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## MONTANA SOCIETY HAS MEETING

The Billings Archaeological Society hosted the annual convention of the Montana Archaeological Society in a two-day meeting on Saturday and Sunday, April 15 and 16.

The daytime sessions on Saturday were devoted to the discussion of buffalo jumps. Descriptions of several jumps were given, and these were followed by a round-table discussion to summarize and coalesce the data into some useful generalities.

Dr. Claude Shaeffer, Curator of the Museum of the Plains Indian at Browning, Montana, talked first about some of the ethnological factors in the Blackfoot Bison Drive. Based upon written records of actual observers of some of the jumps, the talk outlined some of the rituals observed in connection with the operations of the jumps.

Often, the buffalo hunt was under the supervision of some sort of shaman. In Blackfoot lore, this was often a "Buffalo Woman" who possessed a magic "buffalo stone" which had the power of attracting and controlling the movements of the buffalo. This "buffalo stone" is thought to have been a fossil, or perhaps a concretion, which bore some resemblance to a buffalo. This shaman, or drive supervisor, would choose a propitious time for the drive and would assign individuals to various tasks in connection with the operation.

Usually the tribe or band used the same jumps every year, and the long lines of rock which formed guide lanes to steer the buffalo to the fatal fall were used year after year. Most sources agree that the lines of rock piles served to hide hunters who would remain out of view until the critical moment, then would make a movement to keep the buffalo running along the lane. As the herd approached the jump, the hunters would often close in behind, yelling and making every effort to stampede the buffaloes over the cliff.

Among the most important members of the buffalo hunt were the runners. These men were specially trained and physically conditioned for their task. Their job was to locate the buffalo herd and to bring it to the jump site. Only one or two runners were involved, and they maneuvered the buffalo largely through their knowledge of the buffalo's psychology, rather than by any herding or driving. These runners were magnificent physical specimens, capable of great speed and endurance, and legends of their prowess persisted in the tribes and bands in the same manner as of famous chiefs. The name of Red Antelope is famous in Blackfoot legend as one of the great runners.

The runners usually wore antelope or buffalo disguises in their work. These served the primary function of disguising the odor of the runner, since it is believed that the bison had a very acute sense of smell, but rather poor vision. Before the season of the hunt, it is likely that the runners isolated themselves from the band in order to eliminate smoke and other odors from their persons. Ritual bathing is a likely possibility. There is historical evidence that they carefully hid away from the campsite their working disguises to prevent contamination with human odors. This factor of odor repeatedly shows up as one of the most important considerations in jump-killing of buffalo.

Joe Medicine Crow related some of the legendary history of buffalo jumps among the Crow people. The Crow people claim much credit for introducing the buffalo jump into the northwest plains. When the Crow (Absaroka) moved from Minnesota and North Dakota up the Missouri and Yellowstone rivers, they brought the

concept of the buffalo jump with them and thus introduced it to the Cheyenne and other tribes of this area. Several other methods of animal trapping and killing were widespread, including the simple surround, crowding the beasts into snowdrifts or bogs to immobilize them, or crowding them onto river or lake ice to cause them to fall and become vulnerable. The buffalo jump was known to the Assiniboine, and other tribes of the central and eastern areas, and it may be from them that the Crow brought the technique west. The Assiniboine very frequently used the corral method which consists in crowding the animals over a hill into a hidden corral in which they are trapped and killed. The corral method is more suitable for topography which does not afford cliffs for crippling jumps.

Dr. Richard Forbis described the Old Woman Buffalo Jump to the group. This site was a deep, stratified site in which bone deposits were abundant, and projectile points clearly distinguishable by horizons. A clear progression of types was apparent, and it is thought that perhaps 3000 years or more of types are represented. The site furnishes one of the very best archaeological studies on buffalo jumps.

No stone lines are visible at the Old Woman site, but Dr. Forbis pointed out that where stone was scarce, as at this site, it is quite possible to have used bushes, brush, sod, and piles of buffalo chips to make the necessary guide lines.

After the lunch, Dr. Carling Malouf, Professor of Anthropology at Montana State University, showed a film and discussed the Logan Buffalo Jump. This site is apparently a long-used jump, and is reasonably well stratified.

