WYOMING
ARCHAEOLOGICAL
SOCIETY

THE WYOMING ARCHAEOLOGIST

JULY ISSUE 1966

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JULY ISSUE CONTENTS

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In Memorium

The Wyoming Archaeological Society pays tribute to Mr. Robert Frison, who was a Charter member of the Sheridan Chapter, Wyoming Archaeological Society. Mr. Frison died May 13, 1966, in Cheyenne, following surgery. He was born in Basalt, Colorado in 1892, and had lived at Tensleep, Wyoming. He graduated from a short course at Colorado State University in 1916 and served with the A.E.F. Air Service in France during World War I.

Mr. Frison was one of the original game wardens in Wyoming and was employed by the Wyoming Game and Fish Commission until his retirement in 1957. Since that time he was Curator at the Gatchel Museum in Buffalo.

Mr. Frison served as the Society's second President in 1955-1956. He gave much of his time and talents to the Society, including many programs on Archaeology, Geology and Fossils. He had a large collection of well displayed and catalogued artifacts which he had collected over the many years, including material which he had recovered from a cave in the Basin area of the atlatl era. He participated in the Society's field work and was a generous contributor to the Mulloy Scholarship Fund. The loss of his interest and enthusiasm for Archaeology will be felt by the entire membership.

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PRESIDENT'S LETTER

Dear Fellow Members:

The following arrangements have been made for our August 6 and 7 meeting. We will have a short unofficial business meeting on Saturday, August 6, at 2:00 p.m. in the second floor meeting room in "Old Bedlam" at Fort Laramie. At this time members may discuss any issue which they feel should be considered and acted upon at the State meeting in April. A program will be presented by Bob Murray and his staff. Following the meeting, there will be the opportunity to tour the buildings at the Fort. At 6:00 p.m. Saturday, we should leave Fort Laramie, proceeding to the museum building at Lake Guernsey for a no-host picnic and an evening program in this fascinating building which is an outstanding example of stone masonry.

On Sunday, August 7, all must assemble at Hell's Gap not later than 10:00 a.m. in order to join the guided tour of the several excavations. I have been advised no dogs are allowed and small children must be in the company of an adult at all times.

This summer meeting has become quite popular, so I am looking forward to a large attendance. Perhaps we will hear of some exciting reports of your Chapter activities this summer. Until then, Your State President,

Margaret Powers

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NOTICE TO MEMBERS OF THE WYOMING ARCHAEOLOGICAL SOCIETY

We are happy to say that Mr. Charles Stevens has granted us permission to conduct an excavation on his property on Powder River. This site is similar to the Powers-Yonkee and Roberts-Bentzen-Marvakis sites, and it is for this purpose we wish to conduct further investigation. We would like as many as possible to participate in this dig. We are planning to commence work July 2, 1966. If we can be assured of a good crew, this project will be done in a short time. Bring: plenty of water, food, etc., trowels, whisk-brooms and shovels. No arrangements have been made for overnight camping; perhaps one could make arrangements to stay at one of the ranches on Powder River or at "Joe's" in old Leiter or maybe Arvada.

DIRECTIONS: Go 65 miles from Sheridan on old Highway 16 to Arvada turnoff, then turn left on gravel road for 4.2 miles and at the Perry Waisner ranch turn left through a wire gate. Follow dirt road and through car pass until approximately ½ mile turn right and follow old road on first divide. Site is about 1/8 mile. Signs will help point the way.

Mr. George Frison has consented to direct this dig so we hope that some of you will be able to attend.

Gerald Carbone, President Sheridan Chapter,
Wyoming Archaeological Society

CHAPTER NEWS

Sheridan Chapter

February - The meeting closed with two movies on dating methods. One movie delt with several types of dating procedures and the second movie contained a detailed usage of the Carbon '14' method.

March - Rev. Leo Davis reported on a trip through the Texas panhandle. He described the cliff dwellings and the ruins in the area and explained the efforts being made to preserve the remains.

April - Joe Medicine Crow of Crow Agency Montana, told legendary stories of the Crow Nations' history. He told about the entrance of his people into this country and the growth of a large and proud tribe that covered a large area of the northwest. Mr. Medicine Crow captivated his audience with the Crow history in a true story teller's fashion.

A display of artifacts found in Japan were shown also at this meeting.

May - Mr. Louis C. Steege gave the Society a rundown on the known types of artifacts found in the N.W. He had a chart indicating how these points were associated in history and also showed slides to further characterize the types in the listeners' mind.

June - Mr. George Frisson gave a summary on the Piny Creek site near Lake De Smit. The site was apparently a one year stand leaving a layer of remains about eight inches deep and represented a little known period of history between 1541 and 1650. It was tentatively proposed to be of Crow origin.

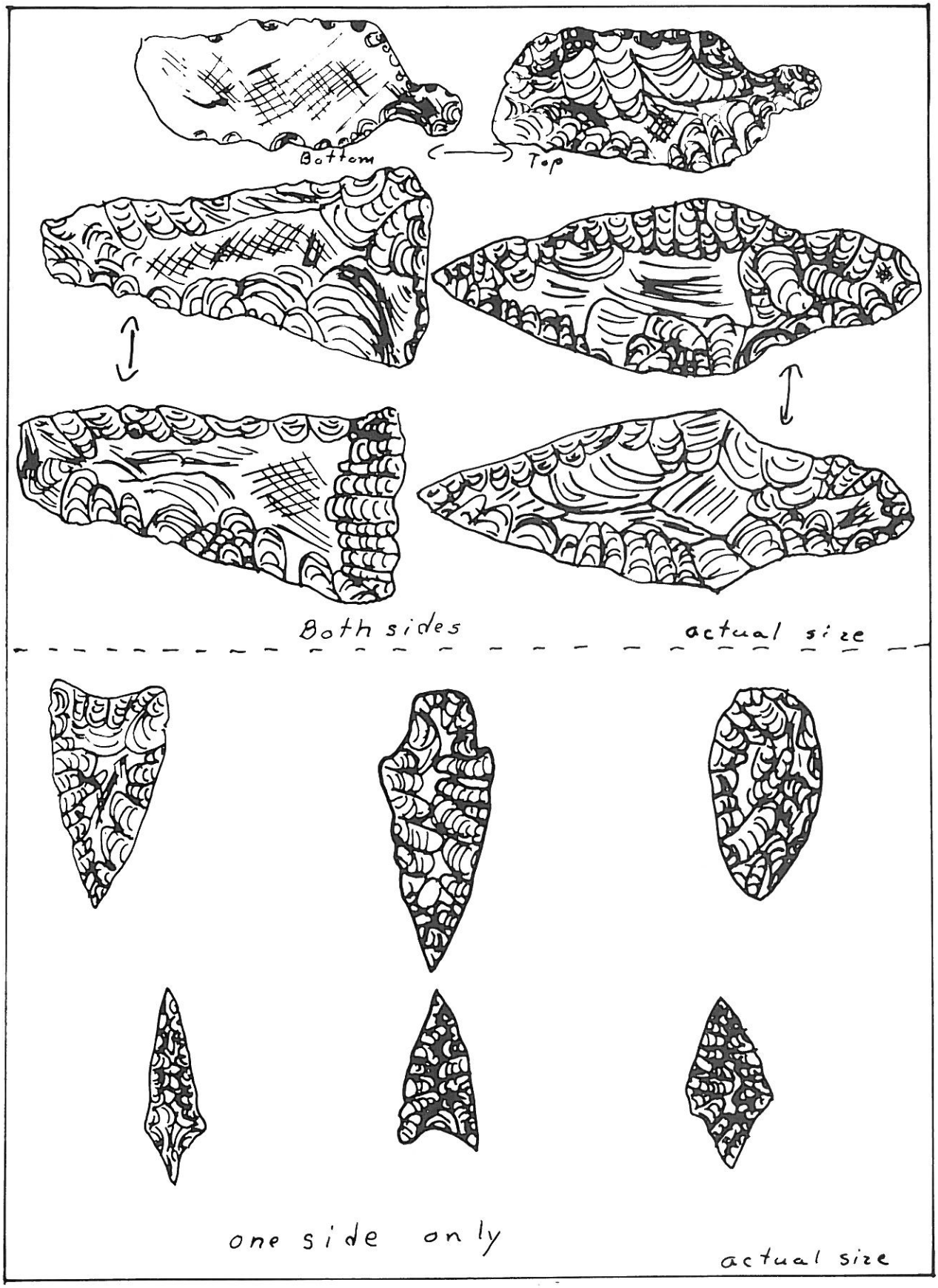
There was a camp site, a kill site, and a butchering area. There was no cache hole found where meat had been stored, however. Also in the kill area there were sixteen rock rimmed holes about two and a half feet across. These were not identified.

