

WYOMING
ARCHAEOLOGICAL
SOCIETY



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SUMMER ISSUE

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EDITOR'S NOTE

We are greatly indebted to Dr. Agogino for his continued interest in Wyoming archaeology and for his article on the Cody Complex. He is now at Eastern New Mexico University, Portales, New Mexico. Joining this University this fall will be Dr. Cynthia Irwin-Williams.

Our thanks to W. D. Greene of Greybull for the information on the Big Horn Canyon. We still have trouble getting adequate Chapter News. Secretaries, please send in your activity report for the Fall Issue by October 1.

We cannot thank Carlton Belz sufficiently for his interesting articles on local collections. How much more interesting our Archaeologist could be if each Chapter would similarly contribute. If you do not have the time for drawings, remember, good photographs would suffice.

Coming soon will be a reprint of the "Castle Gardens Petroglyphs," and "The Brewster Site" by Agogino and an article on "Trade Beads" by Bob Murray, Curator at Ft. Laramie.

Our thanks go to Dr. McCracken at the Whitney Gallery, Cody, Wyoming, and the Cody Chapter for providing a most interesting field trip during the Annual Meeting.

We hope to see you all there.

By: Grant H. Willson, Editor

PRESIDENT'S LETTER

Dear Fellow Members:

First, we want to thank our new editor, Grant Willson, for putting out the excellent spring issue of the Wyoming Archaeologist which was the first under his editorship.

We are happy to announce the award of the William Mulloy Scholarship for the 1964-65 school year to Miss Harriet Washburn of Sheridan, Wyoming. Miss Washburn, an attractive and personable young lady, is a dedicated student majoring in anthropology at the University of Wyoming. We are proud to have this outstanding young lady receive our award, and our best wishes go to her for a good future in archaeology. Don't forget, folks ---contributions earmarked for this fund are always welcome.

The summer meeting of the Wyoming Archaeological Society will be held in Cody, August 15 and 16. Visits to Dr. McCracken's North Fork Cave site and the Cody chapter's site north of Cody will be features of the program. Details appear in a separate article in this issue.

The Society's Handbook for Amateur Archaeologists is filling out gradually and the manuscript should be fairly well completed by mid-summer. My thanks to all of you who have sent in material.

Our good friend, George Frison, is leading a two man team from the University of Wyoming which is assisting the Sheridan chapter in a dig in that area. Their activities are being supervised by Dr. William Mulloy. Incidentally, we hear that Dr. Mulloy --- who might be considered the patron saint of our society --- received a well deserved honor as the Outstanding Faculty Member of the Year at the recent University commencement exercises. We recommend that all members who wish to receive a good lesson in proper field technique contact Margaret Powers and make arrangements to visit the Sheridan site.

Remember to send in those chapter reports of the summer activities to our editor so that they can be published in the fall issue --- also those good black and white photos.

SEE YOU ALL IN CODY ! ! !

Dave Baskett

State President

SUMMER MEETING OF SOCIETY

The annual summer meeting of the Wyoming Archaeological Society will be held at Cody, Saturday and Sunday, August 15 and 16. Dr. Harold McCracken, director of the Whitney Gallery, has very graciously offered to escort the Society on a visit to his North Fork Cave site. Work is just beginning in what promises to be a very rich McKean cultural layer. Excavation will be under way when we visit the site, and Dr. McCracken hopes to arrange to uncover some items of interest at that time.

The Cody chapter is excavating another good site north of Cody and has invited the Society to visit this dig also.

Rex Hale Campground, about 35 miles west of Cody, is closely accessible to the North Fork site. Newton Creek Campground, a mile or so further west is somewhat larger and newer. Blackwater Lodge, very close to the site, offers accommodations in either housekeeping or non-housekeeping cabins at rates of \$7 per nite single, \$8 double, on up to \$16 or \$18 for a family of six. Meals in dining room are extra. Reservations are recommended and a deposit is advised if an afternoon or evening arrival is anticipated. Elephant Head Lodge and Absaroka Lodge, about three miles further west have similar facilities, but no housekeeping units. There are other lodges and campgrounds along the Cody-Yellowstone Highway, and, of course, many motels and hotels in Cody. We are advised that rates at the lodges compare with tourist season rates at the motels in town. Generally vacancies are readily available at lodges, motels, and campgrounds at mid-day or earlier.

Our schedule at present is as follows:

Saturday 9:00 - 11:30 A.M.	Check in at Wyofoto Studios 1279 Sheridan Ave. (right on main highway through Cody next to First National Bank)
11:30 - 1:00 P.M.	Luncheon meeting of State Executive Board at a place to be selected.
1:00 - 5:00 P.M.	Visit Cody Chapter site north of Cody
6:45 - 7:45 P.M.	Brief business and discussion meeting for all members and their families, at place to be selected.
Sunday 8:00 - 12:00 N	Visit North Fork site. (PLEASE only active and honorary members with their families and out-of- state guests. Memberships can be arranged for other interested persons who are properly recommended.)
12:00 N	Unfinished business and adjournment.

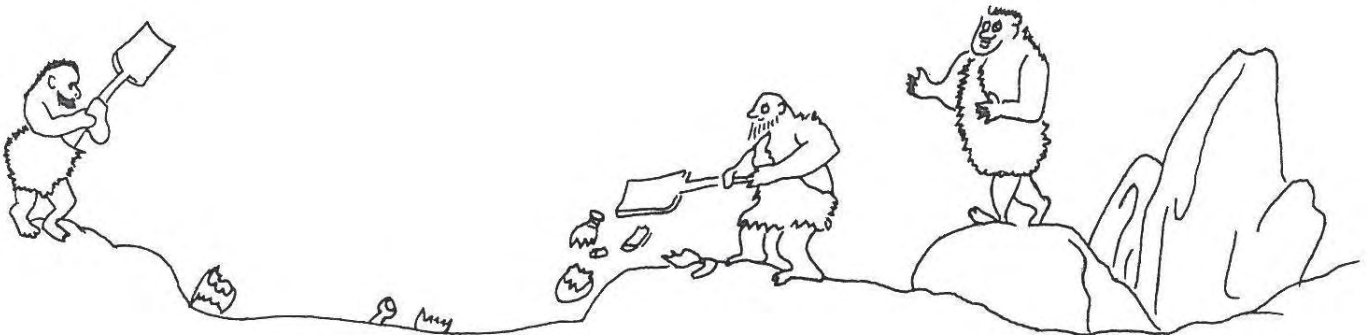
All members will want to visit the Whitney Gallery with its magnificent collection of Western Art, and Buffalo Bill Museum at Cody. The Whitney Gallery is currently displaying the mummified remains of "Joe", a 1500 year old American Indian excavated at the North Fork site. A nominal admission fee is charged

for admission to the Gallery and Museum. Hours are 7:00 A.M. to 10:00 P.M. daily during the summer season.

The Cody night rodeo and the Pink Garter Theater (Melodrama) are recommended for family entertainment each evening.

LETS ALL GO TO CODY ---- Don't forget your camera!

#



“Remember the sequence, Casner, first a layer of broken pottery, then bones, then tools, then . . .”

CHAPTER NEWS

SHERIDAN CHAPTER

We are anxiously awaiting some report on the site excavations being conducted under the direction of George Frison and the University of Wyoming.

NORTHERN BIG HORN BASIN CHAPTER

In reply to your letter of May 26, I shall try to give you a brief summary of our activities for the first six months of 1964. We hope, however, to have a much more interesting report to give for the next six months:

January meeting: Election of Officers

President - A. B. "Doc" Kinnan, Box 394, Cody
Vice Pres. - Florence Castle, 1438 Salsbury, Cody
Sec'y-Treasurer - Edna H. Knapp, Box 759, Cody
Board Members - Harley Fowler
Medine Jacobsen
Edna H. Knapp

In April, our group held an open meeting, inviting the public to see the film on Salvage Archaeology, put out by the New Mexico Highway Department. Members and non-members were invited to display their artifact collections at this meeting.

Our main project at this time is a rock-shelter cave site that we think will prove to be very interesting. We have worked on this for three weekends, and as yet have not reached the main floor of the cave. In our screening of the "trash heap" in front of the cave, however, we have found several points and some bone tools. We are not nearly ready to give a final report on this site, as yet, but intend to do so this Fall, when we have finished digging.

I'm afraid we haven't been too helpful. We are trying to gather material for you for later, though.

Sincerely,

Edna H. Knapp

CHAPTER NEWS

CHEYENNE CHAPTER

April 3: Plans were made to excavate a rock shelter which fortunately is only 19 miles from town. The landowner requests that no more than twelve people work at the sight at any one time and that cars be restricted to one approach and be limited in number. Materials when finally reported will be then donated to Warren Live Stock Company who will display them in their office.

Major Lloyd read an interesting report concerning the geology of the site and of similar excavations to the East.

A most interesting program was furnished by Dennis Real, with the Boeing Missile Support Group, which consisted of colored slides concerning archaeological excavations and of ancient Spanish fortresses found in Panama, in Central America. Richly rewarding at some excavations of burial mounds were the many small cast or hammered gold objects.

May 9: Major Lloyd read a research paper titled, "An Introduction of the Upper Republican Culture," and explained survey techniques used on the site. Ralph Casner reported on the grid system to be used and Lou Steege described trenching and stratigraphy of site. Paula Durnford and Ralph Casner showed slides of the preliminary excavations and cautioned everyone as to the frequent presence of rattlesnakes on site. Some artifacts recovered were shown: knives, scrapers, bone awls and the familiar cord marked pottery. A well fossilized jawbone of a Rhino with teeth well agatized, found by Bill Heilig near the site, was presented to the Chapter. A fascinating program of colored slides on cave explorations in Tennessee was given by Lieutenant Conrad Bush of Warren Air Force Base. The archaeological items found in these caves was a side line to the explorations which often traveled for miles in these tremendous limestone caverns.

Summer activities at the dig site will of necessity preclude the usual monthly meetings which will be resumed in October. However, a field trip to the Spanish Diggings was tentatively planned for July 26 and to be guided by Colonel Harry Palmer of the National Guard.

By: Dorothy Roman
Sec'y-Treasurer

C L U B N E W S

A PRELIMINARY REPORT ON THE HAPPY HOLLOW ROCK SHELTER

Cheyenne Chapter

Before I get into the preliminary report, I would like to take this opportunity to express my appreciation for the wonderful cooperation and assistance which I have received from the membership of the Cheyenne Chapter after I was appointed to supervise the "Dig". The Cheyenne Chapter appears to be blessed with a membership of engineers, machinists, draftsmen, geologists, photographers, carpenters, etc. all of whom are so necessary in a successful field operation. Also to the many members who are furnishing the "armstrong" labor goes my vote of thanks. I sincerely hope this spirit and enthusiasm will continue. Our equipment was nil three weeks prior to the field work, but at the start of April 24, we had, or had access to, nearly everything needed to lay out and excavate the site. Although we are not located geographically in the richer archaeological area of the State, we do have a multitude of good sites nearby which should keep us busy for many years.

The Cheyenne Chapter of the Wyoming Archaeological Society undertook its first major site investigation in April, 1964. The site was discovered by the Chapter President, Ralph Casner, during the winter. At this time a test pit was dug, which produced some lithic as well as some ceramic evidence of occupation.

At the March meeting the members of the Cheyenne Chapter voted unanimously to investigate the site. The landowners were contacted and consent was given to excavate the site.

The site was located beneath an overhang of a rather coarse, friable conglomerate. This conglomerate is exposed near the tops of most of the hills in the area. From this site the early inhabitants had an excellent unobstructed view to the south and east and were sheltered from the prevailing northerly and westerly winds. A small spring flows nearby today and evidence shows that a larger volume of water was flowing sometime earlier.

On April 24th, a datum point was selected and a contour map of the area was made. The following two days (Saturday and Sunday) an exploratory trench was dug and five by five foot grids were laid out at right angles and parallel to the trench. Excavations were then started within the grids. A profile of the trench wall was made. A map of the trench and grids was also made.

To date, the entire area of the overhang to the west of the trench has been excavated and work is now progressing on the eastern side. However, in this area work is much slower due to the presence of huge slabs of rock which have fallen from the ceiling since the time of occupation. At present we are removing nearly six feet of overburden from the sterile floor of the cave. The overburden includes nearly forty inches of cultural deposits and above this is some thirty inches of sand, gravel and rock slabs.

The fire hearths of the early inhabitants appear to be simple surface lenses and occasionally contain a few stones which were probably included more by accident rather than choice. Some stone lined and unlined pits have been discovered in the original clay floor of the shelter. Charcoal samples have been recovered from one of the pits.

