

WYOMING
ARCHAEOLOGICAL
SOCIETY

THE WYOMING ARCHAEOLOGIST



JUNE 1976

VOL. XIX

NO. 2

THE WYOMING ARCHAEOLOGIST is published quarterly by the Wyoming State Archaeological Society, Grant H. Willson, Editor. Address manuscripts and news items for publication to: The Editor, 1915 East 15th Street, Cheyenne, Wyoming, 82001.

NOTE: Membership period is from January through December and includes all issues published during current year regardless of the month the subscription commences. All subscriptions expire with the December issue and renewals are due the first of January each year.

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EDITOR'S NOTES

Please note letter from our good friend Ned Frost from the Recreation Commission pointing out upcoming bills to be acted upon by Congress. If proper funding of the National Historic Preservation Act could be achieved, it would make possible the preservation of our Hyattville Site and many others that we know of. Your personal letters of support for adequate funding could have an impact on our Congressional delegation.

THE STATE



OF WYOMING

ED HERSCHLER
GOVERNOR

Wyoming Recreation Commission

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April 6, 1976

PAUL H. WESTEDT

Director

777-7695

Mr. Grant Willson
Wyoming State Archaeological Society
1915 East 15th Street
Cheyenne, Wyoming 82001

Dear Grant:

You should have the information to notify the secretaries of the several chapters of the society regarding current bills before the Congress that would strengthen the National Historic Preservation Act and its funding. These are:

S. 327, now passed by the Senate and awaiting action by the House on either it or, more likely, a companion House bill. The Senate bill would provide authorization for \$150,000,000 yearly to Historic Preservation Act.

House of Representatives Bill is 2763 or H. R. 12234, recently offered to cover all proposed amendments. Would provide 24.4 million 1977 fy; 75 million 1978 and 1979 fy's; 100 million 1980 fy and thereafter.

Probably the House will pass this bill in some version and then a conference team from the Senate and House will meet to work out a compromise to be passed by both houses.

Sincerely,

A handwritten signature in cursive script that reads "Ned Frost".

Ned Frost, Chief
Historic Division

MINUTES OF THE ANNUAL MEETING
WYOMING ARCHAEOLOGICAL SOCIETY, INC.

April 3, 1976

CALL TO ORDER AND PRESIDENT'S WELCOME

The Annual Meeting of the Wyoming Archaeological Society was called to order at 9:55 A.M. by President George Brox on Saturday, April 3, 1976, at the Holiday Inn in Casper. There were 61 members and guests present.

President Brox gave a brief welcome address, commenting on the coordination of Chapter activities, the importance of reporting and recording sites, and the future of the Society.

CREDENTIALS COMMITTEE REPORT

The report of the Credentials Committee was given by Lorene Iverson. The following certified voting delegates were acknowledged:

Juanita Hinthorn and Helen Bryant - Casper Chapter
Ada Jackson and Deborah Chastain - Cherokee Trail Chapter
Elva Anne Elliot and Craig Casner - Cheyenne Chapter
Helen Lookingbill and Lorene Iverson - Fremont County Chapter
Julie Saylor and Bernie Barlow - Gillette Chapter
Darralee Ellis and Imogene Hanson - Northern Big Horn Basin Chapter
Gerald Carbone and Margaret Powers - Sheridan Chapter
Harry Baker and George Babel - Sweetwater Chapter

SECRETARY'S MINUTES OF THE 1975 MEETING

It was agreed by consensus to dispense with the reading of the minutes of the previous State Meeting since the minutes of that Meeting were published in the June, 1975, issue of THE WYOMING ARCHAEOLOGIST.

TREASURER'S REPORT

The Treasurer's Report was given by Milford Hanson. The report showed a balance on hand of \$5,542.32 as of April 1, 1976. This represents a net gain from April 1, 1975, of \$282.06. The Treasurer's Report was accepted as read.

CHAPTER REPORTS

The following presented Chapter Reports: Charlie Ellis - Casper Chapter; Craig Casner - Cheyenne Chapter; Lorene Iverson - Fremont County Chapter; Imogene Hanson - Northern Big Horn Basin Chapter; George Brox - Cherokee Trail Chapter; Julie Farr - Sweetwater Chapter.

All Chapters were requested to file written annual reports with the Executive Secretary.

INTRODUCTION OF GUESTS

President Brox introduced the following guests: Dr. Larry A. Lahren, President, Anthropologos Researches International, Livingston, Montana; Dr. George Frison, State Archaeologist, and Mrs. Frison; Mr. Charles A. Reher, Archaeology Instructor, University of Wyoming.

NEW AMATEUR ARCHAEOLOGY PUBLICATION

President Brox read correspondence from Dan Vap of the Wichita Publishing Company regarding a new publication called the AMATEUR ARCHAEOLOGIST. The magazine, which is due for initial publication in July of 1976, is designed to provide the layperson with informative articles on archaeology, provide a national outlet for amateurs and amateur organizations, and serve as a means of guiding all amateurs towards a professional attitude. To be published quarterly, the AMATEUR ARCHAEOLOGIST is available at an annual subscription rate of \$7.50 from the Wichita Publishing Company, P. O. Box 8012, Wichita, Kansas, 67208.

FILM ON WYOMING ARCHAEOLOGY

Under Old Business it was moved by Helen Lookingbill and seconded by Helen Bryant to begin work on a public information film on Wyoming archaeology.

Joe Pinner elaborated the need for such a film, stating that there is a need to inform the public on what has been done, and what is going on currently, in Wyoming archaeology. He suggested that the film be designed primarily to encourage public understanding and respect for archaeological endeavors. He also suggested potential uses of the film within the Society and by educational institutions.

Dr. Larry Lahren mentioned that he had made a 30-minute video-tape on Alberta archaeology which would be available to the Society for use in establishing a possible film format.

Considerable discussion followed regarding the potential costs of such a film. Larry Osborne reported that a representative of the State Department of Education had suggested that about \$3,000 might be sufficient for a 28-minute, 16mm color film, and that the money could probably be obtained through a grant. Henry Jensen, who is currently involved in the production of a film for the Wyoming Historical Society, suggested that the cost might be in excess of \$35,000 based upon his experience. It was suggested that the Jayne Media Center at the University of Wyoming might be able to produce the film.

There being no more discussion, a vote was called for and the motion carried.

President Brox appointed the following committee to investigate the possibilities of a film: Henry Jensen, Judy Pinner, and Larry Osborne. He suggested that the committee attempt to make a progress report at the Summer meeting.

ETHICS COMMITTEE

Under New Business President Brox elaborated the urgent need for setting up a uniform system throughout the State on the cataloging of artifacts and the filing of site reports. He requested that each Chapter appoint an additional member to the Ethics Committee to work together with the State Archaeologist's Office in determining what has been found and where it can be seen. The Committee was also instructed to set up ethics and guidelines for the work of amateurs in the State.