Of the buffalo remains there was a very limited number of the following: fetal bones -- perhaps unborn calf was considered a delicacy and was not butchered as the others were. Very few whole skulls -- the skulls may have been crushed to remove the brain. Tail vertabrae were scarce. Also the incisor teeth were missing from the skulls. The tail had many uses and the teeth were presumably used for decoration.

There was no typeology possible on the projectile points. They were all side notch and of assorte shapes and sizes. Over two hundred were found. Of the tools found, there seemed to be a great deal of rework done to keep them in good working order. Broker pieces were reworked to be used again and dulled edges were reflaked until the tools became too small to use. Preasure flaking and precussion flaking were both noticeable. The tool complex originated east of the Mississippi. There seemed to have been no points made at the site.

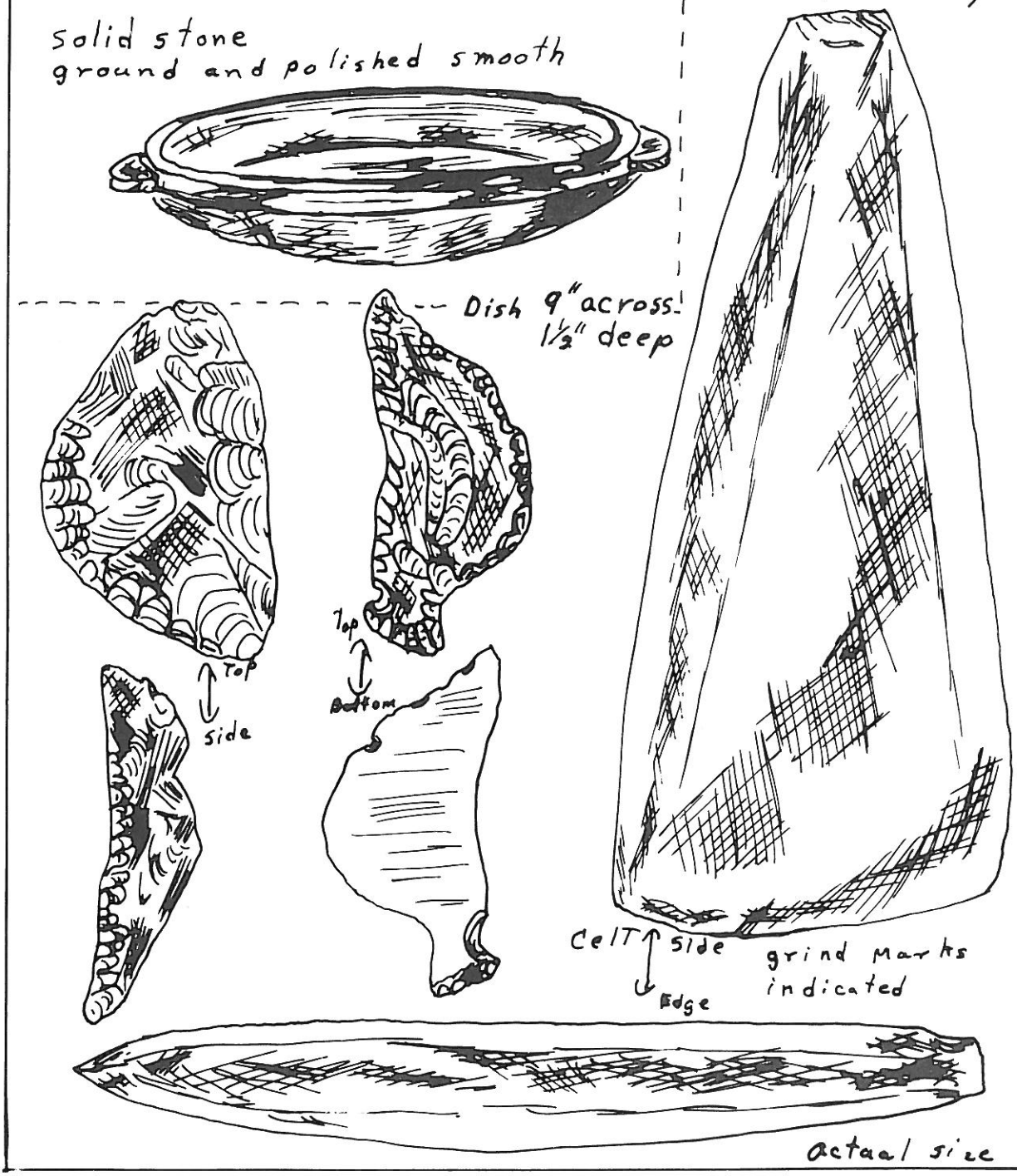
The ceramic collection was of the Mandan tradition with very little decoration and is believed to have been made at the site.

Mrs. Gary Fry


Bottom
Top
Both sides
actual size
one side only
actual size

The following group of drawings are artifacts found while building a road near Sasebo City, an island off Kyusha, Japan. The pieces were taken to an antique dealer who gave them to Mr. Earl Benidict of Sheridan as a Christmas gift.

