WYOMING
ARCHAEOLOGICAL
SOCIETY

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NOTICE TO ALL WYOMING ARCHAEOLOGICAL SOCIETY CHAPTERS

Society stationery (letterheads and envelopes) and decals are available from the Executive Secretary, P.O. Box 122, Cheyenne, Wyoming.

Stationery is $3.50 per hundred; and decals are 50¢ each.

Blank membership cards are available from the Secretary of the Cheyenne Chapter, 118 East 2nd Avenue, Cheyenne, Wyoming.

The blank membership cards are $1.75 per hundred.

WYOMING ARCHAEOLOGICAL SOCIETY, INC.

The Wyoming Archaeological Society invites you to become a member of their organization. Associate membership entitles you to receive quarterly issues of THE WYOMING ARCHAEOLOGIST. This publication will keep you informed of the latest archaeological developments, news, and research projects currently taking place in Wyoming and adjoining areas.

Current and future issues will give you the answers to questions such as: Who lived in the Plains area four, five, or ten thousand years ago? What were these people like? Did they differ from each other? What was the climate like in Wyoming pre-historic days?

The Wyoming Archaeological Society is a non-profit organization composed of amateur and professional archaeologists whose main interest is in finding, preserving, and making known to the general public the scientifically valid pre-history of Wyoming.

Several types of memberships are available. Associate membership, which would appeal to most "out-of-staters", costs only $3.00 per year and includes quarterly receipt of THE WYOMING ARCHAEOLOGIST, and a membership certificate. An application form is attached below for your convenience.

. . . . . .

Wyoming Archaeological Society, Inc.
1500 Garden Creek Road
Casper, Wyoming

Attn: Mrs. R. A. Garling, Treasurer

Yes! I am interested in artifacts and archaeology! Please enroll me as:

_____Associate member @ $3.00 per year.
I understand I will receive quarterly magazine and certificate.
_____Active membership @ $5.00 per year.
I understand this membership entitles me to belong to a local chapter, assist in chapter digs, receive quarterly archaeologist, attend annual winter & summer meetings.
_____Institutional membership @ $5.00 per year.

_____Supporting membership @ $10.00 per year.

_____Contributing membership @ $20.00 per year.

I am enclosing check or money order to cover membership.

_____ _____
(Signed) Print or Type Address

_____

PRESIDENT'S MESSAGE

THANK YOU CASPER-THANK YOU RETIRING OFFICERS -- Your hospitality was great; the meeting was an excellent opportunity to greet old and new friends who are interested in developing and preserving the story of prehistoric man and to discuss the many problems which resulted in a much better understanding. You will be pleased to learn that although Lou Steege had sent in his resignation, he has reconsidered and agreed to continue as Executive Secretary.

Your confidence in me will be an inspiration to continue the program of your past officers and promote the goals of the Society as set forth in Article "2" of the Articles of Incorporation:

> The objects and purposes which said corporation is formed are:
>
> a. To establish and maintain a library, or a cabinet relating to the science of archaeology.
>
> b. To promote the diffusion of useful information by other means than set forth in paragraph numbered "a" hereof, pertaining to the subject of archaeology.
>
> c. To establish and maintain this society for the preservation of the history and antiquities of this country, or any part thereof.
>
> d. To <u>encourage</u> the <u>members</u> of this corporation, <u>and others</u>, in the study and systematic investigation of the relics of man and his industries, and the classification and treatment of remains and records of any or every kind, whether historic or prehistoric, of ancient places, customs, art and similar things of interest.

Active program committees which will outline entertaining and educational programs, member participation in demonstrations, quiz, slides, etc., will appeal to members as well as non-members.

Your Editor is very much in need of material from each Chapter and we need an exchange of ideas. The publication is set up as four issues a year - let's get behind this project. It's rating is high as good reading.

Last Fall's meeting at Ft. Laramie remained, to me, a happy memory and I am delighted to say we are invited to meet there again this year. I hope many of you who were unable to attend last year will be able to come this August. This is not an official business session but is an excellent time to discuss questions and problems. Will see you then.

Margaret Powers

CHEYENNE CHAPTER ACTIVITIES 1966

The Cheyenne Chapter started into the new year with the feeling they had learned a lot, grateful for our new members, and with the realization the public as a whole is becoming more aware of what our aims are. I believe that good public relations will require more effort and work on our part as time goes on. It would be hard to find a group of people more dependent on good public relations than we are.

Since we were starting into our fourth year it was decided we might spread our wings a little and have a dinner for the March meeting. Plans were made to try and finish up the work on the Happy Hollow artifacts. Mr. James Wunnicke gave the program with slides, on the Maya and Toltec Indians of Central America. Jim tells us he went to Yucatan and Southern Mexico a tourist and came back an Archaeologist, and after making four trips back to the ruins there he knows his subject and tells it very well.

The February meeting was busy finishing the plans for the dinner in March. Joe LaRue gave his own slide program on "A Look at the Sinaguas of Northeast Arizona". Sinaguas, I can't pronounce that word either, but in spanich it means "Land Without Water or Dry Hills".

The March meeting was held at the Sky Room at the airport. Mr. James Duguid of the University at Laramie gave a fine program on different shapes and sizes of arrowheads. Good company, good food, and a very good speaker made for a most enjoyable evening.

At the April meeting Henry Lloyd, our president, gave a report on the state meeting at Casper. I have always maintained it would make for closer cooperation among the different chapters if there was one state officer elected from each chapter. I was glad to learn that this will be tried out this coming year. Our faithful stand-by, Lou Steege, gave his report to the club on the "Happy Hollow Site". A number of different times Lou has had to fill in with a program on short notice and always comes through with something very much worth while. The chapter is beginning to make plans for field trips this coming summer.

