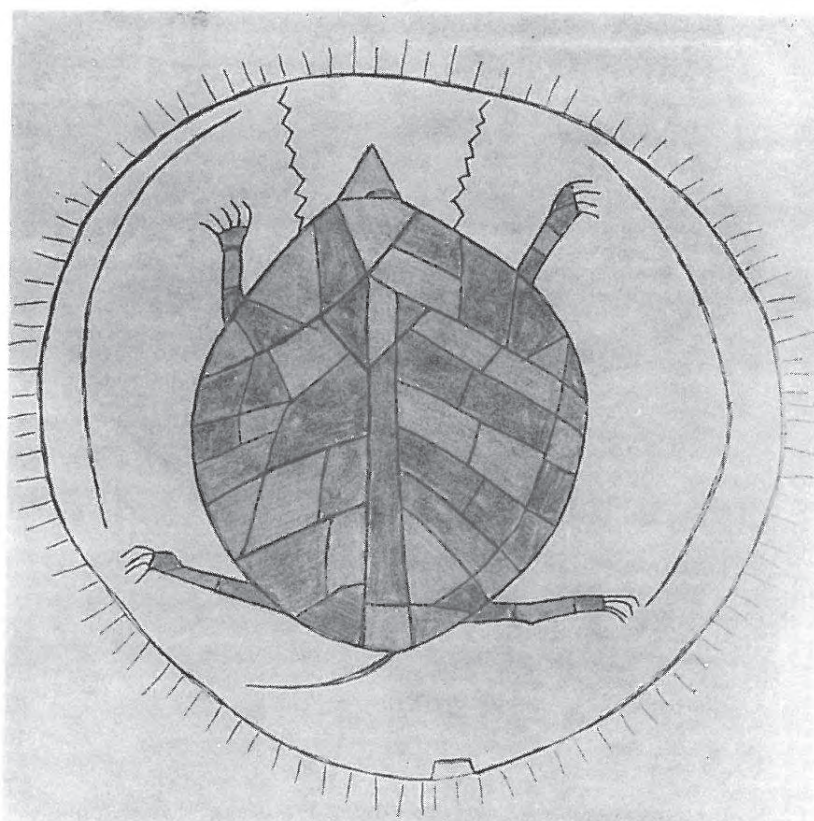
by

Ted. C. Sowers, State Supervisor

Wyoming Archaeological Survey

Sponsored by University of Wyoming
Works Progress Administration

March 1941



FRONTISPIECE.

The masterpiece of the collection is the disk bearing "The Great Turtle". It is 16.5314 inches (42 cms.) across and also with short outside rays, and in good state of preservation. The figure is very neatly engraved and carefully colored in three shades, the same as the other drawings, green, orange-yellow and purplish-red. No instance was observed of the pigment ever running over the line from the division which it was intended to cover. There are 60 such sections, 46 on the elliptical carapace, 13 for the legs and one for the triangular head. The ensemble forms a very attractive polychrome mosaic, with the four legs similarly colored but not rigidly symmetrical in design. The tail in characteristic position and an isolated curve on either side of the turtle complete the design and fill up the open space together with two zig-zag lines, lightning-like, connecting the animal with the upper part of the framing circle.

Dr. Renaud has suggested the term "Chromopetroglyph" to designate a petroglyph or figure engraved or incised on rock and to which pigment or color has been added to complete the picture.

INTRODUCTION.

The site of Castle Gardens is located fifteen miles south of Moneta, Wyoming. The land is owned by Mrs. John Love who was kind enough to permit photographing the figures and also loan an original photograph of the Great Turtle.

Castle Gardens is an extensive site; six miles in length and one mile in width. All petroglyphs were engraved on sandstone cliffs that rise from ten to one hundred feet in height.

The site was photographed by Mr. Jewell B. Brummett, Project photographer, in November, 1940. Fifty plates are contained in this report.

To the author's knowledge, Castle Gardens is the largest and finest petroglyph site in Central Wyoming and should be preserved for the future as a park or monument.

Report on Castle Gardens by Dr. E. B. Renaud

University of Denver

CASTLE GARDENS DISTRICT

Acting upon information given me in the early days of the 1931 season by Dr. S. H. Knight, professor of Geology at the University of Wyoming, and one of his students, I made a first reconnaissance south of Moneta with chief field assistant Paul Beau-bien on July 27, 1931. Unfortunately, neither time nor funds permitted then to undertake a serious study of the Castle Gardens petroglyphs. It was due to the financial help of "Science News Service" of Washington that, between August 19 and 24, assisted by Mr. Jean M.F. Dubois, I could return to Central Wyoming and examine carefully the most important pictographs of the group. At Moneta, a very small town 79 miles west of Casper, we left the highway and turned south, following a prairie trail for 15 miles. We were welcomed by Mr. and Mrs. Love and their family and we thankfully accepted the generous hospitality of their ranch. One of their sons, David Love, a student at the University of Wyoming, served as a willing guide and assistant for the time we studied the petroglyphs. Later, in order to complete my field notes, he prepared a report which I will quote freely. The location where the more numerous Indian figures are to be found is 8 miles east from the Love ranch, accessible only by rough and uncertain trails. David Love describes thus this picturesque spot and at the same time explains the origin of its name: "In Central Wyoming, over 20 miles south of Moneta, the jagged edges of an eroded anticline are projected sharply above the surrounding plain. Thus over an area about 6 miles long by 1 mile wide there is a series of vertical cliff-faces, the long axis of which runs east and west and whose perpendicular faces front to the south. Since the wind has carved many of these vividly colored sandstone rocks into fantastic shapes and the landscape is dotted here and there with green pines, cedars and berry bushes, the effect is of some medieval castles surrounded by quaint gardens - hence the name "Castle Gardens".

"Upon these cliffs, ranging from ten to one hundred feet in height, many well preserved and artistic petroglyphs are found. These are scattered throughout the Gardens but are more numerous at the eastern end". This is the only portion of this vast site, WR 72, (W 144), we were able to study".

The Archaeological Survey of the High Western Plains.
Eight Report.
Pictographs and Petroglyphs of the High Western Plains
by Dr. E. B. Renaud, Director of the Survey.
University of Denver, Department of Anthropology.
Denver, Colorado. September, 1936.
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INFORMATION ON TURTLES FOUND AT CASTLE GARDENS

Another strange and unexpected aspect of these beautiful pictographs was the finding of several figures of a large water-turtle in this dry desert-like region where such an animal is totally unknown. The presence of long tails and legs and triangular heads, caused them to be recognized at the Colorado Museum as the snapping turtle. This big species, reaching 120 pounds in weight, must have impressed the mind of the prehistoric Indians more than the small common variety of turtle. It is known that the turtle is found in the mythology of modern tribes and often symbolizes fecundity. This particular kind, just mentioned, frequents the waters of the Mississippi and Missouri Rivers. But these are far east from Wyoming. However, a week or so later, while visiting the mounds and fortified prehistoric villages on the high bluffs along the Missouri, I heard of a large turtle effigy, a rock mosaic made of 83 stones, a few miles from Pierre, capitol of South Dakota. The outline is quite similar to that of the turtles of the Wyoming pictographs, although the carapace is not represented with as many details as could be brought out by engraving and painting. It seems to refer to the same type of turtle. All this naturally suggests that the prehistoric artists decorated the Wyoming cliffs with repeated representation of a large turtle, possibly their totem or a sacred animal, which they had known when they lived along the Missouri River in the plains and valleys far to the east of their habitat. It may point out a possible westward migration of a tribe drifting from South Dakota to Wyoming in centuries past.

