

WYOMING  
ARCHAEOLOGICAL  
SOCIETY

# THE WYOMING ARCHAEOLOGIST



SEPT. ISSUE, 1968

VOL. XI NO. 3

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 Winter issue and renewals are due the first of January each year.

NOTE: If you move or have a change of address, please notify the Executive Secretary, P. O. Box 122, Cheyenne, Wyoming, 82001. Your WYOMING ARCHAEOLOGIST will not be forwarded unless a payment of 50¢ is received for return and forwarding postage.

NOTE: Checks for Chapter subscriptions and renewals should be sent to the Chapter Secretary involved. All other checks, subscriptions, and renewals should be addressed to: Milford Hansen, 775 Platinum Drive, Cody, Wyoming, 82414. Correspondence and order for back issues should be addressed to Lou Steege, P. O. Box 122, Cheyenne, Wyoming, 82001.

1968 MEMBERSHIP RENEWAL NOTICE  
WYOMING ARCHAEOLOGICAL SOCIETY, INC.

- \_\_\_\_\_ Individual Associate Membership @ \$3.00 per year
- \_\_\_\_\_ Single Active Membership @ \$3.50 per year
- \_\_\_\_\_ Family Active Membership @ \$5.00 per year
- \_\_\_\_\_ Institutional Membership @ \$5.00 per year
- \_\_\_\_\_ Other Membership, including \$10.00 Supporting, Yearly  
(Circle One)                    \$20.00 Contributing, Yearly  
   \$50.00 Life

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Please study the revised Constitution and By-Laws, pages 3 through 10. All members have long recognized the need for revision. The Committee composed of Sheridan Chapter members, with Chairman Jim Goodwin, present this greatly simplified and more adaptable revision for your consideration. Any further changes deemed necessary must be submitted for publication in the December Issue in order to allow sufficient study before final adoption at the Annual State Meeting in April, 1969.

Your individual help is urgently requested in the fine article by Charles R. Rodermel of the Wyoming Recreation Commission, on page 19. A continuous program is necessary to remind all Wyoming citizens of the tragic necessity to help save Wyoming Antiquities. Of primary concern to all of us is the accelerated activities of commercial collectors who move in so quickly, loot sites both historical and archaeological, then advertise these artifacts for sale.

I heard rumors that a type site deserving National monument status was worked extensively this summer. I have seen items in Antique journals advertising artifacts from Ft. Fetterman.

Our Recreation Commission deserves all our support and assistance, and each Chapter should publicly and actively support the saving of Wyoming Antiquities.

SUMMER MEETING  
OF THE  
WYOMING ARCHAEOLOGICAL SOCIETY

The summer meeting of the Wyoming Archaeological Society was held on August 3rd and 4th with the Gillette Chapter being the host.

On Saturday morning, August 3rd, 54 members met at the Durham Meat Company near Reno Junction. After a brief question and answer period concerning the handling of the large bison herd owned by the Company, the group was taken in pick-up trucks to view a portion of the large herd. The herd selected contained about 200 animals. One truck was able to approach within a few feet of the animals and many fine photographs were taken by the members.

At Noon the group departed for the Pumpkin Buttes area to view the bison trap being excavated by the members of the Gillette Chapter. This site, of late Middle Prehistoric Period time, consisted of a trap or corral in which bison were driven and slaughtered. Post holes were found and a few decayed cedar posts were found which indicates that some type of fence had been built to contain the animals. Many projectile points and tools have been recovered from this site.

On Saturday evening a no-host smorgasbord was enjoyed by the members at the Pleasant Dale Community Hall. After the meal a short business meeting was held, the main topic being the presentation of the new proposed Constitution and By-Laws. The new Constitution and By-Laws are to be studied by all the Chapters for any revisions or changes before they are voted upon for acceptance at the April 1969 Annual Meeting. The proposed Constitution and By-Laws are printed elsewhere in this issue. The balance of the evening was spent in seeing slides and hearing reports of the Summer's activities of the various chapters.

Many of the members returned to the bison trap on Sunday and assisted with the excavation of the site under the direction of Dr. George Frison, State Archaeologist.

All Chapters were represented at the Summer Meeting with the exception of Sweetwater Chapter. A large delegation was on hand from the newly organized Cherokee Trail Chapter.

Louis C. Steege  
Executive Secretary

WYOMING ARCHAEOLOGICAL SOCIETY, INCORPORATED

CONSTITUTION

ARTICLE I - NAME

The name of this Society shall be the Wyoming Archaeological Society, Inc.

ARTICLE II - TERM

The term of existence of the Society shall be perpetual.

ARTICLE III - MEMBERSHIP

Membership shall be open to all duly organized Chapters in the State of Wyoming, to any person, persons, Societies, or Institutions upon payment of specified dues, and who subscribe to the purposes and abides by the rules of conduct of the Society.

ARTICLE IV - PURPOSES

1. To encourage the preservation of archaeological materials and sites.
2. To disseminate archaeological information.
3. To receive, maintain and hold, by bequest, devise, gift or otherwise either real or personal, any fund or funds without limitation as to amounts or values; and to convey such property and to invest and reinvest any principal or interest; and to direct, manage and expand the income and principal of the association, and administer any special funds for various purposes as agreed upon by the governing board of the Society, and for purposes and uses herein set forth; to buy, lease, hold, and exercise all privileges of ownership over such real or personal property as may be deemed necessary for the conduct and operation of the business of this Society or incidental thereto.
4. To promote scientific research and cooperation with scientific organizations to further archaeological studies.

ARTICLE V - OFFICERS

The management of this Society shall be vested in the duly elected officers and three appointive officers of the Wyoming Archaeological Society, Inc., and their duly elected successors. The elective officers shall include a President, Vice President and Treasurer. The appointive officers shall include the Executive Secretary, Editor and Librarian. All State Officers shall be members in good standing of any duly organized Chapter affiliated with the State Society. The State Officers shall be elected at the

annual meeting by a majority vote of the qualified delegates or alternates. The duly elected State Officers and the three appointive officers shall constitute the State Executive Committee.

#### ARTICLE VI - CHAPTER ORGANIZATION

Ten or more people residing near each other may apply to the State Executive Committee for a Chapter Charter, provided the a-fore-mentioned persons are paid up members of the Society and their Chapter application is approved by the State Executive Committee by a majority vote.

#### ARTICLE VII - AMENDMENTS

Any proposed change in the Constitution and By-Laws of the Wyoming Archaeological Society, Inc., shall first be submitted to all the Chapters at least ninety (90) days prior to the Annual State Meeting or any special meeting called by the Executive Committee for the purpose of amendment. An affirmative vote of all the votes cast by the Chapter delegates or alternates shall be required for any proposed change in the Constitution and By-Laws.

#### ARTICLE VIII - VACANCIES IN OFFICE

All State Society Officer vacancies occurring by death, resignation, or failure to serve, for the duration of the term to which the officer was elected or appointed will be filled by appointment by the remaining members of the Executive Committee for the balance of the term, except President, which office will be filled by the Vice President for the balance of the term.

#### ARTICLE IX - MEETINGS

The Wyoming Archaeological Society, Inc., shall hold an annual business meeting in Casper, Wyoming, on the first Saturday in April of each year. Other meetings may be called at such times and places as may be determined by the Executive Committee. The State Executive Committee shall be responsible for the organization of the meeting.

#### ARTICLE X - ACCOUNTING PERIOD

The annual accounting period of the Wyoming Archaeological Society, Inc., shall begin on April 1 of each year and end on March 31 of the following year.

#### ARTICLE XI - RULES

The Wyoming Archaeological Society, Inc., shall be governed by Roberts Rules of Order, Revised, 1967.

# WYOMING ARCHAEOLOGICAL SOCIETY, INCORPORATED

## BY - LAWS

### ARTICLE I - AUTHORITY OF OFFICERS

1. The elected State Society Officers and the three appointive officers, serving as the Executive Committee, shall have charge of all affairs, funds, and property of the State Society.

2. A majority of all the members of the Executive Committee is sufficient to remove any State Officer or Officers for due cause.

3. The State Executive Committee shall serve in advisory capacity to all the Chapters of the Society.

4. The State Executive Committee shall not be liable for any debts, bills, or liabilities incurred by any of the Chapters or their members.

5. No Officers, elective or appointive of the Wyoming Archaeological Society, Inc., either State or Chapter, will receive any compensation or be exempt from any dues. The State Executive Secretary shall be given a mileage rate and per diem for official business travel at a rate set by the Executive Committee.