George Arthur, an anthropology student from Montana State University, discussed the Emigrant Buffalo Jumps. This site originally contained two kill sites, one of which is a classical jump, and the other of which more closely resembles the Assiniboine type of corral or pound. Unfortunately, this site has been almost completely destroyed by pot-hunters, and investigation is very difficult. There seems to be a possibility that Cody Complex materials occurred on bedrock at this site, but whether this is true will probably never be known, since, as soon as any interest was shown in the site by archaeologists, pot-hunters converged on the scene and destroyed it.

A short report on the work done to date at the Keogh Buffalo Jump by the Billings society was given by Stuart Connor. This jump has real merit as a classic site, and it is hoped that the Billings society can pursue the work further and derive some pertinent information. The work done to date indicates a Late Period site, but the work is only started, and it is quite likely that earlier usage may develop.

The final before-dinner session was a round-table discussion with Dr. Taylor, Dr. Schaeffer, Dr. Malouf, Dr. Forbis, Joe Medicine Crow, and George Arther. This discussion intended to summarize the foregoing proceedings. Among the important facts about buffalo jumps that were elicited are the following:

1. The design and operation of a buffalo jump depended heavily on recognizing the buffalo's acute sense of smell. Wind direction, avoidance of strong odors on the hunters, and other factors had to be carefully observed.

2. Although small, the rock cairns in the drive lines are believed to have been intended as hiding places for the hunters.

3. The hunt was a highly organized, well-planned and concerted effort on the part of the band.

4. Several types of jump were utilized. The exact type depended upon the available local terrain.

5. A highly specialized type of terrain was needed for the jump. A high plateau-like grazing area was required, near which a sudden drop-off could be found for the jump. The prevailing winds must be right.

6. Most jumps are Late Period, but some may have been used in the Late Middle Period.

The second day of the conference started with a discussion of the famous Pictograph and Ghost Cave sites, and a resume of their significance to northwest plains archaeology. Harold Hagen did an excellent job of explaining the sites.

Following the discussion of these sites, a field trip was made to them, and guided tours through the area were taken. The sites are extremely impressive, and only through a visit can one really understand them in their proper perspective. Much work could yet be done at the site, and it is hoped that this can be accomplished in the near future. Most of the pictographs for which the site is famous have been obliterated by vandals. Only a few remain. Once again, the pothunters and vandals have senselessly destroyed a priceless page of prehistory.

While this brief sketch cannot do justice to the fine conference, it is hoped that the reader will be made aware of the great accomplishments which can be brought forth by concerted efforts of a dedicated group. Stuart Connor and the Billings Archaeological Society are to be congratulated upon the finest archaeological experience which has been produced in this area.

#### SISTERS HILL SITE DATED

Word has been received that Eugene Galloway has a carbon date on the Sisters Hill site which places its age at 9600 years. Work at the site on April 8 produced another basal point fragment about  $2\frac{1}{2}$  inches in length. This is the largest fragment found to date, and indicates that the site may be Hell Gap rather than Agate Basin in its cultural affiliation. This is the oldest dated site in northern Wyoming, and we think Eugene has a good thing going there.

#### NOW YOU KNOW

Arkansas has recently received a bitter blow to its attempts to obtain sensible antiquities laws. The following statement appeared in the Arkansas Society's newsletter for March, 1961. We think the inconsistencies in the governor's statements are too obvious to require our criticism.

#### The Antiquity Act for Arkansas vetoed by Governor Faubus

The Antiquity Act as it appeared in the February issue of this Newsletter passed both the State House of Representatives and the State Senate, but was vetoed by the Governor. In his veto message, Governor Faubus gave as his reason for the action, that he felt the

Act would "work undue hardships upon state, county, and municipal departments and employees;" that Section 15, whereby personnel of the Laboratory of Archaeological Research are allowed access to lands in performance of their duties, was an invasion of the constitutional rights of private landowners; and that requiring persons to determine the ownership of lands and to gain permission before removing artifacts therefrom, would "interfere with and virtually prohibit the hobby of many people of this State."