Drawings by Georgia Lee Fry



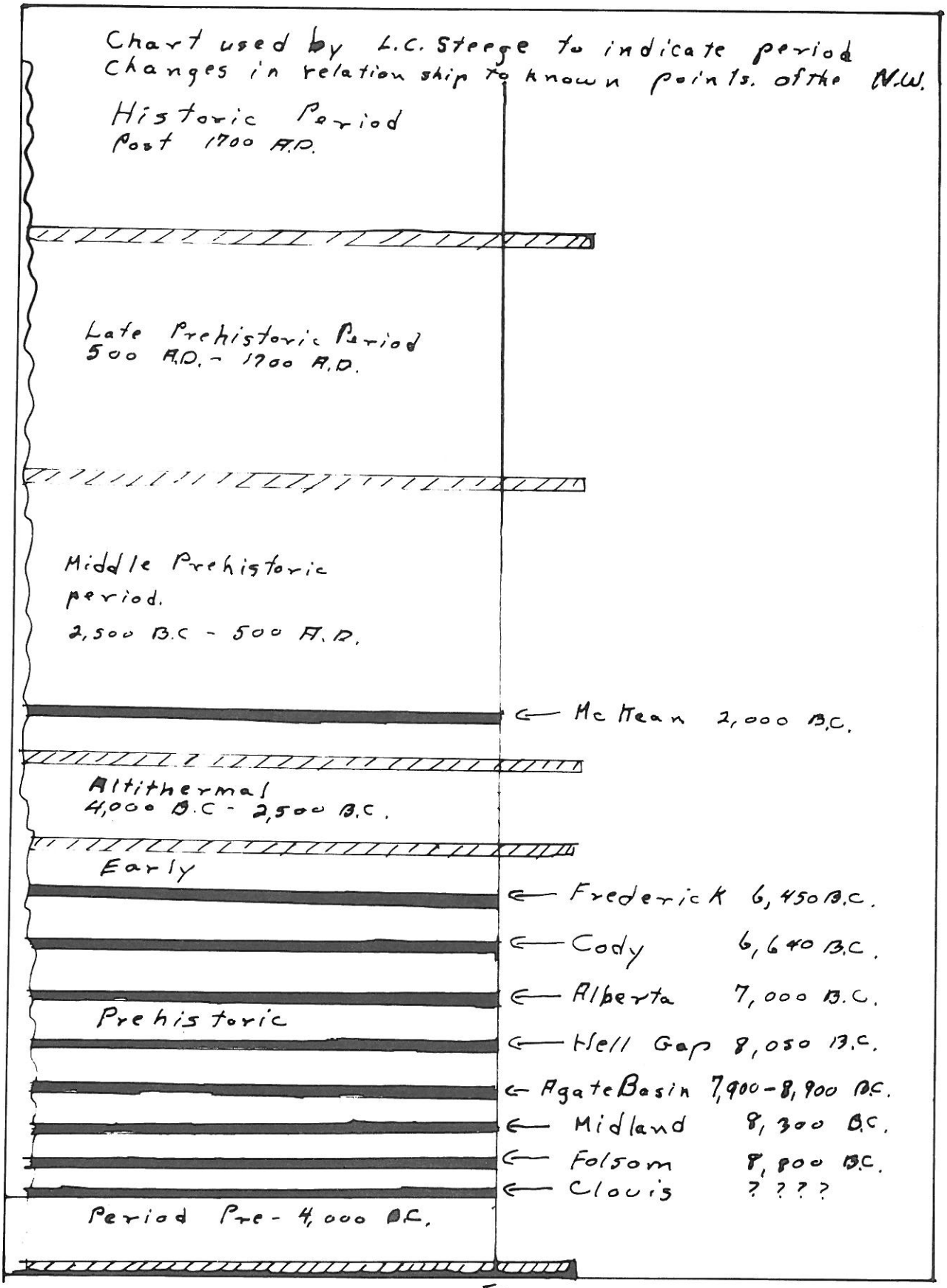


Chart used by L.C. Steege to indicate period Changes in relation ship to known points of the N.W.
Historic Period
Post 1700 A.D.
Late Prehistoric Period
500 A.D. - 1700 A.D.
Middle Prehistoric
period.
2,500 B.C - 500 A.D.
← McMean 2,000 B.C.
Altithermal
4,000 B.C - 2,500 B.C.
Early
← Frederick 6,450 B.C.
← Cody 6,640 B.C.
← Alberta 7,000 B.C.
Prehistoric
← Hell Gap 8,050 B.C.
← Agate Basin 7,900-8,900 B.C.
← Midland 8,300 B.C.
← Folsom 8,800 B.C.
← Clovis ????
Period Pre-4,000 B.C.

MINUTES OF THE ANNUAL STATE MEETING
OF THE WYOMING ARCHAEOLOGICAL SOCIETY
April 1 - 2, 1966

The Annual Business Meeting of the Wyoming Archaeological Society was held in the Townsend Hotel in Casper during the evening of April 1, and during the day of April 2.

The evening meeting of April 1 was an informal discussion centering around membership dues, the publication and the Mulloy Scholarship Fund.

The meeting on April 2 was called to order by President Henry Lloyd. His opening message outlined several problems of the Society. He also gave his recommendations for changes to improve the Society.

1. Letter by Lou Steege announding his resignation as Executive Secretary. President Lloyd recommended that this resignation not be accepted.

2. Dues. Must be stabilized so that present committments and demands may be financed from current year's operation.

a.	Cost of four issues of the "Archaeologist" includes mailing	$720.00
b.	Mulloy Scholarship Fund	100.00
c.	Operating Expenses	125.00
	Annual Operating Expenses	$945.00

3. Publication.

   a. Need for Chapter participation for articles of interest to be published.

4. State Librarian.

5. Site Survey Reports.

6. State Archaeologist.

7. Memberships.

8. Mulloy Scholarship Fund.

A discussion followed regarding a change in dues for 1967. The following changes were agreed upon:

Active individual membership shall be $3.50 per year.
Active Family membership shall be $5.00 per year.
Active Contributing membership shall be $20.00 per year.
Active Life membership shall be $50.00 per year.

A motion was made by Bart Rea that these changes be adopted and that the necessary changes be made under Article 4 of the By-Laws. Seconded by Mrs. Powers. Motion carried.

A motion was made by John Albanese to change the By-Laws to provide for an individual associate membership at $3.00 per year. The Associate members shall be members of the State Society only; shall not be affiliated with any Chapter; shall not participate in any activities and shall not have any voting privileges. Such members shall be issued an Associate Membership card by the State Executive Secretary. The Associate Members shall be entitled to receive the periodical publications of the State Society as issued. Seconded by Bart Rea. Motion carried.

A committee of Bart Rea, Helen Bryant and Mrs. Mary Garling was appointed to re-write Article 4 of the By-Laws.

A motion was made by Mrs. Jensen to change the By-Laws under Article 2, Section E. "Relationship with State", as follows:

"Each Chapter shall remit to the State Society Treasurer $2.50 of each individual active membership and $2.50 of each active Family membership."

Seconded by Col. Palmer. Motion carried.

A motion was made by Mrs. Jensen that the Wyoming Archaeologist be published four times a year and that the dates of mailing be March, July, September and December. Each publication should not exceed 45 pages. Seconded by Bob Edgar. Motion carried.

The formation of a State Library was discussed at some length and it was decided to table the idea until a committee is appointed to study the project.

The Site Report Committee had no report but it was recommended that the same committee be retained.

Legislative Committee recommended that work commence immediately on getting a bill through Legislature creating the post of State Archaeologist and a revision of the Antiquities Law. Publicity is one of the weak spots in the program. It is imperative that we sell the idea to our own County Legislators.

The Mulloy Scholarship was not given during 1965 - 1966, due to lack of funds. President Lloyd recommended that voluntary contributions from Chapters are needed to keep up the fund.

A motion was made by Helen Bryant that a Mulloy Scholarship Committee be appointed to spell out the qualifications for a recipient of the award with a stipulation that it be for a Wyoming youth majoring in Anthropology and that the recipient furnish at least one paper to be published in the Wyoming Archaeologist. Seconded by Mrs. Powers. Motion carried.

The Auditing Committee reported all books to be in satisfactory condition. Helen Bryant moved that the audit report be accepted. Seconded by John Albanese. Motion carried.

After a general discussion involving the many duties of the State Executive Secretary, it was decided to relieve the office of some of the work load. Mrs. Zane Hilman moved that the By-Laws be amended as follows:

Article 8 --- be amended to strike the word Treasurer from the last paragraph, and add a new Article 9, creating the elective post of State Treasurer and the duties of that office. Seconded by Mrs. Jensen. Motion carried.

Recommendation by Rea to give Executive Secretary annual expense allowance of $200 per year if the treasury allowed it.

A motion was made by Joe Bozovich that Lou Steege be commended for the fine job he had done as Executive Secretary under extremely trying conditions and that the Society recommend his resignation not be accepted, and that he continue in the post. Seconded by John Albanese. Motion carried.

Various Chapters reported on their activities during the past year.

The Nominating Committee reported:

Margaret Powers, President
Jim Adams, Vice President
Mary Garling, Treasurer

A motion was made by John Albanese that the report be accepted and that the nominees be elected by acclamation. Motion seconded and carried.

Col. Palmer reported the possibility of new Chapters being organized in the Guernsey - Torrington area and also in the Wheatland area.

