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Moscow, ID 83843
23 December 1997

John Leier, Archaeologist
Corps of Engineers
Walla Walla District
201 North Third Avenue
Walla Walla, WA 99362-1876

Dear John,

As you requested, please find enclosed a final report concerning my analysis of the artifacts and ecofacts collected in 1996 at 45BN52 in association with "Kennewick Man." This revised version incorporates the comments you provided in our conversation yesterday. This report was conducted in fulfillment of Purchase Order W68SBV-7335-PE01.

This collection represents a combination of prehistoric and historic items most of which are in very fragmentary condition. No human bones or identifiable human bone fragments were submitted nor were any identified in this analysis. Prehistoric artifacts are limited to temporally undiagnostic debitage and two flaked cobbles. Numerically, the most frequent class of items include non-human faunal remains - their condition indicates that most are recent and several have marks from sawing. Historic artifacts range from wire nails to recent bottle glass with the most informative being an inexpensive turn-of-the-century table knife.

Previous surveys in the Tri-Cities area indicated that lithic debitage and flaked cobbles are common along the banks of the Columbia and Snake rivers and the historic artifacts as a whole suggest a mixture of late nineteenth to twentieth century Euroamerican domestic refuse. Unfortunately, this collection does not provide much in terms of clarifying the "Kennewick Man" situation but some insights and suggestions are provided below.

Thanks for another opportunity to work with the Walla Walla District. If you have any comments or questions, please feel free to call me at (208) 885-6480 or at (208) 882-4151.

Sincerely,



Robert Lee Sappington, Ph.D.

DOI 02116

ANALYSIS OF CULTURAL MATERIALS COLLECTED IN THE VICINITY OF
"KENNEWICK MAN" AT THE COLUMBIA PARK SITE (45BN52),
KENNEWICK, WASHINGTON

by

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Introduction

The prehistory of the Tri-Cities area is relatively well-known compared with other regions in the Columbia Plateau. Professional archaeological research along the middle Columbia River began in the late 1920s with investigations by Herbert Krieger (Sprague 1973:257-258). The construction of McNary Reservoir led to relatively extensive investigations by archaeologists from the River Basin Surveys beginning in 1947 and these projects (Osborne 1957; Shiner 1961) provided much of the foundation for southern Plateau archaeology. Shortly afterwards, archaeologists conducted extensive excavations at sites along the adjacent lower Snake River from the 1950s into the 1970s prior to the construction of the four dams in that region. The lower Snake River culture chronology (Leonhardy and Rice 1970) has since served as the basic sequence for the southern Plateau in general (Sappington 1994:16). More recently, post-reservoir projects have been conducted in this area as part of cultural resource management studies by the Corps of Engineers and other agencies (Cleveland and others 1976; Galm and others 1981; Thoms with others 1983; Sappington and Carley 1984).

Numerous sites were recorded in the Tri-Cities area in 1948; two of these were combined in 1968 into another designation and 20 sites altogether were included when the Tri-Cities Archaeological District was nominated to the National Register of Historic Places in 1983. The proposed district extends from ca. river mile (RM) 330 to RM 340 and includes sites in both Benton and Franklin counties. According to the form, the "Tri-Cities area contains the densest population of known prehistoric sites along the middle Columbia and lower Snake Rivers." Site types include housepits, open camps, and burials. The burials have received the most attention, especially those at Bateman Island in Columbia Park: at least 24 graves were removed by the Mid-Columbia Archaeological Society in 1968 and another 17 were excavated by University of Idaho archaeologists in 1975, all of which were reburied at Wanawish Indian Cemetery (Rice 1976).

The oldest known sites in the general middle Columbia River area date to the Cascade or Vantage phases ca. 8000-4500 BP (Galm and others 1981:92). While several stylistically older artifacts have been reported, none of the sites in the Tri-Cities area appear to date older than the Cayuse phase ca. 2500 to 250 BP and many are within the past 200 years. Similarly, intense archaeological survey in upper McNary Reservoir

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between approximately RM 340 and 351 indicates that most landforms are not likely to be more than 2000 years old with cultural material indicating that the area was used primarily within the past 1500 years (Thoms with others 1983:153, 156).