#### TYPE SITE FOR THE CODY COMPLEX

Herbert Dick has published, in the October, 1960, issue of American Antiquities, a complete report on the Claypool site in southeastern Colorado. The site produces Cody knives, Eden and Scottsbluff points. In short the site represents the Cody Complex. The situation is a little mixed. Since no formal report has ever been made on the Horner Site near Cody, the term Cody Complex exists primarily through such sources as Wormington's Ancient Man in North America. However, according to formal procedure, the first publication is the one that merits the name of type site, and thus the Claypool site is the proper type site for the complex. It is doubtful that the prevailing custom will change for the benefit of formality, but it would indeed be proper to rename these materials as the Claypool Complex or something similar, in honor of the first technical publication on these materials.

The materials are fairly typical, although the so-called Scottsbluff points show a wider range of variation than is generally attributed to this type in other reports.

#### FLORIDA'S OLDEST DATE

The October, 1960, issue of American Antiquities carries an absorbing account of a most unusual archaeological site at Warm Mineral Springs, Florida.

To begin with, the cultural levels are under some 35 to 40 feet of water. The site is an old limestone cave which apparently was occupied at a time when the seas were much lower than at present. Geological studies, and the chronologies for post-glacial sea levels by Shepard and Suess, indicate that this was quite possible within the last ten thousand years.

Among the finds were skeletal remains of several humans. Most remarkable of the discoveries was that of a human skull which contained some soft grayish tissue. A number of pathologists have concluded that the tissue is a remarkably preserved brain, or portion thereof. While instances of preservation of brain tissues long after the disappearance of other soft tissues are known, this is the first such case in regard to a submerged specimen. It is thought that perhaps some antibiotic property of the Warm Mineral Springs water may be responsible. (Recent discovery of an antibiotic in the Thermopolis, Wyoming, hot springs may or may not be a case in point.)

A carbon date of 8000 years was obtained for the site, although the skeletal material cannot be definitely assigned this age. This is the oldest direct date for a Florida site, although the Melbourne materials and the nearby Russell Cave dates have made it quite likely that such older material might be found in Florida.

## ANOTHER MCKEAN DATE

In a letter from Ann Arbor, Michigan, William Buckles, a professional archaeologist and society member, writes that he helped dig a McKean site in the Black Hills last summer from which was obtained a good charcoal sample in direct association with a Hanna point. The sample has yielded a date of 4100 years. This date is much nearer the previously assumed values than that obtained by Don Grey for the 48 JO 303 site (5600 years). There seems to be accumulating evidence that the McKean Complex has persisted over an appreciable time-span.

Buckles also writes that he has found an Early Man site near Detroit which will probably be excavated next summer. The site yields points with fluting, and points with longitudinal thinning and concave bases somewhat similar to Plainview except for the concavity.

## THE NEWEST OLDEST MAN

Olduvai Gorge has yielded again to the indefatigable probing of Dr. Leakey. Another find of human remains which appear to be stratigraphically older than the 1958 Sinjanthropus find was made last fall. The find consists of parts of an adult and the cranium of a child. There is evidence that the child was murdered by the traditional blunt instrument.

Considerable importance is attached to what may be hide-working tools found with the remains. This would indicate an extremely advanced form of technology for man's earliest known ancestor.

This man does not have the large heavy teeth of Sinjanthropus, and may indicate a collateral branch of man's family tree. Which, if either, of these old men is directly ancestral to modern man is not yet known.

## NATIONAL GEOGRAPHIC SPONSORS WYOMING SITE

The National Geographic Society is sponsoring work at the Hollow Springs site south of Rawlins this coming summer. The Doctors Irwin and Dr. Agogino will be in charge of the work. It is quite possible that this site will be one of the most important Early Man sites in the western part of the United States if its early promise is borne out. Bones of several different animals, including mammoth, have been found, along with artifacts. The excellent state of preservation of materials in the site will afford an opportunity to bring to bear all the methods of palynology and paleontology in the study of the site. The result should be very informative.

## WORMINGTON TO GO TO RUSSIA

Dr. H. M. Wormington will be attending archaeological conferences in Russia this summer. These conferences usually contain geological, paleontological and anthropological sections combined. Dr. Wormington has been interested in the problem of the origins of man in America, and has done some previous work on the artifacts found on the Siberian side of the Bering Straits.