The masterpiece of the collection is the disk bearing "The Great Turtle". It is 16.5314 inches (42 cms.) across and also with short outside rays, and in good state of preservation, (Frontispiece). The figure is very neatly engraved and carefully colored in three shades, the same as the other drawings, green, orange-yellow and purplish-red. No instance was observed of the pigment ever running over the line from the division which it was intended to cover. There are 60 such sections, 46 on the elliptical carapace, 13 for the legs and one for the triangular head. The ensemble forms a very attractive polychrome mosaic, with the four legs similarly colored but not rigidly symmetrical in design. The tail in characteristic position and an isolated curve on either side of the turtle complete the design and fill up the open space together with two zig-zag lines, lightning-like, connecting the animal with the upper part of the framing circle.

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AGE

All the pictographs of Castle Gardens are not of the same age; they are of different styles, and although their general technique is the same, some are very simple and deeply incised, whereas others are more complex and lightly traced; a certain number of them are colored but the majority of the petroglyphs are only engraved on the cliffs. Only a careful study of drawings with superimposition of two or three different styles could tell exactly the chronological sequence of the figures.

But, whatever can be made out of grouped resemblances and contrasting differences, it seems reasonable to state that these petroglyphs are very likely quite old, in fact prehistoric, that is to say dating previous to any contact with the whites. First, Arapahoe and Shoshoni Indians now living on Reservations in Western Wyoming, deny any knowledge concerning meaning and makers of these pictographs. Second, we saw a group of four circles or painted shields, one of which (Plate 10) was badly damaged by the constant rubbing of the branches of a pine tree. Mr. Love, for that reason, cut down the tree some fifteen years ago. The annual rings of this pine, carefully counted, numbered 150. Besides, it took that tree a good many years to grow up and extend branches high and long enough to reach the upper circle and deeply indent the cliff. So we may safely say that the pictographs could not have been incised and painted later than two centuries ago and likely much earlier. Moreover, nowhere in that district do we see, either in the figures inscribed in circles, or in other and possibly more recent series of pictographs, any representation of the horse, and most scientists believe that the horse was probably unknown in the region before about 1680. Nowhere either do we see any trace of contact or influence recalling white civilization, any pictures of white man, gun, etc., nor were glass beads, metal objects, and the like found closely associated with the petroglyphs. These pictographs can therefore be ascribed to a true prehistoric period and relative antiquity, on the faith of these negative, but serious evidences. And the argument holds good for the various classes of drawings, regardless of their respective ages. We must state also that deep fissures sometimes cut a circle and certainly the Indian artist would have selected another part of the cliff if that crack which now disfigures the picture had existed then. In a couple of instances part of the figure, a disk in one example, has been destroyed by the subsequent erosion of the rock on which it is engraved. In other cases the pictographs are now so highly placed that they cannot be reached, a condition which could hardly exist when they were drawn, and likely to be due to the crumbling down of rocks then standing at the foot of the cliffs and at present eroded away. All of these observations suggest at least a fair antiquity, such as several centuries, for the petroglyphs of Central Wyoming.

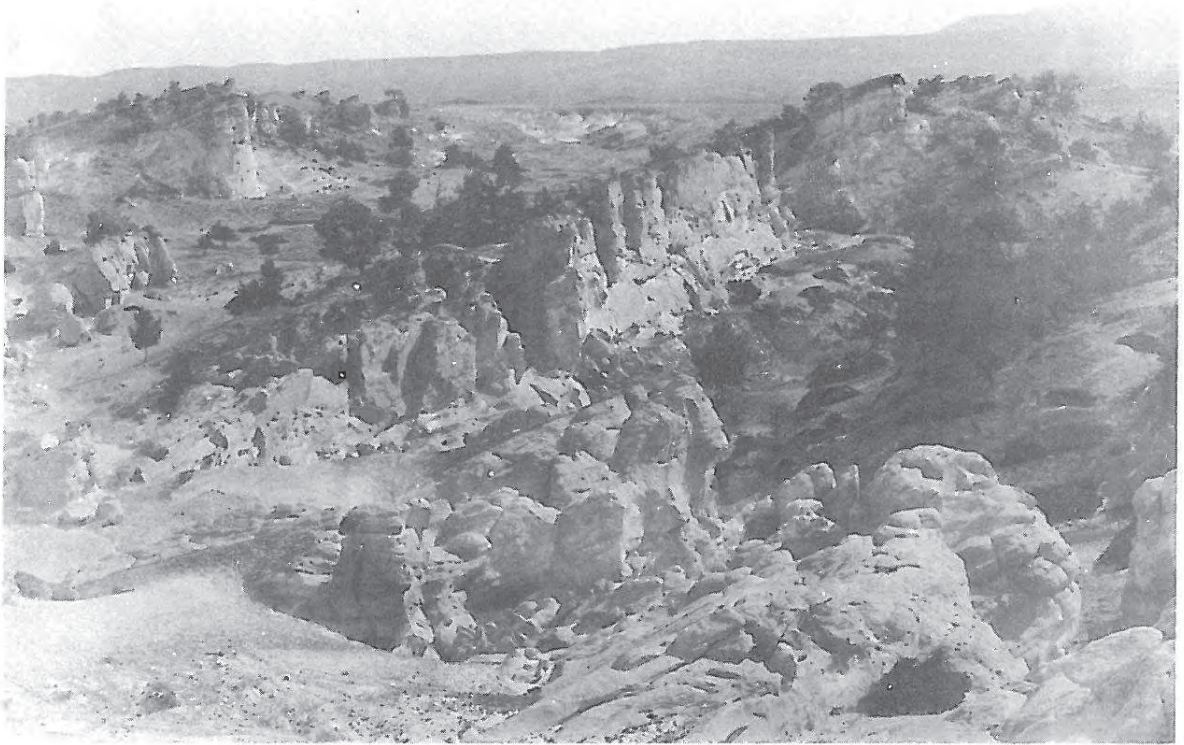
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Northwest view, taken from the extreme east end of gardens. X indicates rocks where petroglyphs were found.



Northeast view showing all of the east end of gardens.



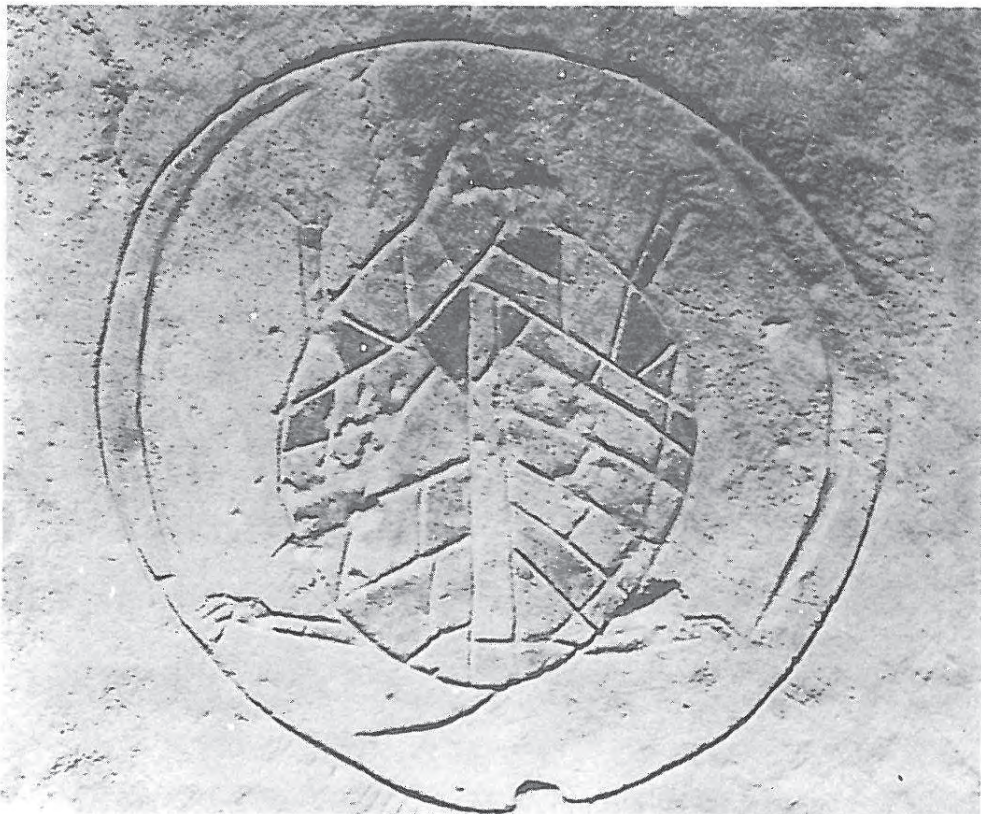
Looking east, center of east end of gardens.