6. All libraries, equipment and monies of a disbanded Chapter shall be turned over to the Executive Committee for disposition.

7. The State Executive Committee shall appoint an Executive Secretary, a State Editor and a State Librarian.

8. The State Executive Committee may specify a permanent Society mailing address. The permanent mailing address shall be one convenient to the State Executive Committee, the Executive Secretary, the Chapters, and to any member of the Society who shall have occasion to contact this Society on any matter of archaeological interest or routine Society business.

9. The State Executive Committee may designate an official State Repository. Said repository shall contain all of the records of the State Executive Committee, which the Executive Secretary shall maintain in a current and accessible condition, so that they shall be available at all reasonable business hours for inspection by any member of the Society. The State Society Repository shall also serve as the Society's official repository for all archaeological material which is now, or may hereafter become, the property of the State Society, and the Executive Secretary shall serve as custodian thereof, and make the same available for public view in a place generally available to the public. The Executive

Secretary, on his own determination, or at the request of any member of the Society, may limit access to site reports, archaeological surveys, and collections, when such action is deemed reasonable and necessary to preserve any archaeological site.

## ARTICLE II - DUTIES OF OFFICERS

1. The President shall preside at the annual meeting of the State Society and at the meetings of the Executive Committee, and shall perform such duties as usually pertain to that office, including the naming of a Nominating Committee, Legislative Committee, Credentials Committee, and other standing and select committees. He shall appoint prior to the annual State Meeting, a sergeant-at-arms, who shall check the credentials of all the delegates and/or alternates prior to the State Meeting. The sergeant-at-arms shall report his findings to the Credentials Committee. The President, with the approval of the Executive Committee, shall also make any appointments deemed necessary for the furtherance of the aims and purposes of the State Society. The President shall appoint a person who has membership in the same Chapter as the State Treasurer, to sign checks, make withdrawals, and endorse accounts, if the Treasurer should become incapacitated.

2. The Vice President shall perform all duties of the President, during the absence or disability of the President, and in the event of death, resignation, or removal of the President from office during the term for which he was elected, the Vice President shall serve the balance of the term.

3. The State Treasurer shall keep and maintain all financial records of the Society for the State Executive Committee. He shall collect State dues and issue memberships and certificates as appropriate for Associate, Active State, Institutional, and Honorary memberships. He shall establish and maintain Society Checking and Savings accounts as needed, with arrangements for the signing of all checks and/or savings account withdrawals by either the Treasurer or the President's appointee. He shall present a financial report at the regular State Meeting, and shall keep the Executive Committee apprised of the Society's financial position.

4. The Executive Secretary shall be appointed by the State Executive Committee from the present paid-up or past membership and shall serve at the discretion of the Executive Committee. He shall maintain the Society Repository and shall serve as custodian for any and all archaeological materials and records contained in the repository. He shall assist the elected officers in the conduct of Society business, and shall keep records of such business. He shall assist the Chapters and coordinate activities between the Chapters and shall keep the Chapters informed on all Society business.

5. The State Editor shall be appointed by the Executive Committee and shall serve at the discretion of the Committee. He shall be responsible for the production and distribution of all Society publications.



6. The State Librarian shall be appointed by the Executive Committee and shall have charge of all library materials including all exchange publications. He shall keep a list of all publications and books available for loan to members and shall have this list published at least once a year in the Society's publication. Rules and regulations pertaining to the loan of publications to members must be approved by the Executive Committee. The state Librarian shall serve at the discretion of the Executive Committee.

### ARTICLE III - ELECTION AND TERMS OF OFFICE

1. The State President, Vice President, and Treasurer shall be elected by a delegation consisting of two (2) delegates or their alternates from each of the affiliated Chapters. They shall be elected from the paid-up present and past memberships of the Society. Election of the State Officers shall take place annually at the regular annual meeting. Elected Officers shall serve for a term of one year. A member cannot serve in one elective office for more than two (2) consecutive years, nor in any capacity for more than four (4) consecutive years.

### ARTICLE IV - CHAPTER ORGANIZATION

1. Each Chapter must choose a name for itself and must adopt its own Constitution and By-Laws which must not be in conflict with the State Constitution.

2. Local Chapters may designate the time and place of their meetings, but it is recommended that Chapters meet at least once a month.

3. Each Chapter has complete self-determination in the election of its officers, business and projects, as long as it does not violate the policies of the Society as a whole.

4. It shall be the function of the Chapter to issue all memberships and collect dues.

5. Each Chapter shall have full custody of, and determine disposition of, archaeological material recovered by the Chapter.

6. Each Chapter shall have as a minimum the following officers as its executive board: President, Vice President, Secretary-Treasurer, and four (4) Board members. The President, Vice President and Secretary-Treasurer shall serve one year terms and the Board members shall serve two (2) year terms, except upon the organization of a Chapter, two of its first four Board members shall be elected to one year terms. A vacancy in any Chapter office may be filled by appointment by the Chapter President until the next regular election.

7. The annual election of regular Chapter officers shall be held in January of each year.

8. Each Chapter shall set its own membership fees which shall include the State fees for each active individual or family membership.

#### ARTICLE V - CHAPTER RELATIONSHIP WITH THE STATE SOCIETY

1. Each Chapter shall remit to the State Society Treasurer that amount as set by the State Executive Committee for each active Individual or Family membership effective with the calendar year beginning January 1 of each year. The Society publication will be mailed to all members when published.

2. Each Chapter shall submit to the annual meeting of the State Society a complete report of its activities during the previous year.

3. Each duly organized Chapter shall be entitled to two (2) delegates to the annual meeting. Each Chapter will also name two (2) alternates to the State meeting who will serve in the place of the delegates if one or both are unable to attend. Each delegate and alternate must be certified by the Secretary of the Chapter of which he or she is a member.

#### ARTICLE VI - MEMBERSHIPS

##### 1. Individual Associate Membership.

Such members shall be members of the State Society only, shall not be affiliated with any local Chapter, and shall not have any voting privileges. Such members shall be issued an Associate Membership Certificate by the State Treasurer. Associate members shall be entitled to receive the periodical publication of the Society as issued.

##### 2. Institutional Membership.

Any Institution, such as Colleges, Universities, Libraries, Museums, other Archaeological Societies, etc., shall be members of the State Society only. Institutional members shall not have any voting privileges. Such members shall be entitled to receive the periodical publications of the Society as issued.

##### 3. Active Membership.

Any individual who affiliates with a local Chapter and takes active interest in the work of such Chapter shall be issued an Active Membership card by the Chapter Secretary. This shall entitle such members to active membership in the Chapter with full voting rights in the Chapter, but with a family membership limited to a maximum of two (2) votes. All Active Memberships shall be members of the State Society also, and shall be entitled to receive the periodical publications of

the State Society as issued, but family memberships shall include only one copy of each publication. Active Memberships include Supporting, Contributing, and Life Memberships.

Individuals residing out of State or in areas remote from a local Chapter may apply to the State Treasurer for an Active State Membership either Individual or Family. These members shall have no voting rights, but shall be entitled to receive the periodical publications of the Society as issued, and shall be allowed to participate in any of the State Society's activities.

#### 4. Honorary Memberships.

Candidates for Honorary Membership may be nominated by a local Chapter for reasons based upon significant service to archaeology in Wyoming. Nominations must be voted upon by a majority at the Annual Meeting of the State Society and such membership shall be granted in an open session of the Annual Meeting. The State Treasurer shall issue one Honorary Life Membership Certificate and an Honorary membership card to each Honorary member. Honorary members who were Active members prior to their election as Honorary members may retain their active status and voting rights. No Institution can qualify for an Honorary or Life Membership.

#### 5. Renewals.

All renewals of memberships in each Chapter or State Society shall be made on or before March 15 of each calendar year or the membership and all Society privileges shall be terminated.

### ARTICLE VII - RULES OF CONDUCT

The State Executive Committee may, for reasons of conduct inappropriate to an archaeologist, revoke the membership of any member of the Wyoming Archaeological Society, Inc. Such reasons may include:

1. Any conduct which is contrary to the stated intents and purposes of the Society.
2. The conduct of any excavation by methods inappropriate to a professional archaeologist.
3. Failure to complete and make public the records of a site upon completion of the investigation within a reasonable length of time.
4. Misrepresentation of membership in, or official relation to, any archaeological organization.

5. The sale of artifacts from or information about, any archaeological site for personal gain.

6. Aiding or abetting, by word or action, any persons who loot, damage, or destroy any archaeological site for any reason whatsoever.