## ART AND SOCIAL STRUCTURE

Dr. Fisher, of Tulane University, has come upon what he believes are some significant relationships between the art forms used by a people and the social forms of that people.

Broadly speaking, Dr. Fisher believes that many social structures are reflected in the types of design used in decoration of pottery or in other art forms. These correlations are best reflected in the more abstract forms, where greater freedom of expression tends to more accurately depict subconscious tendencies.

Tentatively, Dr. Fisher has found that repeated forms in a design, that is, a balanced equality of pattern, tend to reflect a balanced social structure—one which is democratic rather than hierarchic. Asymmetry in a design tends to indicate a class-conscious social structure. Rectilinear (straight line) designs tend to indicate a monogynous society, whereas curvilinear designs portend a freer, perhaps polygynous structure.

If these patterns of correlation hold true, they will form a valuable addition to the study of primitive cultures. Those petroglyphs might yet yield some secrets!

## MONTANA PICTOGRAPH SURVEY

Lewis K. Napton, of the Montana Archaeological Society, is head of a Montana project to photograph and copy Indian pictographs all over the state. He showed a number of fine slides of work already done, and it is clear that the survey is doing some fine work. The Wyoming Archaeological Society has a petroglyph crew working, also, and the two organizations will be working in close accord in the future. It is hoped that these ancient symbols can be preserved before further weathering and vandalism destroy the remaining figures.

One of the important results of a survey such as this is that a study made ten or twenty years hence of the weathering of these signs will afford some pertinent information about the age of these signs. As soon as the weathering rate is known, some useful extrapolations can undoubtedly be made.

In the next issue, your editor will comment on some proposals for direct physical dating of petroglyphs and pictographs.

## ROMANS IN MEXICO?

Periodically there are reports of European materials found in sites in Mexico. Usually these are plain hoaxes, or the imaginings of some Atlantians or Muvians.

Dr. Robert Heine-Geldern reported that a small clay head was found in a burial at Claixtlahuaca under three sealed and undisturbed floors, and that this head has been identified by European Classicists as a well-known type of Roman figurine from the second century A.D. If authentic, this would be the first real pre-Columbian import found in a controlled excavation in the Americas.

We are inclined to take this cum grano salis until further evidence is adduced.

## PROPOSED CHRONOLOGY LABORATORY

The March, 1961, issue of KATUNOB reports that the School of American Research has proposed the establishment of a chronology laboratory at Santa Fe, New Mexico, for the purpose of bringing together all the possible methods of scientific dating which might be applied to archaeological research.

It will be recalled by many readers that such a system was proposed in these pages in June, 1960. It is heartening to know that the School of American Research has been thinking along the same lines. There is a real need for a full-time concerted effort to tackle the problems of archaeological chronology with every tool available, and this seems like a very good approach.

The laboratory would feature such dating methods as carbon-14, thermoluminescence, dendrochronology, obsidian hydration, dendrochronology, paleomagnetism and palynology. Research toward other methods would also presumably be carried out with excellent opportunities for cross-checking new methods against those already available.

## CHAPTER REPORTS

### Sheridan

The Sheridan Chapter met at 7:30 P.M., April 3, at Sheridan College with 26 members and 2 guests present. After a brief business meeting during which there was an appeal for more members to work on diaramas for the coming exhibition, Dr. Bentzen delivered a short program on field methods for the benefit of newcomers who had not participated in a class or dig.

First, Dr. Bentzen developed the pattern of soil accumulation at a hypothetical site, showing how the cultural and geological strata develop. Then he showed how a site might be partially uncovered or otherwise prepared for discovery by further erosion.

After the discovery of the site, the work progresses through the mapping and exploratory work. The exploratory work, consisting of a trench or pit for the purpose of testing the stratigraphy and cultural content, serves to form a basis for deciding the method of operation on the rest of the site. Further excavation and development then follows the plan decided upon.

Careful logging of the position of every man-made item is the most important phase of all. This is the real object of the whole field operation--the transformation of nature's stratigraphic record to a written and permanent form.