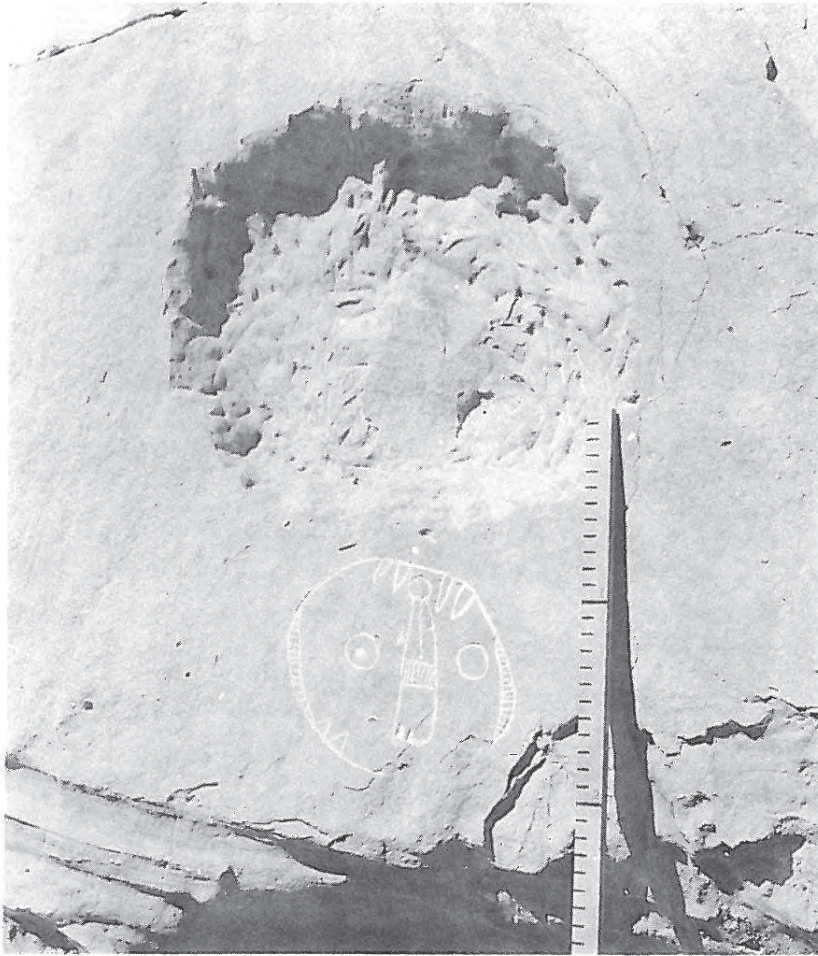
View looking west and a little north, about center of gardens.



Looking west, about two hundred yards east of road through gardens.

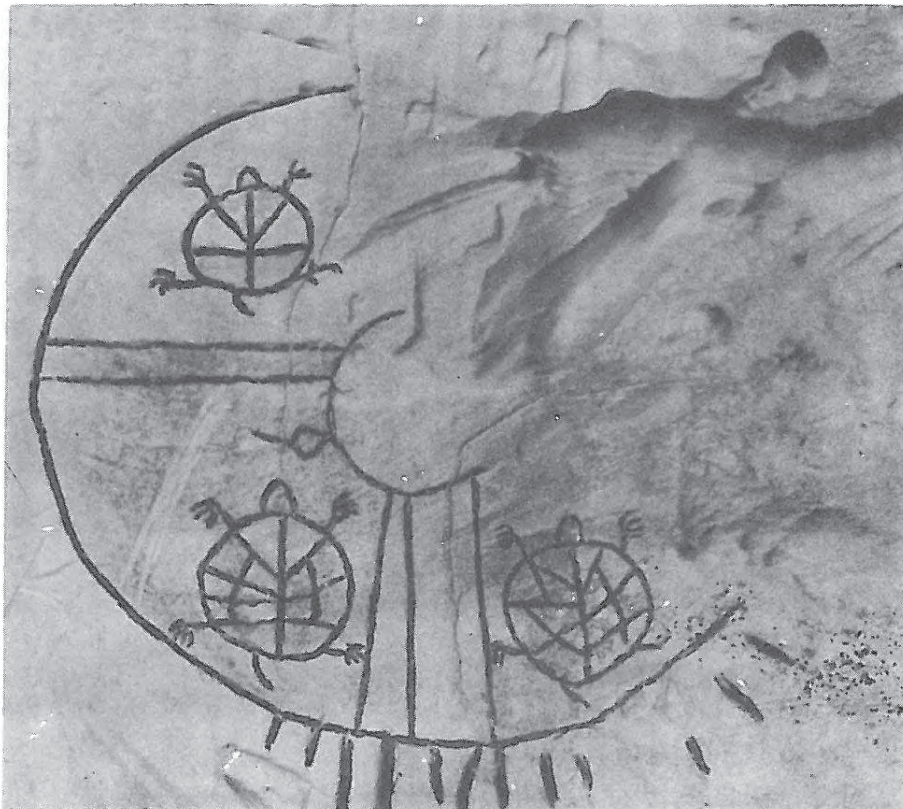


This is a copy of an original photograph taken by Mr. Love and loaned to the Survey. This was taken before the removal of The Great Turtle. Compare with Frontispiece.



View of the hole after vandals had removed The Great Turtle in a solid block.

Below may be seen a shield with symbolic figures.



A Zoomorphic petroglyph of a shield with small turtles (similar to The Great Turtle) in each quarter. The marks left by the rubbing of a pine tree branch may be clearly seen in the upper right hand corner. One turtle was completely erased. Vandals have also removed one of these small turtles from the shield.



A complex panel of shields and possibly drums. The shield to the extreme left is a chromopetroglyph. Four heads complete the design and a green band was painted across each face. Below it is the figure of a buffalo. The circle to the right of the yard stick contains the figures of two prong horn antelopes. To the right may be seen a man with spear. The circle to the right of this figure represents two birds, sage or grouse. Above this a shield represents what appears to be sun symbols. To the right of this is another shield with many inner circles and two feathers at the top right. Below this may be seen a circle containing two weasels, usual sign of a medicine man. To the right of this, the four quarters of the moon is represented. Below this, a shield contains six bear claws radiating from a central circle.



An Anthropomorphic Chromopetroglyph of a warrior on a shield. He is depicting holding two feathered spears. The sandstone is badly cracked, but the surface was smoothed before the Indian artist engraved this figure. The colors of the figure are the following: the feathers are white; the face is green and featureless; the neck is purplish-red; the shoulders are orange-yellow; the upper garment is green and the skirt is purplish-red. This is one of the finest figures although the colors are faded. The two zig-zag lines on the shoulders are like those on The Great Turtle.



A complex panel of shields and symbolic designs. The left hand shield is eroded and of an unknown meaning. The central shield has a design resembling a bird. The last shield shows a medicine man wearing a head-dress and with a weasel on each side of the figure. Below these shields is a complex panel, of which several figures resemble hide stretchers.



