ARCHAEOLOGICAL INVESTIGATIONS IN THE
COULEE DAM NATIONAL RECREATION AREA,
SPRING 1968

by
DAVID G. RICE

WASHINGTON STATE UNIVERSITY
LABORATORY OF ANTHROPOLOGY
REPORT OF INVESTIGATIONS NO. 45

Pullman, Washington
1968
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Dear Sir:

I am transmitting herewith a report by David G. Rice entitled "Archaeological Investigations: Coulee Dam National Recreation Area, Spring 1968" as the final report for Contract No. 14-10-4:940-60 between the National Park Service and Washington State University. The report summarizes the results of the program of test excavations in the area of Lake Franklin D. Roosevelt conducted during the spring draw-down of 1968, and makes recommendations for future work.

I would particularly like to call your attention to the recommendations for sites 45ST72 and 45ST95. While these sites are above water level, they are being eroded by wave action. Their situation is such that with excavation and stabilization they might provide the basis for an interpretative program which would be of value to the general public.

Sincerely,

Frank Leonhardy
Staff Archaeologist
Director, River Basin Salvage
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>FORWARD</td>
<td>i</td>
</tr>
<tr>
<td>LIST OF ILLUSTRATIONS AND TABLES</td>
<td>v</td>
</tr>
<tr>
<td>PREFACE</td>
<td>vii</td>
</tr>
<tr>
<td>ACKNOWLEDGMENTS</td>
<td>ix</td>
</tr>
<tr>
<td>INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>SUMMARY OF ACTIVITIES</td>
<td>2</td>
</tr>
<tr>
<td>DESCRIPTIVE ARCHAEOLOGY OF 45L16</td>
<td></td>
</tr>
<tr>
<td>The Artifacts</td>
<td>5</td>
</tr>
<tr>
<td>Discussion</td>
<td>19</td>
</tr>
<tr>
<td>RECOMMENDATIONS</td>
<td>21</td>
</tr>
<tr>
<td>REFERENCES CITED</td>
<td>23</td>
</tr>
<tr>
<td>PLATES</td>
<td>27</td>
</tr>
</tbody>
</table>
FIGURES

Figure 1. Location of archaeological sites investigated in 1968 .......................... x
Figure 2. Schematic view of test excavations at 45L16 ............................. 6
Figure 3. Plan views and profiles of features and level data from 45L16 ............................. 8

PLATES

Plate 1. General view of the Spokane River at low water .......................... 27
Plate 2. The beginning of excavations at 45L16 ............................. 27
Plate 3. View of field operations at 45L16 ............................. 29
Plate 4. View of 45L15 showing the test pits ............................. 29
Plate 5. View of excavations at 45L123 ............................. 31
Plate 6. View of 45ST95 showing the gradual destruction of the site by slumpage of the bank ............................. 31
Plate 7. Artifacts 45L16: Utilized flakes, core scrapers, exhausted cores ............................. 33
Plate 8. Artifacts 45L16: Flake scrapers, spokeshaves, side scrapers ............................. 35
Plate 9. Artifacts 45L16: Gravers, drills, end scrapers ............................. 37
Plate 10. Artifacts 45L16: Projectile points ............................. 39
Plate 11. Artifacts 45L16: Projectile points ............................. 41
Plate 12. Artifacts 45L16: Knives, projectile points ............................. 43
Plate 13. Artifacts 45L16: Spall knives ............................. 45
Plate 15. Artifacts 45L16: Bone, antler, and tooth ............................. 49

TABLES

Table 1. Identification of faunal remains from 45L16 ............................. 7
Table 2. Outline of cultural materials from 45L16 ............................. 9
Archaeological investigations in the Coulee Dam National Recreation Area during the spring draw-down of 1968 were undertaken by staff of the Laboratory of Anthropology, Washington State University, under contract 14-10-4:940-60 with the National Park Service. Field and laboratory work on this project was carried out between 16 February 1968 and 20 May 1968. The primary objectives of this year's project were:

1. To relocate top priority sites recommended in previous surveys.

2. To perform test excavations at selected sites within the limits of time and funds.

3. To make recommendations for future work.
ACKNOWLEDGMENTS

Archaeological investigations in the Coulee Dam National Recreation Area for 1968 were made possible by a contract between Washington State University and the National Park Service. Mr. Frank C. Leonhardt, Staff Archaeologist, Laboratory of Anthropology, Washington State University, served as Principal Investigator.

The university field crew included David G. Rice, Field Director, and Gregory C. Cleveland, Field Assistant. Students who participated in the test excavations include Jim Chatters, Claudia Cleveland, Mike Dixon, Paul and Madge Gleeson, Jason Henderson, Bill McNeil, Caren Ross, Dick Taylor, and John Tokle. The success of the season's work is a tribute to the outstanding efforts of these people.

The field crew extends its thanks to Park Superintendent David A. Richie and to the other National Park Service representatives in the Coulee Dam National Recreation Area for their cooperation and assistance. Special thanks go to Park Naturalist Art Hathaway, Coulee Dam, for keeping in close communication with the field crew, and to Ranger David Schnute, Fort Spokane, for patrolling the sites where our work was in progress.

Dr. Roderick Sprague, Department of Anthropology, University of Idaho, Moscow, provided the field crew with maps and photographs of Lake Roosevelt and suggested many useful contacts.

Acknowledgments for technical assistance in the preparation of this report go to Mr. Barney S. Flora, Richland, Washington, for drafting figures 1-3, to Mr. Carl E. Gustafson, Laboratory of Anthropology, for identifying the faunal remains obtained from the test excavations at 45L16, and to Mr. Thomas E. Roll, Laboratory of Anthropology, for taking the photographs for plates 7-15.

Finally, a sincere acknowledgment is extended to Mr. Paul J. F. Schumacher, Chief of Archeological Research, Western Region, National Park Service, San Francisco Service Center, for his interest and support in this project.
Note: Archeological sites removed from electronic edition of this map in an effort to protect sensitive cultural resources.

LEGEND

- ▲ CAMP SITE
- ▶▶▶▶ HOUSEPIT SITE
- ⭐️ BURIAL SITE
- • HISTORICAL SITE
- ⚑ NATIONAL FOREST BOUNDARY

Figure 1. Location of archaeological sites investigated in 1968.
INTRODUCTION

This is the third in a series of archaeological research projects in the Coulee Dam National Recreation Area prompted by annual reservoir draw-downs to facilitate expansion of the power house complex at Grand Coulee Dam. This area includes Franklin D. Roosevelt Lake, which is the reservoir behind Grand Coulee Dam, and the narrow strip of shoreline which confines the lake (see Figure 1). The recent low water levels between December and June have been sufficient to expose archaeological sites which have been submerged since Lake Roosevelt was formed in 1940-41. The primary objective of the first two studies (Larrabee and Kardas 1966; Chance 1967) was reconnaissance and evaluation of the archaeological resources of the region. Larrabee and Kardas (1966) reported 34 sites, most of which are situated in the lower end of Lake Roosevelt. Chance (1967) systematically covered the middle and upper stretches of Lake Roosevelt and recorded a total of 122 sites during the spring of 1967. Of the 122 sites reported by Chance (1967) 82 were recommended for test excavation. Of these, 22 were given first priority. The objective of the 1968 project was to relocate these sites and to test as many as possible.