Lithic artifacts recovered from the site include small triangular projectile points, some with side notches and some having no notches; plano convex snub nosed end scrapers; T-shaped drill; graters; blades; flake knives; shaft abraders and milling stones. Bone artifacts include beads, awls and a knife.

Potsherds are scattered throughout the entire occupation level. To date, all the sherds have been small. It is hopeful that somewhere within the shelter some vessel may have survived destruction. The majority of the sherds recovered to date are cord marked. There are a few smooth and some incised specimens.

No perishable materials have been found to date and it is doubtful if any will be recovered in the future due to the extreme wetness of the deposits. The presence of large quantities of animal bones scattered throughout the entire occupation level suggests that a hunting economy was practiced in the area during the time of habitation.

The extent of the cultural deposits is not known at this writing. It does not appear to be thinning out in the present grids. If the entire overhang was utilized for a shelter, an area approximately twenty by forty feet still remains to be excavated.

By: Louis C. Steege



Fire Hearths #1 & #2



Entrance to Rock Shelter Before Any Excavations.

Grid profile with hearth #5. Depth 50" below present surface.



View of Cave from the South.

A POSSIBLE "ALBERTA" POINT FOUND NEAR CASPER

by
Warren B. Carroll

On September 22, 1963, I was out in the sand hills northeast of Casper, Wyoming, looking for artifacts with Bill Hunter of Casper. As chance would have it, a very interesting item was found. Knowing the interest the society has in early man and artifacts, I thought you might be interested to hear about the Scottsbluff type projectile point found by Mr. Hunter.

The picture below (left) will give you some idea of the workmanship and size of the artifact. Note that the point compares favorably to those found near Cereal, Alberta, Canada, and pictured in Ancient Man in North America by H. M. Wormington.

The point is just over three inches in length and one and one-half inches wide. The workmanship is characteristic of the Scottsbluff points, with irregular primary flaking and fine secondary flaking along the edges. The basal edges have been ground and the base thinned. The material is semi-translucent agate with dendritic specks and shows no patination. This lack of patina may be attributed in part to the dry sandy condition of the site.

The site is on the Natrona County - Converse County line about four miles north of the North Platte River. The area is predominantly sandy with numerous blowouts and high sandy ridges. In the immediate area of the find there was no sign of chippings to indicate a habitation site or bones of a kill. Some fifty yards from the point, a tanning stone was found. However, it would be difficult to determine if this was related in any way to the point. A thorough search was made of the area, and no other artifacts or indications of habitation could be found.



Alberta Point - Casper Area
(Hunter Collection)



Alberta Point found on rim of
Big Hole, near Harriman, Wyo.--
in collection of Dorothy Roman

THE ALFORD TANG KNIFE

Casper Chapter

By C. W. Belz

Mr. Wallace H. Alford, 2954 Imperial Place, Casper, Wyoming, is the proud owner of this tang knife. This beautifully worked specimen is made from a huge straight slab of agate, light to dark gray in color, and speckled with small white and red mineral deposits. Large but shallow concoidal pressure flake scars, from the edges to the interior, appears to be the method used in fashioning the blade. The tang areas indicate some grinding was done, but blends in very delicately with the area flaking. The entire shape of the blade appears to have been shaped by grinding prior to being flaked. The surface emits a glossy sheen, and the shallow flake scars blend into each other to create a somewhat smooth surface. The blade edges are not thin and sharp, but are "blunt" to the touch.

The length from the tip to the extreme lower edge is 8.30 inches. The width at the widest span, in the area of the tang, is 2.20 inches while the thickness averages 0.35 inches.

Mr. Alford found this treasure during a fishing trip to Glendo Reservoir on June 7, 1958. During a lull in fishing, a casual search was made in the area, and a portion of the blade surface was observed protruding through the shoreline sand at a sagebrush clump. At this time the water surface was some 150 feet from the small dune where the knife was found. This area was on the east shore in R. 68 W., T. 30 N., Sec. 17 Platte County, Wyoming. A thorough search of the surrounding area was made following this discovery, but there were no indications of other artifacts. There were no chips or flakes, no "fire" stones, no campfire pits or similar clues indicative of a habitation site. It is theorized the weapon or tool was an accidental loss by the owner. Could it have been a hafted knife? Was it attached to a pole, thrown at some animal and the target missed and lost in high grass or bushes, and the blade buried for ages until Mr. Alford found it these many years later? What is your idea?



ALFORD TANG KNIFE

GLENDO RESERVOIR, WYO.



FULL SCALE

C. BELZ

THE RAWHIDE ROCK SHOP AND MUSEUM

by
C. W. Belz

CASPER CHAPTER

A very impressive exhibit of archaeological material may be seen at the Rawhide Rock Shop and Museum at Orin Junction, Wyoming. Mr. J. O. Duguid, an amateur archaeologist, has assembled a few interesting specimens from his vast collection and has presented a very educational display of archaic materials.

Mr. Duguid has been active in archaeological field work for a great many years, and he is well versed in the historical aspect of the ancient materials he has assembled. All historic periods are represented by a few specimens of each type artifact. Almost the entire exhibit contains material collected by the owner and his family. A few casts, identified as such, fill in the voids. Some specimens have been supplied from the collection of Mr. Duguid's son, Jim, who is presently a student at the University of Wyoming. Jim Duguid has been interested in archaeology since a youngster of eleven. At the age of sixteen, Jim located and reported the now famous Hell Gap Site, located in central northeastern Wyoming. Evidence uncovered at the Hell Gap Site, through Carbon 14 dating, has indicated dates exceeding 10,000 years BP.

Some unique specimens and items of a generally scarce nature in the collections of most amateurs are the projectile points of the Hell Gap, Jimmy Allen, and Angostura classifications. Also represented are Scottsbluff and Eden types along with other examples of the Cody Complex. Pre-historic and Late period specimens are also beautifully displayed. The visitor can also see atlatl shafts, various tools, manos and metates, drills and pottery, to list but a few of the artifacts displayed in the cases. The entire assemblage is catalogued for the preservation of its historical record. The items on display are identified although they do not indicate from which areas in Wyoming they were collected. Many state sponsored museums would do well to emulate this exhibit.

Many of the specimens from this collection have been used as models and appear in publications and on charts. The items are of excellent workmanship and design.

Mr. Duguid is eager to discuss his collection with visitors, and you will find time passes rapidly. Your amateur archaeological host takes pride in discussing aspects of field work, and you will gain valuable historical information. Your reporter has viewed many collections, and talked to many artifact-hunters, but very, very few have presented as intelligent and educational display of their collections.

The Rawhide Rock Shop and Museum is located in conjunction with a Conoco (brand) service station and situated immediately north of the highway bridge spanning the North Platte River. It is one mile south of the junction where Wyo. 20 joins Wyo. 87-26, at Orin Junction.

Be sure to stop! You will be glad you did.

BARLOW ARTIFACT COLLECTION

GILLETTE, WYOMING

By C. W. Belz

At the invitation of Mr. Robert Barlow of Moorcroft, Wyoming, and Mr. William Barlow of Gillette, Wyoming, the "museum" of the late Mr. L. H. Barlow was visited. A large collection of artifacts and fossils was viewed. Mr. Barlow passed away at the age of 93 in early April of 1964, and we regret we were not able to arrange a meeting with the aged gentleman prior to his death.

Mr. Barlow assembled a great amount of material beginning in 1936. His preference appears to have been more towards the collecting of fossils, than artifacts, for there is an abundance of paleontological material in the exhibits. Unfortunately, Mr. Barlow failed to identify the source of almost all of the items assembled, whether collected by himself, or presented to him by others!! Therefore, all the historical value of these excellent examples of paleo-indian material has been lost. A few of the items can be identified as to the general area they were found, and a few of the donated collections are identified as to former ownership. It is hoped there might be a relative of the donor who may be able to indicate discovery locations for these items.

Some unusually beautiful specimens are to be seen. One group consists of beautifully finished axe heads, mauls, and various types of hammer stones. Grooving was very well done and many of the pieces show a high degree of polishing. One rather large stone axe head, donated from the collection of the late Mr. Jess Spielman, is an item of such graceful shape and it indicates a high degree of workmanship. Another group of huge stone "blades", possibly used as shovels or diggers, are intriguing due to their unusually large size. Many of these tools are of gray and tan fine-grained quartzite materials, similar to products of the Spanish Diggings quarries, an area located some one hundred miles southeast of the Gillette area. There are also many manos and metates in the "museum", but there is no indication of where they were collected. NONE OF THE ITEMS HAVE BEEN CATALOGED!

A large majority of the artifacts that are mounted in frames are of the Late Historic period, and only a small number of projectile points are of the Archaic or older periods. One unusual aspect of the assemblage was the noticeable lack of the McKean type points, either basal portions or whole specimens.

Many interesting and unusually shaped lithic tools are to be seen, but their "find" locations, or donors, could not be determined for Mr. Barlow apparently kept no records. Again, it can not be too strongly stressed, the importance of recording and cataloging items in a collection. Needless to say, it was a depressing feeling, viewing these excellent specimens and realizing that their historical significance is undoubtedly lost forever. Many of the framed displays that were donated from the collections of Mr. Jess Spielman and Mr. C. C. Wilhelm, both deceased, are likewise uncataloged.

Some complete Late Historic period weapons were noticed, including some stone head warclubs with what appeared to be the original leather bindings. Also,

a skull with maxilla and teeth was displayed, but there was no information to identify this item. This is believed to be the same skull investigated by Dr. Bentzen, as reported in Volume IV, Nos. 1/2, (Jan-Feb, 1961) of the WYOMING ARCHAEOLOGIST.

It is with regret there is not more information on this interesting assemblage of artifacts. It is again to be emphasized, the importance of cataloging the items in a collection. Granted, they are nice to view, but an artifact collection without records isn't worth donating to a public museum!

Several specimens from the collection are here reproduced, giving some idea of what had been collected. It will be noticed that a rather wide range of historic periods is represented.

PLATE 1:

Specimen A - This small scraper of gray-green agate was an eyecatcher due to its rather unusual design. The "tanged" end suggests hafting in all probability. Information on this item is lacking. It is from the D. C. Wilhelm collection.

Specimen B - This attractive point is of a brownish-purple quartzite. The basal portion indicates some grinding, and the blade exhibits large pressure flaking. This point is 2.20 inches long, 1.0 inches wide and the thin lenticular cross section is 0.20 inches thick. This item, along with specimen C, is from the Bill Pearson Ranch. It resembles specimens of the Old Copper Culture.¹

Specimen C - This is an unusually shaped tool, which may have been used as a skinning knife. It is of tan chert and shows excellent workmanship. This tool is 1.65 inches long, width is 1.0 inches and thickness is 0.25 inches.

Specimen D - This is an exceptionally beautiful blade of black chert, containing large percussion scars. In all probability it comes under the Hell Gap Complex due to the proximity to the site location, which is about 90 miles to the southeast of Gillette. The blade is 4.15 inches long, 1.20 inches at the widest part of the blade and 0.30 inches thick. The stem is 1.20 inches long by 0.90 inches wide at the notch tapering to 0.55 inches at the base. The base has a slight convex shape and has basal grinding. NO INFORMATION COULD BE OBTAINED AS TO OWNER, FINDER, OR ORIGIN!

Specimen E - This is a partial point from Mr. Barlow's own collection, and found by him on his ranch west of Gillette. This is a very beautifully worked, transverse flaked, unnotched Eden type point of blue-gray chert. The flaking is very minute but fashioned diagonally to the axis of the point. The base shows a rather limited amount of grinding. Although no determination can be made as to the total length of the complete blade, it appears at least 2/3 of the blade is presented. Width is 0.65 inches and the diamond shaped cross section is 0.25 inches thick.

¹Wormington, H. M., Ancient Man in North America, 1957 Revised, p. 150.

Specimen F - The source of this tan quartzite blade, your reporter believes, would merit a test dig. It was found in 1936 by Mr. Alfred Matheson at a depth of eleven feet during a well excavation. The exact location of the find is yet to be determined, although it was somewhere west of Gillette. Its style and shape indicates it to be a Jimmy Allen type projectile point. It is identical in form, even including the near-the-point notchings, with the specimen in the display of artifacts in the collection of Mr. J. O. Duguid at Orin Junction, Wyoming. Size of this point is 3.50 inches long by 1.20 inches wide and 0.20 inches thick. The basal notch is highly ground and is 0.20 inches in depth. The blade has a slight twist near the tip.