A motion was made by John Albanese that the summer meeting be held at Hell Gap. Seconded and carried.

Meeting adjourned.

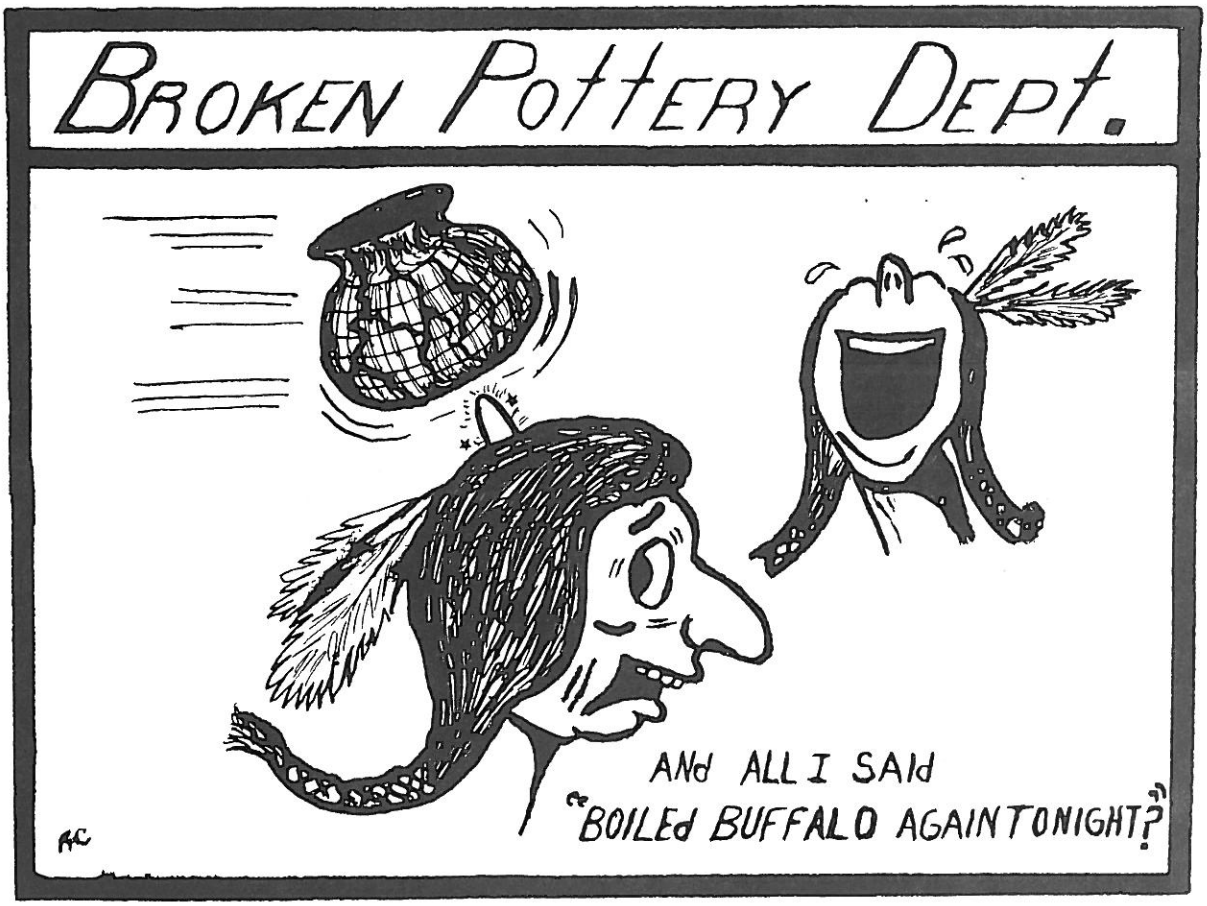
A banquet was held in the Honey-Comb Room of the Townsend Hotel in the evening.

President Lloyd presented a Chapter Charter to the newly organized Sweetwater Chapter at Rock Springs.

The President thanked the members of the Casper Chapter for arranging a meeting place and Banquet Hall for the 1966 meeting. He also thanked the members for their help during the past year.

The meeting was turned over to the newly elected President, Mrs. Margaret Powers. Mrs. Powers thanked the members for their votes, but stated she would need the assistance and support of all the members to help her through the coming year.

The guest speaker, Mr. Bob Edgar, of Cody, Wyoming, was introduced by Maj. Henry Lloyd. Mr. Edgar gave a step by step report of the excavations at Mummy Cave. This is undoubtedly one of the most important archaeological sites on the North American Continent today.



STATE OF WYOMING

PROTECTION OF PREHISTORIC RUINS

36-11. Protection of prehistoric ruins, etc. - Permits to excavate; rules and regulations; violation. - Before any excavation on any prehistoric ruins, pictographs, hieroglyphics, or any other ancient markings, or writing or archaeological (archaelogical) and paleontological deposits in the State of Wyoming on any public lands, either State or Federal shall be undertaken, a permit shall first be obtained from the State Board of Land Commissioners. The State Board of Land Commissioners is hereby authorized to promulgate and enforce such regulations as it may deem needful to protect from vandalism or injury the prehistoric ruins, relics, archaeological and paleontological deposits of the State, also all natural bridges and natural scenic features and formations. Any violation of such regulations shall be a misdemeanor.

36-12. Same - Removal of ruins, etc., from State; consent of Board conditional. - No person shall remove from the State of Wyoming any part of any such ruins or deposit except with the consent of the State Board of Land Commissioners. Said Board may require, as a condition to such consent, that such portion of such relics, materials, or deposit as said Board shall require, shall forever remain the property of the State of Wyoming.

36-13. Same - Penalty. - Any person violating any of the provisions of this act (36-11 to 36-13) shall be guilty of a misdemeanor and shall be fined not less than twenty-five dollars ($25.00) or more than one hundred dollars ($100.00) or imprisoned in the county jail not more than six months, or by both fine and imprisonment, and shall forfeit to the State all articles and materials discovered by or through his efforts.

STATE OF WYOMING LAND BOARD

RESUME OF CULTURAL COMPLEXES AT THE HELL GAP SITE

GUERNSEY, WYOMING

For 1966

Henry J. Irwin - Cynthia Irwin-Williams - George Agogino

Hell Gap comprises three major stations within a gently sloping valley along the eastern slope of the Haystack Mountain range of eastern Wyoming. The geographical situation and the supply of water, proximity to extensive chert quarries (part of the famous "Spanish Diggings"), and access to both the Plains and Montane biomes made this region an ideal home for Early Man. The cultural sequence both at the Hell Gap Site and within the region is as follows:

1. The earliest and as yet little known occupation at Hell Gap comes from Location I. Beneath Folsom a distinct level contains faunal debris, flake wastage, a few tools and charcoal. The tools are rather large and the occupation may be Clovis.

2. THE FOLSOM COMPLEX. well known from the Smithsonian excavations at Lindenmeier thirty years ago, the remains at Hell Gap consist of Fluted projectile points, scrapers and other tools together with camp debris. The level has only been initially tested.

3. THE MIDLAND COMPLEX: this most interesting complex, found only at Location II at Hell Gap, was not investigated until 1962, and its study is still in a preliminary stage. The available evidence indicates a well-defined cultural zone with an irregular living surface and numerous stone artifacts, animal bones, and quarry objects. Points are of types that range from classic Midland or unfluted Folsom forms to Plainview varieties. Other artifacts include well-made side scrapers, large bifacial blanks for projectial points, and several types of knives. Two radiocarbon dates (8,050±200 B.C. and 8,650±500 B.C.) from humic deposits indicate the age of Midland to be about 8,300 B.C.