JOE PINNER: FREMONT COUNTY CHAPTER SUCCESS

Joe Pinner, President of the Fremont County Chapter, was asked to comment on the successful growth and activities of his Chapter. The Fremont County Chapter has made considerable progress in the past year. Joe enumerated the following activities which he felt had contributed to the success of the Chapter:

- extensive recent archaeological activity in Fremont County involving the participation of Chapter Members
- the Summer Meeting at the Lookingbill Site
- monthly newspaper and radio announcements of Chapter meetings
- personal contacts with members and non-members to build attendance at meetings and gain new members
- scientifically oriented, comparative studies of artifact collections, emphasizing site assemblages rather than arrangement by typology
- interesting programs, including the use of several good films,

- many of which are free and all of which promote interest and discussion
- the use of an informal Chapter Newsletter, circulated among members and also among friends and non-members, outlining Chapter activities and up-coming meetings
 - strong emphasis on the recording of artifacts and site reporting, resulting in the combined efforts of the Chapter in reporting new sites of interest
 - opportunities to aid the crew of the Wyoming Archaeological Survey in conducting cultural inventories in Fremont County
 - casting as a Chapter activity and as a means of encouraging the scientific study of artifacts previously unavailable for study

Following a brief recess, the business meeting reconvened to consider further New Business.

SYMPOSIUM ON ARTIFACT TYPOLOGY AND CATALOGING

President Brox reported that the informal discussion on Friday evening had resulted in the recommendation of holding a symposium on artifact typology and cataloging. A committee was appointed to make arrangements for the symposium, probably to be held in conjunction with the Fall meeting. Members of the committee are: Dr. Art Schoondermark, Joe Pinner, Jerry Carbone, and George Zeimens.

STATE ARCHAEOLOGIST'S REPORT

A report was given by Dr. George Frison, State Archaeologist. Dr. Frison reported that a major achievement had occurred within the past year - the official establishment of an Associate State Archaeologist and an Assistant State Archaeologist. Dr. Frison credited the State of Wyoming for its support in this regard. He also lauded the fine work of George Zeimens in coordinating contract archaeological work with various industries, federal and other administrative agencies.

Dr. Frison mentioned that there are sometimes problems associated with the fact that he must wear "two hats" - one as Head of the Department of Anthropology at the University of Wyoming, and the other as State Archaeologist. He emphasized the need to maintain good solid archaeological research work in addition to survey work. He stated that an inadequate number of archaeology instructors at the University had placed a considerable burden on him.

Due to a leave of absence of one of his Department members, Dr. Frison reported that he had an opportunity to provide his students with a better background in archaeology through the addition of an archaeology instructor. Although the

new instructor, Charles Reher, is currently filling a temporary position, Dr. Frison stated his belief that the creation of a permanent position in archaeology is quite desirable from several standpoints, and requested support of the Society. Dr. Frison presented his request in the form of a motion which was seconded and unanimously carried. The Society agreed to provide support through a petition to be sent to the Board of Trustees of the University stating support for the creation of a new permanent position in archaeological instruction at the University.

Dr. Frison summarized the recent achievements and goals of archaeology in Wyoming, with special emphasis on the Medicine Lodge Creek Project. The Project, which has been well-supported by the National Science Foundation, has yielded a fairly good chronology of the Big Horn Basin area. The Basin is a natural laboratory for the study of problems of paleo-ecology and has been the subject of rather intensive work for a period of about thirteen years. A considerable mass of data has been collected, said Dr. Frison.

Dr. Frison spoke of his hopes to fill in some holes in the Altithermal Period in the near future. More studies are being initiated this summer which will involve the expert analysis of pack rat middens, dendrochronology work - including a good regional chart along with some local sequences to establish dates and explain climatic conditions, further study of bison procurement techniques, a pollen program - already begun following the recent purchase of a pollen coring machine, and geological studies with special help from John Albanese. The Colby and Hanson sites have now been tested, and a great deal of cultural data has been gathered and will be invaluable in the re-orientation of the original research design.

Re-definition of goals by the Society is imperative, according to Dr. Frison. He emphasized the extreme value of the casting program of the Society, pointing out the considerable time and study required to master the proper casting techniques.

Dr. Frison concluded by expressing his appreciation to the Society for its continued support.

NOMINATING COMMITTEE REPORT

The report of the Nominating Committee was given by Henry Jensen. It was the recommendation of the Committee that the present slate of officers be retained for another year. Nominations from the floor were called for. As there were no further nominations, it was moved by Imogene Hanson and seconded by Helen Bryant to accept the recommendation of the Nominating Committee by acclamation. Motion carried.

The following officers were re-elected: President - George Brox; 1st Vice-President - George Zeimens; 2nd Vice-President - Robert Ellis.

EXECUTIVE COMMITTEE MEETING

President Brox announced that the Executive Committee would meet at the Ramada Inn at 9:00 A.M. on Sunday, April 4, 1976.

STATE SUMMER MEETING

A brief discussion on the site of the State Summer Meeting was held. Since grant applications have not been acknowledged and other complicating factors made selection of a site at the present time impossible, it was moved by Imogene Hanson that selection of the Summer Meeting site be tabled until further information is available from the State Archaeologist's Office. The motion was seconded and carried.

INFORMATION NEEDED FROM CHAPTERS

President Brox reminded Chapters to report membership, officers, and time and place of meetings to the President and Executive Secretary at the earliest possible date.

After a short recess for lunch, the meeting was reconvened at 1:45 P.M.

FILM: "THE EARLY AMERICANS"

Larry Osborne presented a color film entitled "The Early Americans." The 41-minute film was produced in 1975 by the Shell Oil Company and is an excellent survey of early human experience in America. It is a film not only of explanation but of discovery with animated maps, panoramic landscapes, and scenes from the past and present. It shows how man's interaction with the environment led to his rise from nomadic hunter to builder of empires more than 2000 years before Columbus sailed for the New World. The Koster Site in Illinois and several sites in the Great Plains are depicted and there is an excellent demonstration of projectile point manufacture by Bruce Bradley.

The film is available for free public showings from the Shell Film Library, 1433 Sadlier Circle, W. Drive, Indianapolis, Indiana, 46239. An excellent wall chart accompanies the film. Chapters may obtain a copy of the wall chart, along with descriptive information on the film, by writing to Shell Oil or to the Executive Secretary.

DR. LARRY LAHREN: ARCHAEOLOGY OF THE UPPER YELLOWSTONE VALLEY, MONTANA

Dr. Larry Lahren gave a slide presentation on "Archaeology of the Upper Yellowstone Valley, Montana." Dr. Lahren showed slides depicting the great ecological diversity of the Valley and told of the great difficulty of finding sites in the area. He emphasized the nature of preliminary surface surveys to be frequently misleading to the untrained eye. A great variety of sites was described, including quarry sites, open camp sites, rock shelters, hunting blinds, fasting shelters, bison kill sites, and artifact-bearing cairns. Although many of the sites in the area date from the Middle Prehistoric to the Late Prehistoric, Dr. Lahren stressed that more Paleo sites were expected to be found with the refinement of techniques and further investigation.

Dr. Lahren focused attention on the Meyers-Hindman Site in Park County, Montana, a site which was the basis for his doctoral dissertation. Named after the landowner, George Meyers, originally from Riverton, Wyoming, and Rose Hindman, an amateur who learned of the site from a sheep herder in the early 1950's, the site eventually yielded cultural components dated from 1200 A.D. to about 9,000 years before the present. Seven settlement units were identified, and the archaeological assemblage included 6,150 stone artifacts and a wide variety of faunal remains were evidenced by over 600 identifiable bone elements. The slides of the excavation by Dr. Lahren and his crew described techniques for establishing a grid system, the retrieving of soil monoliths, and the identification of cultural patterns and settlement units.

Dr. Lahren found that collectors and vandals had seriously hampered the ability of the professionals to get accurate interpretations of cultural information in many areas of the Valley, much of the site disturbances having occurred in the 1950's when the archaeological significance of the Upper Yellowstone first became apparent.