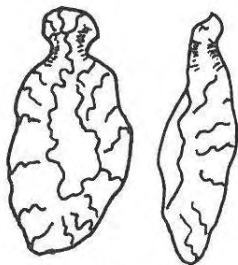
PLATE 2:

Specimens G and H - These two items are quite intriguing in character. As near as could be determined, they were donated to Mr. Barlow's collection, but no history was recorded with the objects. Their use would be pure conjecture. G is an olive hornblend gneiss, fashioned with one blunt end and one sharp end, indicating it may be a chisel. Length is 3.30 inches by 1.0 inches at the widest part and 0.65 inches thick. All longitudinal edges are rounded and the entire surface is ground smooth. In contrast, H is a deep red quartzitic sandstone, also with all edges rounded and polished smooth. Length is 5.25 inches by 0.80 inches wide and 0.575 inches thick.

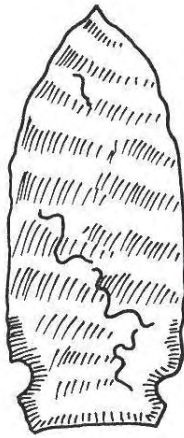
CAN YOU IDENTIFY THESE OBJECTS AS TO THEIR POSSIBLE USE?

Specimen I - This is an excellently finished axe head from the collection of the late Jess Spielman and found in the vicinity of Almstead Creek. Grooving for hafting was very well done, and many hours work went into producing a smooth fine-ground tip.

²Agogino, George A., "A Now Point Type From Hell Gap Valley Eastern Wyoming," American Antiquity, Vol. 26, No. 4, April 1961.



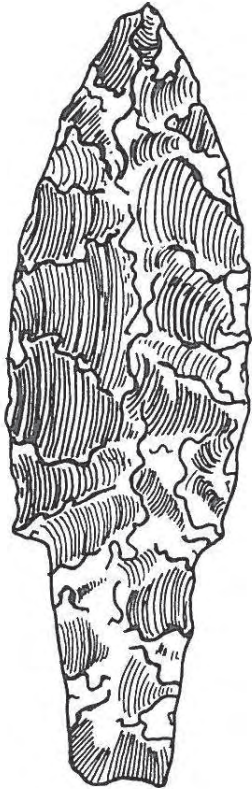
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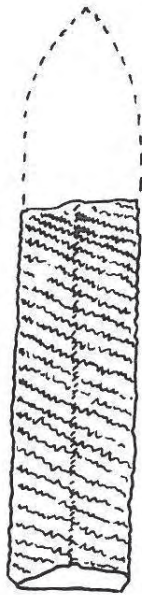
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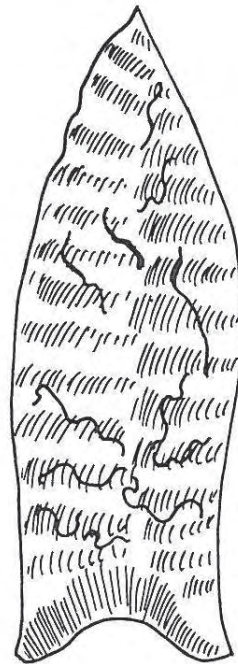
C



D



E



F

PLATE 1.

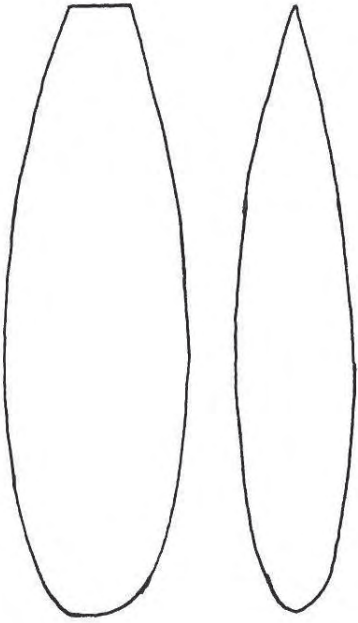
L.H. BARLOW COLLECTION
GILLETTE, WYO.

- 16 -

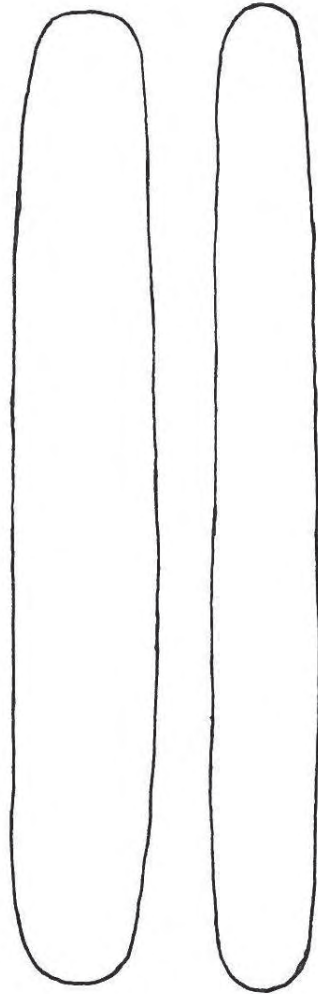
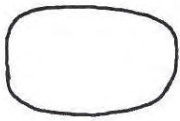
FULL SCALE

C. BELZ

L.H. BARLOW COLLECTION
GILLETTE, WYO.



G.



H.

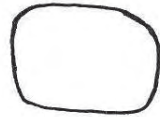
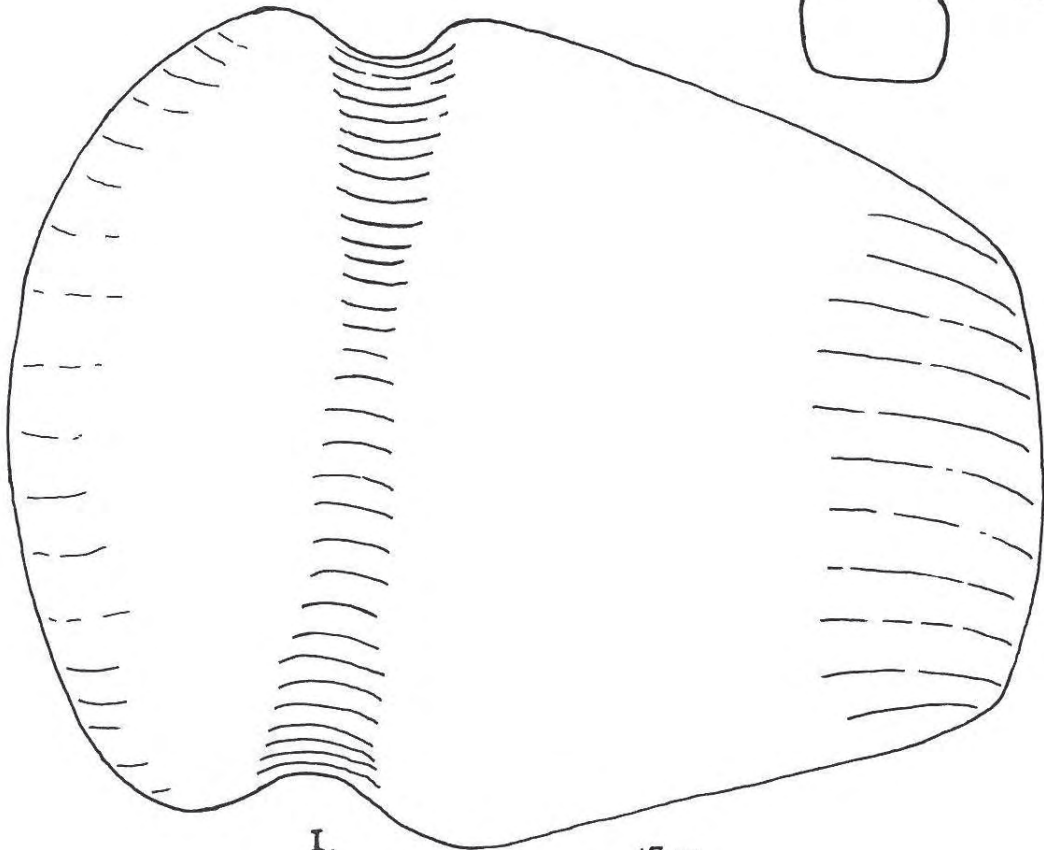


PLATE 2.



I.

FULL
SCALE

C. BELZ

THE HELL GAP EXPEDITION

1963

Hell Gap comprises three major stations located 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 (the southern extension of the "Spanish Digging" quarry formation), and access to both the Plains and montane biomes and their resources. The cultural sequence produced by excavations at Hell Gap is as follows:

1. The earliest, as yet little known, evidence comes from a gravel underlying the major stratigraphic section which, if geological interpretation proves correct, should considerably pre-date 9000 B.C. To date, this evidence comprises charcoal, chips, and a few non-diagnostic artifacts, all recovered in testing operations in 1962. Further investigation is planned in 1963.
2. The HELL GAP COMPLEX: This complex, dated by Carbon 14 at 8930 B.C., was first defined at the type site, Station III. A large quantity of artifacts, workshop materials, animal bones, and several camp features were uncovered in 1961 and 1962. Further excavations at this definitive locality will be carried out in 1963. Diagnostic of this complex is the Hell Gap projectile point type: a lanceolate point, with convex or straight base, and an elongated stem expanding gradually to a widest point well up the blade. This produces an almost shouldered appearance. In addition, objects characteristic of the complex include true blades, very large bifacial "blanks", and well-made end scrapers. One hematite bead and a grinding stone were found.
3. The UNFLUTED FOLSOM or MIDLAND COMPLEX: This most interesting complex, found only at Station II at Hell Gap, was little known until 1962, and its study is still in a preliminary stage. The available evidence indicates a well-defined cultural zone with a possible irregular living surface and numerous stone artifacts, animal bones, and quarry objects. The distinctive typology may yield valuable clues on developments in Folsom-like assemblages and their relations with the lanceolate-point-oriented complexes. Further excavations in 1963 should produce a more adequate sample of material and provide further evidence of campground remains. The projectile points of this complex are completely Folsomoid in outline and workmanship, but none of the specimens recovered to date show evidence of fluting. Other artifacts include well-made end and side scrapers, and large bifacial "blanks."
4. The AGATE BASIN COMPLEX: This complex, dated by Carbon 14 between 7300 and 7900 B.C., is more profusely and more completely represented at Hell Gap than at any other known locality. Its stratigraphic and chronological position as well as its typology suggest evolutionary affinities with the Hell Gap Complex. Materials recovered include a very large number of bone and stone artifacts, fragments of pigment stones, a unique serrated projectile point, and workshop materials and refuse heaps confined to well-defined areas.

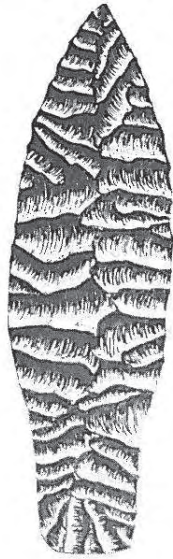
This complex occurs at both Stations I and II, and at the latter may be subdivided into three sequential phases. It is hoped that a detailed analysis of the typology will reveal evolutionary trends within the larger Agate Basin Complex. Station II was investigated in both 1961 and 1962, while Station I was intensively excavated only in 1962. Both localities will be worked in 1963 in order to procure a more significant sample of the materials, to provide a more extensive knowledge of the internal stratigraphy within the complex, and to obtain data concerning the layout of living surfaces. The projectile points of this complex include both the straight and convex-based varieties of Agate Basin point and one unique serrated specimen. Characteristic also are large well-made bifacial knives, side and end scrapers, well-made triangular scraper-awl tools, and occasional worked bone objects.

5. The EDEN-SCOTTSBLUFF COMPLEX: This complex, dated at 6640 B.C., occurs only at Station I and was investigated intensively only late in 1962. Despite the preliminary nature of current knowledge, there is already considerable evidence of a well-defined living surface and very abundant remains, including numerous artifacts, distinctive areas of workshop activity and refuse deposition, and stained zones resulting from pigment grinding. This complex has yielded to date a typical Scottsbluff point and an Eden point, and a wide, very slightly shouldered, form reminiscent of a specimen from Lime Creek, Nebraska. Numerous cutting tools and a variety of scrapers have been recovered.

6. The FREDERICK COMPLEX: This complex was defined at the type site, Station I, in an attempt to clarify and replace the somewhat misleading existing term, Angostura. The Frederick horizon at Station I presents perhaps the most impressive campground remains yet uncovered. It includes possible evidence of a dwelling structure (in the form of a symmetrical circle of stones), 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 stone-working technology can be obtained. The location was tested in both 1961 and 1962, and further excavations are planned to take advantage of the prolific character of the material and the unusual opportunity for studying the layout and structuring of a Paleo-Indian campground. The diagnostic point of the Frederick Complex is a lanceolate obliquely flaked form, with straight or slightly expanding sides, a concave base, and well-defined basal thinning. Other distinctive tools include medium-sized triangular knives and side scrapers. A well-made bone awl and two grinding stones have also been recovered.