7. Failure to secure the consent and permission of the Executive Board of the member's Chapter prior to excavation.

#### ARTICLE VIII - ORDER OF BUSINESS OF THE ANNUAL STATE MEETING

1. Call to order by the President.
2. Report of the Credentials Committee.
3. Roll Call of the Delegates or Alternates.
4. Reading of the minutes of previous meeting by the Executive Secretary.
5. Treasurer's Report.
6. Editor's Report.
7. Librarian's Report.
8. Committee Reports (standing and select committees).
9. Old or unfinished business.
10. New business.
11. Election of Officers.
12. Selection of site for summer meeting.
13. Comments and introduction of new officers who take office at this time.
14. Adjournment.

BADGER BASIN POTTERY SITE  
By Mr. & Mrs. Milford Hansen  
Illustrations by Bob Edgar

About four years ago, in an area near Powell, Wyoming, we found a few pieces of this pot, particularly of the rim and shoulder area.

The discovery was in a sandy area and so at our first opportunity we started with the old shovel and screen. We found more of the pieces but not nearly enough. However, we spent that winter putting together the pieces we had. We have been back to the site several times since and each time we find a little more, but we have not as yet found all of it. We do have the biggest share of it and enough to be able to reconstruct the pot and get the measurements which are:

Around the Top: 19 inches  
Around the Shouldered Center: 30 inches  
Height: 9 inches

It is made from a greyish black clay and tempered with a coarse sand. The inside of the pot shows evidence of having had some substance burned to the inside. So, I assume that my wife wasn't the first woman to ever burn the stew.

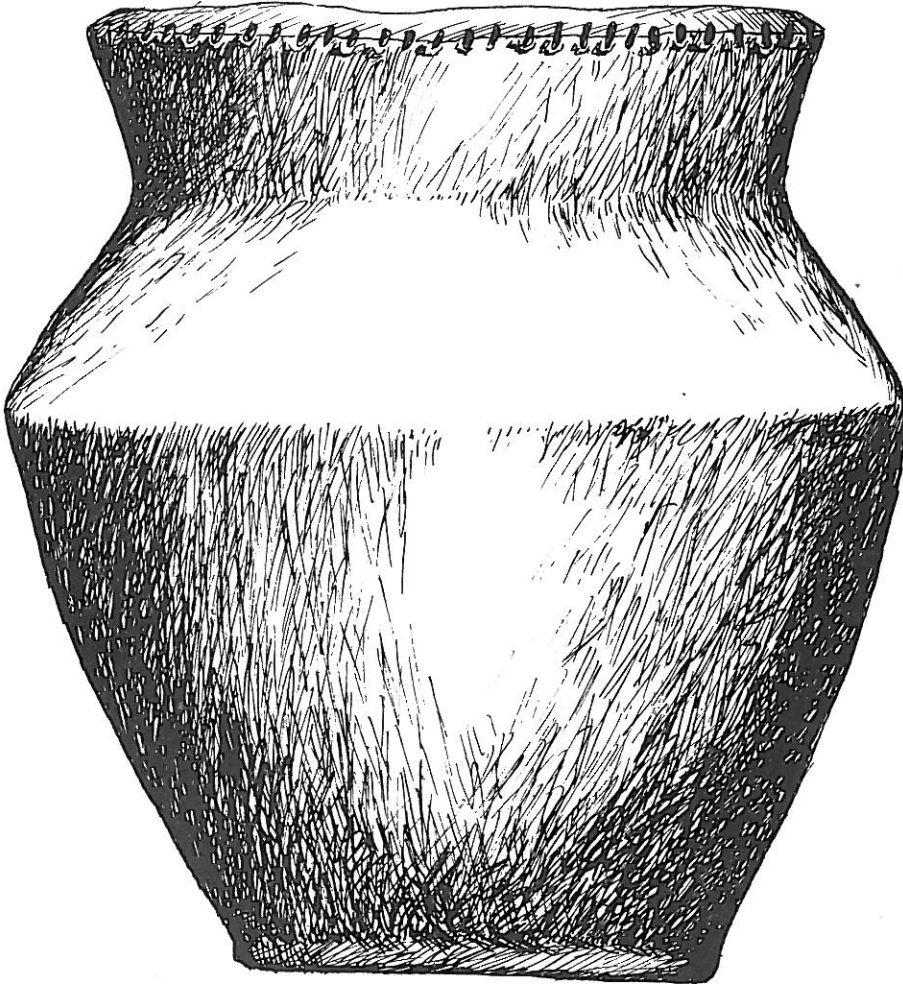
Dr. Frison indicated that this pot is from the early Crow culture and dates approximately 500 to 600 years old.

The area from which this pot came does not show much evidence of heavy occupation, but we did find a few flakes, fire pits, grinding stones and two very crude late period points made of quartzite. (Figs. 5 and 6). We also found, in this immediate area, what we believe to be an amulet, carved from a material resembling ivory, polished quite smooth and having a carved groove around one end. (Fig. 4).

A sandstone protrusion about four feet high and extending out about three feet creating an overhang under which a pack rat had deposited part of the pot and a well made combination knife and scraper of a grey slate material. (Fig. 2). The partial knife of black Basalt material was found in the immediate area also. (Fig. 3).

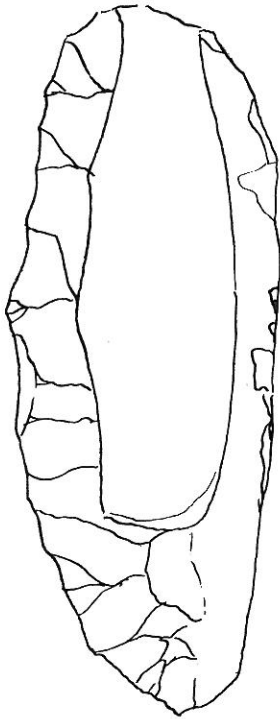
The campsite itself was in a hidden area but only a short distance away high rising bluffs of protruding sandstone afforded a panoramic view of the whole Basin area. The terrain made a perfectly protected and secluded home for the occupant.

The accompanying illustrations were done by Mr. Bob Edgar, and this report submitted by Mr. and Mrs. Milford Hansen.

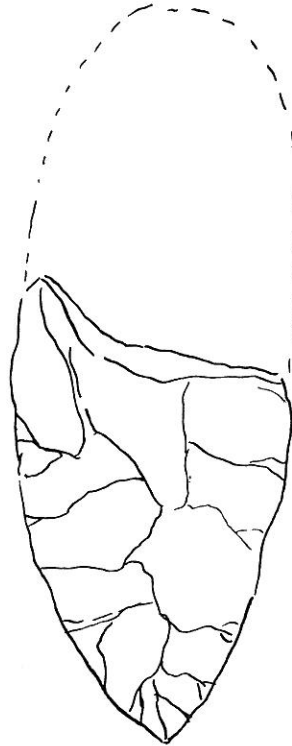


1

SCALE -  $\frac{1}{2}$  SIZE



2



3



4



5



6

SCALE - FULL SIZE

## DENVER MUSEUM GIVEN RARE INDIAN ARTIFACTS

One of the country's most extensive private collections of Indian artifacts -- valued at about \$1 million -- has been donated to the Denver Museum of Natural History, it was announced.

The contribution of the entire collection of more than 11,000 items by Mr. and Mrs. Francis V. Crane, Marathon, Florida, was made public at formal dedication ceremonies of the Charles C. Gates Planetarium at the museum.

Crane, who was present at the ceremony, and his wife have devoted a large part of their lives to collecting the Indian items representing every major Indian tribe in North America.

DIRECTOR 'Pleased'

Dr. Alfred M. Bailey, museum director, said, "We are very pleased. This is one of the outstanding collections in the country."

Roy E. Coy, assistant director, said he and three other staff members will go to Marathon next month to begin packing the exhibit for shipment to Denver.

The Cranes have the collection on display in a special museum they constructed near their home about 50 miles from Key West, Florida.

A few of the major items in the collection include two tepees of plains Indian tribes, a 30-foot totem pole from a Northwest tribe and two Chilkat blankets, described by Coy as rare items. The blankets are woven from goats' wool and cedar bark and "if you could get one for \$1,000, you'd be lucky," he said.

### VISITED IN APRIL

The Cranes were in Denver last April looking over the museum in their search for a spot where their collection would get maximum exposure to the public, Coy said.