In the last three years certain practical problems in conducting archaeology in the Lake Roosevelt area have become apparent. Because of the time of the draw-down it is difficult to obtain experienced professional personnel who are not involved in academic activities. Second, there is the vexing task of securing even part-time field workers for excavation work during the academic year. Other practical problems which must be considered include frequent inclement weather with freezing temperatures and strong cold winds during late winter and early spring on the upper Columbia. These conditions pose serious limitations on sites suitable for field camps and sources for water. Another logistical problem is finding a reasonably close source for supplies and groceries in an area so sparsely populated. All of these practical problems point to the need for a larger operating budget which would provide for the following bare essentials: a pay-scale to accommodate one or two experienced professional archaeologists on a full-time basis; a commensurately large pay-scale to support field workers on a full-time basis; sufficient funds to rent a house or trailer; more funds for food and supplies; and a larger fund for transportation.

There are a number of problems in upper Columbia archaeology which justify the expenditure required to satisfy these practical problems. Archaeological research has been extremely limited in this area and includes only the work of Collier, Hudson, and Ford (1942), Combes (1965), Larrabee and Kardas (1966), Chance (1967), and this report. Only the work of Collier, Hudson, and Ford (1942) and the present work report on excavations at aboriginal sites in the area. Collier, Hudson, and Ford (1942) report no material which is distinctly early. Many of their sites contained Euro-American trade goods and aboriginal artifacts from other sites correspond very closely with the material culture of the ethnographic peoples of the area. Theoretically, stratified sites containing earlier material must be present in the area, but they remain to be found. Another problem relative to the work of Collier, Hudson, and Ford (1942) is that they concentrated on burial sites rather than habitation sites.

The historic peoples of the upper Columbia region have been the subject of several classic ethnographic studies including Teit (1930), Ray (1932), and
Cline and Others (1938) which have been used by anthropologists to characterize the Plateau as a distinctive culture area (Ray 1939, for instance). These ethnographic works, together with the close proximity of two Indian reservations (Colville and Spokane), afford an excellent opportunity for synthesis with materials from late period archaeological sites, specific studies in material culture, and further examination of the problem of lack of housepits (see Collier, Hudson, and Ford 1942:114-15; Teit 1930: 62, 227; and Ray 1939:132-137). Here, then, are numerous opportunities for a combined program in archaeology and ethnography.

The problem of investigating the cultural affinities of elements found archaeologically in the upper Columbia region is an important one. Linkages with the Southern Plateau, the Western Plateau, the Canadian Plateau, and the Plains all need to be expanded beyond the observations of Collier, Hudson, and Ford (1942:111-13). And basic field work is the only way to implement such studies.

Historic sites are fairly common throughout Lake Roosevelt and notable examples can be found in the Kettle Falls vicinity (see Chance 1967) and at Fort Spokane (Combes 1965). Most of these sites are as yet unworked and require examination. In addition, Larrabee and Kardas (1966:47-50) have pointed out the application of historical literature to some of these sites and areas. These are but a few of the problems which warrant intensive investigation in the upper Columbia region during future draw-downs of Lake Roosevelt.

**SUMMARY OF ACTIVITIES**

Work began February 16, 1968, when the field crew met Park Superintendent David A. Richie and his staff at Coulee Dam. The scope of our investigations and our proposed itinerary for the examination of sites are discussed at that time. Of concern to National Park Service personnel was the problem of enforcement of the Federal Antiquities Act. At the request of Park Naturalist Art Hathaway the writer attended a National Park Service training session at Fort Spokane on March 6, 1968, to discuss this problem with the District Rangers. In our discussion it was generally agreed that any digging or scratching beneath the surface for historic or aboriginal artifacts would be strictly forbidden, except by permit. No effective means for controlling surface collecting could be found, however, except that in localities where scientific excavations may be underway surface collecting would not be permitted. The possibility of an educational approach towards archaeology in which interested persons might participate in excavations on an organized basis under professional direction was of some interest to the National Park Service personnel. An arrangement of this sort cannot materialize, however, without an established full-time professional research program.

The first problem facing the field crew during the spring of 1968 was to relocate top priority sites recommended by Chance (1967). In several instances relocation of sites was impossible until late in the season when the water level reached the maximum low. In other cases silting had obscured sites that were fully exposed the previous spring. The first sites exposed by the receding water were situated along the lower course of the Spokane River. For this reason most of our activities were focused in this locality. In April and May low water conditions between Kettle Falls and Northport permitted a
few limited test excavations and surface examinations, but much work remains
to be done there. Following is a summary of sites examined and descriptions
of the nature of the work done. Figure 1 identifies most of the site locations.
More precise locations are given in Chance (1967).

45ST1
Kind of work conducted: Test excavation.
Cultural materials encountered: Firecracked rock, shell, and charcoal
contained in less than 40 cm. of cultural fill.
Artifacts recovered: None.
Remarks: The site has been badly deflated.
Recommendation: No further work is recommended.

45ST21
Kind of work conducted: Test excavation.
Cultural materials encountered: Firecracked rock, some shell and
charcoal contained in 10-25 cm. of cultural fill.
Artifacts recovered: One crude triangular point was found.
Remarks: The larger part of this site has been deflated down to gravel.
In the downstream portion of the site is a small knoll (see Plate 1)
which is reported to have contained close to 100 graves. Chance
(1967:23) reports that the graves have been interred elsewhere.
Recommendation: Further test excavation is warranted.

45ST44
Kind of work conducted: Test excavation.
Cultural materials encountered: Firecracked rock and some shell
contained in 20-30 cm. of cultural fill.
Artifacts recovered: None.
Remarks: The site is heavily deflated and badly disturbed by relic
collectors.
Recommendation: Deep test probes should be made in search of earlier
components.

45ST72
Kind of work conducted: Test excavation.
Cultural materials encountered: Firecracked rock, charcoal, and
quartzite flakes contained in housepit fill at least 75 cm. deep.
Artifacts encountered: One scraper and a cobble tool.
Remarks: There are a minimum of 14 housepits, 4-6 meters in diameter
and 1-2 meters in depth, at this site. Flakes and firecracked rock
are visible on the surface. The site is not disturbed. The site is
located on the edge of the reservoir, but is subject to erosion due
to slumage of the bank.
Recommendation: Full-scale excavation is warranted.

45ST95
Kind of work conducted: Test excavation.
Cultural materials encountered: Firecracked rock and charcoal con­
tained in 15-20 cm. of cultural fill.
Artifacts recovered: Quartzite spall knives.
Remarks: The site lies above high water, but is subject to erosion due
to slumage of the bank (see Plate 6).
Recommendation: Full scale excavation is warranted.
45FE16
Kind of work conducted: Surface collection.
Cultural materials encountered: Firecracked rock and argillite flakes.
Artifacts recovered: Quartzite spall knives.
Remarks: The site has been severely deflated and badly disturbed by relic collectors.
Recommendation: Deep test probes should be made in search of earlier components.

45FE34
Kind of work conducted: Test excavation.
Cultural materials encountered: "Cairn burials."
Artifacts recovered: None.
Remarks: The cairns appear to be superficial and contain no evidence of burials.
Recommendation: No further work is warranted.