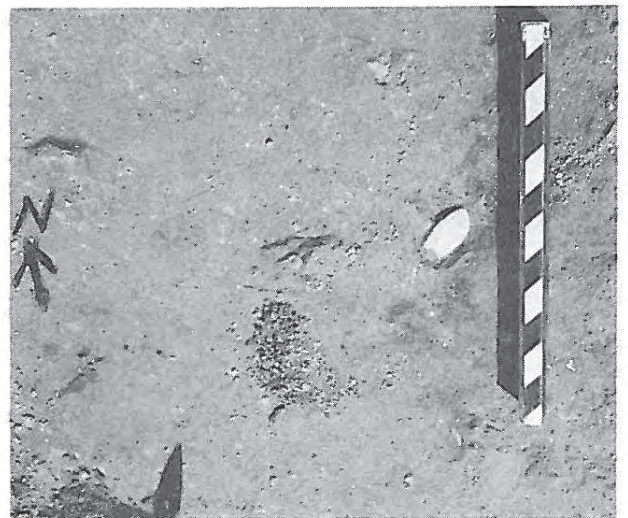
7. Between the Frederick level at Station I and the next intensive occupation level (the Late Middle Horizon) there is a gap in the sequence from which only a few sparse flakes and occasional artifacts have been obtained. This gap, representing primarily the "Altithermal Period" (c. 4000 - 2000 B.C.) should be filled by materials from the nearby site at Patten Creek (six miles from Hell Gap). Preliminary tests indicate a productive level for this period, yielding both quarry and campground materials. Full-scale excavations are planned in 1963. From this zone between the Frederick Complex and the late Middle Horizon occupations, the only diagnostic artifact is a large projectile point with a somewhat recurvate blade edge, wide corner notches and pronounced downwards directed tangs, and an expanding stem with straight base.

8. The latest cultural evidence from the Hell Gap valley comes from Station I and represents intensive multi-component late Middle Horizon occupations. Evidence recovered in 1961 includes numerous campground features, such as shallow-basined hearths, rock-alignments and workshop areas, and a large quantity of stone and bone artifacts and flakes. Although chronologically this may equate with the late McKean Complex (ca. 1000 - 1500 B.C.), it is typologically quite distinct, and with further investigations should be defined as a separate complex. To this end, further excavations are planned in 1963. This latest series of occupations at Hell Gap yielded characteristically numerous medium-sized stemmed and notched projectile points, T-shaped drills, large well-made triangular knives and end scrapers. In addition one typical Duncan point (McKean Complex) was recovered.



Hell Gap Point

Midland Point found August 25, 1963
Photos by L. Stoege



THE HELL GAP EXPEDITION,
1963, is under the
direction of the Peabody
Museum (Harvard University,)
in cooperation with the
University of Wyoming, and
is sponsored by the
National Geographic Society.

ARCHAEOLOGICAL INVESTIGATION OF THE BIG HORN CANYON

INFORMATION AND PICTURES

by

W. D. Greene

Greybull, Wyoming

Archaeologists of the River Basin Survey, Smithsonian Institution, have been working against time--that time when the waters of the Yellowtail Dam will cover completely the ancient habitation sites that exist at intervals throughout the Big Horn Canyon. Archaeologist Wilfred Husted in charge of the Smithsonian's River Party completed the exploratory survey of the canyon and its environment during the summer of 1962. Subsequent fieldwork of a salvage nature must, of necessity, be confined only to the most promising sites. Archaeologist Husted was well fitted for this important task by his previous experiences in the Glen Canyon of the Colorado River and with the Cliff Dwellers and Basket Makers of Utah.

The inaccessible nature of the Big Horn Canyon has aroused the interest and fascination of all who have seen the Big Wind River--heard the legend of the Wedding of the Waters (where the Big Wind becomes the Big Horn)-- or who have glimpsed from a distance the mighty canyon walls. Until a few years ago, only hardy adventurers could run downstream in specially constructed cataract boats. Now with shallow draft boats powered by an enclosed airplane propeller (see Plate I), Bill Greene of Greybull, Wyoming, has opened the canyon to all travelers. In this type of boat, in comfort, without danger to passengers, this gorge which had been the least known of the major gorges of North America has now revealed many of its secrets. The colored movie owned by Bill Greene and available for a moderate rental fee shows the entire canyon in all of its grandeur and colorful beauty. This sound film, of 55 minute duration, makes the ideal club program, and you will never find any other program to equal it.

Chartered trips may be arranged by reservation for any length of time but even a one day trip into this land that time "forgot" would be a memorable vacation. Many rock hounds have hunted petrified wood, limb casts, or agate on the gravel bars on these chartered trips. Fishermen have found delight in fishing streams issuing from side canyons which have never been fished before. Fossil hunters have been fascinated by the stratigraphy of Mississippian and Ordovician Age sediments and fossils exposed by the towering canyon walls. Historians have been interested by the rusting remnants of ancient placer mining equipment and the large oak planked boats abandoned at Barry's Landing some 25 miles down stream from Kane, Wyoming. The complete story of Barry's attempt to penetrate the Big Horn Canyon early in 1900 would be an exciting chapter in Wyoming's history. For the archaeologist, camp sites abound on both sides of the river and at the "Old Crow Crossing," the only possible place to ford the river for many miles, clearly visible traces of the trail used by countless indians over many centuries may be seen. No finer guide could be found than Bill Greene who has gained so much knowledge from the various paleontologists, archaeologists and geologists that he has guided for many years. Transporting the supplies and the frequent moving of the Smithsonian Expedition in the past few years has made it necessary to arrange private trips by advance reservation. No finer or more memorable a vacation could be found than in the peace and solitude encompassed by these canyon walls.

The final report by the Smithsonian Institution will be of great interest to all archaeologists and particularly to the Wyoming Archaeological Society. Extensive archaeological sites were located on the benches overlooking Chain Canyon. Three shelter sites were found near Medicine Creek, a tributary canyon (see Plate II). Another large site was found on the open flat near the old boats at Barry's Landing. In one test pit at the two foot level, three fire hearths were exposed and over twenty five points were recovered in addition to a large number of scrapers, knives, and choppers. But the most important site was a cave shelter a short distance down stream from Barry's Landing. (see Plate III) The cave, located at the base of sheer walls above a talus slope, had its 50 foot wide entry way hidden from view by age old cedar trees (Plate III). Within the 35 foot depth were two distinct chambers with fire blackened walls indicating long periods of occupation. Test excavation revealed five distinct levels of occupation separated by sterile layers of wind blown sand. From the uppermost level, approximately six inches thick, were recovered triangular points of the Historic Period, part of a metal object which later was found to be a brass butt plate from an old Fusee rifle, a fragment of a glass mirror, a piece of tanned leather sewn with yucca fiber, several pieces of tanned mountain sheep hide with fur intact (so identified by a Game and Fish Biologist), several pieces of yucca twine showing excellent braiding, the bottom part of a woven basket, bone awls, pottery fragments, stone knives, and many bone fragments and rock chippings.

A barren zone of fine red sand next appeared indicating the passage of considerable time between occupations. A gray-green sand held the side and corner notched points of the Late Middle Prehistoric period and extended to a depth of $2\frac{1}{2}$ feet. Again a sterile level of fine wind blown red sand separated the occupation levels with another gray-green sand enclosing straight stemmed points of the Middle Prehistoric period at the three foot level. From the next level came the basal ends of several points similar to the Agate Basin type (see Plate IV). Over 40 fire hearths were excavated, and on one level, several small double hearths spaced 6 to 8 inches apart similar to a double burner Coleman Stove.

Several items severely taxed the imagination, one was an arrangement of three to six inch slender, cigar-shaped, water worn stones including petrified woods layed out in a perfect circle. Another item was a bundle of small stones neatly wrapped and tied in cedar bark. Near a fire hearth was found a bundle of small dried fruit similar to a crab apple, but not found in the area today.

Seldom are ancient sites so well defined by stratigraphic levels and completely undisturbed. Only once was the revealed stratigraphy confused by a seemingly careless distribution of large pieces of charcoal over a large floor surface. It was soon apparent that a large volume of water had suddenly cut a stream channel through several fire hearths and washed out the charcoal.

The lower levels, it is hoped, will disclose traces of very ancient man. But in any event, the entire report will add a very fascinating chapter to the history of the Big Horn Canyon. Remember that much of this area will soon be inundated and if at all possible you should see the canyon as it now exists. Perhaps this will be the last year this will be possible.



(Plate I)

Airboat at mouth of Dryhead Canyon, 40 miles into the Big Horn Canyon. (left to right) are Chester Brooks, U.S. National Park Service Smithsonian; Archaeologist Wilfred Husted points to caves in the 3000' walls of lower Gorge; W. Greene, boat operator, examines Elk horns. (This was a survey trip for possible Indian sites).



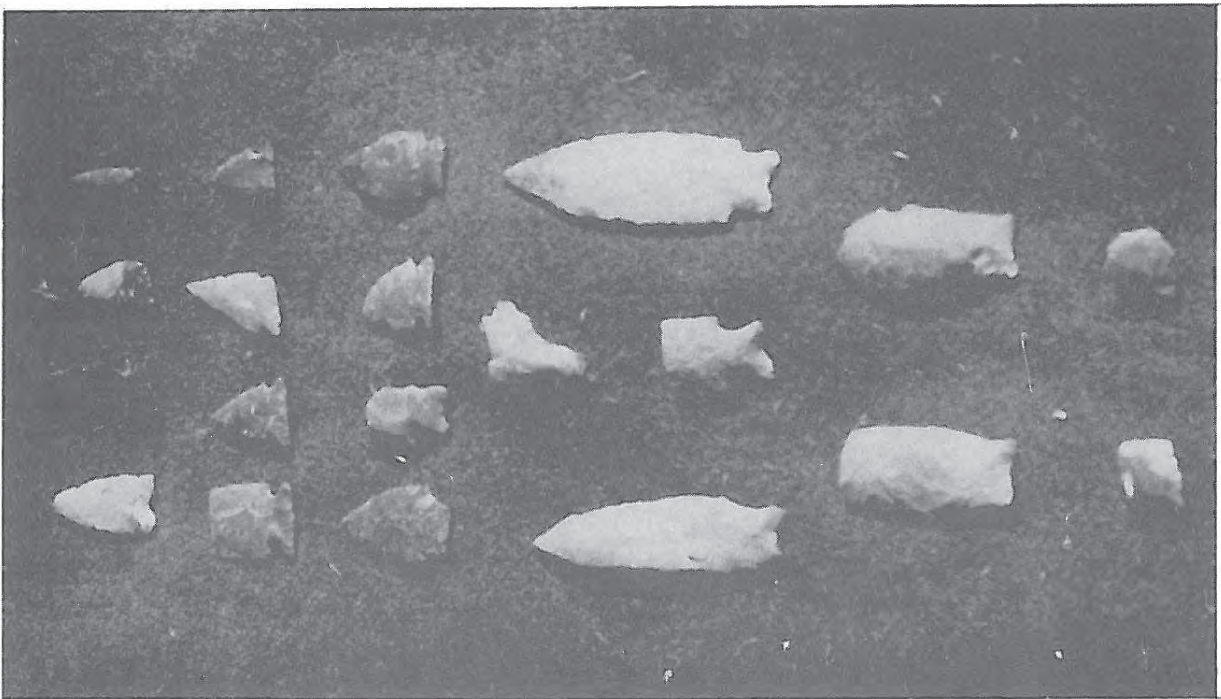
(Plate II)

Archaeologist Husted examines flint chippings at mouth of cave shelter; one of three new Shelter sites found near Medicine Creek, a tributary canyon.



(Plate III)

Age old cedars obscure the cave entrances from the river. Archaeological party recovers many artifacts lying exposed on the surface, perhaps indicating the very isolation of the region prevented explorations by the average modern day arrowhead collectors.



(Plate IV)

Average sequence of projectile points recovered from top to bottom cave levels; a rough estimate, perhaps 50 or 100 points were recovered from each of the larger caves. From the bottom 5' levels, all perishables had disintegrated.