He said the Cranes were impressed with the Boettcher Foundation's \$1 million gift to the museum for construction of the museum's southwest wing, and the \$200,000 donation by the Phipps Foundation. The large contributions were a major factor in their decision to donate their collection to Denver, Coy said.

The donation of the Crane collection, Coy said, will place the Denver museum among the top seven in the country in Indian exhibits.

THE DENVER POST  
Sunday, June 30, 1968



ROCK AND ARTIFACT  
COLLECTING ON THE PUBLIC LANDS  
IN WYOMING

Regulations pertaining to

Indian and Historical Artifacts  
Fossilized Remains  
Petrified Wood  
Gemstones  
and other objects of antiquity

Over seventeen million acres of public lands in Wyoming are managed by the Bureau of Land Management, U. S. Department of the Interior. The popularity of rock collecting on these lands has increased tremendously over the past few years. BLM recognizes "rockhounding" as an important use of public lands and is managing the lands accordingly. In general, the public lands are open to any person, to take and remove rock material for noncommercial purposes without charge. Free maps showing the general location of public lands can be obtained from BLM state and district offices.

However, there are limitations on collecting certain materials other than natural rock or stone. The Antiquities Act of 1906 (34 Stat. 225; 16 VSC 431-433) states that a person may not, without permission, "appropriate, excavate, injure or destroy any historic or prehistoric ruin or monument, or any object of antiquity" on lands under Federal Government control. This means that historical ruins, Indian artifacts, dinosaur bones, animal and plant fossils, and similar objects cannot be collected without a special permit.

Obtaining a Permit Under  
the Antiquities Act

The Antiquities Act prohibits appropriation of any object of antiquity situated on lands owned or controlled by the United States Government without the consent of the Secretary of the Interior. Authority to grant permits for examination, excavation or removal of antiquities has been delegated only to the Director, Office of Management Operations, Office of the Secretary, U. S. Department of the Interior. The Secretary of Agriculture and Secretary of Defense have, under the Antiquities Act, the same authority as the Secretary of the Interior for lands under their jurisdiction.

Any excavation or alteration of antiquities on land under the jurisdiction of the Bureau of Land Management will be undertaken by professional archaeologists, historians, or scientists of the Smithsonian Institution, National Park Service, Bureau of Land Management, or by professional personnel of a qualified institution such as the University of Wyoming. Under the restrictions of present legislation, permits cannot be granted to an amateur archaeologist, recreationist, or rock-hound.

Persons interested in applying for a permit should write directly to the Director, Office of Management Operations, National Park Service, Interior Building, Washington, D.C. 20240, and ask for an "Application for Permit under the Antiquities Act." These forms are also available at the six Bureau of Land Management offices in Wyoming.

Four copies of the completed form are to be returned to that office. Each application must be accompanied by a definite outline of the proposed work, indicating the name of the institution making the request, the date proposed for beginning field work, the length of time to be devoted to it, and the names of the persons who will have overall immediate responsibility for the work. The application must also contain an exact statement of the character of the proposed work, whether examination, excavation, or collection, and the name and location of the public museum in which collections made under the permit are to be permanently preserved. The application must be accompanied by a sketch plan or adequate description of the particular area concerned so that it can be located on the map with reasonable accuracy.

#### Petrified Wood

Petrified wood can be taken from public lands in limited quantities. The Secretary of the Interior has set a limit of 25 pounds plus one piece per day, but not more than 250 pounds per calendar year. This is allowed without a permit if the collection is made for personal, noncommercial purposes. Permits must be obtained from BLM district offices for collecting a quantity of petrified wood exceeding 250 pounds within the period of one year.

In addition to these requirements, explosives or power equipment cannot be used in excavating or removing petrified wood. BLM may close, change, or modify free-use areas for the collection of petrified wood by publishing notices in the Federal Register. Public lands which are closed to the collection of petrified wood are so posted.

#### Gemstones

A collector is welcome to take specimens of gemstones and rocks from public lands for recreational purposes. However, if gemstones are for resale or if large quantities are desired, then a permit must be obtained from the BLM under provisions of the Materials Act.

Care must be taken not to violate the rights of a bona fide mining claimant. Patented mining claims are private land, and permission to collect specimens on these lands must be obtained from the property owner.

Unpatented mining claims are still public lands. However, a mining claimant is entitled to the same controls over locatable minerals as a landowner.

### Indian Artifacts

Petroglyphs, human remains, dwellings, and items made by early Indians are protected by law. However, due to the vast expanses of public lands, it is somewhat impossible to prevent violations. The collector must use discretion in removing surface finds since, in many instances, they are the last remaining link to important archaeology sites. Amateur digging can destroy the scientific value of an archaeological find and is not permitted except by a recognized scientific institution, museum, or university. A site that appears to have potential scientific value should be reported to the nearest BLM office. It will then be properly inventoried and evaluated under the guidance of a trained archaeologist. Undoubtedly many important sites will never be discovered simply because all visible evidence of the site's location was removed by surface collectors.

### Fossilized Remains

Fossilized remains of prehistoric plants and animals are also protected under the Antiquities Act and cannot be taken unless authorized by special permit. Paleontologists point out that the removal of one bone may despoil the site in such a way that vital scientific information is lost.

Sites such as the Kemmerer Fossil Fish Beds in southwestern Wyoming contain rare specimens of animal life found in only a few places on earth. Such sites are of great value to science when properly excavated and evaluated. Amateur excavators could prevent an important paleontological discovery from ever becoming public knowledge. Fossils are rare enough that anyone discovering unusual fossilized remains should report the site to a BLM office or to the State Archaeologist, Anthropology Department, University of Wyoming, at Laramie.

### Bureau of Land Management Offices

Wyoming State Office  
2120 Capitol Avenue  
P. O. Box 1828  
Cheyenne, Wyoming 82001

Rawlins District Office  
Suite 22, Osborne Bldg.  
P. O. Box 670  
Rawlins, Wyoming 82301

Worland District Office  
1700 Robertson Avenue  
P. O. Box 119  
Worland, Wyoming 82401

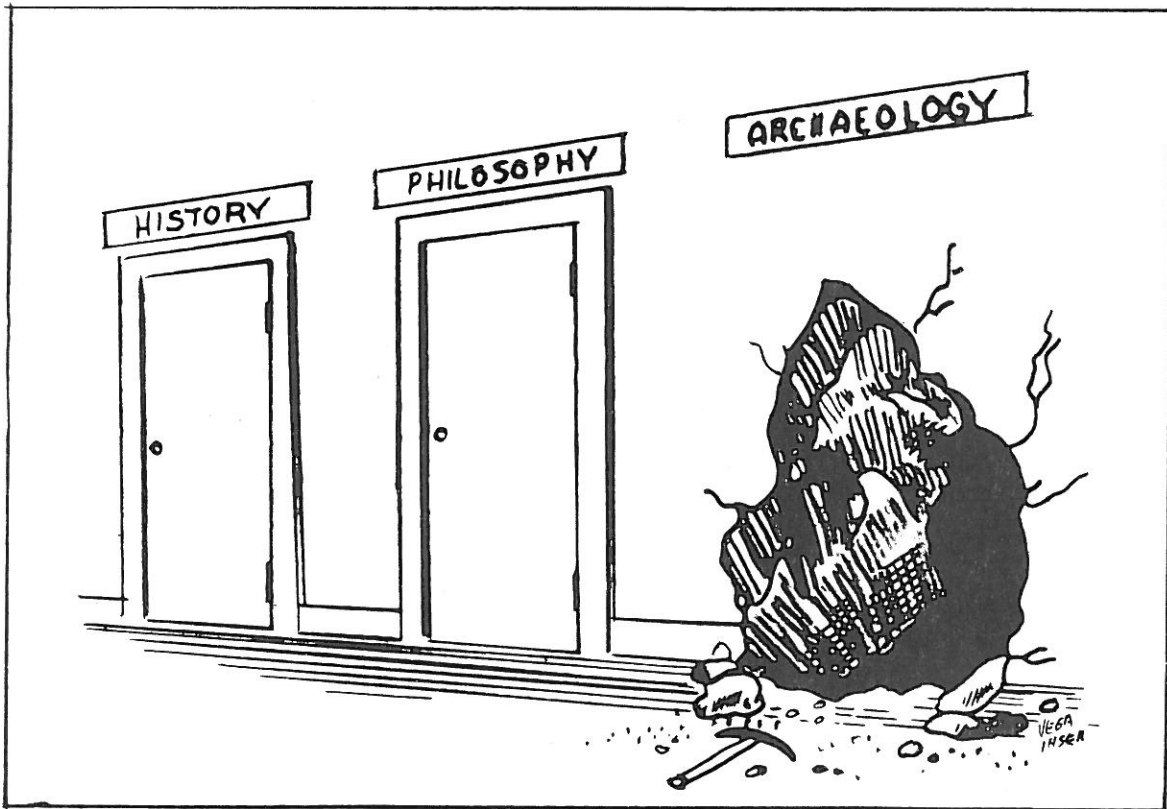
Rock Springs District Office  
126 Elk Street  
P. O. Box 1088  
Rock Springs, Wyoming 82901

Lander District Office  
Jett Bldg., U. S. 287 South  
P. O. Box 589  
Lander, Wyoming 82520

Pinedale District Office  
Molyneux Building  
P. O. Box 188  
Pinedale, Wyoming 82941

Bureau of Land Management Offices (continued)

Casper District Office  
300 North Center Street  
Casper, Wyoming 82601



## HELP ASKED TO SAVE WYOMING ANTIQUITIES

The Director of the Wyoming Recreation Commission is asking all state citizens to report historic, prehistoric and archaeological discoveries "so that such sites and/or objects can be placed under the protection of the State Archaeologist for scientific study".