The last phase of the operation is the study and treatment of the material in order to prepare a written report. This is a tedious, but often fascinating phase which will be discussed at the next program of the chapter. The written report is a vital phase of the operation, because this puts the recovered information in the hands of people who can utilize the information in the study of ancient man.

### Casper

The Casper chapter met on April 11 at 7:30 P.M. in Room 163 of the Casper College building. A short business meeting was held and was followed by two films.

Thirty members and five guests were present.

The films were: Zacaleu--White Earth, a documentary on Mayan culture, and Prehistoric Farmers, part of the University of Nebraska Great Plains Trilogy.

The Zacaleu picture was obtained free from the Princeton Film Service, while the Prehistoric Farmer film cost four dollars. Both are considered to be excellent program material.

#### OVER THE CAMPFIRE

Thanks again to Stuart Connor of the Billings Archaeological Society for an excellently arranged meeting, and a fine program. The Montana Society can be proud of the conference.

Member William Buckles, formerly of the South Dakota museum is now in Ann Arbor, Michigan. He has found a fluted-point site near Detroit which may produce some interesting results next summer.

Word has been received via the grapevine that Dr. Mulloy is back in Peru, but that he won't be home until fall. We hear that Bill has hepatitis. We hope that he soon recovers and is able to return home soon.

KATUNOB is still a mighty good \$2.00 worth of archaeological publication. Last issue had a hundred pages. Send your money to Dr. George E. Fay, Box 87, Southern State College, Magnolia, Arkansas.

Requests for back issues of the Wyoming Archaeologist are coming in with increasing frequency. Chapter secretaries are urged to return any excess copies of any back issues as soon as possible, and members who might wish to sell or donate spare copies of back issues are urged to notify the editor.

A number of excellent dioramas are under construction in the Sheridan area. Some of these will be quite comparable to any museum exhibit. This construction can be a lot of fun, and members are urged to try their hands at reconstructing a site. From time to time, we will publish hints on techniques as learned by various members.

Trees and shrubs for dioramas can quickly and easily be made in very life-like form by obtaining some short lengths of multi-strand electrical cable. The more strands, the better. The cable should have a diameter of the size required for the plant. The length should be a little greater than the height of the desired reconstruction. Produce the major branches by separating part of the strands and twisting together. Smaller branches and twigs are in turn separated and twisted, until the end of the branch is reached. When all the branches have been formed, dip the whole in thin plaster, or in a thick tempera, and let dry. Color can be added to the dip or applied later. Foliage can be attached to the twigs with glue, and the result is a fine tree or bush.

Cliffs, and other natural structures in dioramas can be quickly constructed by using styrofoam, obtainable at the local lumber yard. Several slabs may be glued together with Pliobond or similar flexible cement. Casein glues work well, too. The material can be quickly carved to shape with knives, sticks, saws, and what-have-you. When the final form is achieved, colored plaster is brushed over

the surface to fill the pores, and the cliffs are built. Boulders are just as easily simulated, as are any other large forms. The result is very light, and is quite strong. It is a lot easier to work with than papier mache and screen wire.

A high school student from Carpenter, Wyoming, had an exhibit on an archaeological subject at the Science Fair in Casper this year. The exhibit contained a partial skeleton which the exhibitor attributed to the Middle Period. The editor did not have a chance to talk to the exhibitor, but is writing to learn more about the find.

Sheridan High School has a number of young people interested in the subject of archaeology. Your editor addressed the last meeting of this group and invited them to attend digs of the senior society. Some of these youngsters will make tomorrow's archaeologists, and we hope that they can be encouraged to get an early start.

The Wyoming Archaeologist is now being exchanged for the Iowa Archaeologist. This latter is edited by Dr. Marshall McKusick, the Iowa State Archaeologist, and is an excellently written source of information.

One of the unsung heroines of the Wyoming Archaeological Society is Elizabeth Anne Carlson. She is a mathematics major at the University of Wyoming and works in the library there. She has been extremely helpful in running down references and obtaining information about a number of subjects, often at considerable expense of her personal time. She merits our heartfelt thanks.

EMBERS OUT!