45FE43
Kind of work conducted: Test excavation.
Cultural materials encountered: Firecracked rock, argillite and quartzite flakes beneath 10-15 cm. of silt overburden.
Artifacts recovered: None.
Remarks: The site has been heavily silted over since Chance (1967:33) reported the site. The silt overburden and considerable moisture made screening impossible at the time the site was tested.
Recommendation: Further test excavation is warranted.

45L16
Kind of work conducted: Test excavation.
Cultural materials encountered: Firecracked rock, charcoal, shell, flakes, and cache pits contained in 130 cm. of cultural fill.
Artifacts recovered: 1212 historic artifacts were recovered from the base of the flood silts from the reservoir. 317 aboriginal artifacts obtained from the test excavations.
Remarks: The artifacts and features from this site are described in more detail in the following section.
Recommendation: Full-scale excavation is warranted. This site has been scheduled for excavation during the 1969 project.

45L123
Kind of work conducted: Test excavation.
Cultural materials encountered: None.
Artifacts recovered: None.
Remarks: The site has been completely deflated and deeply eroded by the Spokane River (see Plate 5).
Recommendation: No further work is warranted.

45L125
Kind of work conducted: Test excavation.
Cultural materials encountered: Firecracked rock and flakes contained in 40-50 cm. of cultural fill.
Artifacts recovered: One corner-notched point, two quartzite spall knives, and five flake scrapers.
Remarks: The site is badly deflated, but contains fill in the downstream portion of the site.
Recommendation: Further test excavation is warranted.
DESCRIPTIVE ARCHAEOLOGY OF 45L16

45L16 is an open campsite located on an elevated point of land just east of the confluence of a small tributary stream with the Spokane River (see Plate 1, item a, Plate 2 and Figure 2). Between March 15 and April 11, 1968 three two-by-three meter test pits, were excavated to a depth of 130 cm. (Plates 3 and 4). The results of those excavations are reported here.

Field and Laboratory Methodology

The excavation procedure was to strip off the thin layer of flood silts down to the contact with the aboriginal midden. Since there was no well-defined stratigraphy beneath the flood silts arbitrary ten-centimeter levels were removed by trowel and then screened (see Plate 3). All associated materials, including chipping detritus, shell, bone, and charcoal, were kept in separate bags according to level. Artifacts were kept according to level, but in situ finds were recorded as such. Field notebooks were used to record entries relating to features, soil changes, and unusual artifacts. A description of the features and the general stratigraphy encountered may be found in Figure 3.

All artifacts and associated materials were catalogued and processed at the Laboratory of Anthropology, Washington State University. Freshwater mussel shell (Margaritifera) was weighed in grams according to level. The level frequency of shell is reported in Figure 3 against the background of features and general stratigraphy described there. The total weight of shell recovered from the three test pits equals 14,876 gm. One average sized mussel shell (both valves of a shell 9 cm. long by 4 cm. wide) weights 26.5 gm. Therefore, the minimal number of mussels represented in the test sample not considering decomposed shell or loss due to attrition, is 561 individuals.

Chipping detritus was recorded according to the number of flakes per level. The level frequency data for chipping detritus is also shown in Figure 3. The total number of flakes from the three test pits is 1991, including 1968 cryptocrystalline silica flakes, and 23 obsidian flakes. Most of the cryptocrystalline silica flakes are of petrified wood. The high proportion of petrified wood is of interest because none is reported by Collier, Hudson and Ford (1942) and very little is reported by Grabert (1968).

Diagnostic faunal remains from the test excavations were recorded according to level and are identified in Table 1. The listing is notable because two animals, antelope and rabbit, are not mentioned in the list prepared by Collier, Hudson, and Ford (1942:126). Snake and turtle are also previously unreported.

The Artifacts

The following section provides a description of the artifacts excavated at 45L16. The artifacts are first grouped into five major classes including historic artifacts, chipped stone artifacts, pecked and ground stone artifacts, mineral pigment artifacts, and bone, antler, and tooth artifacts. Then they are categorized within these groupings as knives, gravers, drills, etc. Since this work is preliminary, the descriptive terms which apply to the artifact
Figure 2. Schematic view of test excavations at 45L16.

Note: Archeological sites removed from electronic edition of this map in an effort to protect sensitive cultural resources.
<table>
<thead>
<tr>
<th>Square</th>
<th>Level</th>
<th>Bone</th>
<th>Identification</th>
</tr>
</thead>
<tbody>
<tr>
<td>TPI</td>
<td>0-10 cm.</td>
<td>distal end fibula</td>
<td>elk (Cervus)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>scapula</td>
<td>deer (Odocoileus)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>astragalus</td>
<td>elk (Cervus)</td>
</tr>
<tr>
<td></td>
<td>10-20 cm.</td>
<td>fish vertebra</td>
<td>salmonoid</td>
</tr>
<tr>
<td></td>
<td>50-60 cm.</td>
<td>2 fish vertebrae</td>
<td>?</td>
</tr>
<tr>
<td></td>
<td>60-70 cm.</td>
<td>scapula</td>
<td>elk (Cervus)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>radius</td>
<td>deer (Odocoileus)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>maxilla</td>
<td>deer (Odocoileus)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>metapodial condyle</td>
<td>deer (Odocoileus) or sheep (Ovis)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 fish vertebrae</td>
<td>salmonoid</td>
</tr>
<tr>
<td></td>
<td></td>
<td>fish vertebra</td>
<td>?</td>
</tr>
<tr>
<td></td>
<td>70-80 cm.</td>
<td>astragalus</td>
<td>deer (Odocoileus)</td>
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<td></td>
<td>7 fish vertebrae</td>
<td>salmonoid</td>
</tr>
<tr>
<td></td>
<td></td>
<td>fish vertebra</td>
<td>?</td>
</tr>
<tr>
<td></td>
<td>80-90 cm.</td>
<td>astragalus</td>
<td>deer (Odocoileus)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 fish vertebrae</td>
<td>salmonoid</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 fish vertebrae</td>
<td>?</td>
</tr>
<tr>
<td></td>
<td>90-100 cm.</td>
<td>distal end radius</td>
<td>deer (Odocoileus)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>mandible</td>
<td>deer (Odocoileus)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6 fish vertebrae</td>
<td>salmonoid</td>
</tr>
<tr>
<td></td>
<td>100-110 cm.</td>
<td>incisor</td>
<td>beaver (Castor)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>metapodial condyle</td>
<td>deer (Odocoileus)</td>
</tr>
<tr>
<td></td>
<td>110-120 cm.</td>
<td>2 fish vertebrae</td>
<td>salmonoid</td>
</tr>
<tr>
<td></td>
<td>120-130 cm.</td>
<td>4 fish vertebrae</td>
<td>salmonoid</td>
</tr>
<tr>
<td>TIA</td>
<td>20-30 cm.</td>
<td>turtle shell</td>
<td>turtle</td>
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<tr>
<td></td>
<td></td>
<td>incisor (artifact)</td>
<td>deer ? (Odocoileus)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>phalanx</td>
<td>deer (Odocoileus)</td>
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<tr>
<td></td>
<td></td>
<td>astragalus</td>
<td>antelope (Antilopaca)</td>
</tr>
<tr>
<td></td>
<td>30-40 cm.</td>
<td>2 fish vertebrae</td>
<td>salmonoid</td>
</tr>
<tr>
<td></td>
<td>40-50 cm.</td>
<td>fish vertebra</td>
<td>?</td>
</tr>
<tr>
<td></td>
<td>80-90 cm.</td>
<td>2 fish vertebrae</td>
<td>?</td>
</tr>
<tr>
<td></td>
<td>90-100 cm.</td>
<td>fish vertebra</td>
<td>salmonoid</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 fish vertebrae</td>
<td>?</td>
</tr>
<tr>
<td>T2A</td>
<td>10-20 cm.</td>
<td>20 vertebrae</td>
<td>snake</td>
</tr>
<tr>
<td></td>
<td></td>
<td>fish vertebra</td>
<td>?</td>
</tr>
<tr>
<td></td>
<td>20-30 cm.</td>
<td>astragalus</td>
<td>deer (Odocoileus)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>fish vertebra</td>
<td>?</td>
</tr>
<tr>
<td></td>
<td>30-40 cm.</td>
<td>fish vertebra</td>
<td>?</td>
</tr>
<tr>
<td></td>
<td>50-60 cm.</td>
<td>scapula</td>
<td>deer (Odocoileus)</td>
</tr>
<tr>
<td></td>
<td>60-70 cm.</td>
<td>fish vertebra</td>
<td>?</td>
</tr>
<tr>
<td></td>
<td>80-90 cm.</td>
<td>fish vertebra</td>
<td>?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>incisor</td>
<td>beaver (Castor)</td>
</tr>
<tr>
<td></td>
<td>90-100 cm.</td>
<td>Pubis</td>
<td>antelope (Antilopaca)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>distal end femur</td>
<td>rabbit (Sylvilagus)</td>
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<tr>
<td></td>
<td></td>
<td>2 fish vertebrae</td>
<td>?</td>
</tr>
<tr>
<td></td>
<td>100-125 cm.</td>
<td>fish vertebra</td>
<td>salmonoid</td>
</tr>
<tr>
<td></td>
<td></td>
<td>atlas vertebra</td>
<td>antelope (Antilopaca)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>atlas vertebra</td>
<td>deer (Odocoileus)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>humerus</td>
<td>badger (Taxidea)</td>
</tr>
<tr>
<td></td>
<td>125-... cm.</td>
<td>fish vertebra</td>
<td>salmonoid</td>
</tr>
</tbody>
</table>