This about wraps it up for this time. You know, I have found that "you meet the nicest people in Archaeology".

Ada Sigler

Assistant Editor

SHERIDAN CHAPTER NEWS
RESUME - 1965

At our first meeting in January, Mrs. Victor Powers was re-elected president; Don Eckerson, Vice President; Hila Gilbert, Secretary; and Jerry Carbone, Treasurer. Daal Gruenke displayed a collection of artifacts from northwest Nebraska which included a McKean point, and also, a rare tang knife. Jerry Carbone showed slides of Archaeology in Arizona. Mr. LaToush described location of possible sites. One of our junior members, Ross Helman, gave an original paper on dating methods used in Carbon 14.

At the February meeting, Dr. Hoffman told how a mummy is an archaeologist's best friend. His talk was illustrated by anatomy plates from a rare old German book and were projected nearly life size.

The March meeting, which was well attended, included a collection of artifacts from the Powell area by Harold Underwood. Mrs. Ned Lupton, whole hobby is photography, showed various slides. Jerry Carbone outlined procedure in the event of emergency exploration made necessary by accidental discovery of burials or sites during road construction.

In April, Stuart Conner of Billings had an illustrated talk on petroglyphs: sites and reproduction methods.

The June meeting found a large delegation in Buffalo where we met Gene Galloway, who directed us to the Sisters Hill Site - the report of which was published in American Antiquities, and has a dating of 9,650 years + 250.

During vacation, members aided in the work done on Piney Creek under the supervision of George Frison. Members of the Casper and Cheyenne chapters put in some hot days with us also.

The first meeting in September found us out in the hills north of Decker, Montana, where there is a large amount of petroglyphs. Jerry Carbone was in charge of this field trip and by the way, Jerry found his first arrow point. After that, petroglyphs were of no interest to him. After a full investigation of this side we rode on to the Rosebud Battle ground where Mr. Kobold lead us to the scene of the battle. Later we were Mr. Robold's guests and he showed us points found in a buffalo kill near their home. This side has three kill periods - the oldest being exactly in comparison to the Yonkee and Buffalo Creek type.

Our October meeting was a slide program of the Piney Creek site and a quiz program which created much interest.

In November we had our annual covered dish supper which is always a must. Mrs. Pat Hamilton, instructor in Geology at the Sheridan College, gave a very detailed talk on Mexican Archaeology. This paper was sent to the Archaeologist for publication.

In December Mr. Fred Helman brought a very complete display of pipes, some better than 800 years old. Also Mr. Bob Frison explained the art of reconstructing broken arrow points.

In January we got a new president - Jerry Carbone. The new vice president, M. Powers, Secretary, Elaine Helman, and Treasurer Gary Fry, to whom we extend our congratulations and pledge full cooperation. We feel most of our success in having well attended meetings and increased interest in new members is the fine programs which have been presented at each meeting. Many of these meetings which have been member participation - for this our thanks go to Jerry, Elaine and Bud.

IT DIDN'T TAKE ME LONG
TO FIND THAT ONE

CHIPS

Arthur George Smith
(from the Arkansas Amateur, Vol. 2 No. 9 September, 1963)

The ordinary chip that is found while surface hunting or digging on a site is just as much a prehistoric artifact as a grooved ax or a fine six-inch point of fancy flint. It can tell just as much of the story of the past as other artifacts, and more than some. But the average collector regards chips as mere debris and pays little or no attention to them.

A site which is surface hunted at first loses the large and more eye-catching items, including a few that may be made from gaudy stone. The average collector does not want "junk" as he calls it and leaves the chip alone; and if a broken point, tosses it down again. Even professional archaeologists have been guilty of this kind of selective collecting from sites.

However, on most sites the chips which are strewn all about show the different stone materials used by the people, who once lived there. Sometimes these stone materials can be traced to their sources, which fills in one more segment of the great puzzle picture of the prehistoric past.

Chips from a surface site should be picked up and saved, not just the big ones or showy ones, but all you see. Selective collecting will distort the true picture of the site. Pick them all up, big and little, and save them. If there is more than one concentration of material in the field you are hunting, the chips from each concentration should be kept separate. The best way is to carry a supply of tough bags, coffee sacks are ideal. Put the chips in the bags and put a card in each giving the data for that site, or a separate portion of the site. When excavating by levels, chips from each level should be kept separate just as are all other artifacts.

Once you have the bags in storage you can work them over at your convenience. Each chip should be examined for signs of use as a knife or scraper. Some cultures used no cutting tools except chips, reworked along one or more edges and some of these are very small..... If you wish you can sort them out by materials, and so get a statistical picture in percentages. At times this may aid you in assigning a temporal sequence of a certain complex within the site. This applies, of course, if a temporal change in percentages of differing materials is found in a stratified site.

Chips should be examined to check the flaking technique used in striking them from the core. Further, they should be checked to see if any of them are crude blades. Some archaic complexes made quantities of small two faced blades. Also, chips should be checked for specimens drawn by resolved flaking. These can be easily distinguished, as they

are narrow at the bulbous end and become thicker and wider away from it. Usually such flakes are conchoidal or curved in shape, which makes them ideal for trimming into large scrapers or knives. Any site that yields many resolved flakes or true blades should be called to the attention of some competent professional who knows about the earlier cultures of your region. If you should, by chance, find double edged knives made from such resolved flakes, with their point at the bulbous end of the flake, you do not need a fluted point to indicate that you are on a very early, if not a Paleo-American site.

Chips can tell a story, if --- you know enough to read it.