NED FROST, WYOMING RECREATION COMMISSION

Mr. and Mrs. Ned Frost were introduced. Mr. Frost, representing the Wyoming Recreation Commission, spoke briefly regarding current trends in Federal and State governments concerning historical and archaeological matters. Mr. Frost traced the origin of the Wyoming Recreation Commission and the origin of funding for archaeological research in Wyoming. In the mid-1960's, both the State and Federal governments created sources of funding. It is now imperative to work for the perpetuation of those funding programs, according to Mr. Frost. Recently, some of those programs have suffered serious cut-backs. The reasons for the funding cuts appear to be economical measures plus a lack of convincing

reassurance to Congressmen to the valuable work being done in cultural preservation. Example: the 1977 budget for the Historic Preservation Act has been cut from \$20 million to \$10 million. This is contrasted with demonstrated needs in the states estimated to be between \$200-\$300 million.

There is currently legislation proposed in Congress which would create a Historic Preservation Fund (presently, the funds are budgeted annually out of the General Fund). Mr. Frost stated that the legislation, if passed, might create funds in excess of \$100 million by the mid- 1980's. He emphasized that it is imperative that our Congressmen be notified regarding the current proposed bills. (SECRETARY'S NOTE: the bills referred to by Mr. Frost have been introduced in both houses of Congress under the title "A Bill to Amend the Land and Water Conservation Act of 1965 to Establish the National Historic Preservation Fund." The Senate bill number is S-327 and the House bill number is HR-12234. The address of Wyoming's Congressmen are as follows: Sen. Gale McGee, Dirksen Senate Bldg., Washington, D. C., 20510; Sen. Cliff Hansen, Dirksen Senate Bldg., Washington, D. C., 20510; Rep. Teno Roncalio, 1314 Longworth Bldg., Washington, D. C., 20510.)

Mr. Frost continued by reporting that the Wyoming Legislature had recently refused all funding for the Medicine Lodge Creek Site, a site belonging to the State of Wyoming. Although some funds were allocated, they are funds earned by archaeological teams of the State. In short, we are going to have to get to work to get the funding necessary for important archaeological research and preservation.

CHARLES A. REHER: ARCHAEOLOGICAL SURVEY IN NEW MEXICO

Charles Reher, Archaeology Instructor at the University of Wyoming, made a presentation entitled "Settlement and Subsistence Patterns of the Lower Chaco of Northwestern New Mexico." The study was the result of a contract survey done in conjunction with energy development. The survey covered an area of 75 square miles about 10 miles south of Farmington, New Mexico, in the San Juan Basin on the East side of the Chaco River. Whereas only about 120 sites were anticipated, the survey team found at least 750 sites, or about 12 sites per square mile. Aside from the initial purpose of the survey, a more important and broader purpose consisted of interpreting and integrating the archaeological data in a much larger archaeological framework.

Using a sophisticated methodology, the survey team set out from their campsite at "Hoot Owl City" to evaluate the cultural resources, design environmental monitoring programs, and evaluate plant ecology and geological factors. After walking literally hundreds of miles, a great deal of data was recorded

bearing on the cultural patterns of Paleo, Archaic, Anasazi and Navaho occupations in the area.

The area had been occupied intensively over a period of three to four thousand years. It was soon discovered that a number of effective prediction models could be devised concerning Archaic occupation patterns. This was done by combining knowledge of the fact that the Archaic occupations occurred in areas of great ecological diversity with plant zone maps and the evidence of modern ethnological accounts regarding gathering communities.

Anasazi/Pueblo occupations dating from 500 A.D. to 1300 A.D. were found in considerable number. Some very useful information was derived from the survey which allowed the survey team to accurately predict population trends by considering the relationship between the number of sites and the size of the drainage basin where the site concentrations were located. In an area of only six inches of annual rainfall, the Anasazi farmers were remarkably successful in their environmental adaptation.

Charles concluded his report with a comparison of early historic Navaho occupations to Navaho settlement patterns of the 20th century.

GARVEY WOOD: HISTORICAL ARCHAEOLOGY OF FORT MCKENZIE

Garvey Wood, student at the University of Wyoming, presented a paper entitled "Fort McKenzie: Historical Archaeology of the Upper Missouri River." With slides and references from historical sources, Garvey described the history of the Fort and the problems of interpretation from the historical record resulting from conflicting accounts.

Fort McKenzie, established in the early 1830's by David Mitchell for the American Fur Company, was built in the heart of Blackfoot hunting grounds. Established some six miles above the mouth of the Marias River on the west bank of the Missouri, the Fort served as a trading center with the Blackfeet until it was burned to the ground in 1844. The well-fortified post was an important part of the lives of the Indians, serving as a recreation center, health and welfare center, and source of information to the Blackfeet regarding other tribes in the area.

The first description of the Fort was recorded by the German Prince Alexander Maximilian. Although the Prince left vivid descriptions of the trading post, these accounts were incomplete and often in conflict with accounts of subsequent post traders such as Alexander Culbertson and Francois Chardin. The only painting of the Fort while it was in existence was made by the Swiss

artist Carl Bodmer, travelling companion of Maximilian, who painted the Fort in the background of an Indian battle he witnessed near the Fort in August of 1833.

The Fort was besieged with problems from the outset, often because it was located within striking distance of Crow and Assiniboin who resented the opportunities it provided for the Blackfeet. Traders introduced small pox to the Indians at the Fort within a decade after its construction, resulting in the death of about two-thirds of the Blackfoot population. When Francois Chardin, a "hot-headed Frenchman," replaced Culbertson as chief trader and refused to admit some Blackfeet returning from Crow country to enter the Fort, hostilities erupted forcing evacuation of the Fort in 1844.

The Fort site was flooded in 1908 and leveled and seeded to grain in 1952. In the interim, it was severely looted. Maynard Schumate from Cascade, Montana, salvaged some trade items and observed much evidence of foundations of building in the old Fort, but even his discoveries conflicted with the descriptions left by the original occupants of the Fort.

Garvey suggested that the historical archaeologist cannot rely on the historical record alone, but must employ such archaeological tools as the proton magnetometer, electrical resistivity, and even the dowsing rod to obtain more complete information regarding the physical layout of the Fort. Garvey also suggested that records of the American Fur Company and accounts of burials within the stockade written by Maximilian might also be of value in reconstruction of the human drama associated with this significant frontier outpost in the remote Blackfoot country of the upper Missouri.

MARYANN FRARY: HISTORICAL ARCHAEOLOGY ON THE OREGON TRAIL

Maryann Frary, Anthropology Instructor at Casper College, presented a paper on historical archaeology on the Oregon Trail in Wyoming.

Following the severe Spring snowstorm of 1973 and the subsequent effects of road maintenance equipment and natural erosion forces, a gravestone was found along a private access road near the North Platte River about 22 kilometers east of Casper. The gravestone bore the name of Quintina Snoderly.

Working amid blowing sand and inquisitive livestock, Maryann led a small crew of four in the one-day excavation of the grave site in June of 1974. The burial had obviously been accomplished with great care, and although the coffin had slipped in the grave and most of the physical remains had decayed, the sand had preserved coffin stains, stains of the ropes used to lower the coffin into the grave, and body stains in extreme clarity.

Through a reconstruction of the coffin, it was determined that it had been constructed by a skilled craftsman. Recent historical research has indeed confirmed that a member of the wagon train, Robert Moore, was a cabinet maker.

