

**Supplemental Archaeological Information
Relative to the Colville Tribes' Affiliation with Kennewick Man
submitted in response to Dr. F. McManamon's letter of July 24, 2000**

prepared by Brent A. Hicks
History/Archaeology Department
Confederated Tribes of the Colville Reservation

Dr. McManamon's letter (dated July 24, 2000) solicits additional information (beyond that submitted in the February 2000 CCT Claim document) on several topics specific to Plateau archaeology. Those topics are described beginning in paragraph five of his July 24, 2000 letter and are enumerated *one* through *three* below corresponding with paragraphs five through seven of the letter. Questions raised regarding oral history and traditional cultural knowledge are addressed by Guy Moura under separate cover.

Topic One – Seasonal versus continuous occupation of Marmes Rockshelter

Dr. McManamon makes a good point on this topic, questioning whether the pattern of continuity demonstrated by the presence of cultural materials and their interpreted activities might not be indicative of seasonal occupation rather than continuous occupation of the rockshelter over time. He notes that more recent study of other rockshelter archaeological sites largely have concluded this. We note that Marmes Rockshelter was excavated more than 30 years ago, using the techniques considered standard at that time. Those standards did not call for the same level of control in excavation as would be applied today, nor would most of the sediments within Marmes Rockshelter have benefited from such precision. The principal sediment in the Marmes Rockshelter was roof fall rock, always angular to subangular and varying in size from gravel to boulders. Smaller grain sediments in the site, almost exclusively present as a result of wind, sift downward during excavation, preventing assured statements as to their exact provenience in relation to each other and the cultural materials within. This is to be contrasted with such rockshelters as the Meadowcroft Rockshelter that contain sediments layered together with cultural materials similar to developing soils. Such sediments offer considerably more to interpretation given the higher confidence in materials provenience and success of careful sampling for such things as soil chemistry analysis. These offer a much greater picture regarding seasonality of use as well as a myriad of other topics of interest to archaeologists.

1. Marmes
Occupation of
Seasonality
= goes to
issue of
Continuity

* Seasonality at Marmes Rockshelter must be interpreted from fewer sources of information gathered through more limited avenues. Most of the more 'advanced' (for the day) analyses conducted at the Marmes site were done in support of Fryxell and Daugherty's geological-focused, 'big picture' goals, rather than to further the interpretation of the specific cultural uses of the site. This must be understood in terms of the status of archaeological inquiry on the Plateau. Prior to the Marmes site investigations (1962-1968), only a few Plateau sites had been found that were thought to

be older than ca. 5,000 B.C. and only one of these (Lind Coulee in the central Basin) had been confirmed through the use of radiocarbon dating techniques. [The Plateau also lagged behind most other areas of the United States in developing and testing cultural chronologies] As such, Fryxell's interest in interpretation of the Marmes site was more towards determining its antiquity and development of the landforms at the site, and relating his conclusions to other landforms along the lower Snake River where he and Daugherty had been excavating since the late 1950s. This served Fryxell's overriding interest in contributing to the picture of landscape evolution, paleoclimate, and human adaptation on the Plateau, but left interpreting the cultural uses of the site largely to graduate students. Thus, the only soil-related lab analyses conducted were grain-size analysis and select soil chemistry studies that contributed to examining the development of the floodplain terrace in front of the rockshelter.

- * Examination of the seasons of use of Marmes Rockshelter through time has been taken up by a study currently being conducted by the Confederated Tribes of the Colville Reservation (Hicks ed. 1999, 2000[in process]). Collection methods have hampered this effort however, as seasonally sensitive botanical information is largely unavailable and the predominant use of ¼" screen has resulted in an incomplete picture of the species of fish used at the site. Faunal data is not available at this time.

Botanical evidence of the season of use of Marmes Rockshelter is limited to two fruit/berry producing species and two species of grass/reed. Although hackberry (*Celtis reticulata*) pits are not numerous in the site (almost certainly due to the use of ¼ inch screens), their consistent presence in all of the depositional units in the rockshelter suggests that hackberry fruits were probably used for food throughout the history of the site. Hackberry is frequent along the Snake River and probably was also frequent along the lower Palouse River (the Marmes site is located ca. 1 mile up the Palouse River from its confluence with the Snake River), so an abundant local supply would have been available. The fruits ripen in late summer and persist on the trees into the winter. Many or most of the hackberry pits in Marmes Rockshelter likely were brought there by humans, based on their number and broad areal distribution. Hackberry pits were plentiful in the nearby McGregor and Porcupine Caves, in numbers too large to be accounted for solely by rodent activity (Mastrogiuseppe 1994, 1995).