THINGS TO THINK UPON - - - - - - -

To remove things without ascertaining all that is possible about their age, meaning and connections, is as inexcusable as it is easy. To undertake excavating, and so take the responsibilities for preserving a multitude of delicate and valuable things, unless one is prepared to deal with them efficiently, both mechanically and chemically, is like undertaking a surgical operation in ignorance of anatomy. To turn over a site without making any plans, or recording the positions and relation of things, may be plundering; but it is not archaeology. To remove and preserve only the pretty and interesting pieces, and leave the rest behind unnoticed, and separated from what gave them a value and a meaning, proves the spirit of a dealer and not that of a scholar. To leave a site merely plundered, without any attempt to work out its history, to see the meaning of the remains found, or to publish what may serve future students of the place or subject, is to throw away the opportunities which have been snatched from those who might have used them properly.

W. M. Flinders Petrie

Methods and Aims in Archaeology
pp. 179-180, 1904

THE POWERS - YONKEE BISON TRAP
SHERIDAN CHAPTER, WYOMING ARCHAEOLOGICAL SOCIETY
August - 1961

Site 24PR5 lies on the Fred Yonkee ranch in Powder River County, Montana, and was reported by Mrs. Margaret Powers, president of the Sheridan Chapter of the Wyoming Archaeological Society. This site has a history of being pot-hunted by artifact collectors for at least 35 years. The Sheridan Chapter, with the kind permission of the ranch-owners, decided to conduct an investigation of this site while there was yet undisturbed soil. The bulk of the site had already been destroyed and hundreds of projectile points had been taken away.

In July and August of 1961, a concrete datum post was placed; a survey made of the immediate and surrounding area; an examination made by two competent geologists (Dr. Frank Koucky, professor of geology at the University of Cincinnati, and Dr. Wilton Melhorn, professor of geology at Purdue University); and a camp set up at the site. Fourteen members worked a total of 39 man-days in excavating three different locations on the site, and approximately 25 cubic yards of material was moved, all by hand labor and a wheelbarrow.

Geologically, the site lies on a high terrace (elevation about 3600 feet above sea level) of pleistocene origin and consisting of residual ridges and cones supported by sandstone or clinker beds. The present change rate is slow. The last period of heavy precipitation (Little Ice Age) was probably about 3500 years ago, with heavy gully-cutting. Since then, there had been increasing dryness and stabilization of gullies. The terrain consists of Fort Union or Wasatch beds, 40 to 60 million years old, with a continuing sequence --- sandstone to shale to coal to limey-bed with fossils, then sandstone, shale, etc.

The present surface is predominately heavy gumbo soil with outcroppings of red shale. Prairie grasses and sagebrush are the predominant vegetation, with Ponderosa pine and Colorado juniper scattered along with ridges and arroyos. Mule deer and antelope are plentiful in the area, with considerable numbers of sage grouse, jackrabbits, cottontails, badgers, porcupines and some raccoons. The country is quite arid, and the temperature was extremely hot with the sun beating down mercilessly during the excavation period.

The cultural area lies mostly along the north bank of a small arroyo which drains from east to west, emptying into a larger arroyo which drains to the north into a broad, rather flat valley. It appears that ancient man probably drove the bison from the broad valley or collecting basin into the large, north-south arroyo; then, with the aid of a barricade, shunted them into the smaller, east-west arroyo, which at that time probably had more or less vertical walls. In the east or upper end of this arroyo, the bison were helplessly trapped, and it was an easy matter for the hunters to slay them at practically point-blank range with their stonetipped projectiles. The rib-cage was apparently the favorite target area on the bison, because the majority

Size reduced photographically.
Correct scale, 1" = 35"

Corrected scale, 1" = 36"

2 CONTROL POINT

EXCAVATIONS

CONTOUR INTERVAL 5 FT

APPROXIMATE LOCATION
45° 10' N LAT., 106° 00' W. LONG

APPROXIMATE ELEVATION 4500 FT.

WYOMING ARCHAEOLOGICAL SOCIETY

YONKEE SITE
24-PR-5

SURVEYED JULY 1961 BY L. E. ALLEN

PLATE I

SCALE: 0 10 50 100 FEET

of the points were found in association with rib bones. This is logical, because the chest cavity, besides being a very large target, would also allow easier penetration to vital lung tissue, with resulting hemorrhage, than any other part of the animal.

It was decided to excavate at three different locations on the site where surface evidence gave assurance of the presence of a cultural zone with undisturbed soil. The first location, which is called Site #1, was a small, loaf-shaped ridge lying at the head of the arroyo with a steep gully on either side. Some pot-hunting had been done here and much bone was evident in the disturbed dirt. A vertical profile was cut at right angles through the end of the ridge and in undisturbed soil. This revealed a cultural layer averaging 8" thick, containing many bison bones, and covered with a sterile over-burden of hard gumbo 28" deep. The gumbo layer contained two hairline streaks of charcoal at 16" and 24" below the surface, probably left from grass fires. Excavation was continued to a total depth of 7½ feet, to rule out any possibility of older cultural levels, but the subsoils were all sterile.

The cultural layer was horizontally level and uniformly even in thickness, and the protruding abundance of bison bones in the profile made such an interesting picture that it was decided to leave it intact for a few days until more of the members arrived and could see it.

The second location to be excavated was called Site #2 and was located on the north bank of the arroyo about 100 feet from Site #1. An east-west profile was cut parallel to the arroyo at the point where the mesa dropped off into the steep slope of the arroyo. This cut was 22 feet in length and varied from 16 inches to 5 feet on the vertical. Here again, the bone-bearing layer was quite even in thickness and level, but the gumbo over-burden was only 24" to 8" in thickness. The sterile soil underneath consisted of pebbly gumbo. Twenty-three projectile points, one blade and one serrated tool were recovered while cutting the profile. The bones at this site were mostly disintegrated and unidentifiable except that many teeth were recovered which were those of bison.

A five-foot square was excavated 18 inches north of the west end of the profile cut. This square proved to be mostly sterile with only 2 or 3 artifacts and a small amount of bone being found in that portion lying nearest the profile.