The cause of death appears to have been the result of an accident that occurred when the Snoderly wagon slipped off a ferry as it bumped into the north bank landing on the River, pinning Quintina Snoderly in the wagon or between a wheel and the bank. Skeletal pathology and experiments with replicas certainly reinforce this hypothesis. The immediate cause of death was a pressure impact to the left chest area resulting in multiple injuries consistent with the ferry accident hypothesis.

The historical aspect of the study has documented that Quintina was the wife of Jacob Snoderly and the mother of eight. She died June 25, 1852, while crossing the Plains from Missouri to the Willamette Valley in Oregon.

The historical research further substantiates the initial proposal made by Maryann that a family group moving West would not automatically bury a deceased member in a shallow grave after a "quickie" funeral. A broader context relating to the burial of Quintina Snoderly is not only that it seriously questions the belief held by some that the quickie funeral in a shallow grave was typical, but in terms of problem-oriented historical archaeology provides evidence that one can postulate cultural factors from a dig and check these with historical records.

Maryann showed several slides of the excavation and is currently researching further information on Quintina Snoderly.

ADJOURNMENT

President Brox announced that the Banquet would begin at 7:30 P.M. The meeting was adjourned.

BANQUET PROGRAM

The Banquet was held at 7:30 P.M. at the Holiday Inn. President Brox opened the program portion by expressing his appreciation to all who had contributed to the success of the Annual Meeting.

CHAPTER ATTENDANCE

President Brox called for a count of attendance by Chapters. There were

75 in attendance representing the various Chapters as follows:

Casper Chapter - 23
Cherokee Trail Chapter - 8
Cheyenne Chapter - 11
Fremont County Chapter - 15
Gillette Chapter - 3
Northern Big Horn Basin Chapter - 8
Sheridan Chapter - 3
Sweetwater Chapter - 4

Following an introduction of those at the Head Table, the following awards were presented:

STEEGE "GOLDEN TROWEL" AWARD

Henry Jensen presented the 1976 Steege Golden Trowel Award to co-recipients Milford and Imogene Hanson, members of the Northern Big Horn Basin Chapter. The Award is presented annually in recognition of outstanding service to the Society.

MULLOY SCHOLARSHIP

The Mulloy Scholarship was presented to Susan Hughes, graduate student in anthropology at the University of Wyoming. As Susan was unable to attend the meeting, Dr. Frison accepted the award on her behalf.

SPECIAL AWARD TO DR. FRISON

President Brox presented a special plaque to Dr. Frison engraved as follows: "In appreciation of past services and guidance, the Wyoming Archaeological Society awards a Lifetime Membership to Dr. George Frison."

SPECIAL PRESENTATION TO GILLETTE'S ROCK PILE MUSEUM

George Zeimens announced that a special, framed group of casts representing projectile points from various kill sites in Wyoming would be presented to the Rock Pile Museum in Gillette in the name of Bill Barlow. Mr. Barlow has been a very active amateur who has aided the State Archaeologists in numerous ways. The presentation will be made to the Museum in recognition of his service.

WYOMING ARCHAEOLOGICAL FOUNDATION MEETING

President Brox announced a meeting of the Wyoming Archaeological Foundation, to be held at 10:00 A.M. on Sunday, April 4, 1976, at the home of John Albanese in Casper.

BANQUET SPEAKER: DR. H. MARIE WORMINGTON

President Brox introduced the featured speaker of the evening, Dr. H. Marie Wormington. Dr. Wormington, author of the well-known Ancient Man in North America, is an archaeologist of noted authority.

Dr. Wormington expressed her appreciation for being invited to attend the Annual Meeting. She saluted the amateurs who, she said, "love their discipline." She also spoke of the new term coming into use, "para-archaeologist." The term is often used to describe the amateur who, though lacking the long, intensive professional training, operates in a truly professional manner. Dr. Wormington congratulated the Society for having a good number of para-archaeologists blessed with the direction of Dr. Frison, whom she termed "perhaps the best archaeologist in the Nation."

The slides presented by Dr. Wormington were the result of a trip taken by eleven individuals with the Paleoanthropology Delegation to the People's Republic of China. The delegation was sent by the National Academy of Sciences at the invitation of the Chinese Government.

The following is a summary of Dr. Wormington's evaluation of the significance of the trip and her attitudes regarding the antiquity of man in our hemisphere:

To any paleo-Indian specialist, information about eastern Asia is of great importance. This is where our aborigines first came from and we need very much to know what is on the other side of the Bering Strait. There is still a great deal of uncertainty concerning when the movement to the New World began. We have absolutely firm evidence for about 12,000 years ago of people with fluted points, a highly sophisticated tool kit, and a full blade technology. But before that there are certain claims to antiquity which some accept and others do not.

There is no universally accepted claim for antiquity before this 12,000 year period. An ever-increasing number of paleo specialists are convinced, however, that man has been in the New World much longer than 12,000 years. Most archaeologists are not quite willing to speak in terms of dates between 25 and 40 thousand years ago for the first coming of man to this hemisphere, but we still need the firm breakthrough, the real evidence, such as we had on the Folsom find, for example, that was the first great breakthrough.

It is, therefore, very important to know what was available for export

from Asia at these times in the past. We know that our people must have come from Siberia, but we cannot establish any clear-cut associations with Siberian assemblages. This is not surprising in view of the vastness of the area, the limited excavation undertaken, etc. Frankly, there is very little we know about our own hemisphere. We are just beginning to understand some of our own problems. One thing we do know is that in Siberia, in almost every assemblage, even where we have very sophisticated tool types, we do have assemblages of heavy core tools - choppers, chopping tools, and very heavy scrapers. The possibility has been considered that these could have been imported to Siberia from China where this chopper/chopping-tool tradition has gone on for untold millenia. So it is important for us to know what was available in China which ultimately in some modified form might have reached the New World by way of Siberia.

We are beginning to pick up some clues about possible early sites in the New World with this sort of assemblage. Emma Lou Davis, digging in the China Lake area in California, for example, is finding choppers and evidence of a very heavy core industry which may be very old indeed. We don't have firm dates, but something of the general magnitude of 30 thousand years would not be impossible. And there is very firm association with mammoth and other extinct forms and very interesting patination studies. Some of these very ancient artifacts are more deeply patinated when compared with Clovis points, which are also present in the area, that we can date.

Julian Hayden is doing some very interesting work in northern Sonora where he again is finding choppers amid a very heavy scraper tradition with great variations in patination.

These matters have also been pursued in the eastern United States, where a heavy chopping industry continued way into the Late Prehistoric Period.

Gordon Willey is another who is quite convinced that in South America there is what he calls the "pre-projectile point." (Dr. Wormington stated that she personally prefers the term "non-stone projectile point" or just "non-projectile point.") Firm dates have been established in the northern highlands of Peru for this sort of lithic tradition at about 15 thousand years. There are other, more controversial dates placed at about 22,000 years.

There is now a newly-discovered site in Nicaragua, and several people from Wyoming will be attending a symposium there next month to evaluate that evidence, which may be very old indeed.

It was this kind of material that Dr. Wormington said she was looking for in the Chinese collections. However, she noted that the tour of China lasted

only thirty-one days, and there were so many diverse interests that it was impossible to see many Upper Paleolithic sites such as would have been of primary concern to the group.

One result of the China trip which impressed all members of the delegation was what the Chinese were doing in enclosing portions of sites and preserving them for future generations so they could be viewed just as they had been when the Chinese archaeologists had uncovered them and before any material was removed. Dr. Wormington suggested that it would be well if sites in North America, such as the Hanson Site, could be preserved in a similar fashion in an enclosed building where they could be viewed generations later with the materials still in place. Obviously, there is a very great expense associated with this form of salvage archaeology, but perhaps a point of archaeology well-taken - to preserve as much knowledge as we can.