LISSOLO CAVE SITE

By

Louis C. Steege and David G. Paulley

The Lissolo Cave Site is located in the Black Hills of Weston County, Wyoming, Section 4, T 45 N, R 62 W. The property is owned by Victor Lissolo, a long time rancher on Oil Creek. The site is located on the east side of Crane Canyon where vertical walls of Dakota Sandstone are exposed about midway between the top of a hill and the dry creek bottom of the ravine. A narrow bench of soil, varying from ten to thirty feet in width, separates the perpendicular faces of the cliffs from the steep edges of the ravine. At present this bench is well covered with ponderosa pine, juniper, sage brush and native grasses.

Prehistoric people took advantage of the shallow cave in the sandstone ledge and the fairly level grassy bench and utilized these for an ideal sheltered campsite. A broad view to the west and south as well as to the creek bottom below provided an excellent lookout for approaching game. It is quite possible that a small stream of water was running through the ravine during this time.

The site was first noted by Mrs. V. L. Thorpe of Newcastle, Wyoming, while on a field trip with a group of cub scouts. Mrs. Thorpe noticed, what appeared to be smoke stains on a portion of the cliff face just above the cave. Further investigation revealed more smoke stains on the roof of the cave.

At the time of the discovery of the site, debris filled the cave to a level of nearly twenty-four inches to the roof of the cave. Numerous boulders had sloughed from the roof and the side walls and were included in this debris. The major portion of the deposition consisted of wind-blown sand.

The site was brought to the attention of Dave Paulley, a former resident of the area. Paulley discussed the possibility of further investigations with the co-author and with the consent of the landowner and the assistance of local residents, excavations were started during August 1962, and completed in April 1963 with most of the operations being accomplished over weekends. The artifacts, which were recovered from these operations are on display in the museum in Newcastle.

The persons who assisted with the excavation of the Lissolo Cave Site are as follows:

Dr. and Mrs. V. L. Thorpe, Billy, Stacy, Kelly and Pat;
Bruce and Andy Clark; Bruce Franz; Cary and Tom Voss;
Francis Clark; Mr. and Mrs. R. K. Hammond; Jack Hammond;
Lucy Diegel; Mr. and Mrs. Gordon Paulley and Diane; Mr.
and Mrs. David Paulley and Kristine, and Mr. and Mrs.
Louis C. Steege.

An area sixteen feet in length and twelve feet in width was excavated to a depth of three and one half feet on the bench west of the cave. The cave

measured thirteen and one half feet in length and eight feet in width. The cave was excavated to a depth of four feet. After the cave was completely excavated through level 1, a test pit, dug through another twenty-four inches of sterile soil, revealed no additional occupation levels.

The Lissolo Cave proved to be a well defined stratified site containing three levels of occupation (Plate 6). The top and central levels (levels 3 and 2) were confined to the bench immediately west of the cave proper and extended eight feet to the slope of the ravine. This indicates that both occupations did not utilize the cave as a shelter, probably due to the fact that the cave was already filled with wind-blown sand and soil, and was much too shallow for this purpose. A thin lense of wind-blown fine grained charcoal and ash (Plate 6) extended from the central portion of level 3 to the east wall of the cave. No artifacts, flakes or bones were noted in this lense. The lense was covered by an inch of wind-blown sand and a large rock (Plate 6, A) which had fallen from the roof of the cave. Level 1, or the lowest level occurred approximately three and one half feet to four feet beneath the surface in the cave and extended outward on the bench until it became exposed in the slope of the ravine.

LEVEL 1

The culture bearing stratum of level 1 averaged from seven to twelve inches in thickness (Plate 6, 3). Shallow basin types of hearths were confined to the area under the rim of the overhang. These hearths contained very few stones. Charcoal, ash, bones and lithic materials as well as artifacts were scattered over the entire bench and cave floor and were not concentrated in any particular area. Long bones of game animals were broken into small pieces, undoubtedly to obtain the marrow. Of the teeth and joint sections which were recovered, all belong to the order Artiodactyla and were represented by bison (*Bison bison*), elk (*Cervus canadensis*), and mule deer (*Odocoileus hemionus*). No complete skulls or mandibles were found in the excavated area.

Level 1 produced a total of twenty five projectile points (Plate 1). Of this amount four were complete (a - d), ten were tip fragments (e - n), eight were basal fragments (o - v) and three were center fragments (w - y). Eight specimens are definitely a lanceolate type (a, b, c, o, p, q, s, u) and three are a stemmed type (d, r, t). The eight lanceolate types have a deep basal concavity which can best be described as a basal notch. A basal edge grinding is present on two specimens (o, p) with the extent of the dulling indicated between the horizontal lines. Two specimens are severely fire fractured. All the projectile points show moderately well controlled pressure flaking. The blade edges are thin, sharp, slightly sinuous and somewhat uneven.

Thirteen blade type of artifacts were recovered from level 1 (Plate 2). Of this amount three were complete (a - c); four were tip or distal fragments (d - g); five were basal sections (h - l) and one was a center fragment (m). All except one specimen (d) were percussion flaked. Three specimens (a, b, c) have pressure flaked retouched edges. One distal fragment (d) is pressure flaked throughout and has sharp edges.

Six plano convex snub nosed end scrapers were recovered from level 1 (Plate 3, a - f). All show fine pressure flaking on the working edge. Two specimens (c, e) have slightly concave edges which cause a stem-like appearance. This suggests a use as a spokeshave or a hafted scraper. One specimen (a) cannot definitely be associated with level 1 since it was found with a slab metate cached between the large boulder (Plate 6, B) and the east wall of the cave. Since level 1 did not extend below the boulder, it is apparent that the boulder was in place before the cave was inhabited and that the end scraper and metate would have been cached by either the level 1 occupants or some subsequent visitor before the cave was filled with wind-blown sands. A mano was recovered in this same level on the northwest side of the large boulder.

Miscellaneous artifacts recovered from level 1 include the milling stones (mano and metate) described above, a graver (Plate 3, g), a drill stem fragment (h), a piece of decorated bone (i) and flake knife (j).

The graver (g) is made from a red jasper flake. The sharp stubby point was formed on the flake on a medial ridge where it tapers to the edge of the flake. The point was formed by the removal of fine pressure flakes which were directed from one face only.

A short narrow piece of pressure flaked chalcedony with parallel edges and a diamond shaped cross section has been tentatively identified as a center section of a drill stem (h).

The decorated bone (i) is polished and bears minute parallel striations directed at right angles to the long axis of the specimen. The cellular structure of the ventral face suggests that the artifact was fashioned from a split rib. All edges show breakage and there is nothing to indicate size, shape or usage of the original specimen.

The flake knife (j) is made from a flake of metamorphosed silt-stone with a fine pressure flaked retouching along one edge only. The retouching is visible on both faces of the flake.

Some charcoal samples were obtained from level 1 but to date no analysis has been made.

LEVEL 2

Level 2 was located approximately fifteen inches above level 1 and was confined to the bench only, extending some six feet from the slope of the ravine eastward towards the cave. The culture bearing stratum (Plate 6, 2) was quite thin and contained only minute particles of charcoal, some ash and bone. Only a few scattered stone flakes were noted in the entire level. Hearths were simple irregular surface lenses. Any rocks included in these lenses appear to be accidental.

A total of six artifacts were recovered from level 2. Of this amount five were projectile points (Plate 4, a - e), and one was a fragment of a slab

metate. Two of the five projectile points are complete (Plate 4, a, b). The balance are basal sections.

The projectile points of level 2 are well made. Flake scars are broad and shallow and extend from the edges to the center of the blade. Shallow, wide and U-shaped notches are present on all specimens. The notches are placed quite low. In fact they are set so near the base that it is rather difficult to discern this type from a corner notched type of projectile point. The concavity of the base and the placement of the notches causes a rounded ear-like projection at each corner of the base. All specimens are quite thin and have sharp edges.

The fragment of milling stone (metate) was the only other artifact found in this stratum. It was fashioned from hard fine grained sandstone and shows evidence of much usage.

LEVEL 3

The culture bearing stratum of level 3 (Plate 6, 3) averaged about four inches in thickness. It was located 3 inches above level 2 and about four inches below the present surface level. This level, like level 2 was limited to the bench only and extended about six feet eastward from the edge of the ravine to the edge of the cave overhang. Considerable amounts of charcoal and ash were mixed with small fragments of bone and stone flakes. Identifiable bone samples were almost entirely limited to bison (*Bison bison*). Hearths were simple irregular surface lenses.

Seven projectile points were recovered from this level (Plate 4, f - 1). Of this amount two were complete (f, g) and the balance were basal fragments. All are stemmed, corner notched types with the exception of one (l). This one is quite similar to the level 2 types. Level 3 projectile points are flaked irregularly and do not compare in workmanship with the level 2 types. They are also much smaller in size.

Three plano convex snub nosed end scrapers (Plate 5, a - c), three flake knives (Plate 5, d - f) and six blade fragments (Plate 5, g - 1) were recovered from this level. The scrapers show well controlled pressure flaking along two or more edges. One specimen (b) is stemmed. All the flake knives show a fine pressure flaked retouching on two edges. The blade fragments are roughly percussion flaked and show little or no retouching except on one specimen (g). Since this specimen is triangular in shape and a point fragment, there is a possibility that it could have been a fragment of a projectile point.

One mano was recovered from the surface within the cave, apparently having been tossed into the cave at random by some passerby. It cannot be linked in any way with the horizons of this site.

MATERIALS USED FOR ARTIFACTS

	Metamorphosed		Jasper	Chert	Chalcedony	Agate	Bone
	Quartzite	Siltstone					
Level 1							
Projectile points	9	3	8	3	2		
End scrapers			5			1	
Blades	7	1	2	3			
Flake knife		1					
Miscellaneous			1		1		1
Level 2							
Projectile points	1		4				
Level 3							
Projectile points	4		3				
End scrapers			3				
Blades	1		3	2			
Flake knives			1			2	

CULTURAL AFFILIATIONS OF THE LISSOLO CAVE SITE

The stratigraphy and the artifacts recovered from the Lissolo Cave Site appear to fit very well into the sequence for the Northwestern Plains.¹ However, it cannot be emphasized too strongly that there is a positive cultural identification of each level, but merely a close similarity of horizons as compared with some other localities in the Northwestern Plains. The correlation of the various levels at the Lissolo Cave Site is based almost entirely on the projectile point types since they were the most stylized artifacts available for comparison.

The projectile point types of level 1 at the Lissolo Cave Site are quite comparable to the lower level at the McKean Site.² The lanceolate types are within the range of size and shape, and the stemmed types can also be considered as a variant of the McKean lower level.³ There is one puzzling factor noted at the Lissolo Cave Site. Two of the lanceolate type projectile points from this site have ground basal edges. This did not occur at the

¹Mulloy, "A Preliminary Historical Outline for the Northwestern Plains."

²Mulloy, "The McKean Site in Northeastern Wyoming", pp. 153-187.

³Steege, "The McKean Point".

McKean Site, nor was it mentioned in the Signal Butte report.⁴ The only explanation which can be offered at this time is that the intentional dulling of the edges could very well have been a local tradition.

The plano convex snub nosed end scrapers are similar to both the McKean lower level and Signal Butte I. The blades also are similar. A graver was found in level 1 at the Lissolo Cave Site. A graver was reported from Signal Butte I, but was missing from the McKean Site. Manos were recovered from all three sites. Metates were not present at Signal Butte I. Incised bone objects were recovered from all three sites.

The projectile point type of level 2 at the Lissolo Cave Site corresponds well in size and shape with some of the larger points from the upper level at the McKean Site and Signal Butte II. There is also a remarkable resemblance of these projectile points in every detail except size to the Avonlea points⁵ found in the Plains Provinces of Canada and northern Montana.

The projectile points of level 3, Lissolo Cave Site, are diagnostic of the smaller points recovered from the upper level at the McKean Site. However, at the latter site both the large and the small points were recovered from the same level, whereas a distinct stratum is noted for each type at the Lissolo Cave Site. The small corner notched points appear to be absent in Signal Butte II.

The Plano convex snub nosed end scrapers and the flake knives from the Lissolo Cave Site correlate well with the upper level at the McKean Site and Signal Butte II.

The similarities of the lithic artifacts from the McKean Site, Signal Butte, and the Lissolo Cave Site suggests that perhaps a parallel sequence and similar inhabitants are represented at all three sites. More comparative material from additional excavated sites is necessary before a definite relationship can be established. Until this material is available, the full significance of this complex will remain somewhat shady.

⁴Strong, "An Introduction to Nebraska Archaeology", pp. 224-239.

⁵Kehoe and McCorquodale, "The Avonlea Point", pp. 179-188.