The third location excavated was named Site #3 and lay also on the north side of the arroyo about 75 feet west of Site #2. This cut was nearly north to south and sliced across a small ridge which separated a side arroyo from the main arroyo. About 75 feet of this ridge had been destroyed by pot-hunters through the years, but we were able to make a fresh cut through undisturbed soil, producing a vertical face 22 feet in length with a maximum depth of 10 feet. The hard gumbo over-burden was up to 56" deep, so it involved the removing of many

Corrected scale, 1" = 50"

General view of bison trap site looking northwest. X in left center is Site #1.

tons of earth. This was expedited by first completing a trench in disturbed soil the width of a wheelbarrow and to the desired finished depth, then caving off the over-burden directly into the wheelbarrow.

The north end of the profile revealed a very interesting stratification with two distinct cultural levels saturated with bones and separated by four or five inches of sterile rock and gravel. However, both cultural levels terminated in a lens of powdery, red and purplish shale, and then continued as a single cultural level. Moreover, the artifacts in the two levels were identical in type, so it appears that the intervening layer of sterile rock and gravel was probably laid down over a short period of time, possibly even in a single season by a cloudburst. Excavation was continued 4½ feet bwlow the lowest evidence of culture to rule out any possibility of older occupation.

A five-foot square was excavated eastward from the north end of the profile. The cultural levels were carefully uncovered with trowels and whisk-brooms, revealing a fine assemblage of bison bones including a whole completement of ribs in natural order. The upper level produced ten projectile points (9 in situ), while the lower level contained four points of identical type. The bones in this square were in a fair state of preservation. Sufficient charcoal was recovered for a Carbon-14 dating.

Returning to Site #1, a five-foot square was excavated eastward from the central part of the profile. This proved to be a very rich area with an abundance of bison bones in an excellent state of preservation. A large bison skull was uncovered under the south wall of the square, so a second five-foot square was dug continuous with the first on the south, giving a 5x10 rectangle. The skull was exposed with great care, and being in quite a fragile condition, it was given a coat of spar varnish which helped immensely in holding it together. With considerable of the orbital arches eroded away, the skull still measured 14 inches in width. (For comparison, 20 modern bison skulls all gave similar measurements of 12 to 13 inches.) The right horn-core which is almost complete, is 3½ inches in diameter and 12 inches in length and is nearly straight instead of having a pronounced curvature as do those of modern bison. The skull and horn-core indicate a horn-spread of the live animal of at least 40 inches, whereas the world record in modern bison is 35 inches. The mandibles are massive in size and well-preserved. Most of the bones are complete except the long bones of the legs which had been smashed to get the marrow. Eleven vertebrae were still articulated. The mandibles and many other bones of four smaller bison were also recovered in this site, along with 13 projectile points and a nice deposit of charcoal.

A total of 100 stone artifacts were recovered during this project, of which 95 were projectile points or fragments of points. Fifty points were sufficiently complete to be identifiable. One blade, one blade fragment, one biface, one pendant and one serrated tool made up the

Assemblage of bison rib bones in natural sequence in 5' square of Site #3, 5 feet below surface. Note projectile point near trowel.

Massive mandible of bison in association with leg bones. Projectile point in situ.

Eleven articulated vertebrae, mandible, and huge skull of bison.

Profile of Site #3 on north side or arroyo.
Site #2 may be seen near top left of picture.

Eagle Trap. N-E to S-W Cross-Section
Scale – 1" = 20"

Eagle Trap. N-W to S-E Cross-Section

Corrected scale, 1" = 35"

balance. It is difficult to explain the large number of projectile points, percentage-wise, as compared to the small number of blades. One would reason that with the vast amount of butchering that must have taken place, that the quantity of blades left behind would be greater. Conversation with several collectors who had screened out a great many points from this site during past years confirmed the fact that blades are almost completely absent, as are all other types of artifacts.

Of the 50 identifiable points recovered, the stylization was very uniform, 80% of them being of a basic design resembling very closely the McKean point. The size of the points was generally quite consistent, with a range in length of from 1-2/16" to 2-3/16"; in width from 10/16" to 1"; and thickness from 2/16" to 4/16"; with 78% being 3/16" thick. Ninety-three percent of the artifacts were made of altered shale which occurs locally in great abundance, while 7% were made of quartzite.

The typical point, as illustrated on page 13, is a sharp-pointed, straight-sided, finely pressure-flaked point with basal notch and corner notches giving a constricted base. Some bases are unnotched but slightly concave, while a few are straight. Dr. William Mulloy has described these as being within the range of variations of the McKean point.

Dr. C. Bertrand Schultz, of the University of Nebraska, Lloyd Tanner and Robert Eisele, have examined the large bison skull, and describe it as an intermediate form between Bison bison and Bison antiquus, which would attribute considerable age to the specimen.

A charcoal specimen which was found in association with the skull and the artifacts, has been submitted to Isotopes, Inc. for radiocarbon dating, and if the results are determined before distribution of this report, the date will be written in at this point.
(4450 ± 125 B.P.)

Just 7/10 of a mile east of the bison trap, on the crest of a rocky ridge, is an eagle trap, 24PR401. This was surveyed, profiled, and the floor excavated, but was found to be sterile.

One-fourth of a mile northwest of the eagle trap on the floor of a valley are three stone circles or tipi-rings. One mile north of the bison trap is a group of 5 tipi-rings, on a knoll sparsely covered with Ponderosa pine and juniper. A surface examination of this site resulted in a collection of 31 stone artifacts which correlated in material, workmanship and type with those from the bison trap. This location being near a spring, it may possibly have been a campsite used at the time of the bison trap.