During the slide presentation, Dr. Wormington gave a general over-view of what the delegation saw in China and expressed her personal reactions to the many unique aspects of modern Chinese culture. A few of her many interesting comments are summarized below:

- She said she would not want to live in China. She said the people and countryside were magnificent, but she was too accustomed to the American Way of life to want to live there.
- She said the delegation was impressed by the lack of motorized traffic - "all those beautiful parking places and nothing to put in them."
- The Great Wall was very impressive. It is the only man-made thing that can be seen from the moon by astronauts.
- The incredible cleanliness of the place, in marked contrast with the past when great masses of flies used to be one of the plagues of China, was quickly noticed by everyone.
- The first-rate museum at Choukoutien, where Peking Man was found, is truly remarkable. New Homo erectus finds are being discovered in caves near there.
- The delegation was especially impressed with the very positive response of the Chinese people to the delegation.

Their reception of the "foreigners with the strange eyes" was very courteous. The Chinese people showed a very intense curiosity toward the delegation and about the outside world.

Dr. Wormington's presentation was indeed a fascinating arm-chair tour of China, and her colorful interpretative comments on archaeology and contemporary life in China most enlightening. Her presentation served as a very fitting highlight and conclusion to a most successful Annual Meeting of the Society.

Respectfully submitted,

Larry D. Osborne
Executive Secretary, W.A.S.

LIQUID LATEX TECHNIQUE AND ITS APPLICATION IN RECORDING PETROGLYPHS

By Nancy J. Arthur

INTRODUCTION

Indian peoples in this country have left a great legacy in art scattered on cliffs and boulders all across this land. We cannot interpret this as yet, and even their descendants have lost the meaning, but the mystery surrounding this art does not diminish its value.

Much of this art has already been lost and in this part of the country a great deal more is endangered. We need to record these ancient art galleries before they disappear.

The rock paintings, which I refer to as pictographs, do not lend themselves to the latex technique and must be recorded with the use of overlays or photography. But the petroglyphs are another story. By petroglyph, I mean any motif, incised, pecked, or ground out of the mother rock, making the motif visual through contrast between worked areas and natural surfaces.

For petroglyphs, the latex technique is, in my estimation, as near a perfect recording method as will be found. It is visual, accurate, and tactile. The latter is the one area where all previous methods have failed completely.

This past year, the Rio Blanco Chapter of C.A.S. has been working on a complete survey of petroglyphs in this county, and upon completion, plans to extend the survey to pictographs. If this could be done at the "grass roots" throughout the country, with the findings submitted to the State Archaeologist's office, the results would be magnificent. This is the reason I stress the importance of site reports. With concerted effort, a wonderful "hidden asset" will emerge for study.

The latex methods were developed in other disciplines, such as paleontology, candle making and biology, and evolved from even older methods of mold making. So the process is not new, but this application is. I have enjoyed a good deal of success with the method as I describe it in the following report.

MAKING THE MOLDS

The molds are made with a 75%-pure latex solution. Lighter solutions

dry faster, as do silicone solutions, but the high resolution of the heavy natural latex is worth the extra time and money. Another reason for using this solution is that it causes no damage to the rock. There have been adverse reports on many of the other solutions.

The latex comes in five gallon buckets. Use a well-cleaned gallon paint can with a tight-fitting lid to carry it into the field; unless there is a very large panel to be molded. Always clean the rim of the container to insure a good seal. Don't expose the solution or its container to the sun any more than necessary, as excess heat or air will cause the latex to set in the container. Do not mold when the temperature will drop below 32 degrees Fahrenheit. The latex has a guaranteed shelf life of only three months, but with careful attention to the above mentioned points, it can last as long as seven months.

When going into the field, a kit containing these items will be useful:

for site report:	maps*	latex mold:	latex
	compass		brush
	scale		*hose(nylon
	camera		stocking or
	film		cheesecloth
	50' tape		water
			rags
			newspaper
			scrub brush
			trash bag
			*ladder

*items are variable.

Use a two or three-inch stiff short nylon-bristle brush and carry it in a plastic bag or right in the latex container. Two people should work together when possible.

When you reach the site, you should catalog the elements since they will be covered by the next step. Determine how many panels you will mold. Here the question of integrity will arise. Once you have decided to mold a panel, mold as much as you possibly can. Use the scrub brush to remove excess rock dust or mud from these. Fill shell-pocks, cracks, or deeply undercut areas on the face to be molded with mud. Sometimes a crack or layer of rotten rock will break up the panel. Mold each portion of the panel, and run the molds as close to the crack as possible, or fill the crack with mud. The mud will be evident on the casts, but this method will maintain the relationship of the different elements. Running the molds as close to the crack as possible, will also approximate this relationship.

Using the brush with latex, outline the area that you plan to mold. The outline should be 3-4 inches beyond the outermost elements. The first coat should be fairly thin, but must be worked into every fissure and feature. Let this first coat dry well: there should be no tackiness anywhere. You may use this time to first coat other panels, going back periodically to check on the drying. Where there are many small panels close together, one person can follow another, putting a second coat over the first, when it is dry.

The second and third coats may be applied more heavily than the first, but these must also dry between coats. Apply the latex as evenly as possible to eliminate weak spots in the mold. On small molds (1-2 feet), three coats are sufficient. If the panel is large (3 feet or more), nylon hose may be needed for backing between the third and fourth coats. Cut the top and foot from the hose, then cut up the length so that material will lay flat. Immediately after applying the third coat, lay this material on the still-sticky latex and brush until it is partially embedded. After applying the last coat, work around the edges of the molds with your fingers, and roll any excess and the extreme edges inward slightly to facilitate removal. The mold application will take from four to eight hours depending on the amount of latex used and the number of coats required. Fill out a site report or write down all pertinent data so that this can be done later. Clean the area of any dropped latex or any that has adhered to the rock outside the mold perimeter. The molds must cure on the rock for twenty-four hours before removal.

The next day you may return to remove the molds, take any pictures missed the day before, and gather any information still needed for the site report. To remove the mold, start along the edge and gently work it loose. It does stretch and will crease, so work with just your fingertips. Lay newspapers out flat and put a layer of newspapers between each mold. Then roll loosely, being sure that mold does not touch mold.

The useful life of a mold depends on proper storage. With correct storage and proper use, they should last over ten years. Store them in a rather cool place (50-70 degrees), and away from the light. Do not fold or crease them. Keep them separated with paper, and do not stack them to any great depth or place any weight on them. They may be rolled loosely between sheets of unprinted paper and stored in cardboard cylinders.

MOLD ONLY PETROGLYPHS: The paint of the pictographs could possibly be raised when the mold is removed. Some elements combine both pecking and paint. The use of rice paper and vine charcoal is the only present solution to this situation that would not jeopardize the paint. You can mold an appropriate sized blank from a rock face, mask the combined element with rice paper,

trace it with the vine charcoal, transfer the tracing to the cast blank face, and then color the element appropriately.

CASTING

Lay the mold where it will not be disturbed - on a flat surface or in a sandbox. For casting the molds, use a mixture of #1 molding plaster, papier-mache, and water. To make a cast 2'x2', place about two gallons of water in a five gallon bucket and add about two cups of dry papier-mache. Work with your hands until the mixture looks like a thin gruel. Let the gruel set while you fashion hangers from wire (see figure 1). Work molding plaster into the gruel until the mixture resembles a thick milk shake. Don't create any more bubbles than necessary during the mixing process.