Table 1. Identification of faunal remains from 45L16. (Identifications by Carl E. Gustafson).
Figure 3. Plan views and profiles of features and level data from 45L16.
categories are not defined. The various categories of artifacts and their relative numbers are outlined in Table 2. In the following "cs." means cryptocrystalline silica, and "pet. wood" means petrified wood. Measurements are based on complete specimens only. "S" refers to the number of specimens used in obtaining measurements. Provenience is by square and level in centimeters. Where more than one specimen occurred in a level the number is included in parenthesis after the level.

HISTORIC ARTIFACTS

Test excavations yielded 1212 items of Euro-American manufacture. Most of these were found at the base of the flood silts which overlie the aboriginal deposits, but intrusions by post holes and rodents have displaced some of these items to a depth of 50 or 60 cm. However, the majority of specimens are limited to the top 20 cm. in all three test pits. The major categories of historic artifacts represented include 886 iron nails ranging in size from spikes to shingle nails, 267 broken bottle and plate glass fragments, 35 crckery fragments, nine iron staples, three iron chain links, three iron stove fragments, two bolts, two bottle caps, 2 horseshoes, one plain copper military button, one white glass button with four holes, and one carbon pencil.

Table 2. Cultural Materials from 45L16.
CHIPPED STONE ARTIFACTS

Two hundred eighty four chipped stone artifacts were recovered. These include exhausted cores, core scrapers, utilized flakes, utilized blade-like flakes, flake scrapers, spokeshaves, side scrapers, drills, gravers, end scrapers, projectile points, knives, sinkers, and choppers.

Exhausted Cores (Plate 7, h-j)
Number: 15
Material: 9 cs., 5 pet. wood, 1 quartzite
Measurements in cm.: s=14  L  W  Th
Min.   1.5  1.4  0.7
Mean   3.1  2.6  1.3
Max.   6.8  5.2  2.7
Provenience: TPI: 0-10, 10-20(2), 20-30(2), 50-60, 60-70, 70
TIA: 80-90
T2A: 20-30, 30-40, 50-60, 60-70, 90-100, 100-125

Core Scrapers (Plate 7, f & g)
Number: 2
Material: 2 cs.
Measurements in cm.: s=2  L  W  Th
Min.   3.0  2.8  1.4
Mean   2.5  2.1  1.2
Provenience: T2A: 90-100(2)

Utilized Flakes (Plate 7, a-e)
Number: 32
Material: 18 cs., 14 pet. wood
Measurements in cm.: s=28  L  W  Th
Min.   1.0  1.1  0.2
Mean   2.6  1.8  0.6
Max.   4.3  2.8  1.2
Provenience: TPI: 0-10, 50-60, 60-70(3)
TIA: 60-70(2), 80-90(4), 125
T2A: 0-10, 10-20, 20-30, 30-40(2), 40-50(2), 50-60(3), 60-70, 70-80(3), 80-90(6)

Utilized Blade-like Flakes
Number: 2
Material: 2 cs.
Measurements in cm.: s=2  L  W  Th
Min.   2.1  1.1  0.3
Provenience: TPI: 60-70
TIA: 30-40

Flake Scrapers (Plate 8, a-e)
Number: 43
Material: 24 pet. wood, 17 cs., 1 quartzite, 1 jasper
Measurements in cm.: s=35  L  W  Th
Min.   1.2  1.1  0.2
Mean   2.9  1.9  0.5
Max.   5.2  3.2  0.9
Provenience: TPI: 0=10, 20-30, 60-70, 80, 80-90, 97
TIA: 10-20, 20-30, 30-40, 40-50(3), 50-60(2), 60-70,
70-80, 80-90(2), 90-100(4), 105, 110
T2A: 0-10(2), 10-20, 20-30(2), 40-50(2), 60-70,
70-80(3), 80-90(2), 90-100(5), 100-125

Spokeshaves (Plate 8, g-j)
Number: 5
Material: 3 cs., 2 pet. wood
Measurements in cm.: s=5
<table>
<thead>
<tr>
<th></th>
<th>L</th>
<th>W</th>
<th>Th</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min.</td>
<td>2.0</td>
<td>1.4</td>
<td>0.3</td>
</tr>
<tr>
<td>Mean</td>
<td>2.9</td>
<td>2.4</td>
<td>0.7</td>
</tr>
<tr>
<td>Max.</td>
<td>4.3</td>
<td>3.5</td>
<td>1.7</td>
</tr>
</tbody>
</table>

Provenience: TPI: 20-30, 50-60, 80-90
TIA: 70-80
T2A: 90-100

Side Scrapers (Plate 8, k-o)
Number: 5
Material: 2 cs., 3 pet. wood
Measurements in cm.: s=5
<table>
<thead>
<tr>
<th></th>
<th>L</th>
<th>W</th>
<th>Th</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min.</td>
<td>2.8</td>
<td>1.0</td>
<td>0.3</td>
</tr>
<tr>
<td>Mean</td>
<td>3.3</td>
<td>1.5</td>
<td>0.4</td>
</tr>
<tr>
<td>Max.</td>
<td>4.1</td>
<td>2.2</td>
<td>0.8</td>
</tr>
</tbody>
</table>

Provenience: TIA: 40-50, 43, 60-70, 90-100
T2A: 20-30
Remarks: Some workers might consider these to be uniface drills.