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2 inches

The Sheridan Chapter is the parent organization of the Wyoming Archaeological Society, and has been in existence eight years. Some of our members are dedicated, sincere, amateur archaeologists, and to them, and especially those who so generously gave of their time and energy to help with this investigation, we give our heartfelt thanks. We are fully aware of our limitations and we know that our work falls far short of professional quality, but we do our best and we enjoy doing it. We are grateful for the kind assistance and friendly advice that we have received from our professional friends: Dr. Robert Stephenson, Dr. C. B. Schultz, and Dr. William Mulloy. We hope that any information we may have uncovered may be useful in helping to piece together that great puzzle of prehistoric man on the great plains.

Margaret Powers.....Chapter President

Louis Allen.....Vice President

Hila Gilbert.....Secretary-Treasurer

Raymond C. Bentzen.....Sup't of excavations & producer of this report.

November, 1961

Of the artifacts illustrated, figures #1 through #6 are from Site #1; #7 through #9 are surface finds from the immediate area; #10 through #30 are from Site #2; and #31 through #54 are from Site #3.

THE IMPORTANCE OF THE BUFFALO TO PLAINS INDIAN CULTURE

The Great Plains region lying between the Mississippi River and the Rocky Mountains and extending from south central Canada almost to the Gulf of Mexico is often referred to by anthropologists as the "bison area". For the many tribes of nomadic or semi-sedentary Indians in this area, comprising a total population in excess of 55,000, the bison was the staff of life at the time when the white man first contacted these peoples.

In pre-Columbian times, and for nearly 300 years after the discovery of America, the buffalo roamed over a wide expanse of territory stretching from the eastern shores of Lake Erie to northeastern Mexico, and from the present state of Georgia to Great Slave Lake in northwestern Canada. From north to south its range extended more than 3,600 miles and from east to west over 2,000 miles. The town of Kearney in south central Nebraska is considered the center of the bison area at the time of its widest extent, but after 1800 until the virtual extermination of the bison in 1883, the center would be placed in the Black Hills, the very heart of the Teton country.

Over the broad prairies the buffalo roamed in large compact heards, subsisting on the native grasses and requiring little water. This animal was slow, cumbersome and stupid in spite of its size. It lacked both intelligence to sense and to avoid danger and the fighting qualities to defend itself unless enraged by wounds. These characteristics of the animal itself must be regarded as important factors in the extermination of the bison.

It has been said that in no other section of the world has the culture of a people been so strongly moulded by the presence of a single species of animal as in the Plains of North America. The buffalo not only furnished the Indians with food, clothing and shelter and many other articles in their material culture, it held a prominent place in the mythology, religion and ceremonial organization of the plains tribes.

The buffalo first of all furnished food. How much of the animal would be used for food at any time was largely dependent upon the ease with which the buffalo could be procured. When buffalo were plentiful only the choice parts were often eaten, but in times of scarcity all of the animal but the glands of the neck, sinews, bull's pizzle, horns, hoofs and hair furnished food.

Buffalo meat is juicy, tender, nutritious, digestible and has a pleasant game taste. White traders, trappers, emigrants, soldiers and visitors to the Plains learned to like Buffalo meat and to eat it in large quantities. Indians consumed unbelievable quantities at a single sitting. The Indian preference for buffalo meat must be regarded, therefore, as due to the quality of the meat itself as well as the abundance of the buffalo in the early days.

"SINEW"
BOWSTRING - BOWBACKING
LEATHER BINDING
SEWING
"BLADDER"
WATER BAG
"LIVER"
TANNING
"KIDNEY"
FOOD
"TAIL"
TIPI DECORATION
WHIP - FETISH
SWEATLODGE WATER
SPRINKLER - SUN-
DANCE ORNAMENT
FLY SWATTER
"HEART"
FOOD
"GALLSTONE"
YELLOW PAINT
"PAUNCH"
WATER BOILING
" BAG
" BUCKET
" BASIN
" CUP
CONTENTS
USE OF SKIN
MEDICINE
"BLOOD"
SOUP
"RIBS"
DICE - KNIFE
FETISH
"INTESTINE"
TRIPE
BOWWRAPPING
"LEG BONE"
PAINT PENCIL
SCRAPER
"HAIR"
BALLSTUFFING
SADDLE STUFFING
FETICH WRAPPING
CLOTHING ORNAMENT
HAIR ORNAMENT
ROPE
"LUNG"
FOOD
"SCROTUM"
STIRRUPCOVER
"BOSS RIB"
SKIN SCRAPER
ARROWSHAFT STRAIGHTENER
ARROW POINTS
CHILDREN'S SLED
"TOE"
PAINT PENCIL
TOY HORSE
"DUNG"
FUEL
CEREMONIAL
"SHOULDER BLADE"
AXES - HOES - FLESHERS
"BRAIN"
TANNING - FOOD
"SKULL"
SUNDANCE FETISH
MEDICINE PIPE FETISH
HEADDRESS IN BUFFALO
HUNT
"HORN"
SPOONS - BOWLS - CUPS
CARRYING FIRE - ARROW-
HEADS - HEADDRESSES
"TONGUE"
CHOICE FOOD
SACRED FOOD
"HUMERUS"
HIDE - RUBBER
"BEARD"
DRESS ORNAMENT
WAR IMPLEMENT
"FAT"
DEODORANT FOR
FOOD - TANNING -
MIX PAINT - TRAPS
"HOOF"
RATTLE
GLUE
FETISH

Buffalo meat was eaten raw, boiled or roasted; by itself or mixed with other animal or plant goods. Denig lists the parts of the buffalo eaten raw by the Upper Missouri tribes: liver, kidneys, gristle of snout, eyes, brains, marrow, manyplies, testicles, foot of small calves in embryo, glands of calf envelope. The fat buffalo cow was preferred for meat and certain parts of the animal were regarded as delicacies - the tongue, tender-loin, bass, marrow bones and hump. When buffalo were plentiful only these portions were taken, the rest being left on the ground for the wolves to devour.