- * The presence of two wild cherry (*Prunus emarginata* or *P. virginiana*) pit fragments is a minimal representation in the analyzed sample from the Marmes site (Mastrogiuseppe 1999) but this also may be a result of the use of ¼ inch screens in excavation. Cherries were eaten by early people in the area and cherry pits were present in large numbers in other Palouse River rockshelters (Mastrogiuseppe 1994, 1995). Wherever they grow, wild cherries have been gathered for food. Wild cherries ripen in late summer and fall.

- * The single item of cordage in the analysis sample is made from twisted stems/attached leaves of sedges (*Carex pellita* or *C. vesicaria*). Sedges were the most common material used to create the medium width and coarse cordage found at the excavated sites in the Palouse Canyon/Snake River vicinity (Endacott 1992; Mallory 1966; Mastrogiuseppe 1994, 1995). Sedges were available locally and typically are collected in mid to late

NOTE:
(matting)

summer. Only one fragment of matting is present (although other samples do contain tule fragments that appear to have come from matting). The matting fragment is a twined selvage from a tule (*Scirpus acutus*) mat. A comment with the specimen ("from mat area") implies that there was more matting present in the rockshelter. Tule mats were the all-purpose textiles along the lower Palouse and Snake Rivers, being used for everything from roofing and floor mats to plates. They were also used to separate layers in food storage pits (probably worn mats were used for this purpose [Hicks and Morgenstein 1994]). Tules were locally available and were collected in late summer and fall.

Some plant materials have apparently been used throughout the time periods represented by the Marmes Rockshelter sediments. Western redcedar (*Thuja plicata*) wood was recovered from each of the depositional units. Western redcedar does not now occur anywhere near the Marmes site and is unlikely to have occurred near there during the time periods represented by cultural materials at the site. However, far upstream on the Palouse River and especially on the Clearwater/Snake River drainages there are stands of western redcedar. Since this tree prefers moist habitats, many of these stands occur on the river flood plains, and drift logs would have been relatively common. All of the western redcedar in the vicinity of the Marmes site would have been carried in from distant areas either by the rivers or by humans; its presence within the site deposits is almost certainly a result of human transportation, at least from the river banks.

Douglas-fir (*Pseudotsuga menziesii*) wood was collected from both pre- and post-Mazama ash fall depositional units. There may have been some Douglas-fir growing on cooler slopes/floors of canyons near the Marmes site during less xeric climatic phases, although the scarcity of this wood in the deposits suggests otherwise. It is more likely that this wood, like western redcedar, was carried to the area by water or by people.

Excavation methods have severely limited interpretation of the extent that fish contributed to the cultural use of the Marmes site. The use of 1/4 inch screen would have allowed many of the bones of small fish species and juvenile specimens of larger fish species to escape recording. As such, considerations of the relative abundance of fish taxa in the site should be treated at the nominal scale.

The rockshelter fish fauna shows that a range of fish taxa were used by people occupying the rockshelter (Butler 2000). Fish remains were identified in each of the stratigraphic units spanning the Holocene record of occupation, indicating that fish played some part in subsistence activities for the 10,000 years the site was used. Both resident freshwater and anadromous fishes are present, suggesting that past people were generalized in their fishing practices. *Ptychocheilus oregonensis* (northern pike minnow) was the dominant freshwater species represented; *Catostomus macrocheilus* (largescale sucker) was the sole species of sucker present. Large-bodied salmonids (*Oncorhynchus*), almost certainly from migratory runs, represented 13.7% of the collection and a single specimen from sturgeon was present.

The early Holocene record shows that small freshwater fishes were targeted for capture. The species identified occupy a range of river, stream and lake habitats, including slow

and fast moving water, deep pools and shallows; their preference is relatively warm water. Peamouth tend to occupy the warmest water, favoring deep water during the winter and moving inshore during spring and summer. *Catostomus* species are bottom fishes, feeding on algae or bottom dwelling invertebrates. They occupy quiet areas in the backwaters or edges of the main current of streams. During spawning season of largescale sucker, which occurs usually in April or May, large schools are found occurs in shallow water along river edges.