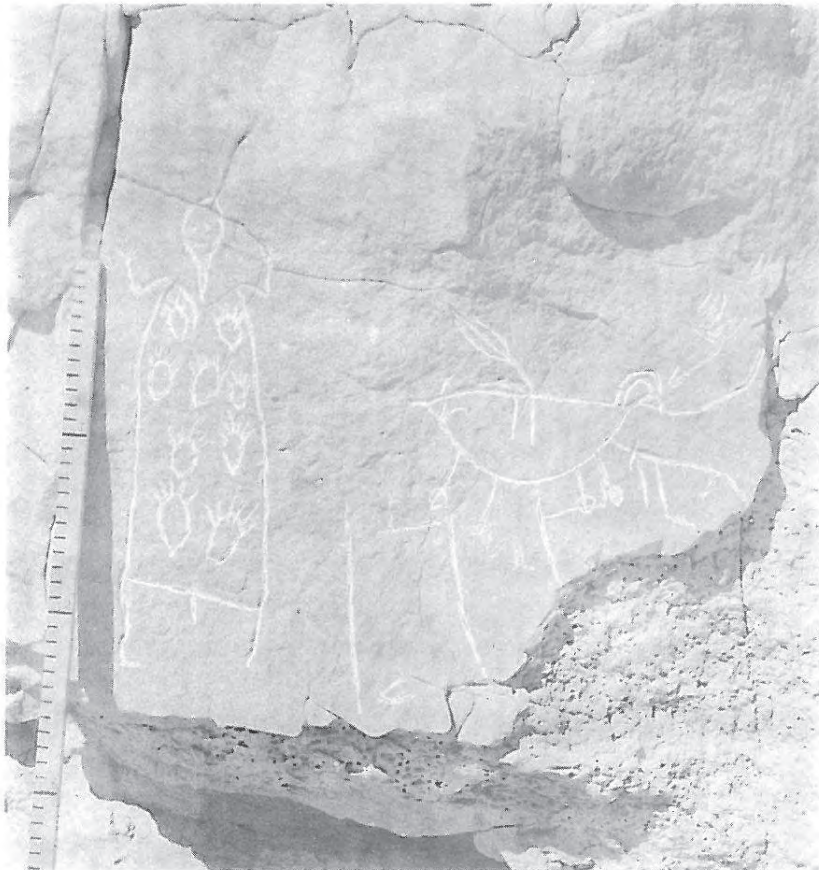
A panel depicting four shields and an Anthropomorphic figure. The upper left hand shield is a simple design of an oblong bar with a circle on each side. Beside it appears the figure of a man. The upper right hand shield bears two turtles, similar to the others at Castle Gardens, and a snake-like figure. It is natural to suppose that the shield had four turtles in each quarter before erosion removed the right two turtles. The two lower shields have designs of a symbolic nature and are too worn for recognition. Note how visitors have defaced the sandstone.



A complex but badly eroded panel of shields and tool-grooves. Many of these designs are barely recognizable.



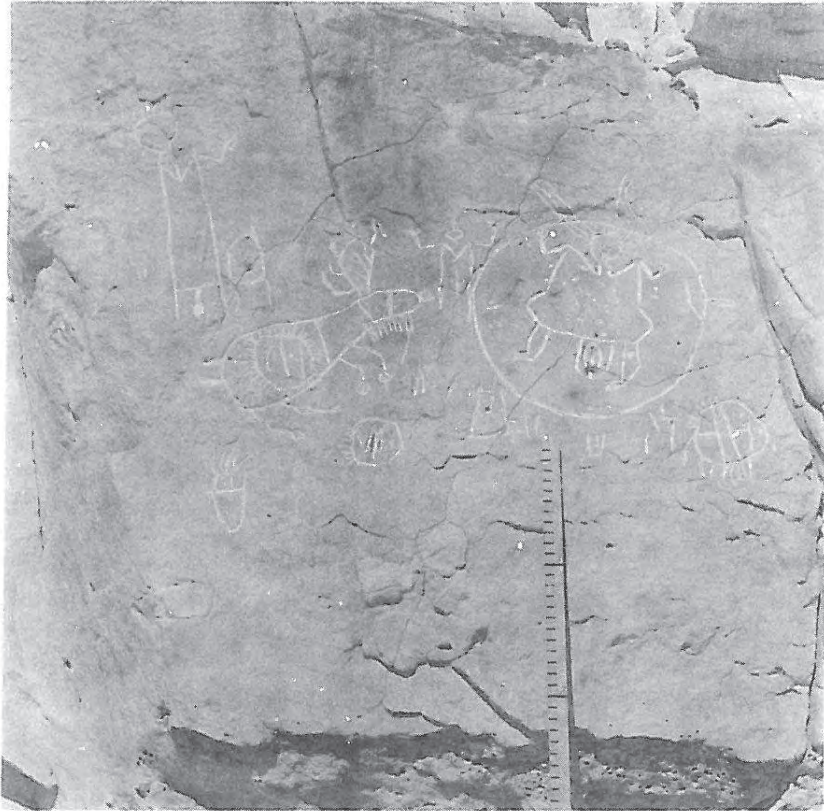
An Anthropomorphic figure of a warrior behind his shield and carrying a lance with many feathers.



An Anthropomorphic and Zoomorphic panel; the phallic figure of a man is seen at the left. Bear tracks cover his costume and probably represent him as a great hunter of bears. The four-legged figure to the right resembles a bird, inspite of the number of legs, and an arrowshaft through the back no doubt caused its death.



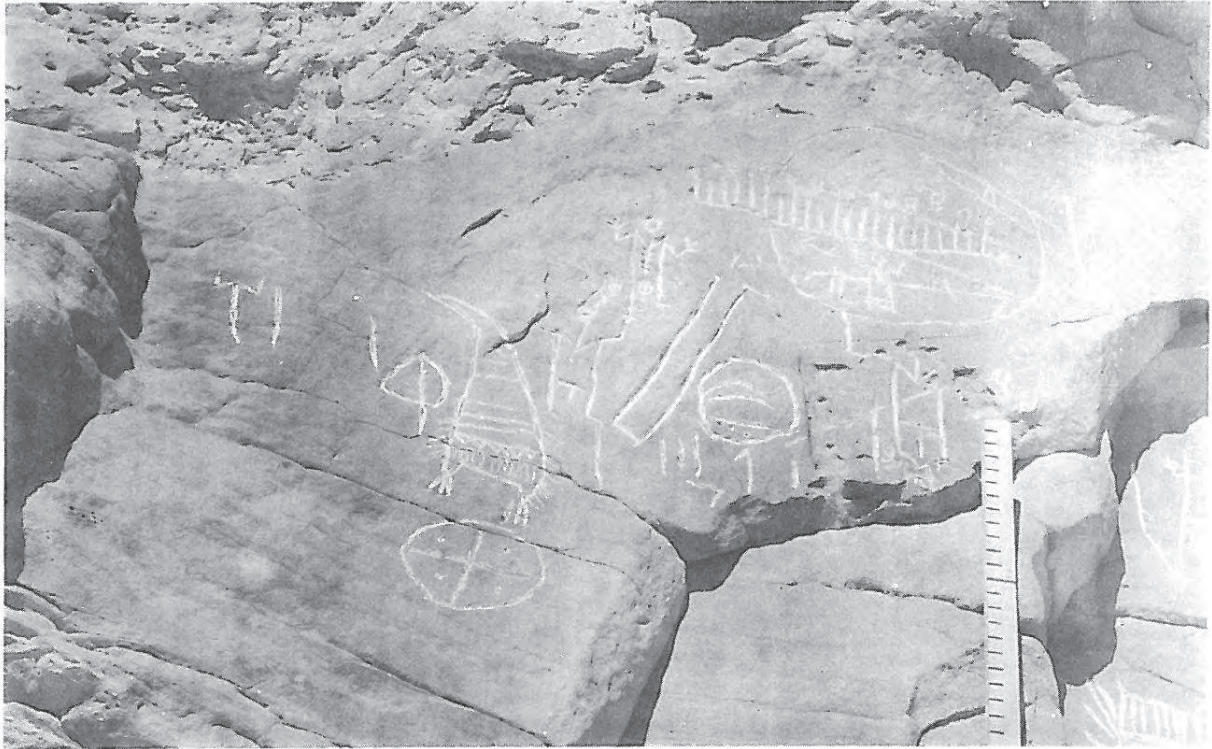
A very complex Anthropomorphic and Zoomorphic panel. To the lower left appears a blanket with fringes. Beside this, a buffalo is represented with several arrowshafts or lances thrust through the back. To the right of this figure appears a hide stretcher. To the upper left three phallic figures may be seen. The shield beside these figures appears to have two men behind it. On the shield itself appears a sort of sun symbol with a phallic design in the center. To the right appears a long feathered arrowshaft, the point of the arrow being below the crack in the sandstone. To the right of the arrowshaft, upon close inspection, the figure of a woman with fringed skirt will be recognized. One arm is raised and in the center of this figure a smaller figure can be seen with the female sign. To the left a bow and arrowshaft appears and probably indicates that the woman and her child had been killed by this means. To the right of this figure, two buffalo may be seen, both killed by shafts or lances and below them the head or mark of a human. More tool-grooves and symbolic designs appear at the extreme right.