The site of 45BN52 was recorded in 1948 and it is located at ca. RM 333.3 within, and adjacent to, the normal pool level of McNary Reservoir which is 340 feet asl. It was reported as an open housepit site in inundated condition in 1976 (Cleveland and others 1976:84). This site was next considered to be a disturbed campsite on an alluvial flat (Galm and others 1981:182). On the 1983 Tri-Cities Archaeological District form it was reported as having housepit(s) in inundated condition. Despite this apparent interest, the site has apparently not been tested, excavated, evaluated individually in terms of National Register status, nor had there been any estimates as to its age prior to the discovery of "Kennewick Man." Finally, it should be noted that "Kennewick Man" was recovered at ca. RM 332 which places it over one mile below the 1948 site boundaries.

Discussion

On 28 July 1996 two people found human remains on the shoreline along the west bank of the Columbia River in Columbia Park. They reported their discovery to Benton County authorities who then contacted James C. Chatters. Dr. Chatters examined the area later on that same day and these remains have since become internationally known as "Kennewick Man." In the course of his investigations, several subsequent inspections of the site were made and both cultural and natural materials were collected along the shoreline in association with "Kennewick Man."

This report is concerned with those items collected in association with "Kennewick Man" from July to September 1996. No human remains were included with the collection submitted and none were identified during this analysis. All artifacts and ecofacts are in the original packaging and they will be discussed within these groupings. A total of eight plastic bags and two folders of photocopied notes were submitted by the Corps to the author in April 1997 for this analysis.

It should be borne in mind that the field notes are minimal and that the specific nature of this association is problematical; that is, while these items were collected on the beach in the vicinity of "Kennewick Man" they are all in secondary context. If they are lag deposits, then they could be from strata of potentially different ages which is common in reservoir settings. In other words, it is likely that the prehistoric and historic artifacts are from occupations greatly separated in time and "Kennewick Man" could predate both or he could possibly be associated with either of them.

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Lithic Artifacts

There are two bags of lithic artifacts (Appendix 1). The first contains seven items and is marked "Columbia Park /Lithics from beach area/25 m extent." Two chalcedony items appear to have been heat-treated and they are definitely debitage: both are decorticated tertiary flakes without platforms and the larger exhibits several dorsal scars as well as probable use-wear along its longest margin. A basalt flake has an intact platform of natural cobble cortex with a distinct but diffuse bulb of percussion and it appears to have split longitudinally when it was detached; carbonate covers most of its dorsal and ventral surfaces. Three items are granitic or quartzite: the largest does not possess a bulb of percussion and may be shatter or not even debitage; the middle-sized item has a facet of fire-altered cobble cortex and it may be a heat spall; and, the smallest has a distinct platform and lip and is thus definitely debitage although the cone of force split when it was detached which caused it to break lengthwise. The last item is a chunk of hematite or possibly an eroded brick fragment. Thus, of the seven items in this bag there are four definite flakes, one of which was clearly an expedient tool.

The other bag is unlabeled and it contains two basalt cobbles, the smaller of which is in a separate bag. The larger item is definitely a core and it exhibits multiple striking platforms from numerous directions with angles up to ca. 80° which suggests that it was reduced considerably until it became exhausted and rejected. It also possesses carbonate over most of its surface. The smaller item is in a bag marked "Columbia Park /Flaked cobble." It has only a single flake scar; it may have been tested and rejected or perhaps it was employed as a percussor and a single flake was detached through use. It also has carbonate on it.

Historic Artifacts

The historic items were in a single bag marked "Columbia Park /sample of historic artifacts/from beach area/much more + not collected." Four of these are ceramic sherds and they all represent separate pieces. Three are decorated but none have makers' marks. One is a flow blue transfer design dating from the turn-of-the-century. Another is Japanese imitation porcelain and dates to the early twentieth century. Two are whiteware: a plate rim is gilt decorated while the other is a foot ring sherd.

Four glass fragments represent three and probably four bottles or jars. A machine made amber fragment with a stippled pattern probably represents a Duraglass pattern beer bottle made since 1940 (Toulouse 1971:170). A green glass neck fragment is probably from a modern liquor bottle. A clear fragment is a canning jar lid liner marked with an "S;" comparable items are marked SAFETY and JARS but no further insights are available. An intact clear (perfume ?) bottle stopper has a raised eight-pointed star on top. These latter three items could date from around the turn-of-the-century until more recent times.

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The ferrous items are so fragmentary that it is not possible to provide an exact number but it appears that these items represent approximately four cut nails and one piece of wire. An intact bone handled knife is 3 3/4 inches long with a decorative inlaid circle at each end and lead or pewter bolsters; the ferrous blade is missing but an oxidized fragment probably represents a portion of it. Nearly identical items are illustrated in Montgomery Ward & Co. Catalogue No. 57 (1895:445), Sears, Roebuck & Co. Catalogue 110 which refers to it as a Double Ring Pattern with bone handles (1900:740), and again in Sears, Roebuck & Co. Catalogue 111 (1902:481).