NOTE
Salmon
Mussels
from Snake
Cave

The Palouse River probably never supported anadromous salmon runs due to the presence of a 200 foot falls just 6 miles above its mouth; the nearest source of these fish for Marmes site occupants would be a mile away in the Snake River. Vast numbers of spring and summer runs of chinook used the Snake River upriver from the Palouse River as a passage way to spawning grounds in tributary rivers and streams; the fall run chinook used extensive spawning habitat in the main stem Snake River between the Palouse River and Hells Canyon. Ethnographic records show that salmon fishing was extremely productive at the confluence of the Palouse and Snake Rivers (Ray 1975).

NOTE
Increasing
use of
fish
3,000 BP

It is widely accepted that sometime after 5,000 years ago, Plateau people made increasing use of salmon, including as a stored resource. Gustafson notes "Salmonid vertebrae and other fish remains sometimes are abundant (particularly in the storage pit areas--Units VI and VII)" (1972: 106). In Butler's (2000) analyzed sample from Marmes Rockshelter salmonid remains are most common in Unit V where they represent over 60% of the fish fauna. Perhaps the higher frequency of salmon in Unit V, which provided a radiocarbon date of 4250 +/- 300 BP (Sheppard et al. 1987), signals the stored use of this resource.

NOTE
Marmes
conclusion
for
seasonality

In conclusion, the collective information on seasonality currently available indicates that the site was potentially used year-round (i.e. identified resources are available in at least a portion of all seasons). However, a more critical assessment of this information suggests summer and fall occupation prior to the use of the site for storage (prior to the Mazama ash fall). Immediate post-Mazama use of the site appears limited to burials. Later, the site's predominant use was for limited occupation, food storage and perhaps preparation of resources for storage; storage would have made it possible for any season's resources to be introduced into the site's cultural deposits.

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NOTE
split
in our dist
of Marmes
(13A) - occupat
pre Mazama
(2A) - used
for burials

Having presented the limited information available from data that is sensitive to seasonality of use of Marmes Rockshelter, we take this opportunity to put the question of seasonal versus "continuous" occupation to some scrutiny. While this may represent information typically offered in undergraduate 'Introduction to Archaeology' courses, we believe it should be in the record of these events, if only so that this perspective not be overlooked by more casual readers.

NOTE
Special Note
on Marmes
Continuity

The underlying devil's-advocate argument in Dr. McManamon's statement is: "just because a site is used in the same season year after year, doesn't prove that it is the same group of people that used it, and therefore it can't be asserted as continuous occupation." There are several points to be made about such as assertion:

- Archaeology almost never proves anything. Like many other fields of study (e.g., physics, astronomy, paleontology, meteorology, psychology, biology) where the evidence is often ephemeral and relies on our interpretation of limited physical evidence, archaeology builds on the available physical evidence by developing hypotheses (working explanations) that may account for that evidence. In all fields, having multiple working hypotheses to test data sets against is considered best and necessary. But not all working hypotheses carry the same weight. Those that have been found to best interpret data sets through well-described studies time and again, especially from multiple culture areas, are considered to have stood the test of time, and it is reasonable that they be cited as the closest thing to explanations (or 'proof') that archaeology can offer.

OTE:
wandering
groups

the site
wandering #
= range
= continuity

- for mobile foraging groups, which is the settlement and subsistence pattern asserted for the Plateau at the time in question, seasonal occupation of a site is as permanent as occupation gets. The widely cited description of mobile foragers is that of people who move their social unit relatively continuously in search of food and other resources. That movement is dictated by their knowledge of resource location, and the extent of the group's movement approximates its 'home' territory. Mobile forager adaptation, then, is the knowledge of resource locations and the scheduling of group movements to take best advantage of those resources in a given year (or seasonal round), with variation in annual resource productivity introduced by such natural factors as weather, fire, prey population variation, etc. and such cultural factors as resource maintenance (e.g., intentional burning), social choices within the human group, etc. Returning to the same resource area year after year (as indicated by archaeological deposits) asserts knowledge of the dependability of the resource at that location, an awareness that comes in time to people that occupy a territory. Where archaeological materials indicate use of a site through time (e.g., consistent or only gradually changing tool styles, presence of the same resources in cultural contexts), that awareness, and the stable foraging pattern and foraging population it implies, can be asserted as one aspect of interpretation of the site.