"There is a growing concern in Wyoming over the continuing destruction of sites and removal of objects significant to the state's history and pre-history," said Charles R. Rodermel. "The Recreation Commission has qualified technical personnel to scientifically research and investigate all such findings and the state and federal government have Antiquity Act laws to provide the necessary protection to such sites on public lands."

"But first we need to know where the sites are and where the objects are located," Rodermel said.

Rodermel said that the concern over destruction of valuable links with the state's past wasn't with the rockhound or the casual surface collector. "We are concerned with the diggers and the commercial interests that gather this material for re-sale," he said. "We are also concerned with scientific collectors who operate without permits and remove archaeological objects to other states, which is in direct violation of our Wyoming Antiquities Act when these objects are taken from Wyoming's State owned lands."

Rodermel said that many of Wyoming's archaeological sites, historic forts and ghost towns have already been turned into garbage dumps and excavated pits by the diggers and that more are in real danger of destruction.

"Once archaeological and historic sites are attacked by the diggers, the scientific value of the sites is forever lost," Rodermel said. "History is not a renewable resource."

The state and federal Antiquity Acts provide safeguards for the amateur rockhound and surface collectors and authorizes permits for scientific investigations. Penalties are provided for unauthorized digging, destruction, vandalism and the commercial re-sale of objects found.

"If the Antiquities Act is going to work in Wyoming, we are going to have to have the support and cooperation of the public," Rodermel said. "The Recreation Commission is now responsible for the research, investigation and development of all state historic and archaeological sites. Many valuable sites have already been destroyed and are beyond development. With the help of the state's citizens, we hope to preserve what is left," he said. Information concerning possible violations should be reported to either the Wyoming Recreation Commission, P. O. Box 309, Cheyenne, or to the State Archaeologist in care of the University of Wyoming.

LEIGH CAVE, WYOMING

SITE 48 WA 304

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## LEIGH CAVE, WYOMING

SITE 48 WA 304

### ABSTRACT

Leigh Cave is a single-component, habitation site in the Big Horn Basin near Ten Sleep, Wyoming, containing artifacts within the range of variation of the type known as McKean (Mulloy 1954). These artifacts are typologically diagnostic of the Early Middle Period. A small amount of perishable material was also recovered. Charcoal from a fire-hearth at Leigh Cave produced a radiocarbon date of 2220 B.C.  $\pm$  150 years. While more work needs to be done in this general area, Leigh Cave seems to characterize a regional variant of a widespread cultural complex on the Northwestern Plains and subsumed under the term of the Early Middle Period. Although the McKean Complex recently has been subsumed under the term of Plains Archaic (Willey 1958) with affinities to the Eastern Woodlands, Leigh Cave is more reminiscent of a Desert Culture than it is of a Plains Archaic.

### INTRODUCTION

Leigh Cave, Site 48 WA 304, (107° 19' W. Long., 44° 05' No. Lat.) is an Early Middle Period site, located in northern Wyoming on the western slopes of the Big Horn Mountains in Washakie County about twelve miles east of the small town of Ten Sleep. This side of the Big Horn Mountains slopes into the Big Horn Basin which is considered geographically as an enclave of the Northwestern Plains. This basin is a syncline roughly 90 miles long and 50 miles wide which connects to the Northwestern Plains through a narrow corridor to the north in Montana. Except for this corridor, the Big Horn Basin is completely surrounded by mountains: To the east and the southeast are the Big Horns; to the southwest are the Owl Creek Mountains; to the west are the Absaroka Mountains and to the Northeast are the Pryor Mountains. The entire basin is drained by the Big Horn River, which before entering the basin from the south, is better known as the Wind River. The Big Horn River flows north and empties into the Yellowstone River in Montana.

The conditions in the Big Horn Basin are more reminiscent of the Basin and Range province further to the southwest rather than the Plains. At the lower elevations, rainfall is often less than seven inches per year. There are large areas of alkaline soil that support little grass and mostly greasewood, (*Sarcobatus vermiculatus*), saltbushes (*Atriplex* sp.), rabbit-brush (*Chrysothamum* sp.), and sagebrush (*Artemisia* sp.). It is a typical badland topography relieved occasionally by fertile river valleys that contain live streams and marked by stands of cotton wood and willow. Toward the mountains, yearly rainfall increases quite rapidly and provides an environment in sharp contrast with the nearby badlands. The mountain front is deeply dissected with narrow canyons of which many contain live streams. Browse and grass cover increases, and stands of trees appear on the northern

slopes. At the highest elevations timberline conditions prevail.

### THE SITE

Leigh Cave is at an elevation of about 5500 feet above sea level and is an erosional recess at the base of a perpendicular canyon wall. The larger streams have eroded far back into the mountain front and provided in many ways the optimum living conditions in the area. From the cave, a steep, talus slope lying at near the angle of repose extends several hundred feet to the edge of a stream known as Ten Sleep Creek which is one of the major streams that drains the western slopes of the Big Horn Mountains. Ecologically, Leigh Cave is found in a small transition zone, with an extensive area of the Upper Sonoran Zone to the west, and to the east, the Canadian Zone (Carey 1917).

The only evidence of occupation in the cave occurred as a single, thin stratum 3-8 inches below the surface in a comparatively level part of the cave (Fig. 1). A small assemblage of artifacts was recovered both perishable and imperishable. Chipped stone projectile points typologically fall within the range of variation of an Early Middle Period occupation known as McKean. This complex was described from the type site in Northeastern Wyoming by Mulloy (1954). A C-14 date of 2220 B.C. + 150 years (Grey 1962) from a fire hearth in Leigh Cave suggests a time of occupation at about the end of the postulated dry Altithermal period that began about 5000 B.C. and ended about 2500 B.C. This date also fits well within the Early Middle Period in the Northwestern Plains.

Of considerable interest and significance at the site was a small body of perishable material. The only feature of importance was a surface fire ringed with angular fragments of limestone. On and in the fire were numerous fragments of fire-fractured limestone and sandstone suggesting some sort of a roasting pit. In and near this fire were the cooked remains of several hundred large insects of the order orthoptera and more commonly known as the Mormon cricket (Anabrus simplex). The context suggests the cave occupants were roasting these insects for food.

A number of plants were probably also being utilized for food. The entire floor of the cave was littered with the outside coverings of wild onion bulbs (Allium sp.). It is likely but not proven that they were in some way leaching these bulbs to reduce the exceptionally strong taste. Included also were large quantities of chokecherry pits (Prunus demissa); lesser amounts of limber pine seeds (Pinus flexilis); buffalo berry (Shepherdia argentea), and wild rose (Rosa woodsii). Noticeably lacking were sego lily (Calochortus gunnisoni) and arrowroot (Balsamorhiza sagitata) both of which are plentiful in the cave vicinity. This strongly suggests an occupation later in the summer after the latter two plants were out of season.

### CHIPPED STONE ARTIFACTS

#### Projectile Points

Chipped stone includes several projectile points that typologically indicate an Early



Middle Period occupation and fit within the range of what are known as McKean (Mulloy 1954). Although some do have a notched appearance (Fig. 2 l,n,o) others are nearly stemmed and appear laterally restricted (Fig. 2 k,m,p). Bases are concave and grinding is in evidence on notches, stems and bases although indentations of the bases are unground. One fragment appears corner-notched but is too badly broken to determine details of shape (Fig. 2 q).