Faunal Remains

Faunal remains were collected and placed in four bags. The first bag examined was marked "Columbia Pk. 1/Bison tibia/calcaneus/from silt stratum" and it contains two elements. The larger element is a right tibia shaft fragment from an apparently mature individual; aging is inhibited by the absence of epiphyses from either the distal or proximal ends. It bears some signs of staining and has fresh breaks on both ends. The interior is filled with sand but no attempt was made to remove sediment from this or any other item because this action might affect subsequent analyses and it would diminish its already poor condition. Comparisons were made with published descriptions (Brown and Gustafson 1979) and the comparative collection at the University of Idaho. It is not possible to distinguish between modern bison (*Bison bison*) and domestic cattle (*Bos taurus*) because these two species are so similar and indeed they can interbreed. Larger and now extinct forms of bison have been recovered in geological contexts and archaeologically at the Lind Coulee site (Schroedl 1973:1). Modern bison (*Bison bison*) apparently entered the region within the past 5000 years and they have been identified at numerous archaeological sites dating from ca. 2500 to 200 BP (Schroedl 1973:66).

The other element in this bag is a right calcaneum; although somewhat eroded it is intact enough to identify as *Bison* or *Bos* from a mature individual. It closely matches the descriptions and illustrations in Brown and Gustafson (1979:168-175). Whether it represents the same individual as the tibia is unknown. Based on their size and lack of mineralization it is unlikely that either element represents an extinct species of bison. Cattle ranching began in the Tri-Cities area in the early 1860s (Thoms with others 1983:22) and 130 years of burial and subsequent immersion in the Columbia River could make these elements appear to possess more antiquity than they actually do. Thus, these elements probably represent either modern bison dating from within the past 2500 years or domestic cattle dating from the late nineteenth century to recent times.

The second bag of faunal remains analyzed is labeled "Columbia Park 1/Sample of non-human bone/From beach area" and contains three fragmentary elements. The largest is a *Bos/Bison* proximal left ulna sawn on one end and is therefore clearly historic so it is most likely *Bos*; it also has an iron stain on the other end. The middle-sized element is a fragment of a *Bos/Bison*-sized distal femur with a recent break. The smallest fragment may represent a portion of a skull.

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The third bag contains 12 fragmentary elements. Four are clearly historic: one is a medial long bone fragment commercially sawn on both ends and is probably from a round steak; another is a sawn scapula with an iron stain; a third is a probable *Bos* cervical vertebra which exhibits sawing and butchering marks; and, a small fragment was detached by sawing. There are two rib fragments, one of which is very fresh in appearance and is *Bos*-sized while the smaller one exhibits gnawing marks. The other fragments are tentatively identified as portions of two ulna, a left mandible, a clavicle, a sphenoid, and an occipital. This latter group is medium- to small mammal-sized and could represent deer, sheep, pronghorn, pig, or other species.

A bag containing six freshwater clam or mussel shell fragments was labeled "Columbia Park I/Shell frags from beach/area." These items could be either cultural or natural. Several hinges are comparable to *Margaritifera falcata* (Lyman 1980) and it is likely that they all represent this species.

Summary and Conclusions

In summary, this collection from 45BN52 includes 46 diverse items. The two flaked cobbles clearly represent a prehistoric component and similar items are common throughout the region; at least four of the other seven lithic items are debitage which also supports the presence of a prehistoric occupation at this location. Seventeen items are non-human bone fragments and their condition suggests that they are fairly recent; four are clearly historic and the remainder represent *Bos/Bison* and smaller unidentified species. The six freshwater clam fragments could be either natural or cultural and they appear to be *Margaritifera falcata* which is commonly encountered in drainages throughout the Columbia Plateau both in prehistoric contexts and in contemporary situations. The fourteen historic items generally date from around the turn-of-the-century with the amber glass fragment representing post-1940 recreational use of the area.