Drills (Plate 9, g & h)
Number: 2
Material: 1 cs., 1 pet. wood
Measurements in cm.: s=2
<table>
<thead>
<tr>
<th></th>
<th>L</th>
<th>W</th>
<th>Th</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3.7</td>
<td>2.0</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>3.2</td>
<td>2.2</td>
<td>0.6</td>
</tr>
</tbody>
</table>

Provenience: T2A: 75, 86

Gravers (Plate 9, a-f)
Number: 8
Material: 6 cs., 1 pet. wood, 1 jasper
Measurements in cm.: s=7
<table>
<thead>
<tr>
<th></th>
<th>L</th>
<th>W</th>
<th>Th</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min.</td>
<td>3.1</td>
<td>1.3</td>
<td>0.4</td>
</tr>
<tr>
<td>Mean</td>
<td>3.7</td>
<td>1.9</td>
<td>0.7</td>
</tr>
<tr>
<td>Max.</td>
<td>4.8</td>
<td>2.4</td>
<td>0.9</td>
</tr>
</tbody>
</table>

Provenience: TPI: 20-30
TIA: 30-40, 80-90
T2A: 10-20, 40-50, 60-70(2), 126
Remarks: One specimen has a base like a corner-removed point.

End Scrapers (Plate 9, i-l)
Number: 7
Material: 6 cs., 1 pet. wood
Measurements in cm.: s=5
<table>
<thead>
<tr>
<th></th>
<th>L</th>
<th>W</th>
<th>Th</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min.</td>
<td>1.4</td>
<td>1.5</td>
<td>0.3</td>
</tr>
<tr>
<td>Mean</td>
<td>2.3</td>
<td>2.2</td>
<td>0.7</td>
</tr>
<tr>
<td>Max.</td>
<td>3.6</td>
<td>2.7</td>
<td>0.9</td>
</tr>
</tbody>
</table>
Provenience: TPI: 10-20  
TIA: 30-40, 90-100  
T2A: 0-10, 50, 60-70, 125

**Triangular Projectile Points or Preforms (Plate 10, a-g)**

Number: 14  
Material: 6 cs., 7 pet. wood, 1 jasper  
Measurements in cm.: s=6  
<table>
<thead>
<tr>
<th></th>
<th>L</th>
<th>W</th>
<th>Th</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min.</td>
<td>2.4</td>
<td>1.4</td>
<td>0.3</td>
</tr>
<tr>
<td>Mean</td>
<td>2.9</td>
<td>1.9</td>
<td>0.5</td>
</tr>
<tr>
<td>Max.</td>
<td>3.8</td>
<td>2.3</td>
<td>0.8</td>
</tr>
</tbody>
</table>

Provenience: TPI: 67  
TIA: 25, 60-70(3), 70-80  
T2A: 20-30, 30-40(2), 60-70(3), 70-80, 102

Remarks: Basically, these specimens appear to be preforms for notched projectile points. One specimen is notched in one side of the base.

**Corner-Notched Projectile Points (Plate 11, a, c, j-o; and Plate 10, h)**

Number: 16  
Material: 7 cs., 6 pet. wood, 3 jasper  
Measurements in cm.: s=12  
<table>
<thead>
<tr>
<th></th>
<th>L</th>
<th>W</th>
<th>Th</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min.</td>
<td>1.1</td>
<td>0.8</td>
<td>0.3</td>
</tr>
<tr>
<td>Mean</td>
<td>2.3</td>
<td>1.5</td>
<td>0.4</td>
</tr>
<tr>
<td>Max.</td>
<td>3.7</td>
<td>2.1</td>
<td>0.6</td>
</tr>
</tbody>
</table>

Provenience: TPI: 0-10  
TIA: 10-20, 20-30, 90-100  
T2A: 20-30, 30-40, 50-60(3), 60-70(2), 70-80(3), 112, 100-125

Remarks: Two of these specimens have basal notches in the stem.

**Base-Notched Projectile Points (Plate 11, b, d-i)**

Number: 10  
Material: 6 cs., 3 pet. wood, 1 jasper  
Measurements in cm.: s=5  
<table>
<thead>
<tr>
<th></th>
<th>L</th>
<th>W</th>
<th>Th</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min.</td>
<td>2.0</td>
<td>1.4</td>
<td>0.3</td>
</tr>
<tr>
<td>Mean</td>
<td>2.5</td>
<td>1.6</td>
<td>0.3</td>
</tr>
<tr>
<td>Max.</td>
<td>3.6</td>
<td>2.4</td>
<td>0.4</td>
</tr>
</tbody>
</table>

Provenience: TPI: 0-10  
TIA: 10-20, 30-40, 37, 40-50, 90-100(2)  
T2A: 10-20, 72, 90-100

Remarks: One specimen has squared barbs; one specimen has a basal notch in the stem.

**Corner-Removed Projectile Points (Plate 11, p-aa; and Plate 10, j & k)**

Number: 18  
Material: 10 cs., 7 pet. wood, 1 jasper  
Measurements in cm.: s=13  
<table>
<thead>
<tr>
<th></th>
<th>L</th>
<th>W</th>
<th>Th</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min.</td>
<td>1.4</td>
<td>0.8</td>
<td>0.2</td>
</tr>
<tr>
<td>Mean</td>
<td>2.5</td>
<td>1.4</td>
<td>0.5</td>
</tr>
<tr>
<td>Max.</td>
<td>3.6</td>
<td>2.8</td>
<td>0.8</td>
</tr>
</tbody>
</table>

Provenience: TIA: 30-40(2), 50-60(3), 80-90(2), 90-100  
T2A: 10-20(2), 30-40(2), 50-60, 70-80, 80-90(2), 90- 00, 100-125

Remarks: One specimen has rounded shoulders; two specimens have basal notches in the stem.
**Side-Notched Projectile Points** (Plate 10, i; and Plate 12, g-i)

- **Number:** 4
- **Material:** 2 cs., 2 pet. wood
- **Measurements in cm.:**
  - \( s=2 \)
  - \( L = 2.8 \), \( W = 1.6 \), \( Th = 0.6 \)
  - \( L = 6.8 \), \( W = 2.3 \), \( Th = 0.9 \)
- **Provenience:**
  - TIA: 20-30
  - T2A: 60-70, 78, 70-80
- **Remarks:** These points bear no resemblance to the small triangular side-notched points frequently found in late sites in the Plateau.