Buffalo meat was dried, and mixed with chokecherries or other berries for preservation for future use. When packed in perfleches this mixture, known as pemmican, would keep for several years if necessary.

Some favorite mixed dishes of the Teton in which various parts of the buffalo were important ingredients were: (1) blood boiled with brains, rosebuds and the scrapings of rawhide, until the whole assumes the consistency of warm glue; (2) pounded cherries boiled with meat, sugar and grease; (3) prairie turnip boiled with the dried stomach of the buffalo.

For clothing the buffalo hide with pelage attached was used as an outer wrapper which amply protected the wearer in sub-zero winter weather. Or hides without the hair are worn in warmer periods of the year. Moccasins, too, of the important articles of clothing were of buffalo hide.

For shelter the nomadic tribes used the tipi, covered with dressed buffalo hides carefully pieced together, throughout the year. The tipi was used by the semi-sedentary tribes while on buffalo hunts. Tipis were lined with additional pieces of buffalo hide to keep out wind and water. Other hides served as bed coverings.

To facilitate water transportation, buffalo hides were sometimes stretched over a wooden framework to form the so-called bull-boat.

Buffalo hides had many more uses. A large variety of containers of different sizes, shapes and uses were made of hide including the parfleche, quivers, medicine cases, saddle bags, etc. The shield bases was of fire-hardened hide. Rawhide was used for finding and hafting.

The sinew from the large tendons of the back and legs was twisted for use as thread, bowstrings, snowshoe webs and rope. Many bows were sinewed backed.

As household utensils buffalo horn spoons and ladles were used. The intestines or bladder served for water containers. Stone boiling in buffalo paunch containers was a common method of cooking.

Hoofs and horns of the Buffalo were cut up and made into ceremonial rattles or used to hold tobacco, medicines and gun powder.

Bones were used for tools of various kinds: awls, chisels, hide fleshers, scrapers and paint brushes.

The hair was sometimes twisted into yarn and braided into bags, belts, garters, leggings, girdles, ropes for tying materials, in ceremonial costumes as headbands, necklaces, etc., blankets, saddle wadding, moccasin lining in winter, halters for horses, additional artificial head-hair, etc.

Finally even the droppings of the buffalo were extensively used by the Indians as a sun-dried fuel. In a country where timber was scarce these "buffalo chips" were valuable. They gave clear, hot, relatively smokeless flame which was a real advantage to warring Indians.

There were communal hunts in the spring, summer and fall, usually before the planting and after the harvesting of the tobacco crop. In winter small groups who desired robes in their heavy winter state went out on hunting trips. Hunting by individuals was forbidden. Before the coming of horses and firearms the animals were pursued on foot and killed with bow and arrow and lance.

The chase was carried on in the following ways: (1) The animals were driven into large corral-like structures by large numbers of beaters and there killed. (2) The prairie grass was fired in a large circle about a group of buffalo so that it burned in toward them, forcing them into a close mass that was easily attacked by the hunters. (3) The animals were similarly surrounded and forced together by large numbers of men and boys. (4) In winter after a very heavy snow the buffalo would sink into the drifts so that they were unable to move and fell easy prey to hunters on snowshoes. (5) In the early spring, when the ice in the rivers was about ready to break up, buffalo were enticed into attempting to cross a stream on the ice by burning the dead grass on the opposite side of the stream, thus disclosing the new green grass. Their weight would break the ice into large masses which floated down the stream, each one with several animals carried on it. The Indians would run out over the broken ice to these islands and dispatch the buffalo. (6) Herds were either driven over a cliff or led over by an Indian disguised as a buffalo. Most of the animals thus attacked were killed by the fall.

The introduction of the horse in the late 18th and early 19th centuries tended to break up the old tribal cohesion and the communal hunts. The mounted Indians hunted the buffalo either by surrounding a group of them or by riding through a stampeding herd, killing such animals as came near them.

Nothing required the attention of the Plains Indians of both sexes so much as preoccupation with the buffalo. It was men's work to find

and kill the buffalo. It was women's work to fless the hides and fashion and decorate the greater part of the objects made of buffalo hides. While we may look upon the buffalo hunting as a romantic, exciting form of sport, it was none the less a serious business to the Indians. The work of the women was hard and of long duration.

In the field of art the buffalo made a less prominent contribution. The buffalo was rarely represented in the three principal Plains techniques - painting, quillwork and beadwork. But buffalo hide materials served as field for decoration - robes, parfleches, moccasins, shields, tipi covers, etc. And sinew for sewing beads and attaching quills, bone paint brushes and the glue sizing used in painting - all were furnished by the buffalo.

The buffalo strongly influenced the immaterial side of the Plains Indian life. Societies and seasons or months of the year were named after the buffalo. The buffalo appears as a favorite topic in the mythological animal stories. It was given a place in the Dakota religious hierarchy. Buffalo calling ceremonies and buffalo dances were observed. And materials taken from the buffalo were endowed with sacred meaning when used in ceremonial and medicine bundles.

The spirit or ghost buffalo, the first of all buffalos, was said to have been born in a cave in the north. He was pure white and was the patron of medicine men and doctors, teaching them the healing art, especially as regards wounds.

The rare albino animals found occasionally on the plains were greatly reverenced by the Indians because of their resemblance to the spirit buffalo.

The animal was the totem or fetish of the Buffalo societies which existed among the plains tribes. Members of these societies had personal names indicating movements, postures and actions of the beast, such as Standing Buffalo. The months were designated by the habits of the animal. The buffalo became the symbol of the leader and the type of long life and plenty. Buffalo ceremonies and stories were a constant delight to the people.