A complex panel of great interest from the point of interpretation. The phallic figure of a man appears at the upper left. Below this an elk is recognized and the same phallic sign is seen in the circle upon the body. Note that elk has two eyes although the animal is portrayed in profile. A bear track appears at lower left. The figure in the circle is that of a woman. Note the female sign. From the crude contours of the body, it would appear to represent a pregnant woman. An Anthropomorphic figure may be seen at the left of the circle. At the extreme right appears a shield or drum.

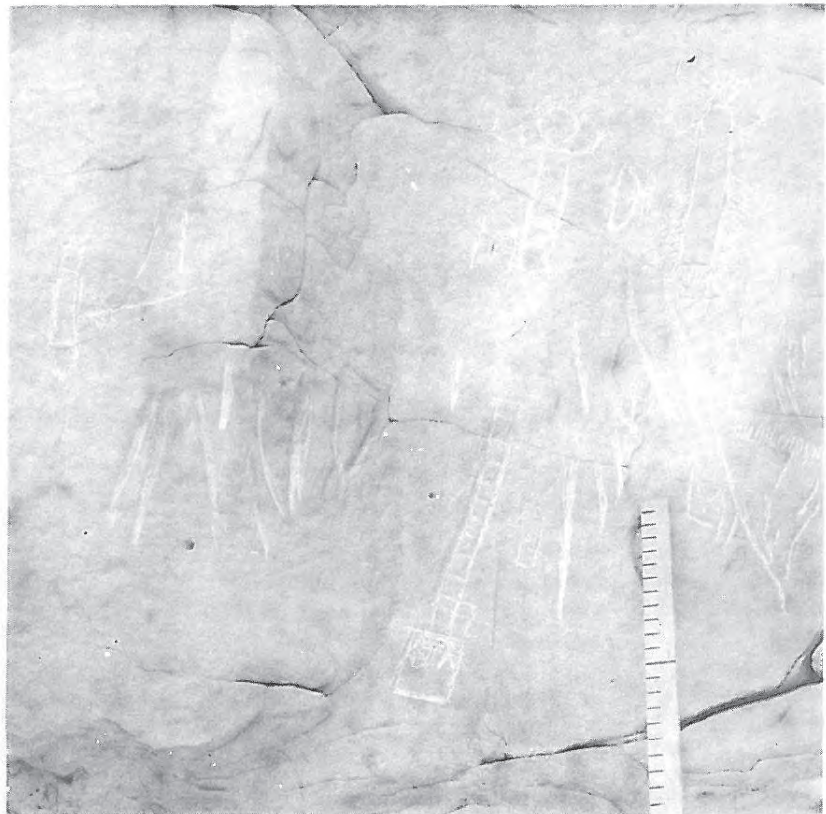
The Anthropomorphic figure of a medicine man appears to the left. Note horns and head-dress. Symbolic figures appear at lower right.



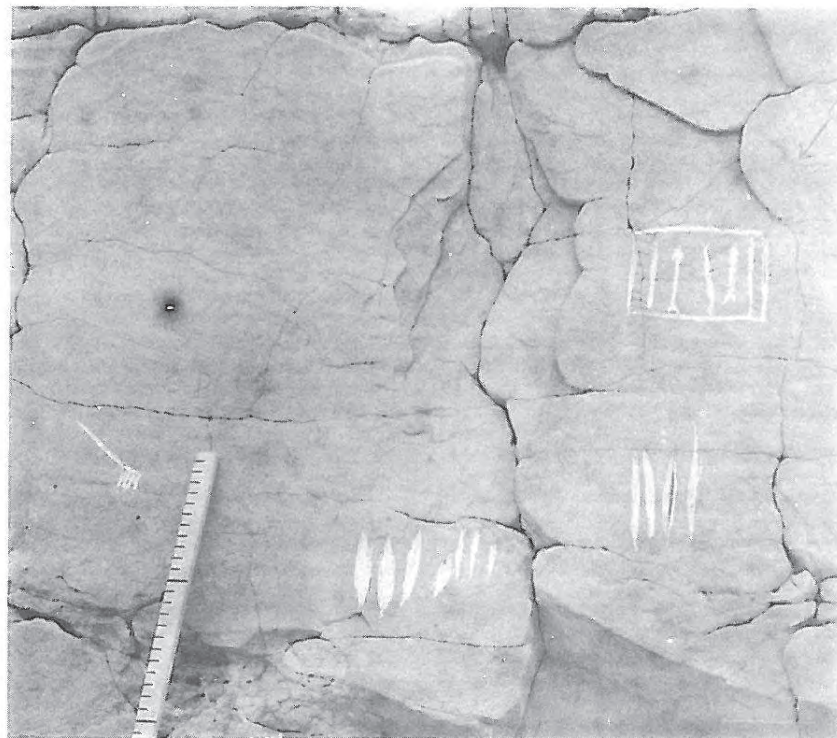
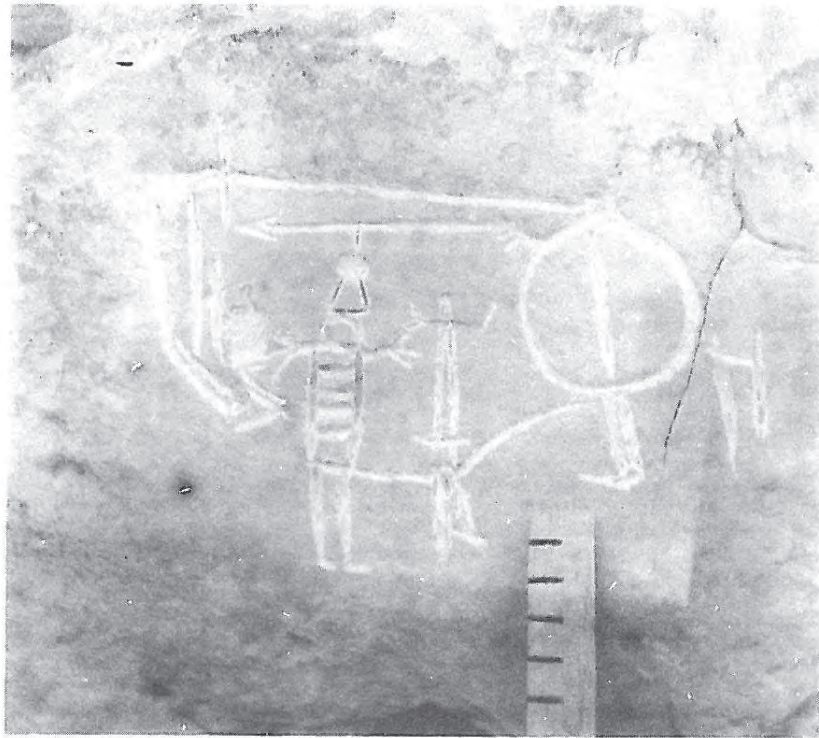


A complex panel with several shields. The upper left hand figure is eroded. Several symbolic designs are to the right of this figure, one appears to have fringes and decorative designs suggesting a costume, although there is no head shown. Below these a shield may be seen. In the center two phallic men are clearly shown. Note that the upper figure has marks suggesting ribs and spinal column. To the right appears several figures and a shield or drum. Above this is a circle containing a line of Anthropomorphic figures. Only the heads and a line for the body were engraved.