The mix will start to set rapidly, so you must work quickly. Sprinkle water over the mold, or dip it in water and shake off the excess immediately before pouring the cast. Start the pour at one edge, and using your hand with a patting motion, flow it across the mold, being careful not to over-flow the edges (see Plate 4).

Embed the wire fittings immediately. Go no deeper than half the total depth of the cast. You may use such materials as wire or cheesecloth to strengthen larger casts by placing them on top of the first pour and quickly making a second pour before the first has dried appreciably. Drying time will vary with the size and depth of the cast.

When the cast is dry and hard, invert it and peel the mold from the cast (see Plate 5), just as you did from the original stone. Wash the mold in water, remove any flakes of casting material that have adhered to the edges, dry it well, then place in storage. The cast may be colored immediately, but it is best to let it cure for a day or two first, since the face of the cast will not be as dry as the back.

COLORING THE CAST

The cast will be an exact replica of the stone, with one exception - it will be dead white. It is best to have seen the original panel before deciding on the color. But if you haven't, there are ways to mitigate this circumstance. A small stone from the mother-rock, collected at the site, along with photos of the panel, will help in determining the stone color, patina if any, and which features are natural and which are man-made.

The first decision is the color within the pecked area. Use a lean acrylic wash of the color within the pecks to completely cover the cast. Place the cast where the light will come from the side and study it carefully. The pecks will show most clearly in this light. Since the pecked areas will be the lightest color on the completed cast, you must decide just where these lie.

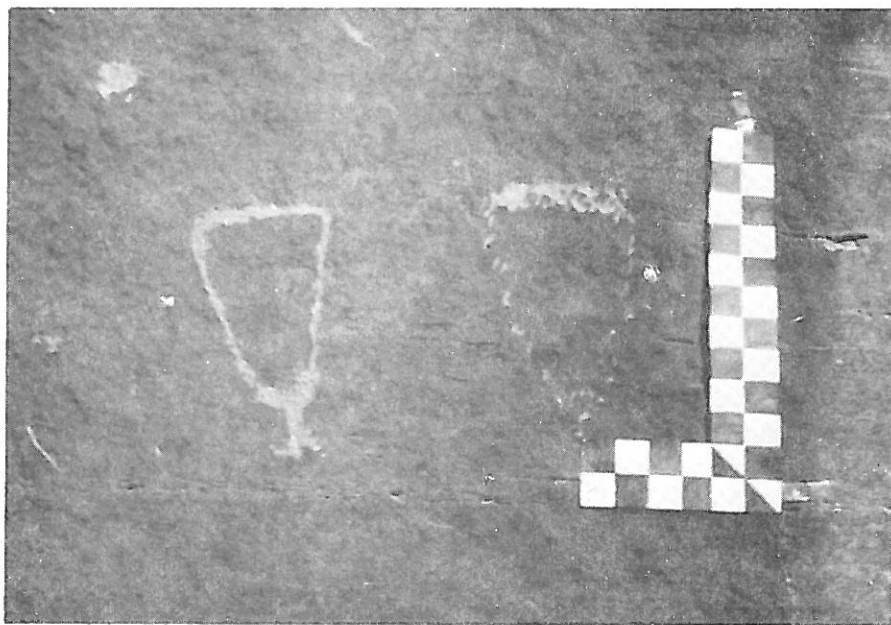
Patina will dictate the second color used, but if there is very little, the decision should be made to add a bit more. Accentuate only enough to delineate the motif. Take into consideration where it will be hung, how much light there will be, and the approximate viewing distance. Use a very lean wash for the second color, and use many coats to achieve a buildup of color, rather than one very dark or heavy wash. Use watercolor sables of various sizes. Start the brush stroke at the edge of the motif and draw it outward. Use a sponge or larger brush to fill in large areas with each coat of color. Accentuate any natural features of the rock, as this adds an "authentic look".

Use: umber, sienna, and ocher as the principal colors; and blue, purple and red to vary and strengthen them. White should be used very sparingly, and black, not at all. White tends to make a wash opaque, and equal parts of raw umber and cobalt blue make a much more pleasing dark shade than black. White and black are not truly natural colors.

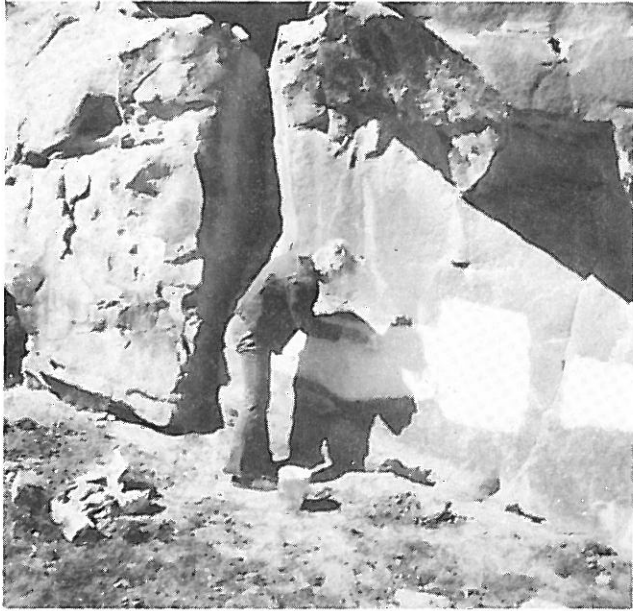
When the overall effect of the cast pleases you, let it dry well. Then turn it over and coat the back with a dark shade, but don't let this bleed onto the face. Let the back dry. Then coat both sides with a plastic spray or polyurethane varnish, thinned with turpentine.



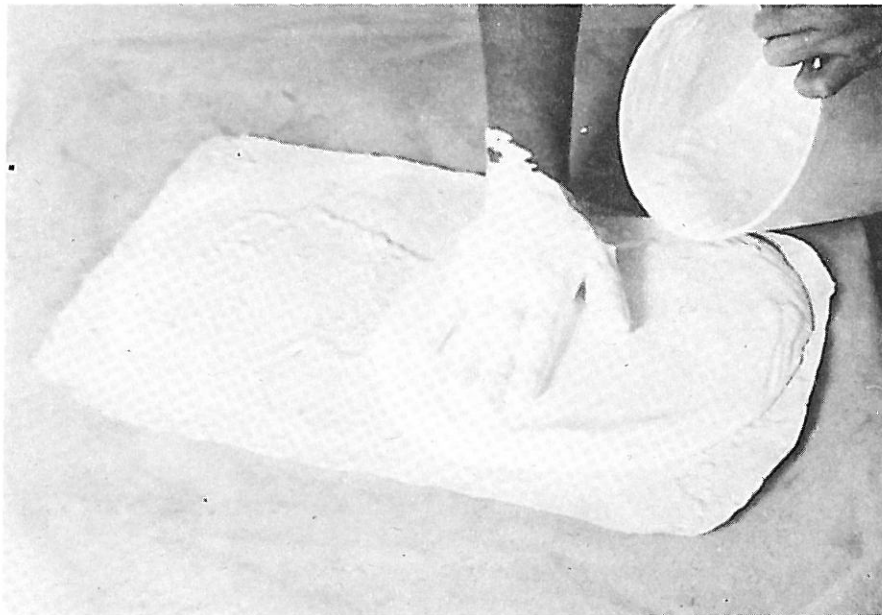
(Plate 1)
Indian Petroglyph showing
the high relief afforded
by strong side light. Early
morning or late afternoon
frequently gives you the
best photos with the least
effort. Photo by N.J.A.