Only one point is complete (Fig. 2 k) but all show a range of variation of the same stylized type. Two points (Fig. 2 o, p) show evidence of reshaping and reuse, probably after being broken, and while still contained in a haft.

#### Scrapers

Other chipped stone artifacts included a few nondescript side and end scrapers. Three fragments show evidence of use as end scrapers (Fig. 2 a,b,e). One side scraper is made from a large percussion flake whose entire perimeter shows a lateral retouch with the original face unworked (Fig. 2 c). Another type of side scraper is of a thinner, slightly convex percussion flake, with a smooth face, showing definite bifacial retouching along one edge and more steep on one side (Fig. 2 d).

#### Core

One irregular nodule of chert, 66mm long, 40mm wide and 39mm thick, found locally in limestone, had been utilized as a core.

#### Chopper

One large percussion flake 68mm long, 53mm wide and 22mm thick, has a retouch on two edges suggesting use as a chopper. The retouch appears partly deliberate and partly the result of use.

#### Retouched Flakes

In addition to the five percussion flakes showing definite use as scrapers, twenty-six retouched flakes were recovered. All utilized fortuitously formed edges for scraping, grooving and cutting (Fig. 2 f,j). The flaking materials used were all local and available in quantities within short distances of the site. These were mainly chert, with at least one example of jasper and a few quartzite. Two flakes demonstrate points suggesting use as grooving tools. One is a part of biface which had been reworked after being broken (Fig. 2 h). It probably was used as a scraper as well as for grooving. The other also shows probable use as a scraper on two edges and has two points which were used for grooving (Fig. 2 i). One is almost round in outline form with two edges showing unifacial retouch, while both ends are unaltered (Fig. 2 j).

#### Miscellaneous Flakes

Most of the 217 miscellaneous flakes indicate some workshop activity. A few demonstrated they were soft-hammer flakes of bifacial retouch (Bordes 1961) that resulted from tool sharpening. These indicate a certain amount of tool use that was not evident from

the presence of actual tools. Soft-hammer technique of tool-sharpening is suggested by overhang on the bulbs of percussions on most specimens.

### GROUND STONE ARTIFACTS

Ground stone artifact material included fragments of two and possibly three sandstone slab-type milling stones and three manos. One of the manos was nearly complete and measures 70mm in width, 117mm in length and is 45mm thick: A piece of sandstone 56mm wide and 113mm long has a fairly smooth red surface, with striations parallel to the long axis of the stone and may have been used in shaping tools. It is different from the typical milling stone: Several small pieces of red ocher were abraded, suggesting they may have been a source of pigment. An irregular fragment of a rounded river cobble shows one side smoothed from use as a rubbing stone but it does not appear to have been used as a mano. The rounded end is battered and was probably used as a hammerstone.

### BONE

Bone tools are quite noticeable by their absence and consist of two awls that were made from the long, sharp-pointed accessory carpal of a deer foot and were almost unchanged from their natural form (Fig. 2 r,s). One piece of unidentified long bone was nearly round and had been rather crudely ground to remove the rough edges (Fig. 2 t). Animal bone was scarce and included two specimens of Mountain Sheep (Ovis canadensis), one of which was a mature female and the other an immature animal suggesting that the cave occupants may have obtained a ewe and lamb. There was at least one specimen of mule deer (Odocoileus hemionus) and two specimens of a small local grey squirrel (Sciurus sp.). Carnivores consisted of one specimen of coyote (Canis latrans). Most of the 592 bone fragments were very small and unidentifiable. Of this number about 150 fragments were charred. Two small pieces of charred long bone which had been cut in half were part of a larger piece, showing striations parallel to the length of the bone (Fig. 2 u). This may have been part of a tool, but use is unknown.

### PERISHABLE MATERIAL

#### Worked Wood

A small amount of woodworking evidence appeared but all in the form of debris and none as finished artifacts. Cutting, scraping, chopping and abrading with stone tools was indicated. Two fragments may have been parts of foreshafts to fit a socket in a main shaft (Fig. 2 x). One specimen (Fig. 2 v) has been cut on one end and battered on the other but its function is unknown. There are three fragments which were possibly shafts. Most of the wood used was willow (Salix sp.) with one piece of greasewood (Sarcobatus vermiculatus), and one of birch (Betula fontinalis). Several fragments are apparently workshop debris (Fig. 3 w) and consist of pieces cut or chopped on one end and a small quantity of chips and shavings.

### Fiber Cordage

The Leigh Cave material includes 26 examples of two-strand, twisted cordage. All except seven specimens are "S" twist. The most common material was a bast fiber of milkweed (Asclepias sp.) (Fig. 3 b-d), with at least one piece of juniper bark (Juniperus sp.) (Fig. 3 a) and three of yucca fiber (Yucca glauca) (Fig. 3 e). These pieces of cordage are all fragmentary and there is a wide range of variation as to technique used and size and quality of workmanship (See Table 1).

Two pieces of cordage found close together suggest they may have been part of some object made with a netting technique (Fig. 3 b). A few of the pieces taper to a fine point caused by the common technique of twisting the elements together with a flat of the hand against the thigh and suggest they are the discarded ends of longer pieces (Fig. 3 d,e). Three examples of cordage used in sewing elements were still attached to fragments of unidentified hide (Fig. 3 f,g). One fragment is knotted with what appears to be an overhand knot, however, the cordage is so worn that identification of the knot is uncertain.

In addition to the fiber cordage, many examples of bark were found in various stages of retting. Some of the bark is juniper (Juniperus sp.), willow (Salix sp.) and most is unidentified. A number of milkweed stalks (Asclepias sp.) were recovered with bast fiber removed. Three yucca (Yucca glauca) leaves appear partially retted.

### Sinew

There were nine pieces of sinew of various sizes, including one small fragment of two-strand, "S" twist cordage: one fragment of single-strand "Z" twist: one fragment of two-strand, "Z" twist cordage, knotted together at the end with an overhand knot.

### Hide

Three pieces of well-finished but badly worn and unidentified hide were probably pieces of clothing and holes for sewing elements are visible. They still retain pieces of fiber cordage which suggests they were using it as the sewing element rather than sinew (Fig. 3 f,g). In addition there were also several fragments of a partially tanned squirrel (Sciurus sp.) hide.

Two fragments of unidentifiable hide are stained red (Fig. 3 h,i). One is very soft and pliable as a result of good manufacturing technique (Fig. 3 i). The other appears to have been similarly treated but is badly deteriorated (Fig. 3 h). The remaining four fragments are badly deteriorated.

### Grass and Hair

A great deal of rye grass (Elymus canadensis) and other unidentified grass was found in the cave, mixed with deer (Odocoileus sp.) and mountain sheep (Ovis canadensis) hair to form the actual living floor. Several wads of grass, bark and hair suggest they were being used as padding for moccasins.

## CONCLUSIONS

The cultural materials and other evidence from Leigh Cave strongly suggest a small group, probably a single nuclear family, with an economic orientation towards vegetable food gathering and small animal hunting, and lacking emphasis toward big game hunting. These people probably exploited various small environments (microenvironments) within a larger total exploited area (macroenvironment) (Coe and Flannery 1964). During winter months, they would probably exploit the interior basin areas with a strong orientation toward vegetable foods, and then move to the foothills and the cave sites, such as Leigh Cave, and to the grasslands of the high mountains during the late spring, summer and early fall to exploit various vegetable foods as they ripened, as well as game animals.

The occupation at Leigh Cave is more reminiscent of a desert culture orientation than that of Plains Indian hunters. There is no evidence to suggest the area of the Big Horn Basin of northern Wyoming, in which Leigh Cave is located, was ever an area in which Bison bison were found in numbers comparable to the Great Plains area immediately to the east of the Big Horn Mountains. The season of occupation of Leigh Cave was probably late summer from the stage of maturity of both plant and animal remains. We are as yet ignorant of their way of life with regard to other seasons of the year although there are some suggestions in poorly defined sites that their winter orientation may have been plant gathering to a large extent. All of the plants found in the cave deposits are found in the immediate vicinity of the site today and there is nothing to suggest any greatly significant climatic changes from that period until the present.