4. THE AGATE BASIN COMPLEX: this complex dated by Carbon 14 between 7300 and 7900 B.C. at other sites and up to 8900 B.C. at Hell Gap Location III, is more profusely and more completely represented at Hell Gap than at any other known site. Its stratigraphic and chronological position as well as its typology suggests affinities with the later Hell Gap Complex.

Materials recovered include a very large number of bones and stone artifacts, fragments of pigment stones, a unique serrated projectile point, possibly with some ceremonial function, and concentrated refuse heaps representing living areas. Two rings of post-moulds about 6 1/2 feet in diameter give evidence of very early hut structures at the site.

Although occurring at all locations at Hell Gap, this complex has been extensively investigated only at Location II. There it can be divided into 2 sequential phases. It is hoped that a detailed analysis of the typology will reveal evolutionary trends within the culture. More work needs to be done to achieve this aim and that of learning the layout of the living surfaces. Besides the characteristic lanceolate Agate Basin projectile points, often handsomely worked, there are numerous tools of many types, including several varieties of scrapers, shaft scrapers, triangular scraper-awl tools, knives, bone artifacts, etc.

5. THE HELL GAP COMPLEX: this complex, was first defined at Location III in the Hell Gap Valley. A large quantity of workshop debris, animal bones, and some artifacts were removed in 1961, 1962 and 1964. Diagnostic of this complex is the Hell Gap projectile point: a lanceolate point with a convex or straight base and an elongated stem expanding gradually to a widest point well up the body. This produces an almost shouldered appearance more or less like a symmetrical Sandia point. In addition, characteristic objects of the complex include true blades, very large bifacial blanks for points, large fan-shaped scrapers, and well made end scrapers. One hematite bead was also found. The complex occurs at Location II 9 where it dates 8,050 B.C.) and at Location I.

6. THE ALBERTA COMPLEX: at Location I a rich horizon was excavated in 1964 containing a good tool assemblage, and projectile points of the Alberta type. The principle area for the distribution of these points is Prairie Canada. The stratigraphic position of the complex is clear, lying between the Eden-Scottsbluff (Cody) and the Hell Gap Complex below. It is probably ancestral to the Cody Complex and dates about 7000 B.C. Hell Gap represents the only location so far known where the Alberta Complex occurs in a datable context.

7. THE CODY COMPLEX: this complex, dated at the Hell Gap Site at 6640 B.C. 600, occurs at Locations I and III. It had been intensively investigated at Location I; it is characterized by Eden and Scottsbluff points, and the distinctive Cody knife. There is evidence of a well-defined living surface with very abundant remains including numerous artifacts. The flint working of this group was truly outstanding, however, and well represents the high point of Paleo-Indian technology. Many fine examples of this work are included in the collection.

8. THE FREDERICK COMPLEX: this complex was defined at the type location, Location I of Hell Gap. The Frederick horizon, occurring in two levels (the lower dating 6650±300 B.C.) at Location I presents perhaps the most impressive camp ground remains yet uncovered. It includes a stone circle, no doubt the remains of a brush shelter, several well-defined hearth areas and ochreous zones, numerous artifacts of both stone and bone, refuse piles, and great quantities of workshop debris occurring in neat, visible heaps, from which it is hoped that a better understanding of Paleo-Indian technology can be obtained. Further excavations will take advantage of the prolific character of the material and the unusual opportunity for studying the layout and

structure of a Paleo-Indian camp ground. The diagnostic projectile point of the Frederick Complex is a lanceolate, obliquely flaked form, with straight or expanding sides, a concave base, and well-defined basal thinning. Other distinctive tools include medium-sized triangular knives and side scrapers. Well-made bone awls occurred with specimens of other bone tools, and two beautifully carved bone beads. There are grinding stones associated with the complex, giving another clue to the economic orientation.

9. Between the Frederick Horizon at Location I and the next intensive occupation, there is a gap in the sequence from which only a few flakes and sparse artifacts have been recovered. This gap represents primarily the Altithermal period, a period of climatic change which signaled the departure of the Paleo-Indians from the Plains. However, this gap is filled by a sequence of artifact-bearing horizons at a site not far away, known as Patten Creek. Preliminary work indicates a more or less uniform development of culture during this time (4000-2000 B.C.). The site has both extensive quarry and camp ground materials. The projectile points and other suggest strong affinities with a newly defined cultural complex of the same age in Nebraska, the Logan Creek culture. The dates on two hearths found at Hell Gap (3750±200 B.C. and 1390±200 B.C.) neatly delimit this period.

10. Returning to the Hell Gap Valley, we find in the upper layers at Location I, a single McKean type point, followed by an occupation known to archaeologists of the area as the Late Middle Horizon. Evidence recovered shows a rich occupation with numerous campground features, including hearths, stone alignments probably representing the remains of living structures, and workshop areas. A large quantity of bone, stone, and other camp waste was obtained, including numerous artifacts. This occupation yielded characteristic projectile points, T-shaped drills, large, well-made triangular knives and end scrapers.

11. The next occupation of the area is found not far from Hell Gap at Whalen Cave. The testing of this site is in the preliminary stage, but promises to yield a good series of bone and stone artifacts, and perhaps some coramic material.

Henry J. Irwin
Harvard University
Peabody Museum of Archaeology
Cambridge, Massachusetts 02138

Cynthia Irwin-Williams
University of New Mexico
Eastern New Mexico University
Portales, New Mexico

George Agogino
Eastern New Mexico University
Portales, New Mexico

NORTHERN BIG HORN BASIN CHAPTER
CODY, WYOMING

A PRYOR COMPLEX SITE IN THE BIG HORN MOUNTAINS OF WYOMING

By Bob Edgar

The Big Horn Mountains of Northwestern Wyoming and of Southern Montana have been the home of ancient man for more than ten thousand years. This magnificent mountain range had much to offer these early people of the high plains. It's lush valleys and rolling meadow lands, crowned by snowcapped peaks and high mountain basins, were a haven to the large herds of big game that abounded in the area. The wooded and brushy creek bottoms supported bountiful amounts of berries and seeds. The streams themselves contained large numbers of native trout.

The many canyons, cliffs, and natural limestone formations held caves and rock shelters which were important to prehistoric man.

Natural outcroppings of useful stone materials are present throughout the entire mountain range. These include: jasper, agate, petrified agate wood, chalcedony, quartzite, basalt, and chert, which were used in the manufacture of tools, and projectile points. Steatite (soapstone) which was used in the manufacture of beads, pendants, and smoking pipes, and cooking vessels. Limonite (yellow ochre) and hematite (red ochre) were used for brightly colored and durable paints.

The trees and the bushes of the region were useful for many things besides firewood. The inner barks of the cottonwood and cedar trees were used in making cordage. The red willows were used in making shafts, and the chokecherry and juniper bushes were used by the late period Indians in the manufacture of bows. These are no doubt just a few of the many uses that primitive man made of these plants.

Today the Big Horn Mountains contain a valuable record of ancient mans occupation of the region. This record probably begins with the end of the ice age, and continues right up until modern times. This record, however, is scattered through the mountains like the pieces of a large jig saw puzzle, and some of the pieces are small. These shreds of evidence are found in various types of caves and rock shelters, where the primitive groups lived during adverse weather conditions. This evidence can be found near springs and lake beds, where the ancient hunters killed their game, and then camped there until it was gone. The rows of stone piles above a buffalo jump; the stone fences of a mountain sheep trap; and the circular stone blinds in the high mountain passes, are mute evidence of some of stone age mans hunting techniques.

Only through the time and efforts of dedicated people can the shreds of evidence be brought to light. With the aid of radiocarbon dating methods these various manifestations can be arranged into their proper sequence. When enough of these ancient cultures have been studied and dated a certain pattern should begin to emerge, and, eventually, in this way most of the prehistory of the Northwestern plains, may be pieced together.