PLATE I

Level I

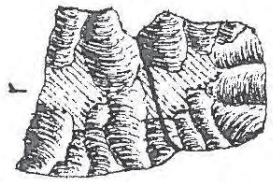
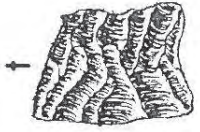
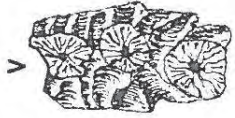
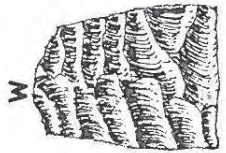
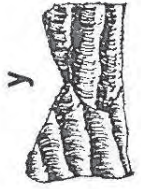
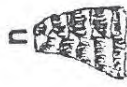
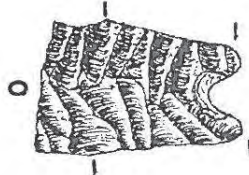
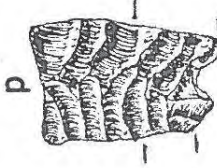
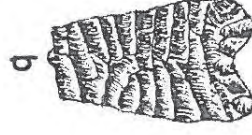
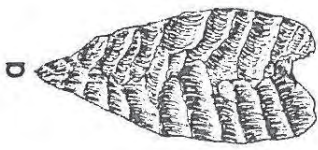
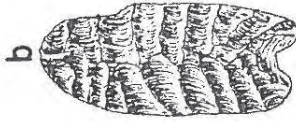
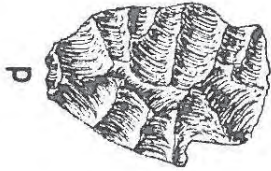
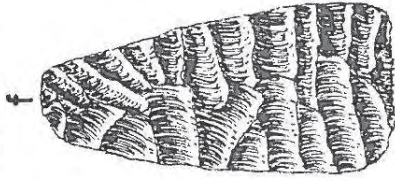
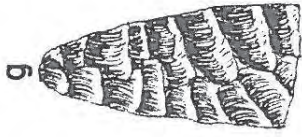


PLATE 2

Level 1

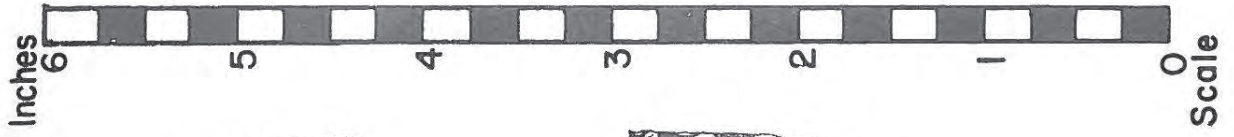
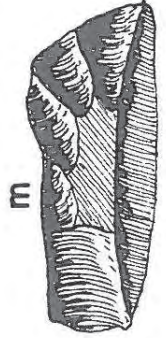
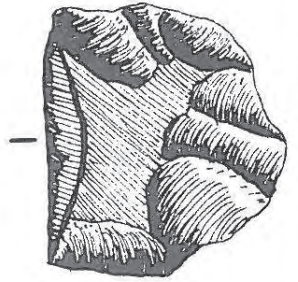
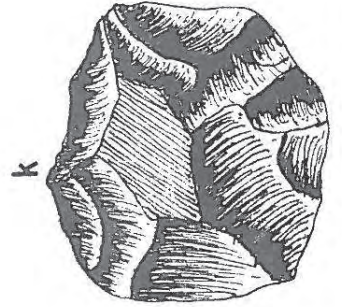
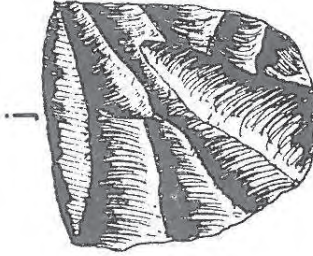
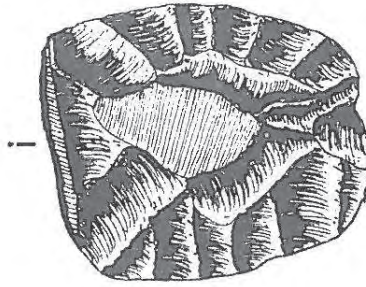
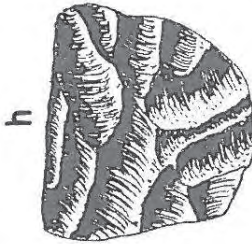
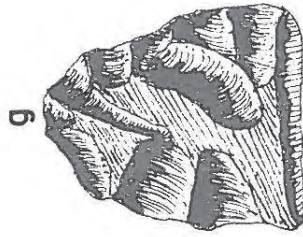
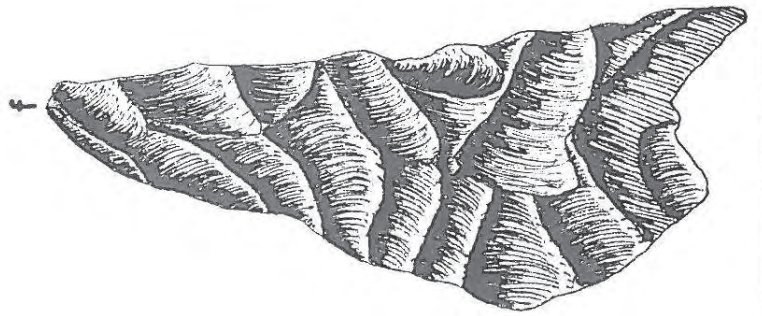
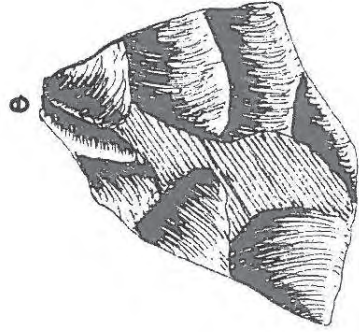
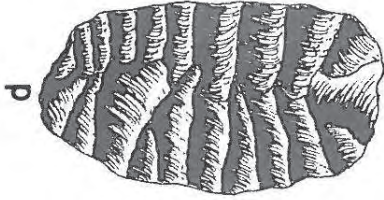
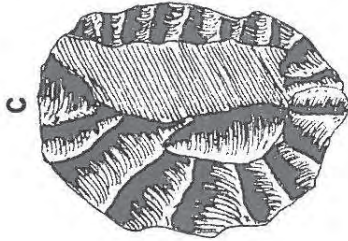
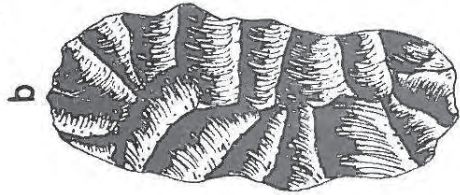
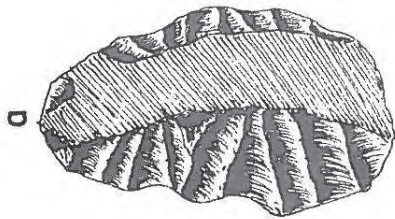
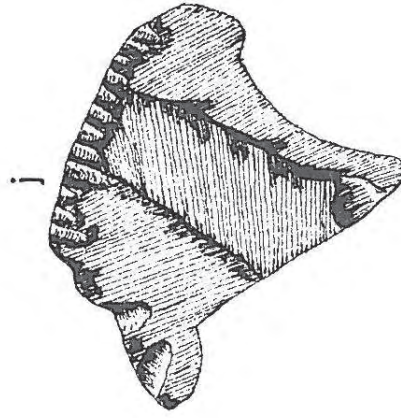
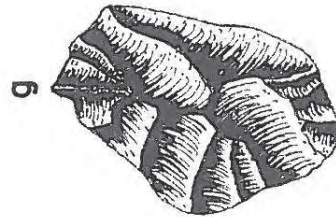
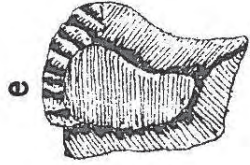
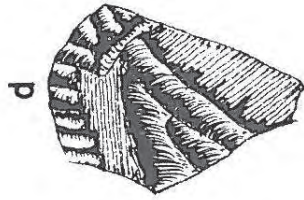
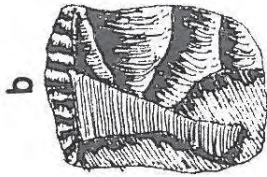
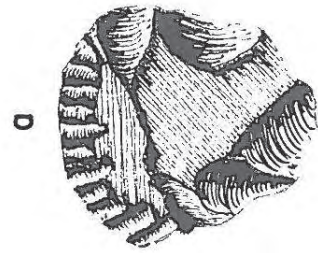


PLATE 3

Level I



Scale

PLATE 4

Level 2

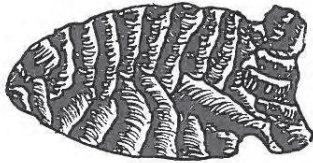
c



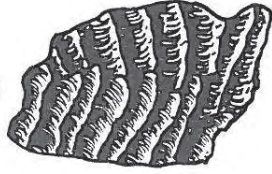
b



a



e



d



Level 3

g



h



j



i



k



l



f



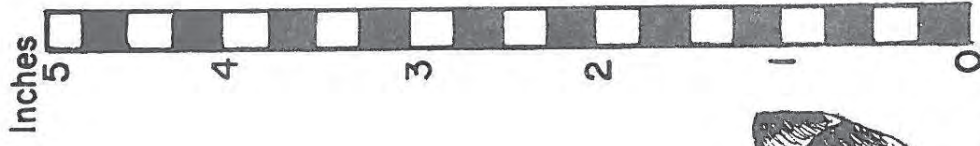
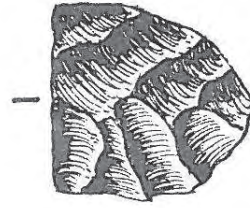
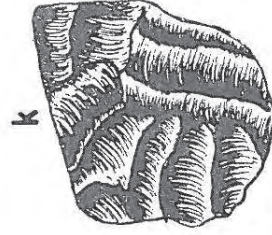
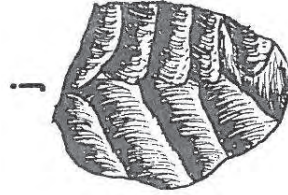
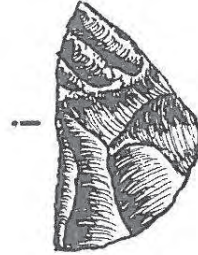
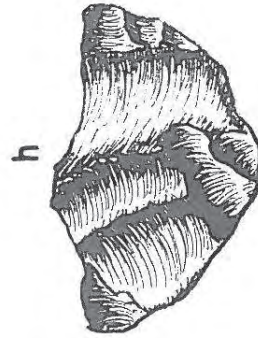
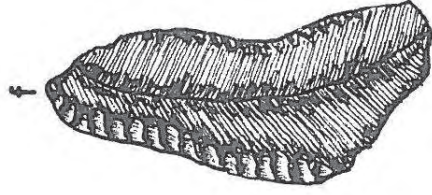
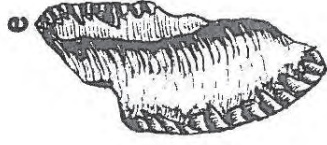
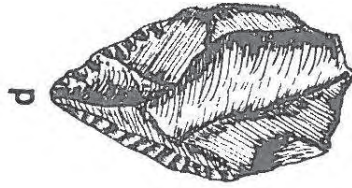
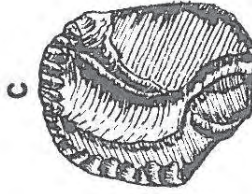
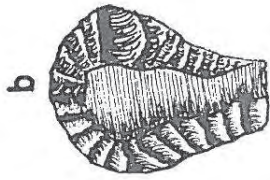
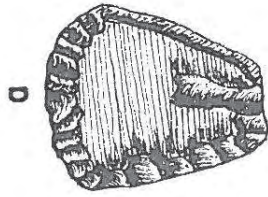
Inches