Topic Two – Relationship between Marmes Rockshelter and other lower Snake River sites

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It was shown in the CCT's initial claim packet that there are many recorded archaeological sites along the lower Snake River that collectively indicate continuity of occupation of the area. In particular, the periods of occupation of these sites overlap throughout the last 10,000 years indicating no significant break in occupation of the region. In addition, the tool assemblages found in these sites reflect the phase assemblages described in Leonhardy and Rice's (1970) cultural chronology indicating that the sites were used by the region's tool-making occupants.

continuity?

The "post-Windust Phase" (Leonhardy and Rice 1970) archaeological picture for the Plateau is described generally as one of cultural continuity as indicated by only gradual changes in material technology, settlement patterns, and resource use (Bense 1972; Browman and Munsell 1969; Campbell 1985; Rice 1972). While perceived changes in certain tool forms can always be argued as indicative of some change in cultural

NOTE Assertion
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behavior, without corresponding evidence of population displacement it would be irresponsible to assert that it is due to replacement. In addition, changes in the form of specific tools without changes in the rest of the tool assemblage assigned to a phase would argue for in-situ adaptation or adoption of a new form through diffusion.

In-situ Evolution of Tool assemblage

no Population displacement w/ Evidence!

The overlapping dates of site usage, in combination with a long-standing pattern of only gradual changes in tool forms that do not correspond with a widespread break in use of occupation sites at a given time period on the Lower Snake River would appear to rule out population displacement as an explanation.

Relationship between Lower Snake River sites

As far as establishing relationships between these sites and the Marmes site, intersite archaeological relationships rely on similarities of cultural materials. This is borne out in the lower Snake River region in that none of the sites there exhibit other than that described in the Leonhardy and Rice (1970) cultural sequence, which is probably why it has stood for 30 years. The Marmes site is unique in this area in that it has a continuous cultural record and it has been excavated; no other sites share both of these characteristics. As such, other sites' materials must be compared with portions of the Marmes site materials. This is done at length in Leonhardy and Rice (1970) and will not be duplicated here; Leonhardy and Rice (1970) is enclosed.

! specific EX. of link through time

One example is presented here. Marine Olivella (*O. biplicata*) shell is found in a number of sites with older components along the lower Snake River. In particular, Olivella shells with the spires ground off were recovered at Marmes Rockshelter (Units I and II, ca. 9,000 – 10,000 BP)(Breschini 1979; Rice 1969), Alpowa/45-AS-78 (Early Cascade subphase, ca. 8,000 – 7,000 BP)(Brauner 1976), Granite Point/45-WT-41 (Area C, ca. 9,000 – 6,700 BP)(Leonhardy 1968, 1970), Tucannon/45-CO-1 (Assemblage 2, ca. 6,500-4,000 BP)(Nelson 1966) and in the Orondo Rockshelter/45-DO-59 (ca. 6,500 – 2,000 BP)(Gunkel 1961). At the Tucannon Site, this pattern of grinding off the spire continues into the Current Era (Erickson 1990). Thus, this particular method of preparing a specific artifact type is found in multiple sites and over a long period of time.

Address this Evidence NOTE

Topic Three – Posited changes in procurement of obsidian through time

The changes in methods of procurement of obsidian through time asserted by Hess (1997) as noted in Dr. McManamon's letter follow easily from the prominent settlement and subsistence pattern working hypothesis for the Plateau of gradual decreasing mobility and increasing population during the Holocene. Together with increasing intensification of subsistence resources and storage comes increased sedentism, ultimately manifesting itself as the pithouse village and intensive salmon fishing pattern described as the ethnographic 'Plateau Culture' (cf. Swanson 1962, Ray 1933).

The presence of out-of-area items in Plateau archaeological sites demonstrates that the acquisition of such materials (e.g., lithic materials, shells, Euroamerican goods) occurred beginning early on in prehistory and continued through to the historic era. Olivella shells from the Pacific Coast to the west and obsidian from Whitewater Ridge in south-central

Argument that Obsidian and shells = continuity!!

Trade routes established
own. the
of trade
of sedentism
!!!
Address this
Assertion
Obsidian change = economic
and not cultural
or people.