A complex panel of Anthropomorphic designs and tool-grooves. To the left appears the figure of a man, placed up-side down and pierced by an arrow-shaft. The upper two figures show details of costumes. The figure to the left is wearing a sash, placed low upon the body. The right figure is wearing a fringed costume. Beside him is shown a bow and two arrowshafts. The lower central figure resembles a ladder.



An Anthropomorphic panel that is beginning to erode and part of the left hand figure is missing. The central figure is the key to the description. It is the elongated figure of a woman. The man on the right is behind a shield and is shown with a lance, from which is suspended a design of unknown meaning. This is directly over the head of the other phallic figure. The figure at the extreme left is an animal and appears to have been killed by the man behind the shield. The figures are portrayed as full-face and at the same time a profile view is also shown.

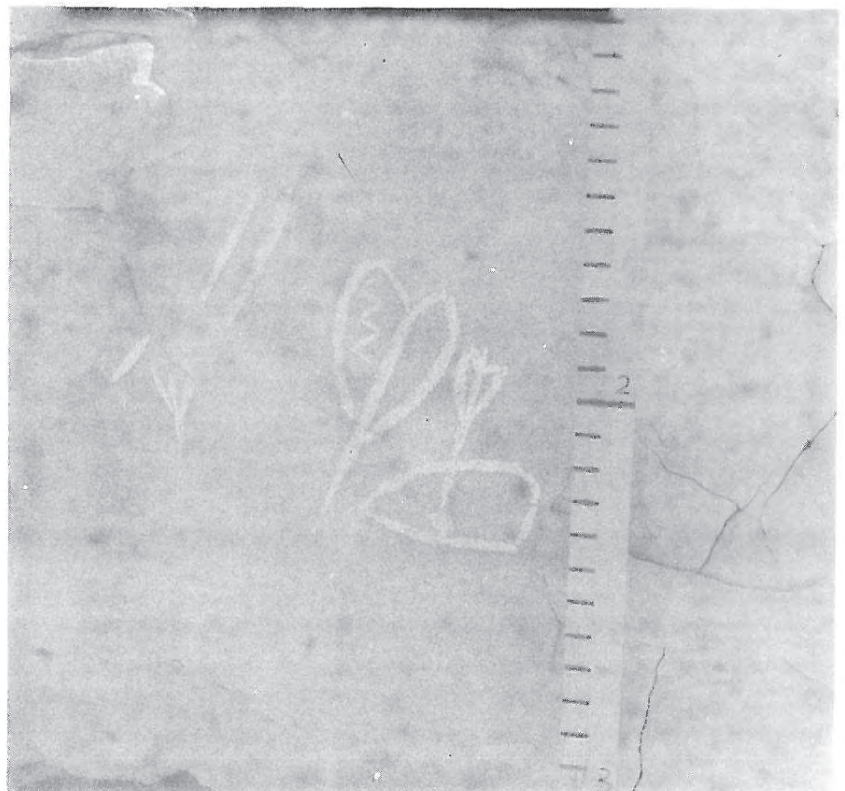


The lower figures are those of tool-grooves. Above this is an interesting representation of an Indian gambling game which was played by tossing arrowshafts upon a blanket and the direction in which the shafts fell determined the winner or loser. Note white man's arrow above this figure.



A panel with many tool-grooves and the figure of a bird in the center. A bird track is shown below this figure.

Tool-grooves appear to the left and to the right may be seen the feathered ends of arrowshafts and one appears to be thrust into either the heart or liver of an animal.

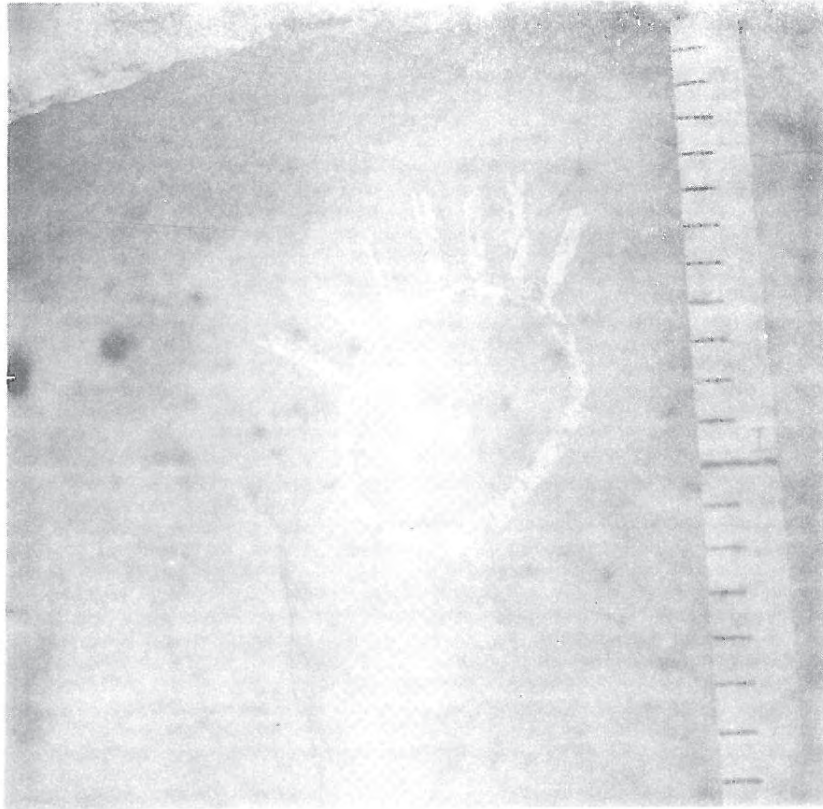




The shield to the left is interesting in that it portrays the phytomorphic figure of a tree or plant. Symbolic figures may be seen in the center and a broken and eroded shield appears to the right.