Scale

PLATE 5

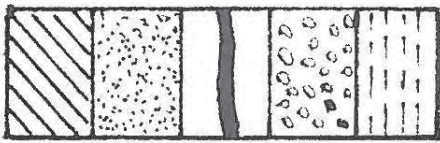
Level 3



Scale

PLATE 6

LEGEND



Dakota Sandstone

Wind-blown Sand

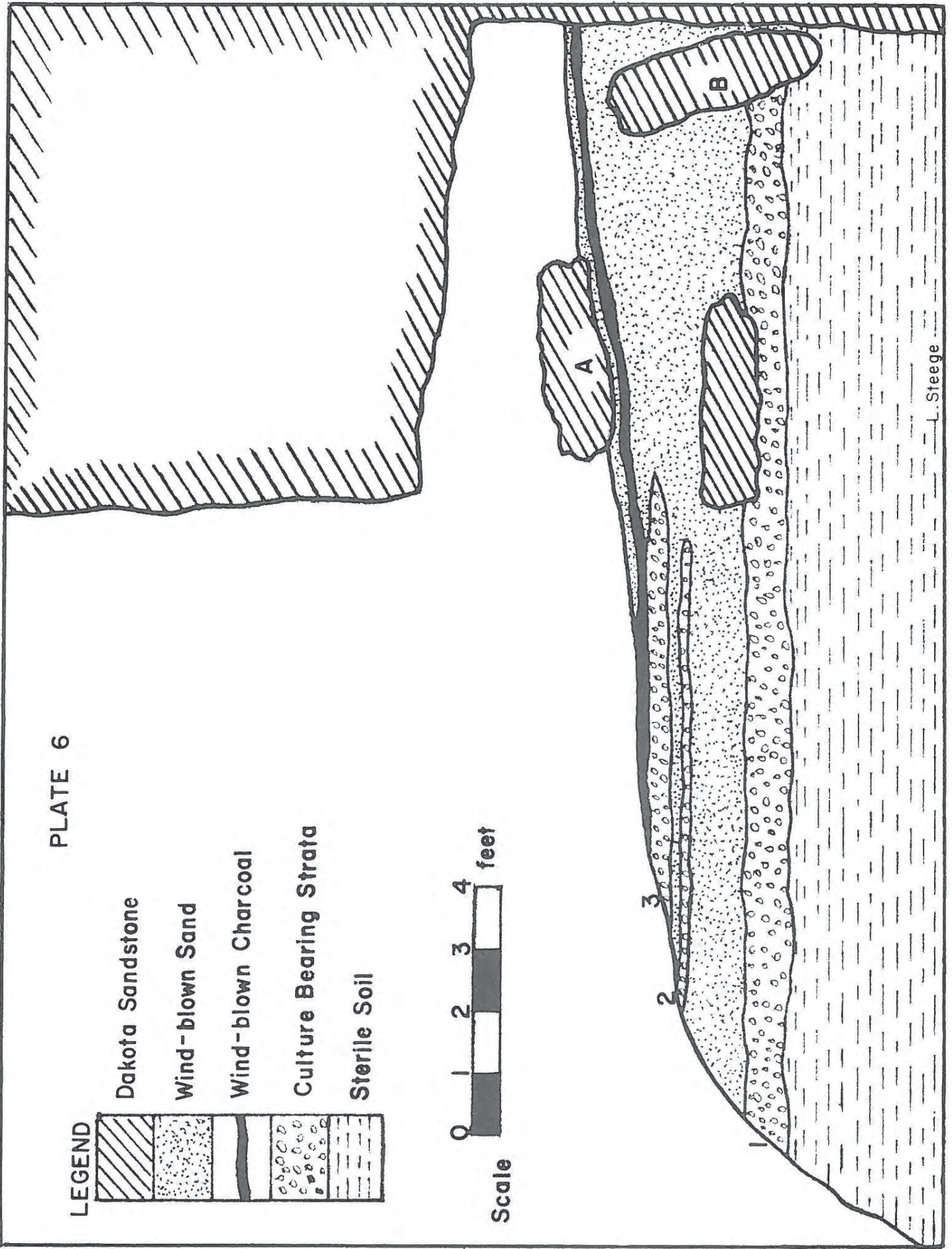
Wind-blown Charcoal

Culture Bearing Strata

Sterile Soil



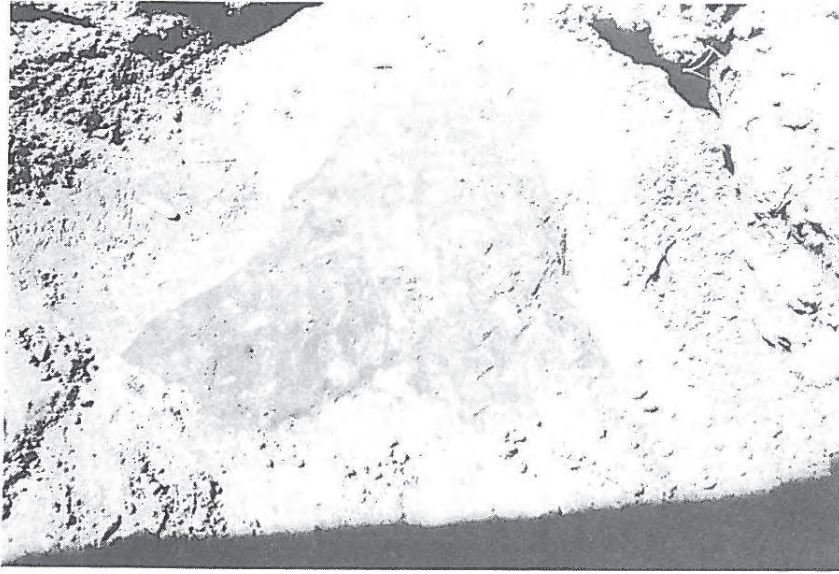
Scale



L. Steege

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Shallow Basin Type Hearth
Level 1 - Lissolo Cave Site



Lissolo Cave Site
Looking East Across the Ravine



Lissolo Cave Site
Looking North After Excavation



Lissolo Cave Site
Looking North Showing the Bench,
Vertical Faces of Dakota Sandstone,
and the Cave.

BOOK REVIEW

A SURVEY OF SOME RECENT TRENDS IN PHYSICAL ANTHROPOLOGY

by
David S. Baskett

The publication of The Origin of the Races by Carleton Coon (Alfred Knopf, New York) curator of ethnology and professor of anthropology at the University Museum in Philadelphia has evoked a storm of intense although subdued controversy.

Though he is not universally revered by the professionals, Coon has a large and dedicated following among well educated laymen in the field of anthropology. His previous Seven Caves (Alfred Knopf, New York, 1957) was particularly well-received. He writes in a clear, distinct, and scholarly style which is never dull or tedious. He painstakingly chronicles the evidence pertinent to his theme, patiently develops his arguments, and carefully propounds his comprehensive thesis.

Professor Coon believes, in essence, that the differentiation of man into the major geographical races took place prior to the emergence of modern man, and that these subspecies of our predecessor, *Homo erectus*, each crossed the "critical threshold" to become *Homo sapiens* independently of one another and while maintaining their identity as separate races. He postulates that it is absurd to pretend that the living races of modern man could have become so widely differentiated ethnically and linguistically in the comparatively short time since the emergence of *Homo sapiens*.

Coon avers that there is an inherent stability and continuing state of equilibrium maintained in each race which minimizes the effect of the substantial gene exchanges known to have taken place among the races throughout the ages--- exchanges which would have been sufficient to have produced an homogenous human race by this time if it weren't for the operation of the genetic retarding mechanisms tending to perpetuate those characteristics which have been demonstrated to be beneficial to each geographical race in its adaptation to its environment.

In speaking of racial characteristics, the modern ethnologists---Theodosius Dobzhansky, Stanley Garn, Frederick Hulse, Gabriel Lasker, and others as well as Carleton Coon---emphasize that the pronounced visible characteristics such as skin color, type and distribution of hair, and the familiar anthropometric measurements are merely elements of the newer more complete classification criteria. Now included are the chemical characteristics of blood and other body components, degree of endocrine activity, mechanical details of the nervous system, and even psychological traits such as adaptability to stress and crowding. Coon finds that biochemistry divides the human species into exactly the same races which have been recognized previously on the basis of other criteria.

Professor Coon, while stressing the very real and pronounced differences which demarcate the various races, is quite emphatic in imputing no innate superiority to any group. He points out that all races have included recent primitive

populations of food gatherers and hunters which had progressed little, if at all, in several thousand years. Some of the most backward of these groups belong to the Caucasoid and Mongoloid subspecies.

Some criticisms of Coon's thesis have been reasoned and others merely furious. The more scholarly of the adverse responses have been centered largely on the allegation that the body of evidence is not sufficiently comprehensive to warrant the assumptions on which Coon's hypothesis is based. Dr. William Mulloy, Professor of Anthropology at the University of Wyoming, offers as a comment, "Carleton Coon takes fragmentary evidence and assumes that these fragments represent the centers of several discrete ranges of variation. It is at least equally likely that this fragmentary evidence represents several points on a single broad range of variation."

Frederick S. Hulse of the University of Arizona has written a physical anthropology text The Human Species, recently published by Randon House. An extract of a significant portion of this book by the author appeared as an article in American Anthropologist, V 64 No. 5 Part 1, Oct. 1962, under the title, "Race as an Evolutionary Episode". Professor Hulse acknowledges that early skeletons from Europe and other places appear to bear a significant resemblance to present-day inhabitants of those regions, but he maintains that there is a sufficient difference between early and modern skeletal material in the various areas to justify the commonly held belief that racial diversity postdates the appearance of Homo sapiens. He contends that there is not sufficient diversity among the various modern races to support the conclusion that the differentiation of these groups preceded the appearance of Homo sapiens.

Despite the lack of agreement between Coon and Hulse concerning the antiquity of present-day human races as distinct entities, it properly may be inferred that on several significant matters the two are more in harmony with each other than they are with some others in the field. Both regard the division of modern man into geographical races as a valid method of classification. Hulse considers a system of racial classification to be sound if three-fourths of the individuals in adjacent sub-species are unequivocally determinable.

Apparently Hulse regards recent agitation for elimination of race as a modern human taxonomic category as being ill-founded and highly contrived. In a gentlemanly fashion he chides Ashley Montagu, a formerly active anthropologist who has been described recently as a social philosopher. He credits Montagu with currently denying the existence of races within Homo sapiens and proceeds to twit him for having advocated a generic---two forks up the branch--- distinction between ancient Chinese and Javanese merely on the basis of a dental gap present in one and absent in the other.

On the basis of presently available evidence Hulse thinks it likely that mankind was also divided into geographical races at the time of Paleolithic man. Here, in effect, he again concurs with Coon, but he fails to find the direct vertical linkage between the Paleolithic races and their modern counterparts which is discerned by Coon.

Both Hulse and Coon have abandoned the traditional form of the phylogenetic tree tracing the ancestry of the human family--- the tree which has numerous

dead twigs, but from which are missing critical portions of some of the larger branches. Attempting to plot the various skeletal remains of now extinct species and genera on the phylogenetic tree has made it appear that ancient skeletal material almost entirely represents far-removed childless cousins with a noticeable lack of evidence concerning our direct ancestors.

Hulse replaces the tree with a phylogenetic trellis in which the lines of descent follow the pattern of intertwining vines. Coon represents the lines of human descent with parallel vertically descending branches connecting the sub-specific groups in successive species. In general arrangement his pattern exhibits some similarity to Hulse's scheme, the principal difference between the two is in the application of the emphasis. Coon acknowledges that substantial genetic exchanges have taken place among the various sub-species through the ages, but he regards the parallel lines as being the most important.

On April 4, 1964, in Washington, D. C. and London, England, Dr. L. S. B. Leakey announced the discovery in Olduvai Gorge, Tanganyika, of what he considers to be the skeletal remains of a previously unknown human species, which was a direct, though far-removed ancestor of *Homo sapiens*, and which he has designated as *Homo habilis*.

Dr. Leakey's article on the new species, written in collaboration with Prof. P. V. Tobias and Dr. J. R. Napier, appeared in Nature (published in England) April 4, 1964 along with two supporting articles. The press reports circulated in the U.S. at the time of Leakey's announcement carried the comment that the new find might upset basic anthropological theories and could necessitate the rewriting of texts on physical anthropology. This statement apparently refers to the belief that all manlike fossils were ancestors of man. In the last several decades nearly all ethnologists have been very reluctant about placing proto-man fossils directly in the ancestral line and have been designating most of them as dead branches on one side or another of the main trunk of the human family tree.

General acceptance of Leakey's hypothesis by ethnological specialists will await the eventual publication of his fully documented report. It does appear that *Homo habilis* fills a gap in the line of man's ancestry, but as of yet, no particular violence seems to have been done to any of the more modern theories of human evolution.

To summarize, we may say that the following are among the major discernible trends in the field of physical anthropology:

1. There is a fairly general acceptance of the classification of *Homo sapiens* into various geographical races, despite the efforts of some politically-oriented sociologists to the contrary. A few ethnologists would prefer an alternate term to describe the sub-specific categories, although there has been no universal assent to the use of any particular substitute designation.
2. The acceptance of the modern human races as distinct taxonomic entities does not carry with it any idea of superiority or inferiority of any of the individual races.