It is not possible to make concrete conclusions concerning this collection since at least two components are represented in an undatable secondary context which makes any association with "Kennewick Man" tenuous at best. In terms of chronology the lithic artifacts are the oldest. On the lower Snake River precipitated carbonate lenses and carbonate-covered cobbles have interested archeologists and geologists for the last two decades (Hammatt 1976). For example, at the Hatupuh site (45WT134) the degree of carbonate development suggested that two lower strata could be ca. 10,000-5000 years old (Brauner and others 1990:48) while at the Port of Clarkston (45AS99) it was suggested that carbonate-covered artifacts dated ca. 4000 BP or older (Sappington 1984:2-3). The debitage is too infrequent to make inferences about prehistoric knapping activities but it does indicate the presence of cultural material beyond the original boundaries of 45BN52 as it was recorded in 1948.

The faunal remains do not suggest much evidence of antiquity. If the tibia and calcaneum are actually bison they could date as old as 5000 BP although a more recent

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date seems likely and I assume that they are actually *Bos*. I make this observation based on the lack of mineralization and the association with other elements which are historic based on the presence of saw marks. Cattle ranching began in the Tri-Cities area in the early 1860s and 130 years of burial and subsequent immersion in the Columbia River could make these elements appear to possess more antiquity than they actually do.

As a group, the historic artifacts date from the late nineteenth century into the middle twentieth century. Not coincidentally, the local Euroamerican population increased greatly at this time with irrigation development which began in the 1880s and continued into this century. Richland acquired its post office in 1905 (Thoms with others 1983:23) and since then the Tri-Cities area has developed into one of the most populous centers in Washington state. The most distinctive historic artifact is the table knife which has been well documented as being available ca. 1895-1902. Cut nails were in common use at that time and the glass and ceramic artifacts all date to that period or later. Thus, it appears that there was an historic site nearby or that local residents used this area as a dump for unwanted household items and food debris.

In order to obtain a better understanding of cultural activities at 45BNS2 it is recommended that a sample of artifacts be examined in a primary context. The recovery of lithic and historic artifacts in stratigraphic units would better illustrate the relationship between the two (or possibly more) components. At present, these items do not shed much light on "Kennewick Man" but a relatively inexpensive and minimally disturbing examination of the exposed bank and the submission of a column of sediment samples for radiocarbon dating would facilitate our understanding of this challenging site. It might also be possible to radiocarbon date the carbonate on these or other lithic tools.

Previous studies in the Tri-Cities area suggest that it is unlikely that a ca. 9200 year old site would be located in such a setting. At present much of the argument in favor of the antiquity for "Kennewick Man" hinges on a single radiocarbon dated human remain and I would suggest that waterborne nuclear waste from Hanford could have contaminated that sample. Additional investigations are necessary to prove or disprove the antiquity of "Kennewick Man." Hopefully, this report will help archaeologists work toward that goal.

Acknowledgments

I would like to acknowledge the contributions of two colleagues at the University of Idaho. Don Tyler, Chair, Department of Sociology/Anthropology facilitated the identification of the bone fragments and Roderick Sprague, Professor Emeritus, Department of Sociology/Anthropology aided with the identification of the historic artifacts.

DOI 02122

References Cited

- Brauner, David, R. Lee Lyman, Howard Gard, Stephan Matz, and Rebecca McClelland with an Appendix by James C. Charters
1990 *Archaeological Data Recovery at Hatiupuh, 45WT134, Whitman County, Washington*. Report prepared for the Walla Walla District, Corps of Engineers, from Department of Anthropology, Oregon State University, Corvallis.
- Brown, Christopher L. and Carl E. Gustafson
1979 A Key to Postcranial Skeletal Elements of Cattle/Bison, Elk, and Horse. Washington State University Laboratory of Anthropology, *Reports of Investigations*, No. 57. Pullman.
- Cleveland, Gregory C. Bruce Cochran, Judith Giniger, and Hallett Hammett
1976 Archaeological Reconnaissance on the Mid Columbia and Lower Snake River Reservoirs for the Walla Walla District Army Corps of Engineers. Washington Archaeological Research Center, *Project Report 27*. Pullman.
- Gaim, Jerry R., Glenn D. Hartmann, Ruth A. Masten, and Garry O. Stephenson.
1981 A Cultural Resources Overview of Bonneville Power Administration's Mid-Columbia Project, Central Washington. *Eastern Washington University Reports in Archaeology and History*, No. 100-16. Cheney.
- Hammett, Hallett H.
1976 Late Quaternary Stratigraphy and Archaeological Chronology in the Lower Granite Reservoir Area, Lower Snake River, Washington. Unpublished Ph.D. dissertation, Department of Anthropology, Washington State University, Pullman.
- Lyman, R. Lee
1980 Freshwater Bivalve Molluscs and Southern Plateau Prehistory: A Discussion and Description of Three Genera. *Northwest Science* 54:121-136.
- Montgomery Ward & Co.
1895 *Catalogue and Buyers' Guide No. 57, Spring and Summer 1895*. Facsimile Reprint (1969) by Dover Publications: New York.
- Osborne, Douglas
1957 Excavations in the McNary Reservoir Basin near Umatilla, Oregon. *Bureau of American Ethnology Bulletin* 166, River Basin Survey Papers No. 8. Smithsonian Institution, Washington, D. C.