The Hanson site located in the Big Horn Mountains just south of Shell Canyon represents a campsite belonging to an early culture of which very little is actually known. However, the projectile points that were used by this group of ancient hunters were of a very distinctive style, and unusual in the Northwestern plains region.

About the same time that the work was being done at the Hanson Site, the Smithsonian River Basin Surveys found that the same culture had occupied three caves in the Big Horn Canyon, and that these people had lived in the Big Horn Region about 7,300 years before present. The same distinctive projectile points were present in the Big Horn Canyon caves along with grinding stones, and split animal bones. These bones were about the size of deer. The Smithsonian named this manifestation the Pryor stemmed point.

The Pryor complex at the Hanson site had camped against the sheltered side of a sandy hill. Here at the edge of the hill, the thin culture layer was eroding to the surface. The occupation level consisted of charcoal stained sand, small fragments of charcoal, and numerous flakes of red jasper, and white agate.

Two of the projectile points had been recovered in the level. The other four had eroded to the surface. Five out of the six projectile points were broken at the tip. These points may have been broken while hunting and were then carried back to the camp still fastened to their shafts. They may have been discarded at the Campsite after new points were bound to the old shafts.

The prior stemmed points are bi-beveled. The points from the Hanson Site, and the points from the Big Horn Canyon Sites are beveled on the right hand side, when the point is held with the tip in an upward position. The beveling varies from pronounced to very little. In some cases the beveling extends on to the stem on at least one edge.

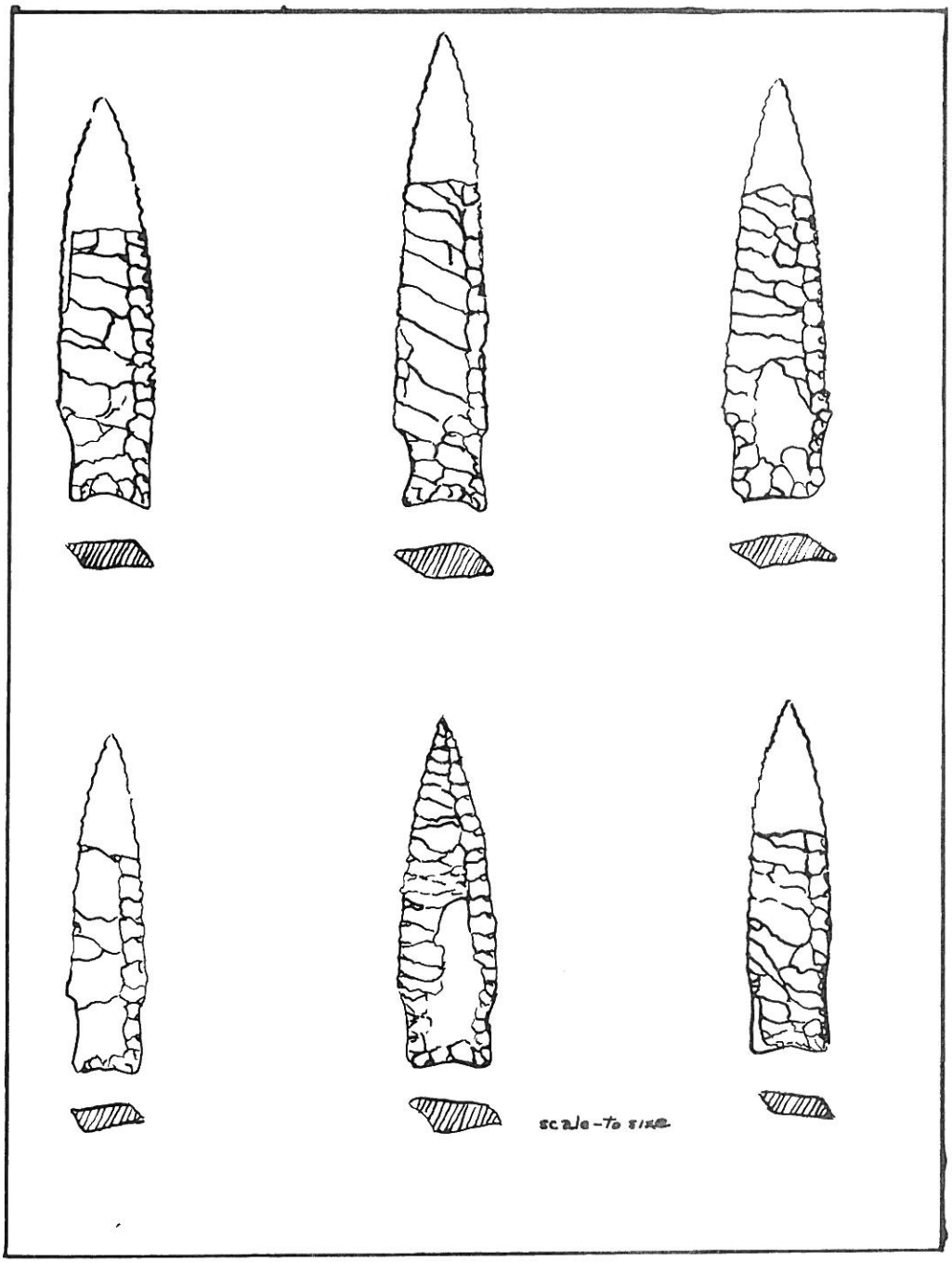
The projectile points themselves range in length, on an average from three to four inches. The stems generally run from 1/2" to 5/8" in length. The base and the stem edges are slightly concave and ground. The shoulders range from prominent to nearly lacking.

The workmanship on the Pryor stemmed points varies from crudely oblique to random. The beveled edges are usually retouched in order to obtain a serrated edge. The cross sections of these points are rhomboidal.

Most of the Pryor complex finds have been confined to the Big Horn-Pryor Mountain areas. Was this a local development? Or will more of

these sites be recognized as attention is called to this obscure and ancient culture? Time holds the answer.

The individuals responsible for the work at the Hanson Site are: Mr. and Mrs. Milford Hanson; Mr. and Mrs. Bob Edgar; Mr. and Mrs. Joe Tyrrell; Mr. and Mrs. Bob Burns; and Mr. and Mrs. Chuck Slaughterbeck; all members of the Northern Big Horn Basin Chapter of the Wyoming Archaeological Society.



A BOY AND A CACHE
by Mary E. Garling

The week before we had been driven out of our favorite "hunting grounds" by a real dilly of a wind and thunder storm. The pitted windshield of the car would never be the same again! However, the trip had been worth something, since we'd found a dead ewe with living twin lambs huddled close for the comfort and protection their mother no longer offered. Perhaps the sheep herder wasn't too happy to see us (he didn't say so), but he took the lambs into the wagon for warmth and comfort.

We had barely stepped from the car this day when Roger said, "Well, today certainly looks better than last weekend!" Whereupon, he stooped over next to a flattened pile of sandstone slabs and proceeded to work loose sand around the edge.

"Hey!" he called, sand flying, "I think I've found something!" Snatching up the black and white camera, I ran over just in time to film his cache, for that's what it turned out to be - a cache of scrapers with two complete knives and one broken butt end of a knife.

From this cache came a round flat quartzite pebble showing many percussion marks; a 2½ inch rounded agate stone with a hole knocked in the flattest part; three worked pieces of chert; a laege jasper plano-convex scraper; nine various types of light grey to white quartzite scrapers, some finished all sides; one brown quartzite triangular scraper; one almost black quartzite square-ended scraper.

Later in the afternoon, returning from a hill-searching operation, Roger's father walked over to an anthill and retrieved a thick banded-chert atlatl point lying on the surface near the cache site.

But, even this was not enough to dampen a thirteen-year-old boy's spirits after such a lucky find as a cache!