**Large Base-Notched Projectile Point** (Plate 12, k)

- **Number:** 1
- **Material:** 1 pet. wood
- **Measurements in cm.:**
  - \( s=1 \)
  - \( L = 4.6 \), \( W = 3.6 \), \( Th = 0.7 \)
- **Provenience:** T2A: 68

**Leaf-Shaped Projectile Point with Small Stemmed Base** (Plate 12, j)

- **Number:** 1
- **Material:** 1 pet. wood
- **Measurements in cm.:**
  - \( s=1 \)
  - \( L = 6.5 \), \( W = 1.6 \), \( Th = 0.7 \)
- **Provenience:** T2A: 60-70

**Contracting Stem Projectile Point** (Plate 10, l)

- **Number:** 1
- **Material:** 1 cs.
- **Measurements in cm.:**
  - \( s=1 \)
  - \( L = 2.3 \), \( W = 1.3 \), \( Th = 0.5 \)
- **Provenience:** TPI: 70-80

**Side and Corner-Notched Projectile Point**

- **Number:** 1
- **Material:** 1 pet. wood
- **Measurements in cm.:**
  - \( s=1 \)
  - \( L = 2.0 \), \( W = 0.2 \), \( Th = 0.4 \)
- **Provenience:** TIA: 40-50

**Triangular Projectile Point with a "V-Notched" Base**

- **Number:** 1
- **Material:** 1 obsidian
- **Measurements in cm.:**
  - \( s=1 \)
  - \( L = - \), \( W = 1.4 \), \( Th = 0.4 \)
- **Provenience:** T2A: 10-20

**Corner-Notched and Corner-Removed Projectile Point**

- **Number:** 1
- **Material:** 1 cs.
- **Measurements in cm.:**
  - \( s=1 \)
  - \( L = - \), \( W = 1.4 \), \( Th = 0.4 \)
- **Provenience:** TIA: 20-30
Projectile Point Bases with Notched Barbs (Plate 10, m & n)

Number: 2
Material: 2 cs.
Measurements in cm.: None.
Provenience: T1A: 40-50
T2A: 80-90

Large Stemmed Projectile Point Bases

Number: 2
Material: 2 cs.
Measurements in cm.: None.
Provenience: T1A: 20-30
T2A: 10-20

Large Lanceolate Knife (Plate 12, f)

Number: 1
Material: 1 pet. wood
Measurements in cm.: s = L W Th
12.5 2.8 0.8
Provenience: T1A: 70

Triangular Knives

Number: 4
Material: 1 cs., 3 pet. wood
Measurements in cm.: s = L W Th
5.0 2.5 0.5
Provenience: T1A: 80-90, 90-100
T2A: 50-60, 90-100

Pentagonal Knives (Plate, 12, a-e)

Number: 5
Material: 3 cs., 2 pet. wood
Measurements in cm.: s = L W Th
4.8 1.9 0.8
Provenience: TPI: 20-30
T1A: 40-50
T2A: 55, 80-90, 107

Knife and Point Fragments

Number: 56
Material: 24 cs., 29 pet. wood, 3 jasper
Measurements in cm.: None.
Provenience: TPI: 0-10(5), 20-30(5), 70-80
T1A: 0-10(2), 10-20(2), 40-50(3), 50-60(4),
70-80(3), 80-90, 90-100
50-60(2), 57, 60-70(3), 70-80, 80-90(4),
90-100(4), 100-125(2).
Remarks: Diagnostic point and knife bases are not included here,
but are categorized according to their particular style.
Spall Knives (Plate 13, c-f)
Number: 7
Material: Quartized and Shist
Measurements in cm.: s=2
<table>
<thead>
<tr>
<th>L</th>
<th>W</th>
<th>Th</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.0</td>
<td>8.5</td>
<td>1.0</td>
</tr>
<tr>
<td>5.8</td>
<td>5.3</td>
<td>0.7</td>
</tr>
</tbody>
</table>
Provenience:
TPI: 10-20
TIA: 30-40, 80-90, 107
T2A: 20-30, 90-100, 106

Cobble Spall Knives (Plate 13, a)
Number: 4
Material: Crystalline rock
Measurements in cm.: s=4
<table>
<thead>
<tr>
<th>L</th>
<th>W</th>
<th>Th</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.5</td>
<td>10.0</td>
<td>2.6</td>
</tr>
<tr>
<td>10.5</td>
<td>7.2</td>
<td>1.5</td>
</tr>
<tr>
<td>9.1</td>
<td>6.1</td>
<td>0.8</td>
</tr>
<tr>
<td>6.7</td>
<td>10.3</td>
<td>2.7</td>
</tr>
</tbody>
</table>
Provenience:
TPI: 10-20
TIA: 20-30, 24, 48

Double Notched Pebble Sinkers (Plate 14, a-d)
Number: 5
Material: Crystalline rock
Measurements in cm.: s=5
<table>
<thead>
<tr>
<th>L</th>
<th>W</th>
<th>Th</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.7</td>
<td>4.7</td>
<td>0.9</td>
</tr>
<tr>
<td>5.8</td>
<td>5.0</td>
<td>1.3</td>
</tr>
<tr>
<td>7.5</td>
<td>5.2</td>
<td>1.6</td>
</tr>
<tr>
<td>5.4</td>
<td>5.4</td>
<td>1.2</td>
</tr>
<tr>
<td>5.7</td>
<td>3.5</td>
<td>1.1</td>
</tr>
</tbody>
</table>
Provenience:
TPI: 60-70, 79, 90-100
TIA: 90
T2A: 70-80
Remarks: These specimens are notched on the long edges, not the ends. One specimen is notched on one edge only.

Cache of Sinker Blanks
Number: 4
Material: Crystalline rock
Measurements in cm.: s=4
<table>
<thead>
<tr>
<th>L</th>
<th>W</th>
<th>Th</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.5</td>
<td>4.9</td>
<td>0.9</td>
</tr>
<tr>
<td>6.9</td>
<td>4.3</td>
<td>1.5</td>
</tr>
<tr>
<td>6.5</td>
<td>4.7</td>
<td>1.6</td>
</tr>
<tr>
<td>6.8</td>
<td>4.5</td>
<td>1.5</td>
</tr>
</tbody>
</table>
Provenience: TIA: 30-40
Remarks: These may have been blanks for notched sinkers or they may have been used unnotched as sinkers. (cf. Ray 1932: 69).

Uniface Cobble Choppers
Number: 2
Material: Crystalline rock
Measurements in cm.: s=2
<table>
<thead>
<tr>
<th>L</th>
<th>W</th>
<th>Th</th>
</tr>
</thead>
<tbody>
<tr>
<td>18.0</td>
<td>11.0</td>
<td>9.4</td>
</tr>
<tr>
<td>9.8</td>
<td>7.2</td>
<td>4.7</td>
</tr>
</tbody>
</table>
Provenience: TIA: Feature 3
T2A: 45
**Biface Cobble Choppers**

Number: 2  
Material: Crystalline rock  
Measurements in cm.: \( s = 1 \)
\[
<table>
<thead>
<tr>
<th>L</th>
<th>W</th>
<th>Th</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.5</td>
<td>13.0</td>
<td>5.5</td>
</tr>
</tbody>
</table>
Provenience: TPI: 10-20  
TIA: Feature 3

**Biface Pebble Chopper**

Number: 1  
Material: Crystalline rock  
Measurements in cm.: \( s = 1 \)
\[
<table>
<thead>
<tr>
<th>L</th>
<th>W</th>
<th>Th</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.4</td>
<td>6.2</td>
<td>2.2</td>
</tr>
</tbody>
</table>
Provenience: TIA: 24

**PECKED AND GROUND STONE ARTIFACTS**

There are 9 pecked and ground stone artifacts, including pestles, ground stone discs, an adze blade fragment, and an abrasive stone fragment.