Oregon are found in deep cultural layers at Marmes Rockshelter dating to between 9,000 and 10,000 BP. Olivella shells are found in burials in the site through to ca. AD 1000. It is clear that in the late prehistoric period, inter-regional trade routes were well established, particularly between the Plateau and the Pacific Coast (cf. Anastasio 1972). Walker (1967) asserts that the ecological variation in the Plateau fostered interareal movement of localized resources. With increasing sedentism and an increased focus on certain food resources (and therefore certain resource locations), long trips (prior to obtaining the horse in ca. 1730) to obtain out-of-area non-subsistence resources at the source may have become less practical than obtaining those items at trading centers (e.g., the Dalles, Kettle Falls) in the course of trading subsistence items.

We would suggest that Dr. McManamon's 'devil's advocate' statement that Dr. Hess's (1997) study of changes in obsidian artifact form as distance from source increases can be seen to conclude that "a continued presence of a material such as obsidian may...reflect different patterns of procurement, mobility, and group interaction" is a semantic somersault of what the study actually says. Dr. Hess (personal communication, August 2000) has clarified that the force for change in the obsidian artifact forms is an economic one, not a change in the people seeking obsidian. The overall economic change is a gradual change over time from direct procurement of obsidian by small, mobile foraging groups in pre-Mazama times, to procuring the bulk of obsidian through trade along established trade networks. Hess (1997) asserts that the impetus for the economic change is in-situ population pressure that led to greater sedentism, intensification of the use of a smaller subsistence resource base, and reliance on trade for out-of-area materials such as obsidian; multiple lines of archaeological evidence describe this pattern on the Plateau. Hess also hypothesizes that with increased population and greater sedentism, a stronger sense of territoriality developed, creating barriers to direct procurement of obsidian (and other relatively rare items and materials) from many sources. He concludes that it is the combination of all of these factors that led to changed "patterns of procurement, mobility, and group interaction." These are cultural behaviors that are manifest as a result of multiple social and economic factors that Hess does not assert would be responsive to the desirability of a single lithic material type.

NOTE

Address!

Intuitively, it seems that the transition from direct procurement of obsidian to obtaining obsidian through trade would have changed certain aspects of obsidian representation in archaeological sites rather than maintaining them consistently through time. As obsidian became more of a trade item than an item directly procured as Hess indicates, it is expected that much of that trade would have occurred at trading centers which were the anchors of the growing trade networks. One might hypothesize that obsidian from sources closest to the trading centers would become the predominant material types traded. Over time this would show up in the archaeological record as a decrease in the number of sources used or at least an increase in the percentage of certain obsidian types in more sites through time.

In regards to direct procurement, we note that the Whitewater Ridge obsidian source is nearly two hundred miles south of Marmes Rockshelter and the nearest source of Olivella shell is nearly three hundred miles west. In addition, *Haliotis* sp., while found along the

Oregon coast, becomes abundant only in the warmer waters off California (Erickson 1990). All three of these materials are found in Marmes deposits that date to the Late Pre Mazama period during which direct procurement of obsidian is hypothesized by Hess. It cannot be asserted that all of these materials came to the Marmes site by direct procurement. And it also cannot be asserted that the continued presence of any of these three materials in a Plateau site with a long chronological sequence by itself represents a change in patterns of procurement, mobility, and group interaction. Such an assertion would have to be buttressed with associated changes in these and other archaeological materials in the site to be considered demonstrative. For example, for the continued presence of obsidian to be used to assert a change in procurement patterns, an archaeologist would have to demonstrate the changes in the tool forms and wear patterns asserted by Hess (1997) and discount all other ways that these forms and wear could have occurred. For the continued presence of obsidian to be used to assert a change in mobility, an archaeologist would have to demonstrate how such a change in mobility is also reflected in the changes in material technology that would be expected with such a major lifeway change (in this case increased sedentism) and the consequent use of different subsistence resources. For the continued presence of obsidian to be used to assert a change in group interaction, an archaeologist would have to demonstrate changes in socially sensitive material culture and/or site structure. The *continued* presence of a single archaeological material rarely indicates *change*, particularly in such culture dependent behaviors as "patterns of procurement, mobility, and group interaction."

To conclude, by itself, continued presence of obsidian in a site may actually indicate very little. Changes in such things as procurement patterns, mobility, and group interactions would have widespread effects throughout the cultural group that would be discernible in the archaeological record. On the Plateau, the hypothesized changes in procurement patterns, mobility, and group interactions occurred over thousands of years and generally are observable in the archaeological record. Whether related to obsidian procurement or other cultural activities, there is no well-founded basis for an assertion of other than in-situ cultural development.

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