THE PALEO-INDIAN CHRONOLOGY AND CULTURAL SEQUENCE

by

George A. Agogino
Director, Paleo-Indian Institute
Eastern New Mexico University

The first human being to set foot in North America had already arrived late in the total span of human existence. In Europe and Asia man had lived for nearly a million years under conditions that were far from ideal. Human population during the major part of this period was sparse, and human hope of survival depended primarily on three features: man's big and complex brain, his upright gait which freed his hands from the duties of locomotion, and an opposable thumb that made these emancipated hands capable of material creation that allowed him better to utilize the environment about him.

With this advantage man was able to survive several glacial periods that crushed large sections of northern latitudes with continental ice sheets. The inter-glacial periods in contrast were hot and humid. Many forms of animal life larger and stronger than man perished during these times of climatic change because they failed to adapt to changed environmental resources. Mankind managed to survive this period because of his unique ability to adapt culturally in order to maintain organic homeostasis (Haring and Johnson, 1940).

These human types faced an unpromising future using simple bone, wood, and lithic tools that remained largely unchanged throughout most of the lower paleolithic period. In spite of inadequate use of the environment, early hominids managed to exist, multiply, and spread over most of the Old World. By the final stages of the last glacial period, the stage was set for the Paleo-Indian, truly the first American, to enter the New World.

Thirty-five years ago most archaeologists were of the opinion that no Paleo-Indian sites were more than five thousand years old. The Folsom discovery doubled this estimated time, and later excavations at Sandia Cave and Clovis, New Mexico, as well as the Hell Gap site in Wyoming have extended this period further back into antiquity. Within the past decade a number of possible pre-projectile point cultures have been investigated which may eventually extend the human occupancy of the Americas to twenty thousand years or more.

Several of these sites, Manix Lake and Coyote Basin in California, and Chapala Basin and the Valsequillos gravels near Puebla, Mexico, have produced unquestioned artifacts, but under conditions that preclude precise dating methods. The Valsequillos gravels present a complex geologic situation that currently defies clear interpretation, while

the Manix Lake, Coyote, and Chapala Basin sites are basically surface locations associated with high beach terraces that suggest but do not guarantee extreme antiquity. No radiocarbon dates are currently associated with any of these sites.

Adequate radiocarbon samples have been processed from the Santa Rosa, Scripps, and Texas Street sites of California, the Tule Springs site of Nevada, and the Lewisville site of Texas. All of these sites have produced dates in excess of twenty thousand years, but in each instance there has been some question in relating artifacts to the earliest dated stratum.

A typical example would be the Tule Springs site. This site was originally excavated by paleontologist George Gaylord Simpson with later excavations conducted by M. R. Harrington and Ruth Simpson (1961) of the Southwest Museum. Recent excavations produced two charcoal radiocarbon dates, the first, greater than 23,800 years and the second, greater than 28,000 years. One disturbing fact in the report is that the charcoal samples were encrusted with the remains of land snails which could absorb inorganic carbons from this limestone area, thus altering the radiocarbon date. However, fauna associated with this site, mammoth, camel, and extinct forms of bison and horse are Pleistocene in age and tend to support a date in excess of 10,000 years. Currently, large scale excavations are being conducted at Tule Springs using National Science Foundation funds.

For the past decade, George Carter, Ruth Simpson, Juan Armenta, and Carmen Baggerly have championed the extreme antiquity of man in the New World. Only time will tell if they are right, wrong, or right for the wrong reason.

Four High Plains point cultures appear to be associated with cultural horizons dating over 8,500 B.C. Folsom has been dated at the Lindenmeier, Colorado site at 8,820 B.C. (Haynes and Agogino, 1960), while its typological prototype, the Clovis point, has been dated in excess of 9,000 B.C. (Haury and others, 1959). While the Sandia point is yet without an acceptable radiocarbon date, it appears to be typologically similar and at least as old as Hell Gap points dated at 8,890 B.C.

Typologically, none of these points lack sophistication, and one would normally expect to find simpler prototypes either within the Americas or in areas adjacent to the Bering Straits, the most acceptable land bridge to the New World. To date these prototypes have not been found or at least not recognized as such.

An analysis of typology, stratigraphy, faunal association, and radiocarbon dates strongly suggests that the Clovis complex is ancestral to Folsom. Because the Sandia complex has not been precisely dated, its chronological relationship to Clovis and its typological relationship to Hell Gap points cannot be clearly established. Within the past two years geologist Vance Haynes and I have excavated remaining sections of Sandia Cave under a series of National Geographic Society grants.

While roughly a dozen radiocarbon dates have been obtained from the cave, final analysis is not completed and no further comment regarding this dating will be made at this time.

Hell Gap points (Agogino, 1961) now found in situ only in eastern Wyoming, are widely distributed in surface collections throughout the United States. The typologically similar Sandia point is by contrast restricted largely to the central New Mexico region. If the two point types are culturally associated, their contrasting distribution could be explained in two ways:

1. Sandia types are Hell Gap prototypes. During the earlier Sandia phase their range was restricted to the Sandia mountains and adjacent region but during the Hell Gap phase this range greatly expanded to include most of the United States.

2. The Hell Gap point is the basic point type and the Sandia projectile is a local one-shouldered variant of this widespread Hell Gap point type. This could explain the absence of Sandia points outside of the central New Mexico region.

The first accepted discovery involving Clovis points and mammoth occurred at Dent, Colorado (Wormington, 1957), in 1932 when two fluted projectiles of the Llano complex were found in direct association with the remains of a dozen mammoth. Later the same year similar Clovis points, again associated with ammmoth, were found underlying typical Folsom forms, associated with Bison antiquus, at the Clovis, New Mexico, gravel pits.

The Paleo-Indian on the High Plains was a hunter of megafauna; mammoth, ground sloth, as well as extinct varieties of camel, horse and bison. These ancient hunters were profoundly influenced by preferential animals regarding the hunt. The Llano hunters for instance seem to largely disregard all megafauna types except the mammoth. Hence his culture was developed about and dependent upon the existence of the Columbian mammoth and the disappearance of his culture seems directly associated with the extinction of the mammoth.

The Clovis or Llano complex (Sellards, 1952) as identified in the High Plains and Southwest includes: a preference or dependence on mammoth hunting, large fluted points, side scrapers, points or foreshafts of bone, and crude hammerstones. The most significant sites are at Dent, Colorado; Clovis, New Mexico; Miami and McLean sites, Texas; Stecker, Oklahoma; and the Naco and Lehner sites, Arizona. Radiocarbon dates have been obtained from three of these sites: Naco, Lehner, and Dent. The most valid dates for these sites clusters about 9,300 B.C. The Dent date of 9,240 B.C. was obtained using a new chemical technique that removed the preservative from bone and tusk from one of the Dent mammoth supplied for this purpose by the Denver Museum of Natural History. An

earlier untreated sample gave a date of 4,940 B.C. far below the estimated geologic age of 9,000 to 10,000 B.C. Such a spurious low date would be expected due to contamination of the sample with preservative.

Points typologically close to western Clovis have long been found in surface collections in the eastern section of our country, but until recently the absence of fauna associations, adequate stratigraphy, and radiocarbon dates, made their antiquity speculative at best. Even today our eastern Clovis have not been found with extinct fauna, only a small percentage of these sites are endowed with workable stratigraphy, and we have only a handful of radiocarbon dates by which to analyze the eastern fluted tradition.

Perhaps half of these eastern Clovis sites reveal archaic as well as paleo-point types under conditions that suggest closely contemporary age. Even the archaic forms represented seem typologically similar although they are called Dalton, Quad, Suwannee, and Greenbrier points at individual sites. While no single site offers conclusive evidence, the general picture favors a long Clovis occupancy in the east existing perhaps into middle Archaic times.