As the number of buffalo diminished, and the distribution of the herds contracted, this search for buffalo led to many bitter conflicts between tribes over hunting grounds. In the nineteenth century the demand for buffalo hides in the east and in Europe encouraged the Indian trade of the Plains. The period of Indian atrocities and later open warfare with the whites from 1840 to 1877 was largely motivated by the desire on the part of the Indians to preserve their hunting grounds. The final settlement of the Teton on reservations was only effected after the number of bison had become too few to permit of their subsisting by the case. The Ghost Dance craze of 1890 had as one of its principal motives the desire for the return of the buffalo. But it was then too late. The great herds were gone forever, and with the

extermination of the bison the old culture was doomed.

By 1885 less than a thousand animals remained and their extermination seemed inevitable. But public opinion and government regulation stepped in just in time, so that today the animals are steadily increasing. There are probably ten thousand in various zoos and government preserves and several hundred wild animals in the Canadian herd.

Teton Dakota
Ethnology and History
John C. Ewers
National Park Service, 1937

Denver Art Museum
Department of Indian Art
Leaflet No. 7 - 1930

THE MAVRAKIS-BENTZEN-ROBERTS BISON TRAP
SHERIDAN CHAPTER, WYOMING ARCHAEOLOGICAL SOCIETY
June - 1962

Site 48SH311 lies on the Donald Roberts ranch in Sheridan County, Wyoming, on a tributary of Buffalo Creek, approximately 30 miles east of Sheridan, in the NW¼, SW¼, Sec. 2, T55N, R80W. It was discovered in 1960 by Sam Mavrakis while deer hunting, as an outcropping of bones on the side of a cut bank. Sam, along with two game wardens, obtained permission from the landowner to excavate the site in order to recover stone projectile points for their collections. A considerable amount of digging was done and quite a number of artifacts were recovered.

When the writer learned of this situation which was fast bringing about the total destruction of the site, he prevailed upon the collectors to turn the site over to the Sheridan Chapter of the Wyoming Archaeological Society for a sufficient length of time to make a careful excavation and study of the site so that information could be gathered and recorded before the site was destroyed. This was granted, along with full cooperation of the land-owner.

In May and June, 1962, a concrete datum post was set at the site and a contour survey made of the area. A camp was set up on Buffalo Creek one mile north of the site, and 23 members and 5 friends of the Sheridan chapter worked a total of 533 man-hours in ten days to carry out the investigation.

This site compares very closely with 24PR5 (1) which the society excavated in 1961. It lies 40 miles southwest; the geologic conditions are similar, and the terrain is almost a duplication both directionally and in general formation. Buffalo Creek, running west to east, was the grazing and gathering basin for the bison. The side-drainage from the south has a nice spring about one mile up the canyon. Just a few steps south of the spring is the mouth of a precipitous-walled and blind canyon or a arroyo which extends eastward for 150 yards. It was probably a relatively simple procedure for ancient man to barricade the north-south canyon just above the mouth of the east-west canyon, and execute a short drive when the bison came to the spring for water. Once they were boxed in the blind canyon, they were easily slain at very close range by stone-tipped projectiles, probably atlatls.

The immediate terrain is mostly gumbo with sandstone out-croppings and some shale. Sagebrush and prairie grasses dominate the vegetation, while the Colorado juniper, cottonwood and willow grow in the arroyos where moisture is sufficient. Many mule deer and antelope live in the area along with an abundance of sage grouse, jackrabbits, cottontails, porcupines, badgers and raccoons. The country is usually quite arid, but this year was favored with frequent and properly-spaced rains so

(1) The Powers-Yonkee Bison Trap, Plains Anthropologist, pp 113-118, Vol. 7, No. 16, June 1962.

Society camp on Buffalo Creek.

Site #1 on south bank of arroyo.

100
80
60
100
120
140
160
180
200
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260
280
300
170
300
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SITE 2
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7
2
1
SITE 1
N
2 CONTROL POINT
EXCAVATIONS
BENCH MARK (ASSUMED 100.00 FT)
CONTOUR INTERVAL 10 FT
NW 1/4, SW 1/4, SEC. 2, T 55 N, R 80 W
APPROX. ELEVATION 4500 FT
WYOMING ARCHAEOLOGICAL SOCIETY
ROBERTS SITE
48-SH-311
SURVEYED JUNE 1962 BY L. E. ALLEN
SCALE:
0 10 50 100
FEET

that the vegetation was more profuse than ever in the memory of living man. Although it rained every day of our investigation, it never rained while we were excavating, only during lunch hour or after 6 P.M.

Most of the uncontrolled digging had been done in a 50-foot area on the south side of the arroyo, and this seemed to have the heaviest deposit of bones, so it was decided to excavate that area first. Many tons of loose and disturbed earth were shoveled over the bank to clear the area and give a working platform. Then a vertical cut was made in undisturbed soil for a distance of 22 feet, parallel to the canyon. This revealed a sterile over-burden 9 feet thick, and a cultural or bone-bearing level that ran from 12" to 14" thick. Below this was more sterile soil. The over-burden was a mixture of gumbo clay and sand, but there was sufficient sand to promote a caving condition, so when the squares were excavated later, a 20 degree slope had to be maintained for safeguarding against caving. This added materially to the amount of dirt to be removed and it was figured that 44 tons of earth were removed, all by hand labor, to expose three contiguous 5-foot squares. With three and a fraction more squares excavated, there were probably 75 tons of over-burden removed.

In site #1, three 5-foot squares were exposed and carefully excavated simultaneously, and later a fourth square was added on the east end. The excavating was so carefully done that nearly all the artifacts were found in situ. Although all excavated material from the cultural level was screened through ¼" mesh hardware cloth, there was one period of 3 consecutive days when not a single artifact turned up in the screens.