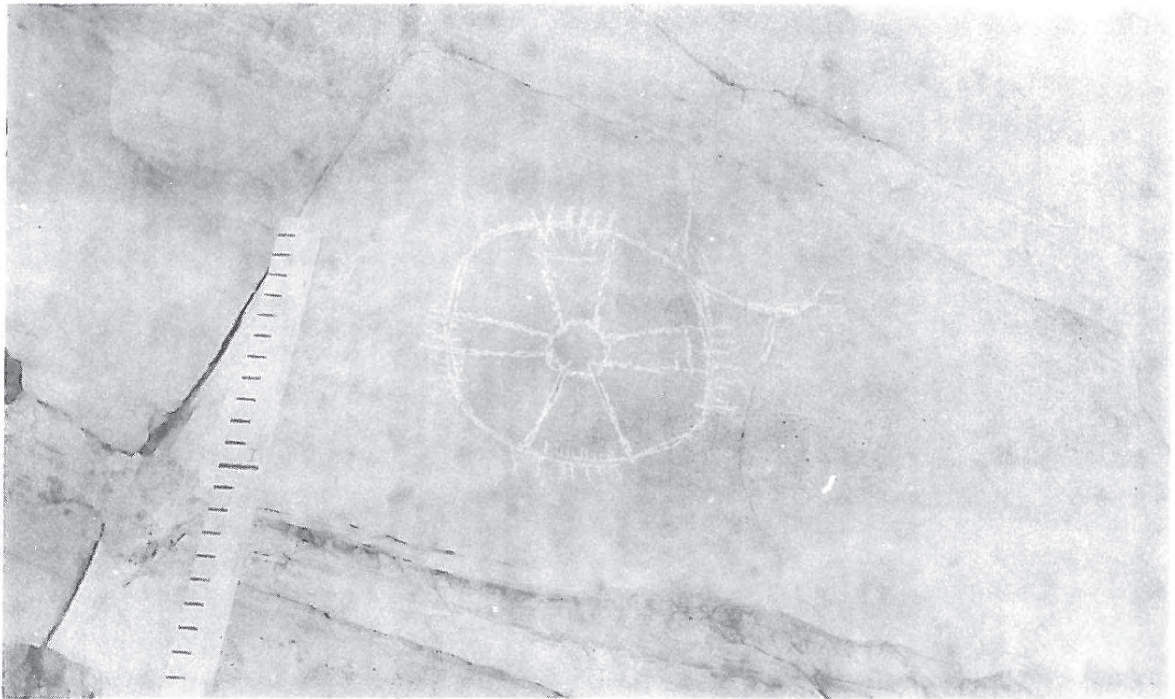
An Anthropomorphic panel, so badly eroded the heads are missing, but a row of phallic figures are recognizable. To the right appears more phallic men. Note the pointed shoulders on the figures.



An interesting representation of a bear track.



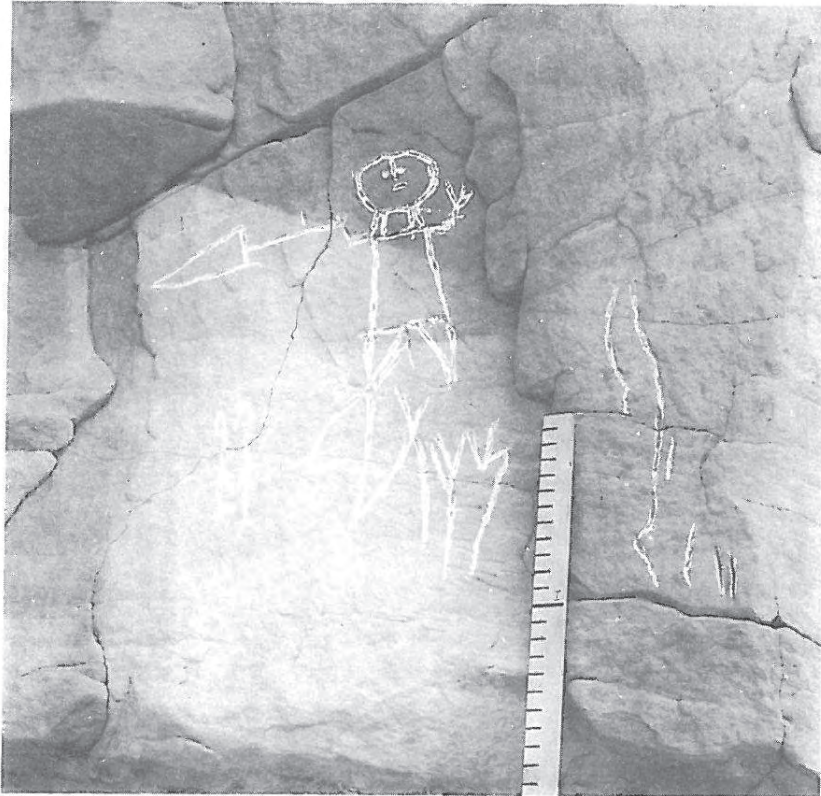
A badly eroded panel with three shields represented. The figure of a man may be seen at left of yard stick. Note the tool-grooves. An arrowshaft appears in the center of the right shield.



A shield with the sun symbol and extending rays which also resembles the German Iron Cross.



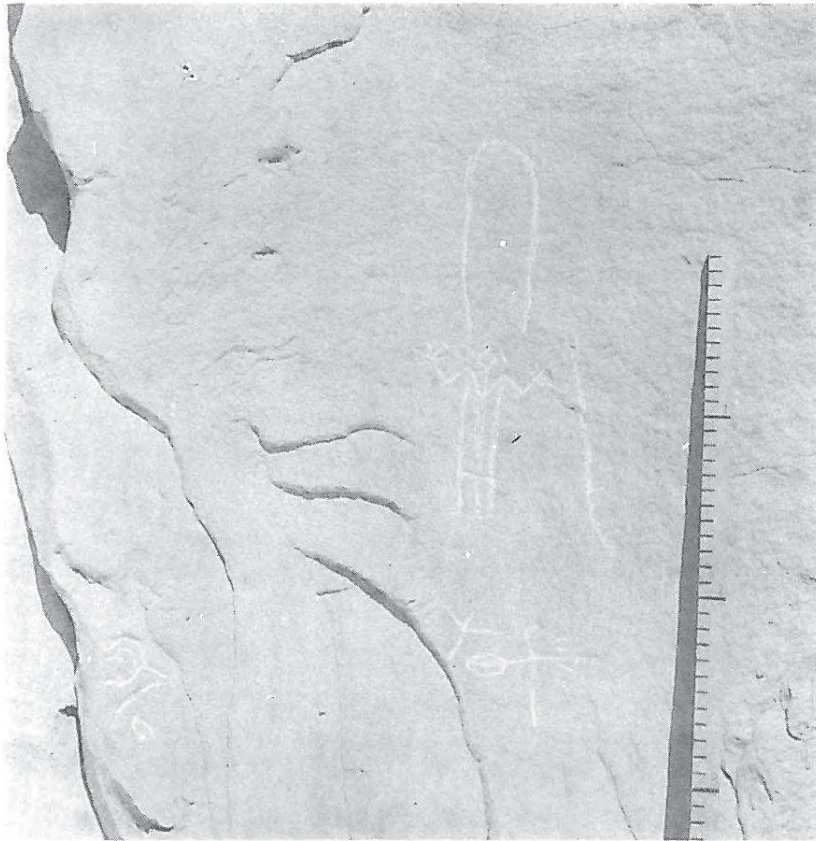
A complex panel of tool-grooves, symbolic designs and a shield (right).



A panel of three figures; the two smaller figures are unfinished. The larger figure is a man holding a spear.