**Pestles**

Number: 5  
Material: Crystalline rock  
Measurements in cm.: \( s = 5 \)
\[
<table>
<thead>
<tr>
<th>L</th>
<th>W</th>
<th>Th</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.7</td>
<td>4.0</td>
<td>3.2</td>
</tr>
<tr>
<td>26.3</td>
<td>9.0</td>
<td>6.1</td>
</tr>
<tr>
<td>13.1</td>
<td>5.0</td>
<td>3.7</td>
</tr>
<tr>
<td>14.3</td>
<td>6.0</td>
<td>5.3</td>
</tr>
<tr>
<td>14.1</td>
<td>7.2</td>
<td>7.0</td>
</tr>
</tbody>
</table>
Provenience: TPI: 100-110  
TIA: 20-30(4) cache  
Remarks: Four pestles were found in a cache in TIA.

**Ground Stone Discs**

Number: 2  
Material: Soapstone  
Measurements in cm.: \( s = 2 \)
\[
<table>
<thead>
<tr>
<th>L</th>
<th>W</th>
<th>Th</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1</td>
<td>3.8</td>
<td>0.5</td>
</tr>
<tr>
<td>3.7</td>
<td>3.3</td>
<td>0.3</td>
</tr>
</tbody>
</table>
Provenience: TIA: 90-100  
T2A: 70-80

**Adze Blade Fragment**

Number: 1  
Material: Nephrite  
Measurements in cm.: None.
Provenience: T2A: 60-70

**Abrasive Stone Fragment**

Number: 1  
Material: Shale or Slate?  
Measurements in cm.: None.
Provenience: TPI: 20-30
Small Pecked Cobble  
Number: 1  
Material: Crystalline  
Measurements in cm.:  
\[
\begin{array}{ccc}
    L & W & Th \\
    7.0 & 6.3 & 4.6 \\
\end{array}
\]  
Provenience: TIA: 46  
Remarks: The cobble is pecked around its circumference.

Abraided Pebble  
Number: 1  
Material: Crystalline  
Measurements in cm.:  
\[
\begin{array}{ccc}
    L & W & Th \\
    6.9 & 5.5 & 2.4 \\
\end{array}
\]  
Provenience: TPI: 70-80

ARTIFACTS OF MINERAL PIGMENT  
Two specimens are artifacts of mineral pigment and include only red ochre.

Red Ochre  
Number: 2  
Material: Iron oxide  
Measurements in cm.: s=2  
\[
\begin{array}{ccc}
    L & W & Th \\
    1.5 & 1.0 & 0.3 \\
    1.4 & 0.7 & 0.3 \\
\end{array}
\]  
Provenience: TPI: 20-30  
T2A: 20-30

BONE, ANTLER AND TOOTH ARTIFACTS  
There are 20 artifacts of bone, antler or tooth. These include awls, needles, bone pegs, barbed harpoon points, a perforated rib, a spokeshave, the tip of a wedge, a chipping tine, a salmon vertebra bead, a fragment of worked bone, a gnawed bone, a tooth pendant, and a worked beaver tooth.

Awls (Plate 15, a & f)  
Number: 4  
Material: Bone  
Measurements in cm.: s=2  
\[
\begin{array}{ccc}
    L & W & Th \\
    7.5 & 0.8 & 0.4 \\
    5.0 & 2.9 & 1.0 \\
\end{array}
\]  
Provenience: TPI: 53, 70-80  
T2A: 30-40, 125

Round Blanket Pin or Needle (Plate 15, e)  
Number: 1  
Material: Bone  
Measurements in cm.: None.  
Provenience: T2A: 80-90
Flat Matting Needle (Plate 15, d)
Number: 1
Material: Bone
Measurements in cm.: L W Th
6.8 0.7 0.3
Provenience: T2A: 90-100
Remarks: The needle appears to have been eyed.

Pegs or Rods (Plate 15, c)
Number: 3
Material: Bone
Measurements in cm.: s=1 L W Th
2.0 0.7 0.6
Provenience: T2A: 100-125, 125
Remarks: One specimen has a cross-hatch design at one end.

Unilateral Barbed Harpoon Points (Plate 15, h & i)
Number: 2
Material: Antler
Measurements in cm.: s=2 L W Th
8.3 2.0 0.5
9.0 2.5 0.9
Provenience: TPI: 67
T2A: 83-89
Remarks: One specimen has parallel line markings on the barbs. Similar specimens are illustrated by Collier, Hudson and Ford(1942:151, Plate 9, h-l) and Grabert(1968:219, Plate 39, D).

Perforated Rib
Number: 1
Material: Bone
Measurements in cm.: L W Th
31.0 1/5 1.1
Provenience: TPI: 52-54
Remarks: Possibly this specimen is an eyed needle such as that reported by Grabert (1968:218, Plate 38, item L).

Spokeshave (Plate 8, f)
Number: 1
Material: Bone
Measurements in cm.: L W Th
9.2 1.8 0.9
Provenience: TPI: 65
Remarks: This specimen is made from a split mammal long bone.

Wedge Tip
Number: 1
Material: Antler
Measurements in cm.: None.
Provenience: TPI: 100-110
Chipping Tine
Number: 1
Material: Antler
Measurements in cm.: None.
Provenience: TPI: 90-100

Salmon Vertebra Bead (Plate 15, b)
Number: 1
Material: Bone
Measurements in cm.: L W Th
1.5 1.4 0.9
Provenience: TIA: 23
Remarks: Teit (1930: 82) suggests that some fish vertebrae were perforated and used as beads.

Worked Object Fragment
Number: 1
Material: Bone
Measurements in cm.: None.
Provenience: TIA: 90-100
Remarks: Both edges of the specimen contain parallel line markings.