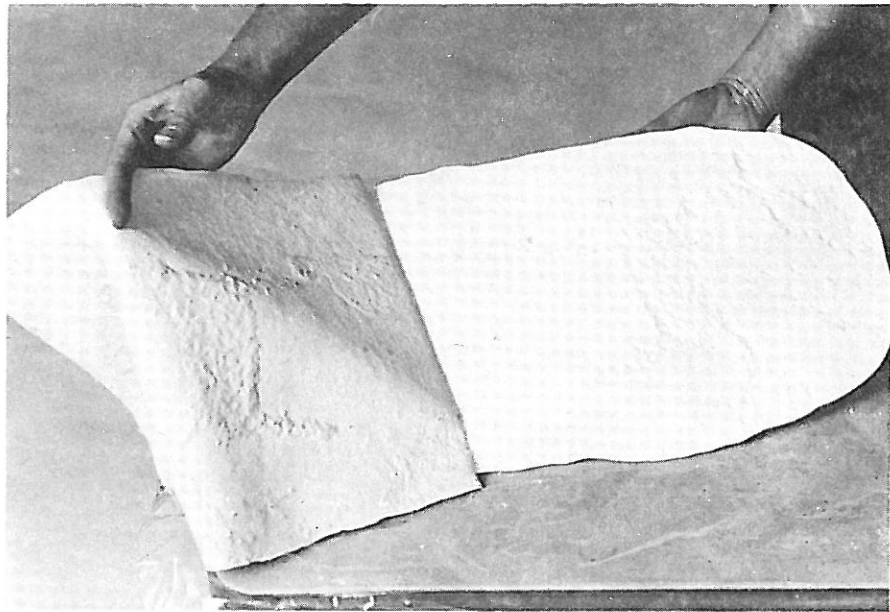
(Plate 2)
This scale is made of cardboard with inch squares on one side and
centimeters on the reverse. Handy, accurate, cheap!
Photo by N.J.A.



(Plate 3)
Field application of the latex by a participant in the C.N.C.C. workshop. Note how close the panel she is working on and the panel just to the right are placed. There was a very deep crack in the rock with the petroglyph running across the crack.
Photo by N.J.A.



(Plate 4)
This shows the pour, where it should be started on the mold, and the proper consistency of the plaster mix. If you are doing a larger cast, the mix should be correspondingly thicker.
Photo by Evert Jones



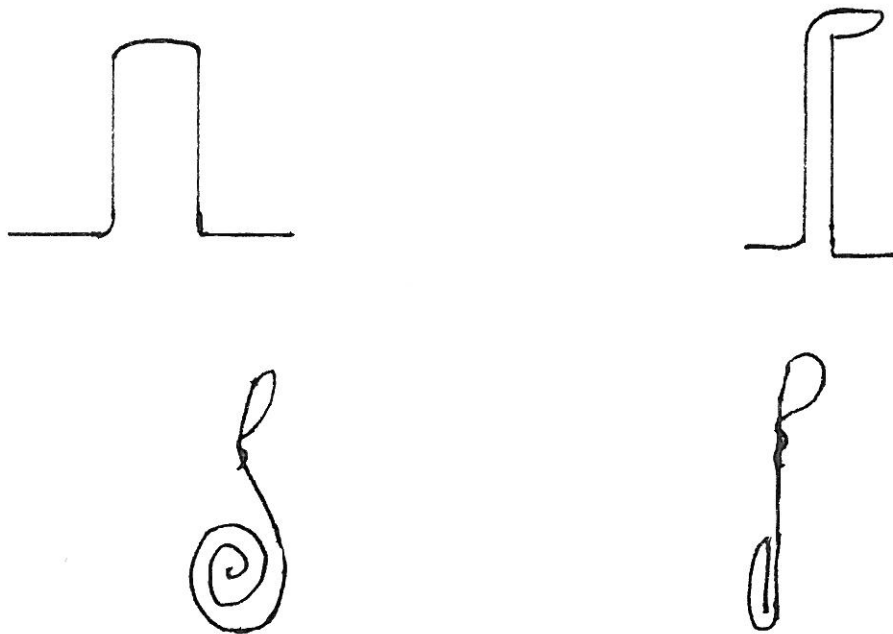
(Plate 5) Invert the cast when dry and gently peel the mold from it. Photo by Evert Jones.



(Plate 6) As you can see I use an inch or #10 water color brush for most of the coloring. A sponge or even larger brush maybe used for the first coat or large unpecked areas on subsequent coats. Photo by Evert Jones.



(Plate 7) This cast is finished and ready to hang on the wall.
Photo by Evert Jones.



(Figure 1)

AN EARTH HISTORY OF SAGE CREEK BASIN

By Cherokee Trail Chapter Members
Ada Bouril Jackson and Deborah Black Chastain

Sage Creek Basin, northwest of Saratoga, for many years has been a lucrative hunting ground for surface collectors of indian artifacts and fossils. So many of these collectors are now members of the Cherokee Trail Chapter of the Wyoming Archaeological Society and we thought it would be interesting to find out why man was in Sage Creek Basin over such a long period of time.

The basin is about 21 by 12 miles, covering approximately 252 square miles, bounded by the North Platte to the east, North Sage Rim, Atlantic Rim, the "split" of the Continental Divide and South Sage Rim. Surface finds range from Early Prehistoric to Late Prehistoric, showing perhaps 12,000 years of intermittent occupancy in a land that today offers little, while to the south and the east is country seemingly far more productive for man's needs. We wonder why. In order to understand the land form we see today, we must examine the past. Hopefully this will be an understandable layman's picture of the earth history of this basin.

When the most recent glacial period was at its peak, thick ice masses covered the northern part of our continent. As the glaciers slowly receded, vast fresh water lakes filled present-day deserts and intermontane depressions. The land abounded in game -- giant bison, mammoths, small horses, camels, ground sloths and some of the animals we have today. Sage Creek Basin is but a few miles across the Continental Divide from the site where the extinct great tusked giant *Mammuthus Columbia*, one of the best preserved mammoth skeletons ever found in the United States, was unearthed in 1960 by the University of Wyoming and Harvard's Peabody Museum. At the U. P. Mammoth site, smashed mammoth bones with stone and bone tools were found. These tools were made and used by Ice Age hunters some 11,000 years ago, possibly by Clovis man, but here, unfortunately, the very distinctive fluted points were not found.

460 Million Years to Present

Present geologic knowledge indicates the age of the earth is approximately 5 billion years. The oldest known rocks in Wyoming are about 3 billion. Much of the surface of Sage Creek Basin today appears to be Cretaceous from 135 million to 65 million years ago. But -- Gastropods from the Ordovician Period when Wyoming was inundated by shallow warm waters 460 million years ago are also present on the surface. Brachiopods from the Pennsylvanian Period, 270 M, when south central Wyoming after being submerged in warm tropical

shifting seas for millions of years was uplifted, are surface finds today.