This general area is as yet poorly defined archaeologically. At this time it seems best to characterize the cave occupation as a regional variant of a widespread cultural complex on the Northwestern Plains that is subsumed under the term of the Early Middle Period. It seems only logical to assume that all of these people were closely tuned to a number of regional ecological adaptations. The Big Horn Basin stands in sharp contrast to the Great Plains only a short distance away and immediately east of the Big Horn Basin. Here grass and other conditions for the large grazing and browsing animals is much more favorable. There is good evidence that during the same time period as the occupation of Leigh Cave, there were peoples east of the Big Horn Mountains strongly oriented toward stylized techniques of buffalo trapping and hunting. However, in Northeastern Wyoming, at the McKean site (Mulloy 1954) the type site of the Early Middle Period, it is strongly suggested that there was a strong orientation toward plant gathering as well as hunting.

Recently, near Cody, Wyoming, a large cave site, on the opposite side of the Big Horn Basin from Leigh Cave, was excavated. This was a deep site with 38 levels of human occupation over a period of more than 7000 years. In one level of this cave with a date of 2470 + 150 B.C. were found artifacts which are suggestive of Leigh Cave (Wedel, et al, 1968). Another cave site in the extreme south of the Big Horn Basin also produced a poorly-defined level that is somewhat suggestive of the Leigh Cave material (Frison 1962).

At present, the cultural affiliations of Leigh Cave are quite nebulous. The McKean Complex has recently been more or less subsumed under the term of a Plains Archaic with affinities to the area of the Eastern Woodlands and/or the Desert Culture (Willey 1966). Obviously this is a tremendous oversimplification and it seems likely that there were contacts to both areas. Leigh Cave is more reminiscent of a Desert Culture manifestation than Plains Archaic but much archaeological work remains before this time period on the Northwestern Plains can be adequately described.

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TABLE 1  
FIBER CORDAGE

LEIGH CAVE

(Method of Classification Adopted from Jones 1954)

Univ. of Wyoming Cat. No.	mm Diameter	mm Length	Plies	Twist	Maceration	Tightness	Quality	Twists per cm
2179	1.3	22	2	Z	Advanced	Very Tight	Very Good	8.0
2180	.7	60	2	Z	Medium	Tight	Good	5.0
2181	1.3	104	2	Z	Medium	Medium	Fair	3.5
2182	.8	56	2	Z	Advanced	Tight	Very Good	8.0
2182	1.6	61	2	Z	Medium	Tight	Good	3.0
2183	1.9	55	2	Z	Medium	Medium	Fair	3.0
2184	2.7	25	2	Z	Little	Loose	Poor	3.0
2185	3.4	126	2	S	Little	Medium	Good	2.5
2188	1.4	18	2	S	Medium	Tight	Good	4.5
2190*	1.0	29	2	S				4.5
2191	1.0	62	2	S	Medium	Tight	Good	4.0
2192	2.6	64	2	S	Medium	Medium	Good	2.5
2206	1.8	47	2	S	Medium	Tight	Good	4.0
2207	2.6	30	2	S	Medium	Tight	Very Good	5.0
2208	1.4	80	2	S	Medium	Tight	Good	5.0
2209	2.8-2.0	123	2	S	Medium	Tight	Good	2.5
2210	2.8	114	2	S	Medium	Medium	Good	3.5
2211	2.0	58	2	S	Advanced	Very Tight	Excellent	4.0
2212	1.5	52	2	S	Advanced	Tight	Very Good	6.0
2213	3.7	61	2	S	Medium	Loose	Fair	2.0
2214	3.7	68	2	S	Medium	Medium	Good	1.8
2215	2.9	21	2	S	Medium	Loose	Fair	3.0
2216	1.9	30	2	S	Medium	Loose	Poor	3.5
2217	2.9	110	2	S	Medium	Medium	Good	2.5
2218	1.2	26	2	S	Advanced	Tight	Very Good	9.0
2219	2.2	61	2	S	Medium	Tight	Good	4.0

\* Badly Deteriorated.

TABLE 2

FAUNA

Coyote	1	<u>Canis latrans</u>
Deer	1	<u>Odocoileus virginianus</u>
Marmot	1	<u>Marmota flaviventris</u>
Mormon cricket	several hundred	<u>Anabrus simplex</u>
Mountain sheep	2	<u>Ovis canadensis</u>
Squirrel	at least 2	<u>Sciurus sp.</u>

FLORA

birch		<u>Betula sp.</u>
boxelder		<u>Acer negundo</u>
buffalo berry		<u>Shepherdia argentea</u>
cactus		<u>Opuntia polyacantha</u>
chokecherry		<u>Prunus sp.</u>
cottonwood		<u>Populus sp.</u>
greasewood		<u>Sarcobatus vermiculatus</u>
juniper		<u>Juniperus sp.</u>
limber pine		<u>Pinus flexilis</u>
lupine		<u>Lupinus sp.</u>
milkweed		<u>Asclepeas sp.</u>
mountain mahogany		<u>Cercocarpus ledifolius</u>
sagebrush		<u>Artemisia tridentata</u>

FLORA (continued)

thistle	<u>Circuim sp.</u>
wild onion	<u>Allium sp.</u>
wild rose	<u>Rosa woodsii</u>
wild rye	<u>Elymus candensatus</u>
willow	<u>Salix sp.</u>
yucca	<u>Yucca glauca</u>