3. The use of the classical phylogenetic tree as applied to the human family is being abandoned. Patterns with multiple lines of concurrent descent and with varying degrees of lateral and diagonal intertwining are being proposed.
4. There is general acknowledgement of substantial genetic exchange among the various subspecies throughout the ages, but there is not full agreement on the extent to which this exchange has significantly affected the genetic composition of these groups.
5. There is a scarcity of evidence concerning direct ancestors of modern man among the skeletal remains of ancient proto-men. Possibly this situation will be corrected through (a) re-evaluation of existing fossils, (b) tying some of the non-direct forebearers into the family tree in some sort of lattice arrangement, and (c) further discoveries of gap-filling skeletal material.
6. There is a pronounced emphasis on the use of various biochemical, psychological, and neural criteria in ethnological research and classification.

#

BOOK REVIEW

by

Dorothy D. Goodwin

ARCHAEOLOGY, Edited by Samuel Rapport & Helen Wright, New York University Library of Science, Washington Square Press, 1964, 367 pages, 36 Illus., 60¢.

"ARCHAEOLOGY is a brilliant anthology of essays and other writings by the great archaeologists of the past and present. Set against the historical background of the sudden growth of this "new" science are glimpses into some of its most dramatic discoveries: the Dead Sea Scrolls, Easter Island, the Walls of Jericho, the Tomb of Tut-Ankh-Amen, the Rosetta Stone, and many others. Limitless in its scope and timeless in its appeal, ARCHAEOLOGY will capture the imagination of every reader. The New York University Library of Science is a multi-volume series designed for the general reader and spanning the whole range of the natural and physical sciences." ARCHAEOLOGY is one of the first 4 volumes available.

These statements from the covers of this fascinating book are completely accurate. It is recommended without reservation for everyone interested in archaeology.

THE CODY COMPLEX

BY

GEORGE A. AGOGINO

In the spring of 1926 bison bones were found along the bank of Dead Horse Creek, Union County, near the town of Folsom, New Mexico. These bones were brought to the attention of Fred J. Howarth and Carl Schwachheim of Raton, New Mexico. They in turn sent samples of the skeletal remains to the Colorado Museum of Natural History. The bones were identified as belonging to the straight-horned extinct *Bison antiquus*. This variety is believed to have died out at the close of the last glacier period.

In April of 1926, Harold J. Cook and Jesse Dade Figgins visited the site to prepare the area for eventual excavation. Early in the excavation of the bison remains, a point was discovered. Unfortunately, once again the artifact was not recovered in situ. The base of the point was missing but in general typology it was closely similar to points found at Lone Wolf Creek (Wormington, 1957). Towards the close of the digging season a second point was found, again after it had fallen from its original location. It was almost identical to the first artifact and like the original lacked the base. However in this case the missing base was located still in situ adjacent to one of the ribs of the long dead animal.

In three years research at Folsom, New Mexico, nineteen Folsom points were found closely associated with the remains of twenty-three *Bison antiquus*, and the antiquity of the Paleo-Indian was finally firmly established. Now, long neglected glacial strata was for the first time carefully examined. Archeologists looked for additional Early Man sites wherever man, wind, or weather had scarred the surface of the land, exposing the glacial earth levels to the human eye. Within a decade of the Folsom, New Mexico discovery, Paleo-Indian sites were found from Alaska to Patagonia and from coast to coast. These sites had been exposed to the eye of man for decades, but they were only found AFTER man was convinced that Ice Age Indians actually existed... Again it shows that man must believe before he looks, and must look before he finds anything.

Four classic hunting point types appear to be associated with cultural horizons dating over 8500 B.C. Besides Folsom, dated by Haynes and Agogino (1960) at 8820 B.C. (10,780 + --375 B.P.) we have its typological prototype, the Clovis point, and the as yet undated but equally old Sandia types. The most recent addition to this group is the Hell Gap point (Agogino, 1961) dated at 8890 B. C. (10,850 + --550 B. P.) first found in situ in eastern Wyoming.

Perhaps the finest flint knapping in the New World belongs to the people that were responsible for the Cody Complex artifacts, shaped by the hand of man over 7000 years ago. The Cody Complex, named after the Type Site located near Cody, Wyoming, consists of three diagnostic artifacts, the Eden point, the Scottsbluff point and the unique Cody knife. This complex, or at least units of this complex, have been found from Canada to Mexico and from the High Plains eastward to the Great Lakes region.

In 1932 C. Bertrand Schultz and E. H. Barbour excavated a site near Scottsbluff, Nebraska.¹ Exposed gravels had revealed bison bones. They appeared to be of an extinct type. (*Bison occidentalis*), the direct ancestor of the modern Bison type that roamed the Plains in great numbers during the middle of the last century.² Associated with the remains were eight artifacts including an end scraper and three modified flakes without diagnostic value. Four points were also found in association with the bison bones. One lacked the base section and cannot be identified, the other three were sufficiently complete for classification. One of these points can be classified as a Plainview, the other two are distinct types and are called Scottsbluff projectiles. These Scottsbluff point types are identified by the following characteristics:

Type I - Points with somewhat triangular or parallel-sided blades, small shoulders and broad stems. The flaking is usually of the transverse parallel type but it may be more irregular. The cross-section is a thick oval. The stem edges are usually ground. The range in length is from two or five inches. Most specimens are between three and four inches long about one inch wide. Many of those that are less than three inches long compare with the longer specimens in breadth and may represent points that were re-worked after the tips have been broken.

Type II - Points that resemble Type I but that have wider triangular blades, are thin and lenticular in cross-section, and have more clearly defined shoulders.³

Medicine River Dam is located near Cambridge, Nebraska. Before the valley behind the dam was flooded in 1950, several interesting Early Man sites were excavated by the University of Nebraska State Museum. One of these was the Lime Creek Site, named for its location, a tributary of the Medicine River. From 1947 to the time of flooding in 1950 extensive excavation were carried out. One complete and four fragmentary points were found. Two of these projectiles could be identified as to type. One is a good example of a Scottsbluff I type while the other resembles a Milnesand projectile without the characteristic basal grinding.⁴ The MacHaffle Site near Helena,

¹E. H. Barbour and C. Bertrand Schultz. "The Scottsbluff Bison Quarry and its Artifacts," Nebraska State Museum Bulletin, XXXIV, Vol. 1, (1932), pp. 283-286.

²Arthur J. Jelinek, "Pleistocene Faunas and Early Man," Papers of the Michigan Academy of Science, Arts and Letters, Vol. XLII, (Publisher not given, 1957), pp. 230-231.

³Wormington, Early Man....., 267.

⁴Ibid., 120.

Montana, yielded Scottsbluff points that clearly were in a more recent strata than Folsom points found at the same site. Folsom points underlying Scottsbluff have also been reported from the San Jon and Blackwater Draw sites of Eastern New Mexico.⁵ Many Scottsbluff points have been found on the surface. They have been reported from Texas, Louisiana, Arkansas and the Great Lakes area as well as the entire Plains area. Specimens have been picked up on the surface of western Canada and one example that could fit this category was found in Alaska.⁶

The Eden point is very often associated with the Scottsbluff specimens in many sites. However their range is more limited than that of the Scottsbluff as they are found only in the High Plains and the areas to the North. Oscar Lewis found one while doing reconnaissance research in the construction of the Alaskan Highway, and Frank C. Hibben found an Eden point in the frozen muck near Fairbanks, Alaska.⁷

Wormington's description of Eden points is as follows:

Points that resemble the Scottsbluff types, but which are narrower relative to their length. The insets that produce the stems are very slight; in some cases the apparent stemming may be only the result of pronounced basal grinding. Most Eden points are characterized by collateral flaking and have pronounced median ridges and a diamond-shaped cross-section. In rare cases the flaking is of the transverse parallel type and the median ridges are less clearly marked. Those found in the Plains area of the United States are usually three to four and a half inches long and one half to three quarters of an inch wide. Eden points of similar size occur in the Prairie Provinces of western Canada, but some specimens have been found there that are as little as two inches long and five sixteenths of an inch wide.⁸

Eden points were first found in Yuma county blowouts by E. B. Renaud. These points were collected in the early 1930's and with a wide variety of apparently unrelated points were grouped under the single category "Yuma" points. It was not until O. M. Finley found a type site near Eden, Wyoming, in 1939 that Eden points were found in situ.⁹ The first extensive excavations began in 1940 under the direction of Linton Satterthwaite of the University Museum

⁵Richard G. Forbis and John D. Sperry, "An Early Man Site in Montana," American Antiquity, VXIII, No. 2, (October, 1952), p. 131.

⁶Wormington, Ancient Man....., 123-124.

⁷Ibid., 124.

⁸Ibid., 267.

⁹Moss, Early Man.....10-14.

of the University of Pennsylvania. Scottsbluff I and II types as well as Eden types exhibiting both collateral and transverse chipping were found with the remains of bison. The range and variety of points runs from lancelike Eden projectiles to broader Scottsbluff types and also included a squat unnamed triangular blade that may have been a knife.¹⁰ The bison bones have not been identified. With the points are found scrapers, knives, engraving tools, perforators; as well as choppers, pounders, and rubbing stones. At the present time there is not a detailed description of these artifacts, although the entire lithic industry here is identified as the Cody Complex.¹¹ This unique knife is described by Wormington:

Knives with transverse blades that are usually shouldered on one side, but are sometimes characterized by a parallel-sided base without an inset. There is virtually no published information on this type and it is difficult even to estimate the size, range, but most of the specimens seen by the writer have been two to three inches long.¹²

Nineteen miles south of the town of Otis, Washington County, Colorado lies the Claypool site excavated in 1953 by Herbert Dick of the University of Colorado Museum. Eden and Scottsbluff projectiles as well as Cody knives were found in situ. The combination of Eden and Scottsbluff points in association with Cody knives has long been recognized by Russell A. Johnson of the Little Gem region in southern Alberta. During the 1930's he applied the term Little Gem to the entire complex.¹³ This complex is today known as the Cody Complex from similar associations that were noted at the Horner site in northern Wyoming.

The Bison type from the Horner site located near Cody, Wyoming, has been identified as modern Bison although radiocarbon dates averaging 7000 years in age suggest that the animals may be either an extinct variety or a transitional variety from extinct Bison occidentalis to modern Bison bison. It is at the Horner site where the Cody flaking appears to be of the finest type, perhaps better than at any known Paleo-Indian site in the New World. The artifacts are so well made that the suspicion arises that there may have been religious-magic reasons for such lithic art. Surely the points need not be this well manufactured for utilitarian purposes. Much cruder points could have done the job of killing as easily as these beautifully flaked specimens.

It is clear today that there is a definite cultural affiliation between the individuals who made the Cody knives, Scottsbluff points, and Eden projectiles. On the other hand this association need not always occur as many sites have been found where only one of the above types were

¹⁰Satterthwaite, Stone Artifacts....., 12-17.

¹¹Wormington, Ancient Man....., 127-128.

¹²Ibid., 267.

¹³Ibid., 132-134.

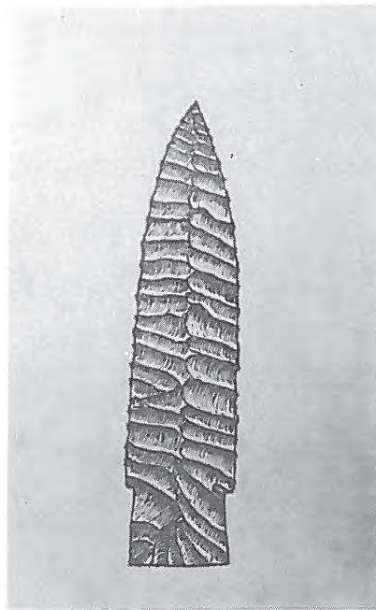
represented. One interesting fact is noted. While Scottsbluff points are often found "in situ" without Eden points, Eden projectiles are never found without Scottsbluff points. This situation has given rise to speculation that Eden projectiles may be a highly specialized type of Scottsbluff point.¹⁴

Thirty five years ago most of us were convinced that the Paleo-Indian was less than five thousand years old. The Folsom discovery doubled this estimated time, and later Sandia, Clovis, and Hell Gap excavations extended the span of time man has lived in the New World even further.

However, nowhere in the cultural history of the Paleo-Indian did lithic chipping reach the high art techniques as exhibited in artifacts of the Cody Complex. The reasons why this lithic art was developed and what eventually happened to the people who manufactured the Cody implements may never be known but each year we find new Paleo-Indian sites and it is eventually hoped that the constant new knowledge unearthed will someday answer most of these questions.



Cody Knife



Eden Point



Scottsbluff Point
Photo by L. Steege

¹⁴Ibid., 136.