DOI 02123

- Rice, David G.
1976 Untitled report re: Columbia Island Park Burial Relocation Project. University of Idaho, Laboratory of Anthropology, *Letter Report*, No. 76-8. Moscow
- Sappington, Robert Lee
1984 Report to the Corps of Engineers, Walla Walla District, concerning an archaeological reconnaissance of 45-AS-99. University of Idaho, Laboratory of Anthropology, *Letter Report*, No. 84-14. Moscow.

1994 *The Prehistory of the Clearwater River Region, North Central Idaho. University of Idaho Anthropological Reports*, No. 95. Moscow.
- Sappington, Robert Lee and Caroline D. Carley
1984 Test Excavation and Evaluation of 45-FR-317, on the Middle Columbia River, near Pasco, Washington. *University of Idaho Anthropological Research Manuscript Series*, No. 78. Moscow.
- Schroedl, Gerald F.
1973 *The Archaeological Occurrence of Bison in the Southern Plateau. Washington State University, Laboratory of Anthropology, Reports of Investigations*, No. 51. Pullman.
- Sears, Roebuck and Co., Incorporated
1900 Sears, Roebuck and Co. Consumers Guide, Fall 1900, Catalogue No. 110. Facsimile reproduction (1970) by Digest Books: Northfield, IL.

1902 Sears, Roebuck and Co. Consumers Guide, Fall 1900, Catalogue No. 111. Facsimile reproduction (1969) by Crown Publishers: New York.
- Shiner, Joel L.
1961 *The McNary Reservoir: A Study in Plateau Archaeology. Bureau of American Ethnology Bulletin 179, River Basin Survey Papers No. 23. Smithsonian Institution, Washington, D. C.*
- Sprague, Roderick
1973 *The Pacific Northwest in The Development of North American Archaeology*, pp. 250-285, James E. Fitting, editor. Anchor Books: Garden City, NY.
- Thoms, Alston V., with contributions by Sheila J. Bobalik, Karen Dohm, Todd R. Metzger, Deborah Olson, and Stephan R. Samuels
1983 *Archaeological Investigations in Upper McNary Reservoir: 1981-1982. Washington State University, Laboratory of Archaeology and History, Project Report*, No. 15. Pullman.

DOI 02124

Toulouse, Julian Harrison
1971 *Bottle Makers and their Marks*. Thomas Nelson: New York.

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APPENDIX 1

AN INVENTORY OF MATERIALS ANALYZED FROM 45BN52

Bag label	Contents	Comments
Columbia Park I lithics from beach area 25 m extent	7 lithic items	includes: 2 chalcedony flakes; 1 basalt flake; 1 granitic or quartzite flake; 2 granitic or quartzite spalls; 1 hematite or brick fragment
unlabeled	1 basalt cobble	multidirectionally worked core
[inside this bag is another labeled: Columbia Park I Flaked cobble]	1 Basalt cobble	minimally worked
Columbia Park I sample of historic artifact from beach area much more + not collected	14 fragmentary historic artifacts	includes: 1 amber glass bottle fragment; 1 green glass bottle fragment; 1 glass jar lid liner fragment; 1 glass stopper; 1 flow blue sherd; 1 limitation porcelain sherd; 2 whiteware sherds; 4 (?) cut nail fragments; 1 piece of wire; 1 table knife handle (with a blade fragment)
Columbia Pk. I Bison tibia calcaneus from silt stratum	2 elements	includes: 1 modern bison/cow tibia; 1 modern bison/cow calcaneum
Columbia Park I Sample of non-human bone From beach area	3 elements	includes: 1 sawn modern bison/ cow left ulna; 1 modern bison/cow femur; 1 unidentified (skull?) fragment
Columbia Park I Sample of non-human bone From beach area	12 fragmentary elements	includes a variety of non-human medium and small mammal fragments, some of which are sawn; 1 may be a bird bone
Columbia Park I Shell frags from beach area	6 shell fragments	freshwater clam shell fragments
TOTAL	46	46

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