Gnawed Bone
Number: 1
Material: Bone
Measurements in cm.: L W Th
7.7 2.0 0.4
Provenience: T2A: 77

Tooth Pendant
Number: 1
Material: Tooth (probably deer)
Measurements in cm.: None.
Provenience: TIA: 20-30

Worked Tooth (Plate 15, figure g)
Number: 1
Material: Beaver tooth incisor
Measurements in cm.: None.
Provenience: TPI: 100-110

Discussion

It would be premature to base many comments on the limited materials from 45L16. A few observations are pointed out for discussion, however. Presently, in Columbia Plateau archaeology the most useful artifacts for comparative purposes are projectile points. At 45L16 the most common varieties of projectile points are corner-removed, corner-notched, and base-notched in style (see Plate 11). These styles of points appear to be closely related with styles in the southern and western portions of the Plateau. Points reported by Nelson (1966: 97-99, figures 29-31) from assemblages 4F to 4K at the Tucannon Site on the Snake River, for instance, show strong similarities in style and workmanship with the points illustrated in Plate 11 of this report. Further similarities may be found with points from Bruces Eddy on the Clearwater River in Northern Idaho (Lynch, Wilkinson, and Warren 1965: 47,
From Wenas Creek in the western Plateau (Warren 1959:237, Plate 4, D-B'; 238, Plate 5, M-H'), and from the Cascade foothills (Rice 1964: 12, Plate 1, j-k) to mention only a few scattered occurrences. The high incidence of petrified wood flakes and artifacts at 45L16 further suggests a relationship with the southern and western portions of the Plateau. As pointed out earlier in this report, petrified wood is essentially absent along the upper Columbia and is rare in the Wells Reservoir area to the west, but is very abundant in the Vantage region of the Middle Columbia. Points with basally notched stems (see Plate 11, b, d, g, i, j, m, t, and z) which are found at 45L16 also are very abundant in the Vantage region. Work to the east, in the Idaho panhandle, is too limited to afford comparison. Sanger's (1967) work in the Canadian Plateau shows a similar tradition of corner notching in the Lochmore-Nesikep locality between 1000 B.C. and A.D. 1000. Specimens illustrated by Sanger (1967: 190, Figure 5, m, n, and p) have stylistic resemblances with the 45L16 materials, but are of quite different material, workmanship, and association. The problem of how the cultural materials from the Canadian Plateau relate to the southern Plateau is only now being unraveled (Sanger 1967, Grabert 1968) and will require far more basic excavation and detailed comparison to reach a solution. At the present time it seems safe, however, to say that the affinities of the chipped stone industry at 45L16 are primarily with the northern and western parts of the Plateau.

Since no radiocarbon dates were secured from 45L16 it is difficult to establish the age of the deposits. By comparing the projectile points from 45L16 with similar points from carbon-dated contexts at other sites, however, it is possible to narrow down the possible age range of the site. Two sites from the Wells Reservoir area to the west provide the closest dated comparisons. At 450K49 six examples of corner-notched and corner-removed points were recovered from cultural zone 2 of a housepit which was radiocarbon dated at 514±40 B.P. (Grabert 1968:48, 168). At 45DO68 three corner-notched and corner-removed points (see Grabert 1968:207, Plate 32, s-t) were obtained from cultural zone 2, which was radiocarbon dated at 515±50 B.P. (Grabert 1968:30, 31, 168). It is therefore, tentatively concluded that the cultural deposits at 45L16 date from about A.D. 1450.

Speaking from a larger point of view, corner-notched and corner-removed point styles seem to occur earlier in the southern Plateau than at its northern margin on the Upper Columbia. In the southern Plateau, for instance, points of these styles date from 1720±165 B.P. at the Tucannon Site on the Snake River (Nelson 1966: 71). If one accepts the dates from the Wells Reservoir sites and the tentative age of 45L16, then there appears to be a northward diffusion of some cultural elements from the southern Plateau to the Upper Columbia region during the last 2000 years. During the same time span cultural elements from the Coast such as nephrite adze blades and unilaterally barbed harpoon points of bone and antler appear to have diffused through the Canadian interior and into the upper Columbia region where they fuse with the northward trending elements. Also during this 2000 year time span there appears to be a growing similarity in the general cultural elements of both the Columbia Plateau and the Canadian Plateau (Sanger 1967), suggesting the coalescence of these elements into the ethnographic pattern which unifies the Plateau as a culture area.

To summarize, in spite of very limited data it has been possible to make three tentative observations which relate to the significance of 45L16.
First, the site appears to be primarily linked with the southern and western segments of the Plateau. Second, the site tentatively dates from A.D. 1450. Finally, historical comparisons of artifacts from 45L16 suggest that some cultural elements have diffused from the Columbia Plateau northward in the last 2000 years and coalesced with other cultural elements from the Coast and the Canadian Plateau.

RECOMMENDATIONS

Four general recommendations for future work in the Coulee Dam National Recreation Area are made. In general, it is recommended that more time be spent in conducting extensive excavations at a few promising sites rather than performing small tests at a number of sites. In this way large controlled samples of materials needed for detailed comparative studies can be obtained. Recommendations for the sites investigated in 1968 (these are located in Figure 1 and Chance 1967) are as follows: Recommended for full-scale excavation: 45L16, 45ST72 and 45ST95. Recommended for further test excavation: 45ST21, 45ST44, 45FE16, 45L125.

Third, first priority sites recommended by Chance (1967) for test excavation which were not investigated in 1968 are recommended for testing. An additional two field seasons will be required to adequately test and re-evaluate the sites recommended by Chance (1967).

Finally during the 1969 season the level of Lake Roosevelt will be at its lowest since Grand Coulee Dam was constructed. For this reason additional reconnaissance work should be carried out between Kettle Falls and the mouth of the Sanpoil River.
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Plate 1  General view of the Spokane River at low water.
   a. The site of 45L16.
   b. The lower portion of 45ST21. The knoll to the right once contained a large burial site.

Plate 2  The beginning of excavations at 45L16. Note the position of the site along the edge of an old river terrace. The view is taken towards the southwest, away from the Spokane River.
Plate 3  View of field operations at 45L16, looking northeast towards the Spokane River. Test pits Tp1, T1A, and T2A are identified.

Plate 4  View of 45L16 showing the three two-by-three meter test pits, Tp1, T1A, and T2A, near completion.
Plate 5  View of excavations at 45L123. The high water channel to the left and the eroding bank across the river in the background are good examples of how sites in the reservoir are affected by the changing water levels.

Plate 6  View of 45ST95 showing the gradual destruction of the site by slumpage of the bank. The high water mark of Lake Roosevelt is visible in the lower right hand corner.
Plate 7  Artifacts from 45L16.

Utilized flakes (a-e)
Core scrapers (f & g)
Exhausted cores (h-j)
Plate 8  Artifacts from 45L16
  Flake scrapers (a-e)
  Spokeshaves (f-j)
  Side scrapers (k-o)
Plate 9  Artifacts from 45L16.

  Gravers (a-f)
  Drills (g & h)
  End scrapers (i-l)
Plate 10  Artifacts from 45L16.

Projectile Points

A. Triangular preforms (a-g)
B. Corner notched (h)
C. Side notched (i)
D. Corner removed (j & k)
E. Contracted stemmed (l)
F. Bases with notched barbs (m & n)
Plate 11  Artifacts from 45L16.

Projectile Points

A. Corner notched (a, c, j-o)
B. Base notched (b, d-i)
C. Corner removed (p-aa)
Plate 12  Artifacts from 45L16.

Knives
A. Large lanceolate knife (f)
B. Pentagonal knives (a-e)

Projectile Points
A. Side notched (g-i)
B. Leaf shaped with stemmed base (j)
C. Large base notched (k)
Plate 13  Artifacts from 45L16.

Spall Knives

A. Cobble based (a)
B. Based on siabs or plates (b-f)
Plate 14  Artifacts from 45L16.

Double notched sinkers (a-d)
Plate 15  Artifacts from 45L16.

Awls (a & f)
Salmon vertebra bead (b)
Bone peg (c)
Flat matting needle (d)
Round blanket pin or needle (e)
Worked beaver tooth (g)
Unilaterally barbed harpoon points (h & i)
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