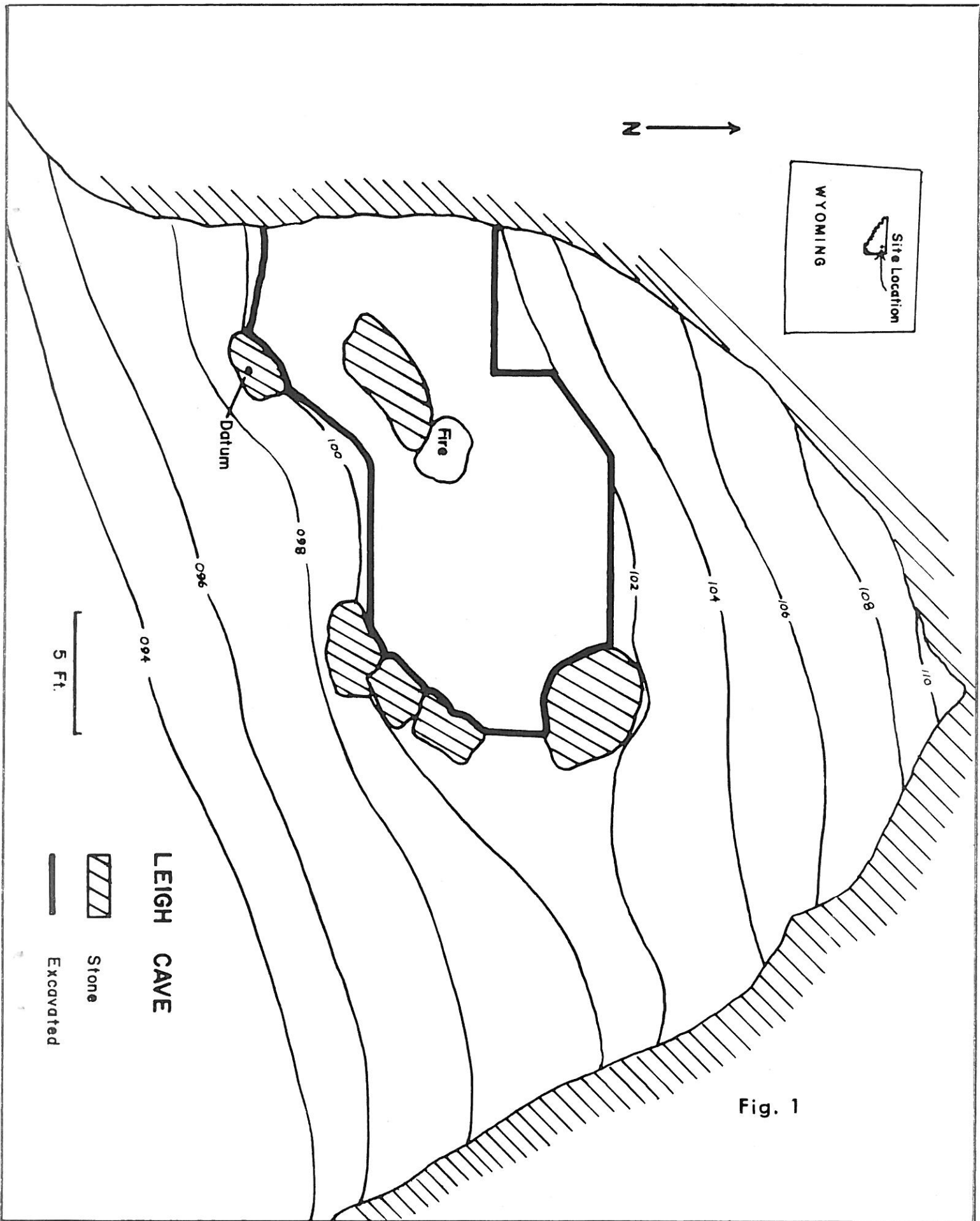


Fig. 1

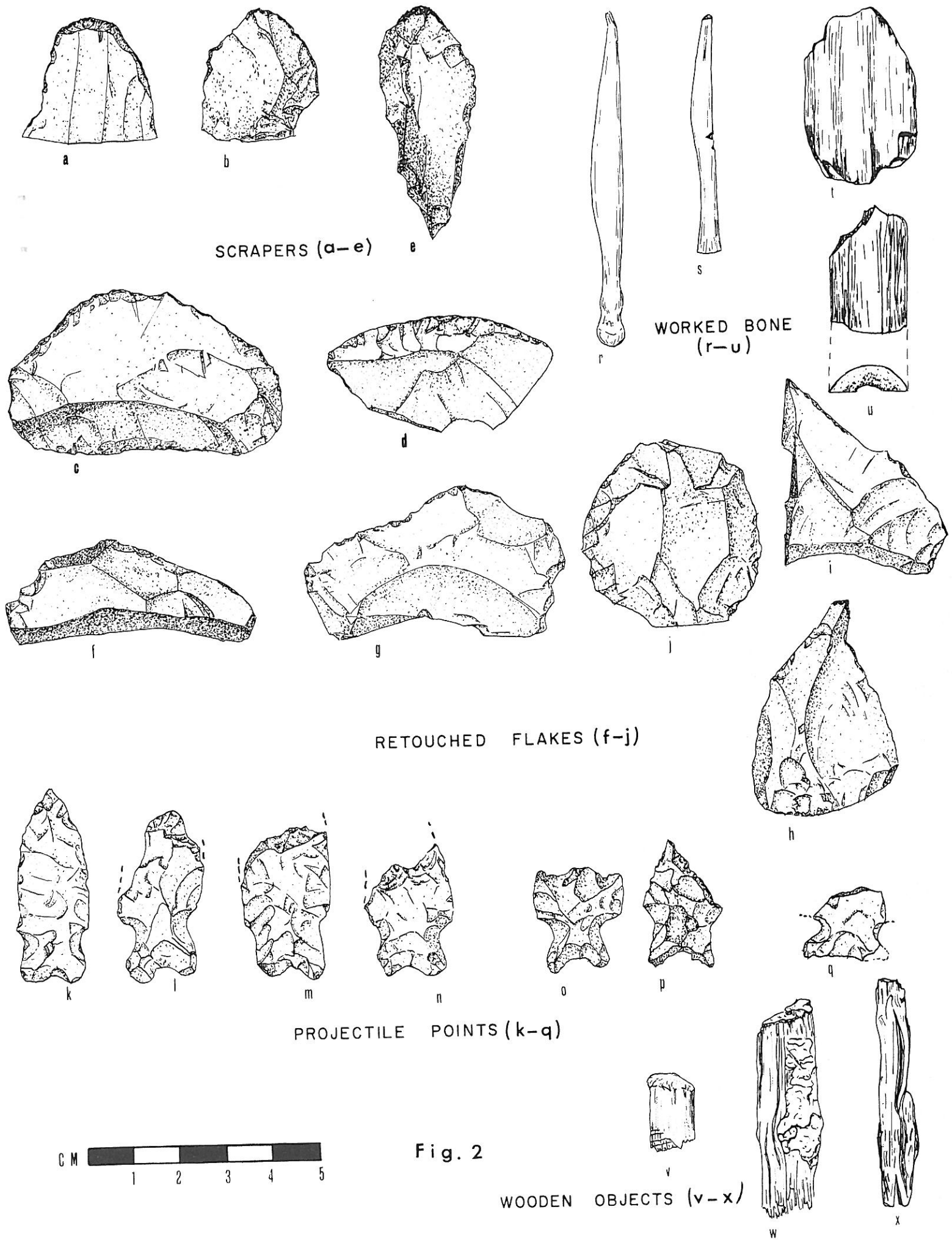
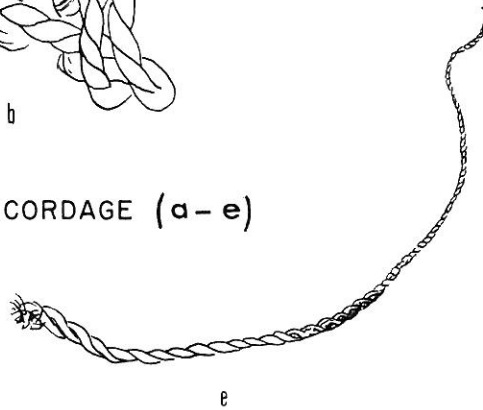
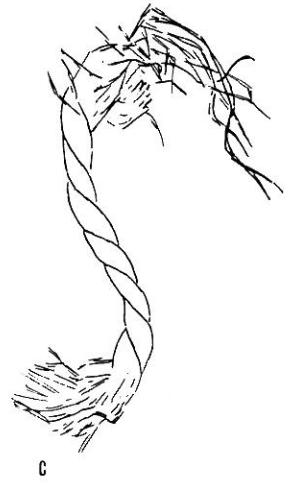
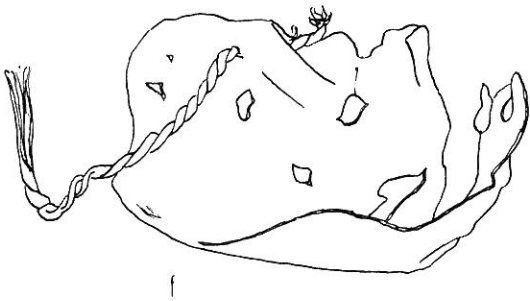


Fig. 2

WOODEN OBJECTS (v-x)



FIBER CORDAGE (a-e)



TANNED HIDE (f-i)

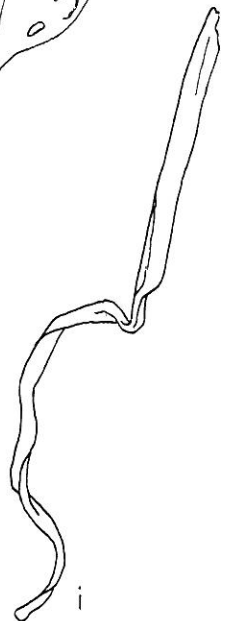
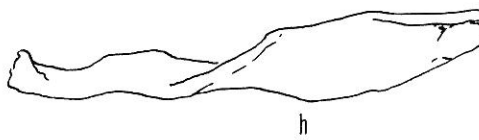
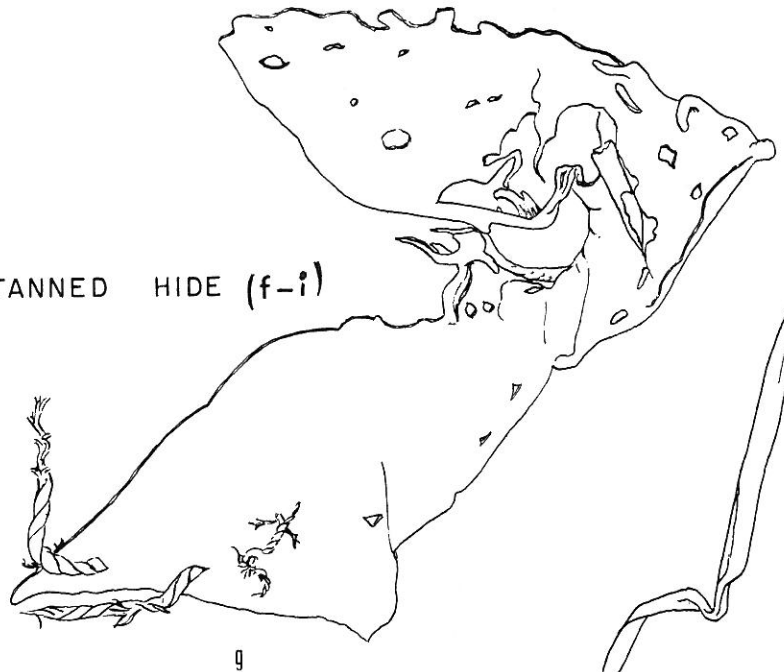


Fig. 3