Once again seas covered this part of Wyoming and in the late Jurassic, 130 \overline{M} , when, due to uplift, the seas withdrew, sediments were deposited, and terrestrial life was abundant with dinosaurs plentiful. The Jurassic emergence was only temporary. Seas again encroached on the land and most of Wyoming was submerged by the middle of the Cretaceous. With the rise of the Rocky Mountains during late Cretaceous, the seas retracted, dinosaurs returned to Wyoming to become extinct by the end of this 40 \overline{M} year mountain building period. At the same time the mountains were uplifted, intermontane depressions or basins were formed. Sage Creek Basin dinosaur bones are found in conjunction with sharks teeth and other fossils of the Cretaceous Period.

By early Cenozoic time, 60 \overline{M} , the mountains and basins of Wyoming were well outlined. As the mountains continued to grow they were subjected to erosion which caused the deposition of sediments in the basins. Today's Sage Creek Basin coal, layers of shell and petrified wood probably comes from this period when for millions of years the climate was warm and humid, but gradually getting cooler and drier. Volcanic activity was very evident. It was during this time that modern flora and fauna evolved. During the Miocene, 26 \overline{M} to 12 \overline{M} , for the first time in geologic history, grasslands became prominent and supported a great variety of animals.

Mountain glaciation in the present day Sierra Madre and Snowy Range occurred in Pleistocene time, 12 \overline{M} to 3 \overline{M} , and sculptured them to the forms we see today. The last glaciers disappeared about 10,000 years ago followed by the Altithermal when temperatures rose, vegetation and climate changed, the last Pleistocene animal disappeared, and man changed from a specialized big-game hunter to a forager-hunter culture.

Sage Creek Basin has changed but little geologically, except for increased erosion. The most important change has been climatic as the area's climate was periglacial 12,000 years ago. Although the glaciers were restricted to the high mountain, the basins were affected by permafrost, patterned ground and eolian (wind) activity in the form of dunes and deflation basins. Today this area only receives approximately 10 inches of moisture a year.

From Folsom to Shoshoni

Man in Wyoming has long been a hunter. Many of Wyoming's archaeological sites are older than sites further north but obviously man was present here at the end of the Pinedale glacial period. Perhaps to take advantage of abundant game resources resulting from the better climate, or perhaps this area was a convenient

migration route northward. Man must have been in Sage Creek Basin then or soon after as Folsom, Hell Gap and Cody points have been surface finds.

Why was he here? Sage Creek Basin was and is an east-west passageway over the Continental Divide at Bridger's Pass and affords an easy crossing of the Platte near the outlet of Sage Creek. Today there is game year round as there is ample feed, water and shelter. There are good springs used for the Rawlins water supply and by stockmen. Surely these springs existed before and even during the Altithermal as fluted, lanceolate and stemmed points are surface finds at these Paleo man campsites. Fire-hearths are found close to present day streams but are also found a distance away on benches, ridges, sand dunes and on the eroded sides of hills.

Was man a transient for 12,000 years and used the area only on a seasonal basis? We feel he did more than merely pass through. The camp sites are small, little pottery has been found and most of the sherds appear to be Shoshoni. At least one sherd has been identified as South-western corrugated, sometimes known as corded and associated with the Anasazi Culture. No petroglyphs or pictographs have been located although there are plenty of likely spots for them to be. The few groupings of stone circles found are associated with pottery. A cache of about 160 canine metacarpels were found together under a shallow fire-hearth in vertical and horizontal bundles.

Three hundred approximately dateable projectile points and hafted knives from surface finds in Sage Creek Basin indicate man's occupancy from Early Prehistoric time.

12,000 - 7,000 B.P.	Early Prehistoric - 1 Folsom
7,000 - 4,500 B.P.	Altithermal
4,700 - 3,000 B.P.	Early Middle - 29 points
3,000 - 1,500 B.P.	Late Middle - 197 points; 15 knives and spear points.
1,500 - 300 B.P.	Late Prehistoric - 58 points

The majority of the artifacts date from 1,000 B.C. to 500 A.D. Why this period? Why is there so much evidence of many cultural periods found on the surface? Is the "split" of the Continental Divide that bounds the Great Divide Basin and is part of the Western boundary of Sage Creek Basin of any significance to why man was there for thousands of years?

Historic

Migrating animals were the first to find the easiest ways across mountains, rivers and deserts. The Indians followed the game trails. The explorers,

mountain men, trappers and traders followed the Indian trails. The mountain men guided the immigrants and the military, followed by wagon trails, stage coach routes, telegraph lines, railroads and highways. The buffalo were the first engineers of our super highways and by-ways.

The Elk Mountain, North Platte, Sage Creek Basin and Bridger's Pass trail was known by hunters and trappers from the early 1820's. Its great use, however, was not until 1862 when the Indian depredations on the Oregon Trail became so severe the Postmaster General insisted the mail carrying Overland Stage Line be moved south to the Jim Bridger route.

Trader-trapper William Henry Ashley and 40 men on a trapping expedition passed through Sage Creek Basin in 1825.

John Charles Fremont with Kit Carson as guide crossed the North Platte into Sage Creek Basin August 5, 1843. An excerpt from his journal reads -- "Extremely rugged country, barren and uninteresting. Nothing to be seen but artemisia (sage) bushes in such a luxuriant growth that it was difficult and laborious for a man on foot to force his way through and nearly impracticable for our light carriages."

By 1848 a few wagon trains on their way to Oregon would cross the Laramie Plains, head west toward Elk Mountain, cross the Platte into Sage Creek Basin, out through Bridger's Pass and join the regular road on Green River.

The gold seekers westward rush in 1849 was the big year for the Overland Trail to California. Between May and October, some say 30,000, others 100,000, gold hungry men passed through Wyoming, some through Sage Creek Basin as unlike the northern route there were no long hauls between water and feed for the stock. This was then the beginning of the Cherokee Trail although sometimes this route went south by way of Savery Creek instead of west to Muddy Creek as did the Overland.

The Cherokee Indians dispossessed of their homelands in North Carolina and Georgia by their avaricious white neighbors disliked the Indian Territory in Oklahoma to which they had been shipped in the Fall of 1849. A considerable number of these Indians set out April 20, 1850 for the California gold fields and arrived 161 days later. July 2nd they crossed the Laramie River, headed into the hilly country to the west and the next day followed Pass Creek and camped on the North Platte. July 4th they crossed the river and traveled six miles into Sage Creek Basin. That night, Indians apparently celebrating the American Independence Day, or something, stole 30 head of horses and mules. The next night a Spanish boy was mistaken for an Indian and shot by one of the

guards. A company of men went into pursuit of the stolen horses but rejoined the train two days later with only one of the horses. The wagon train had six days of hard traveling in Sage Creek Basin because of the prolific and exceedingly heavy growth of wild sage and crossed the Continental Divide at Bridger's Pass.

Later this same summer Captain Stansbury and party with Jim Bridger as guide passed through Sage Creek Basin from Salt Lake to Fort Leavenworth looking for a shorter way than the Oregon Trail - South Pass route. The finding of it foreshadowed the creation of the new Overland Trail and later the Union Pacific Railroad. In 1862, when the Oregon Trail was closed by Indians, the new Overland Mail and Stage route through Sage Creek Basin and over Bridger's Pass to California took its place with stage stations at North Platte, Sage Creek (Miller), Pine Grove and Bridger's Pass. The telegraph line from Denver to Salt Lake came through in 1866. The Overland Trail was heavily used from 1862 to 1868 and then only intermittently until as late as 1900.

Fossils identified by University of Wyoming, Courtesy Sophia Swanson and Mark Miller.

Artifacts dated by John Albanese.

Hell Gap and Cody points from Paul Brenniman collection.

Pottery identified by Chuck Reher.

Typed by Betty Stockwell.