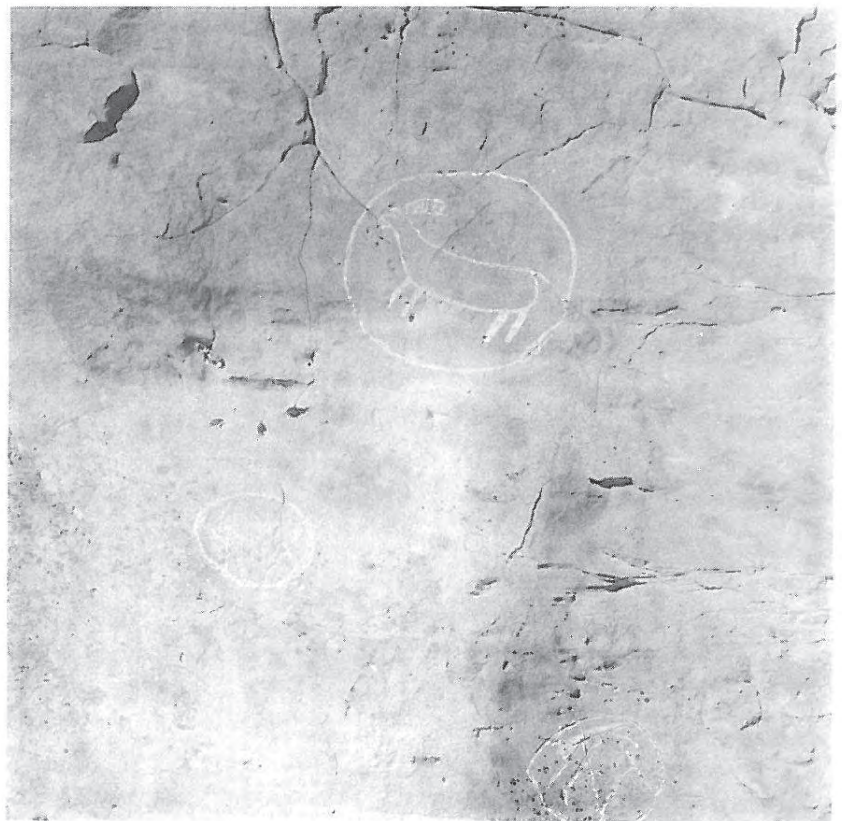


A badly eroded panel that once represented shields.



The Zoomorphic figure of a mountain sheep's head appears at lower left. The phallic figure of a man is represented in the upper center with a loop over the head. The lower figures are of unknown meaning.

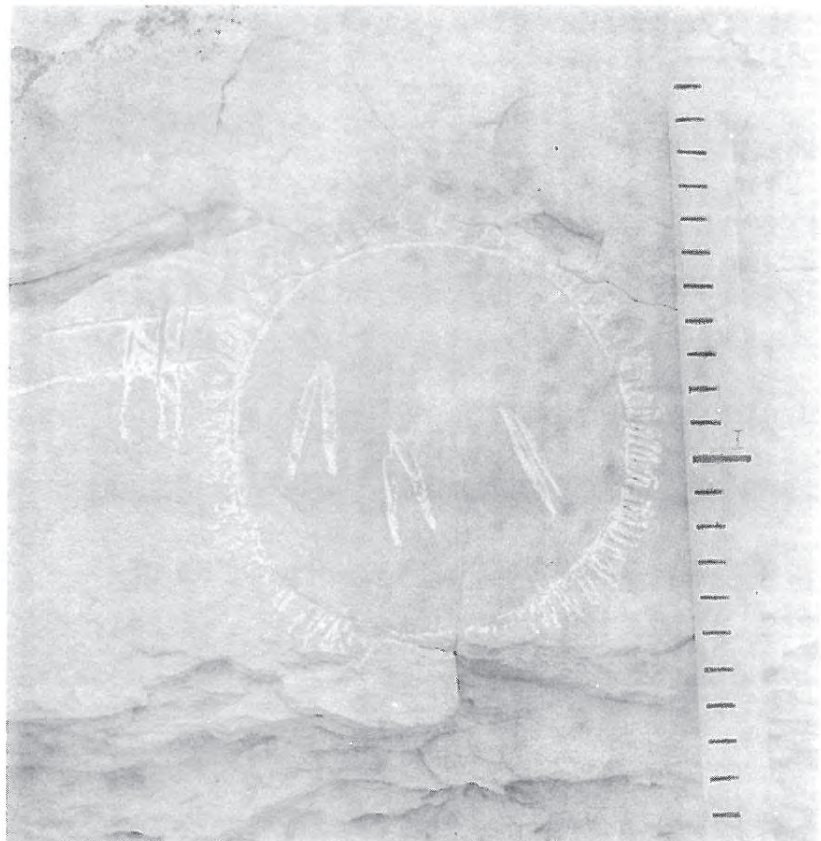
The upper shield portrays what appears to be a mountain sheep. The two lower circles are badly eroded.





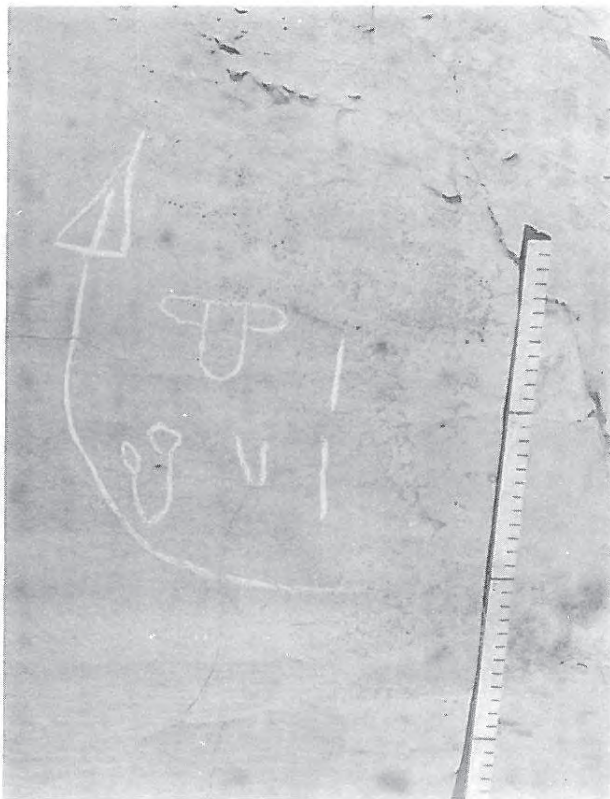
Representation of two Anthropomorphic figures; right figure was unfinished. Tool-grooves are also shown.

A good representation of a shield with feathers tied to the center and fringes outlining the circle. Tool-grooves appear to the left. Note that center of shield was smoothed by artist before engraving the design and that the sandstone is now cracking.

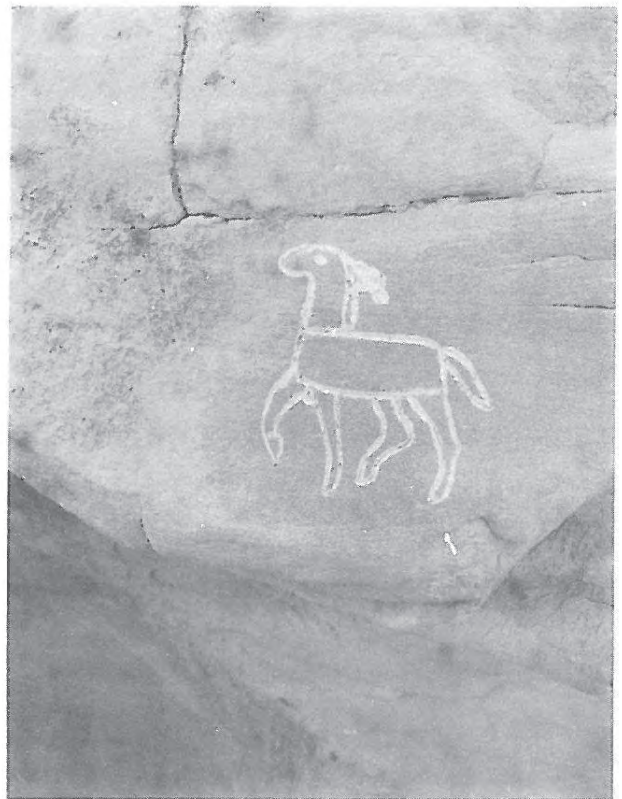




The figure of a woman is represented at the upper left. Note the female sign. Tool-grooves appear in the center and also the representation of a tree (?). The figure to the right is eroded, but appears to be the figure of a man grasping a weapon.



Brands and figures inscribed by white men.



White man's representation of a horse.

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