Site #2 was a knob-shaped projection of bank topped with a heavy-rooted shrub which probably had prevented the erosion of the soil. It was situated on the opposite or north side of the arroyo and about 100 feet east of site #1. It also had 9 feet of over-burden, with a fairly level outcropping of bones exposed on three sides. When the sterile over-burden was removed, two complete and one partial 5-foot squares were available for excavation. These proved to be very difficult to excavate due to the extremely hard gumbo which could only be loosened with picks. The bone layer was also much thinner than in site #1, tapering from 10 or 12 inches on the south or exposed side to 3 inches on the north. The artifacts, though identical with those in site #1, were fewer in number.

In site #1, the cultural level was pretty much parallel with the present surface of the ground, sloping 10 inches in 15 feet lengthwise of the arroyo, and 7 inches in 5 feet crosswise. This would indicate that the general slope of the ground surface had been maintained during the milleniums of the build-up of the 9 feet of overburden.

The deposit of bones in the cultural level was so heavy that rarely could a shovel-ful of dirt be trowled out without exposing bone. All bones recovered were those of bison with the possible exception of a few

Heavy concentration of bison bones.

View from top of bank showing excavation.

smaller ones which resembled those of deer. All mandibles and toe-bones (hoof-cores) were saved, along with seven or eight bushels of other bones which were sufficiently well-preserved to be worth keeping. In site #1 (four 5-foot squares) 33 mandibles were recovered, which would total 17 bison, and 207 hoof-cores which would indicate 26 bison. This is a concentration of one bison for every four square feet, and also one bison for every 4 cubic feet, because the bone layer averaged 12" in depth. In site #2, with 2½ 5-foot squares, there were 6 mandibles and 49 hoof-cores which indicates 7 bison, a considerably smaller concentration than in site #1.

All bones were carefully examined and three of them revealed interesting conditions. A large leg bone showed evidence of repeated blows with a sharp rock to fracture it so the marrow could be removed, a common practice. Imbedded in a hump vertebra was the broken tip of a stone projectile point. A fractured leg bone was uncovered with a stone wedge inserted in perfect position to further split the bone to obtain the marrow.

A total of 87 stone artifacts were recovered, of which 81 were projectile points or fragments and 53 had bases sufficiently complete to be identifiable. Eighty-one percent were made of altered shale, 11% of quartzite, and 7% of agate. One artifact, #18, is a smooth, flat, round polished stone of granitic material and unknown usuage. Number 17 is a mid-section of a crude blade or chopper, while #19, 20, and 21 are side-scrapers with finely pressure-flaked edges. Number 3 is a broken snub-nosed end-scraper. Numbers 1 through 7 are surface finds from the area near the sites. Numbers 8 through 11 are from the disturbed area at site #1. Numbers 12-16, 20, 21, 54, and 65 are from site #2, and all the rest are from site #1.

Of the 53 identifiable points, 45, or 85%, are of the McKean type (1), while the others are similar enough to come within the range of variations of the McKean complex. In size, the points range from a maximum length of 2-13/16" (No. 65), to a minimum of 3/4" (No. 25); in width from 1" (No. 41), to 9/16" (No. 8); and in thickness from 5/16" (No. 63), to 2/16" (No. 26), the average thickness being 3/16".

The typical point is a sharp-pointed, straight-sided or slightly convex-sided, finely pressure-flaked point with basal notch and corner notches giving a constricted base. Some bases are unnotched but slightly concave. These points are nearly all identical in size, shape and material with those recovered from the Powers-Yonkee Bison Trap. (1).

Dividing the number of recovered projectile points by the number of bison remains in each site, we have 2.5 points per animal in site #1, and 2.4 points per animal in site #2. Again, as was found to be true in the Powers-Yonkee site, the majority of the points were found in association with rib bones, which indicates a preference in these ancient people to use the rib-cage as the target area. This is a logical

Profile of Site #1. Mavrakis-Bentzen-Roberts Bison Trap, 48 SH311

2 feet

Articulated vertebrae and complete front leg.

Assemblage of bones with projectile point in situ.

Leg bone of Bison, showing result of fracture from sharp rock, to obtain marrow.

Hump vertebra of Bison, showing imbedded tip of stone projectile point.

Fractured leg bone of Bison with stone wedge used for splitting, found in situ.

Rib assemblage with projectile point in situ.

Projectile point No. 65 as found in situ.

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62
63
64
65
RCB
2 Inches

choice, because the chest cavity is a large target and allows easy penetration of a projectile to vital lung tissue with resulting speedy death of the animal.

A charcoal specimen was recovered from Site #1 and submitted to Isotopes, Inc. for carbon-14 analysis. It gave a date of 2,600 plus or minus 200 years B.P. With a carbon date on the Powers-Yonkee site of 4450 plus or minus 125, this would give a variable span of 1525 years to 2175 years for the extent of this facet of the McKean complex. The later date of this site as compared to the Powers-Yonkee was identified by Schulz (1) as being an intermediate form between Bison bison and Bison antiquus. During the 1500 to 2100 years which elapsed from then till the time of the Mavrakis-Bentzen-Roberts Bison Trap, it is logical to assume that the intermediate form could evolve into Bison bison.

The Sheridan Chapter of the Wyoming Archaeological Society wishes to express the thanks of its members to the Wenner-Gren Foundation for Anthropological Research for its kindness in allowing a grant of $500 which enabled our society to carry out this investigation.

Margaret Powers.....Chapter President

James Goodwin.....Chapter Vice-President

Hila Gilbert.....Secretary-Treasurer

Raymond C. Bentzen....Superintendent of excavations & producer of this report.

September, 1962

Vertical wall of site #1 with projecting bones.