If we construct a distribution chart for Clovis in the New World, we find the western concentration in the High Plains, the Texas Panhandle, the soutwest desert, and along the Gulf Coast. In the east, Clovis concentrations are found along the Mississippi, Ohio, Tennessee, and Cumberland Rivers with secondary concentrations found along the Atlantic coastal states from Florida to New England. Few Clovis points are found in Canada, Mexico, the west coast of the United States and in the Middle Border region of the midwest. In the west we have a general time sequence from Clovis (10,000-9,000 B.C.), Folsom (9,000-8,000 B.C.), Plano types (8,000-4,500 B.C.), emerging into Archaic at this time. In the east the Folsom culture is not represented except by scattered finds, and the Plano types are also poorly represented. Perhaps the Clovis culture in the east survived for a longer time than in the west instead of being replaced by Folsom and Plano.

The first clear association between man and extinct animals (Bison antiquus) occurred in 1926 near Folsom, New Mexico, when twenty-three bison and nineteen points were found in direct association (Figgins, 1927). Had Folsom points not been involved with the first accepted Paleo-Indian discovery, they would still hold a prominent position in Paleo-point typology.

Technologically, Folsom points represent an abrupt change in two traditions, one involving flaking and the other fluting. Earlier point complexes, like Sandia (Hibben, 1941), Clovis (Sellards, 1952), and Hell Gap (Agogino, 1961), were entirely produced by controlled percussion, while the fine marginal retouch of Folsom points result from pressure flaking. This technique, New World in origin, and apparently first with Folsom, later dominates the flaking techniques of the Plano tradition. Folsom points are also the last to show fluting in the High Plains. This

tradition, absent in the Old World, commences with Sandia and Clovis prior to 9,000 B.C. and terminates in western North America about 8,000 B.C.

Folsom locations are not numerous, and established sites are restricted to five states: Montana, Wyoming, Colorado, New Mexico, and Texas. It was not until 1955 that the first radiocarbon dates were obtained for this complex. This first sample of burned bone was collected by E. H. Sellards at the Lubbock, Texas, site and revealed a date of 7,928 B.C. Charcoal C14 dates were later obtained by George Agogino and Vance Haynes from two additional sites. They were the Lindenmeier, Colorado, site which was dated at 8,820 B.C. and the Brewster, Wyoming, site which produced an 8,430 B.C. date.

With the exception of Sandia Cave no classic Folsom point has ever been found in association with either ground sloth, horse, mammoth or mastodon. The extinct fauna associated with classic Folsom sites are extinct varieties of bison and camel. From this we must generalize that they did not hunt horse, mammoth ground sloth, or mastodon, or that these fauna already were extinct in the High Plains before the advent of the Folsom hunters.

There is no doubt that the bison, smaller as he was than the mammoth, played a much moreimportant role in the dispersion of the Paleo-Indian throughout North America. Here was an abundant type of game, easily killed, yet large enough to supply both meat and materials to make the Paleo-hunting tradition easy to follow.

Our Paleo-Indian sites generally reveal only two varieties of bison, Bison antiquus and Bison occidentalis; Bison antiquus is often found with the remains of Pleistocene horse and camel, but Bison occidentalis, largely lived after these animals had died out, probably becoming extinct less than five thousand years ago. Bison occidentalis are generally found with Cody, Milnesand, Midland, Jimmy Allen, and Simonsen artifacts. Perhaps the oldest of these sites associated with Bison occidentalis is the Simonsen site of Iowa (Agogino and Frankforter 1960; 414-15).

What happened to extinct bison types on the High Plains when the area became arid. There is considerable evidence (MacGowan and Hester, Jr., 1962: 200) that Bison antiquus moved northward. The horns of recent Bison athabascan is nearly twice the length of the plains Bison and is much straighter, like Bison antiquus. Unfortunately by 1925 the last pure Bison athabascan herd was destroyed by mixing with plain bison and no studies exist that could solve the migration theory.

In the Plains and High Plains we have several Paleo-point complexes associated with extinct bison and lying chronologically between 8,000 and 4,500 B.C. These post-Folsom complexes are known as cultures of the Plano tradition (Mason, 1962).

While the relative sequence is still uncertain, it appears that the most ancient of these post-Folsom point complexes includes Agate Basin, Plainview, and Meserve. Agate Basin points were first radiocarbon dated at the Brewster site (Agogino and Frankforter, 1960a). The most recent of two Agate Basin levels was dated at 7,490 B.C. while the older level produces an 8,029 B.C. date. Agate Basin points are found stratigraphically just above Folsom at the Agate Basin type site, the nearby Brewster site, and at the Hell Gap site, all in eastern Wyoming. Plainview and Meserve points have been radiocarbon dated over a broad expanse of time ranging from more than 7,500 B.C. to less than 6,000 B.C. (Mason, 1962). This broad dating span may be explained in two ways. Either the younger dated samples have been contaminated by rootlets or bacteria to produce an artificially low date or we must accept the fact that these complexes lasted over a 2500 year span.

The Angostura complex presents a confused chronological and typological picture. Richard Wheeler is at present in the process of revising his view of this complex, and no doubt the situation will be clarified in the near future. If the type point is similar or the same as Agate Basin, then the date is probably of similar age, and the older 7,424 B.C. date from the Ray Long site is probably valid. If the Angostura type point resembles the photograph published in Ancient Man in North America (Wormington, 1957), which has received widespread circulation,[1] then the younger dates averaging 6,439 B.C. have greater acceptability since this form of Angostura is found above a Scottsbluff-Eden level dated at 6,640 B.C. at the Hell Gap site. A decision has been made to identify this Hell Gap level as the Frederick Complex until the Angostura classification has been crystalized.

Simonsen points (Agogino and Frankforter, 1960b) fall into the same time period as Scottsbluff-Eden and the younger variety of Angostura, now identified at Hell Gap as the Frederick complex. These Simonsen points are notched and typologically Archaic but must be considered of Plano tradition, since they are associated with extinct Bison occidentalis and have been radiocarbon dated at 6,471 B.C. Similar points of equal antiquity are found at the Hill site in Iowa in the lower levels of the Modoc Rock Shelter in western Illinois and at the Logan Creek site in eastern Nebraska. It is suggested that typologically similar points of this age period from all these sites be identified as Simonsen points.

The youngest cultures of the Plano tradition include the Jimmy Allen (Mulloy, 1959), Browns Valley (Jenks, 1937), and Portales Complexes (Sellards, 1952). Both the Jimmy Allen and Portales Complexes have been dated at less than 6,000 B.C. The Browns Valley point is undated but is typologically similar to or identical with Jimmy Allen specimens and should have a closely related age.

1. H. M. Wormington, is today of the opinion that the point illustrated in Ancient Man in North America is not representative of the Angostura complex.

West of the Rocky Mountains is found evidence of Paleo-Indians who placed an emphasis on seed gathering rather than on extensive hunting. These people are known as the Desert Cultures. Evidence of their existence can be found earlier than 9,000 B.C. (Jennings, 1953). Perhaps the best known of these complexes is the Cochise culture of southeastern Arizona (Sayles and Antevs, 1941). It is probable that American agriculture first began with a seed gathering rather than a hunting culture.

Alaska, Canada, and the western coast of the United States has produced little Paleo-Indian material. In southern California we have evidence of possible pre-projectile cultures and considerable Desert Culture material but Plano types, and the older "classic point types" seem to be absent.

Thirty-five years have passed since the first established Paleo complex was found at Folsom, New Mexico. For the first time a faint but discernible cultural sequence picture is beginning to emerge. Within the next thirty-five years, the sequence evolution of these point types (See Figure No. 1) will undoubtedly become firmly established.

2. This is an enlarged paper of one printed by me in Vol. 3 No. 1, Great Plains Journal 1963.

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