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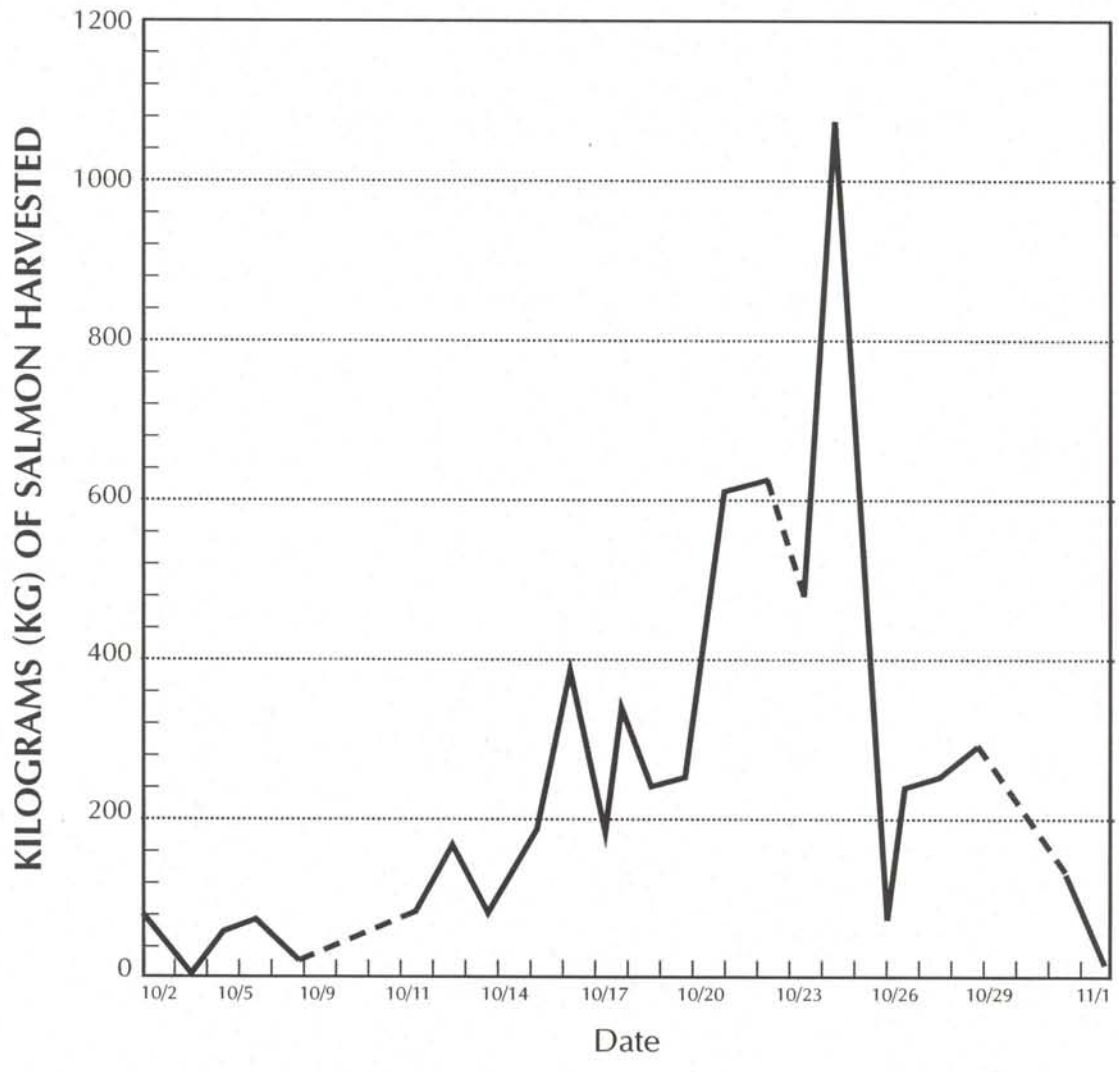

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ARTICLES AND REPORTS

FISH REMAINS FROM THREE SITES IN SOUTHWESTERN IDAHO

Mark G. Plew and Sharon Plager

INTRODUCTION

The use of improved recovery techniques during the past two decades has resulted in the more consistent recovery of fish remains from archaeological sites. The evidence to date suggests that fishing activity spans several millennia though it appears it may have been relatively more common during the past fifteen hundred years. Archaeological evidence suggests that salmon, trout and other species were utilized. This paper briefly reviews the status and interpretations of the archaeological data base and describes the results of recent osteological analyses of fish remains from three sites (10-EL-22, 10-EL-1367 and 10-EL-392) in southwestern Idaho.

Two major hypotheses characterize the extent and nature of fish procurement in southwestern Idaho and the Middle Snake River area in general. The first argues for a winter storage strategy based upon bulk procurement of fall Chinook salmon and is vested in the presumption that an abundance of salmon resources provided the single largest protein source for aboriginal peoples and the basis for the emergence of sedentary village life (Pavesic and Meatte 1980). A second hypothesis argues for year round fishing by many groups employing variable strategies in the short term procurement of a variety of species. The later hypothesis argues that only a few groups engaged in large scale fall harvests for winter storage as the resource was not cost-effective or optimal (Gould and Plew 1996; Plew 1980, 1983, 1997).

The primary sources for the storage model are historic, ethnohistoric and ethnographic works, particularly those by Steward (1938), Murphy and Murphy (1960) and Liljeblad (1957). Without belaboring criticisms of 19th and early 20th century ethnography, it is important to note the anecdotal nature of these accounts. While the accounts of ethnohistories tend to be seasonally and event specific, ethnographic accounts detail the "memory culture" of people who never resided on the Snake River Plain and who did not practice the aboriginal lifeway.

The accounts provide sweeping generalizations about subsistence as is exemplified by Steward's (1938) accounts of the Middle Snake River area. Such accounts fail to document the variability of aboriginal lifeways as they have evolved and as they most certainly changed in the recent period – a point made by Kelly (1996) in his observation that "all too often, ethnographic data are used as whole cloth analogies of the past without considering the context of those data." Only recently have scholars, such as Allison Freedman (1998), begun to describe a greater range of variation in these accounts – a pattern different than that generally associated with the convention of Steward.

The storage model of fish procurement adheres to the uncritical assumption – long discounted and predicated upon historic bias – that aboriginal peoples utilized abundant resources because they were abundant and remained constant over time. This assumption, which is at odds with much hunter-gatherer research, is not archaeologically demonstrated. Further, the model fails to account for the ways in which these assumptions must be related to biological and ecological factors affecting fishes, particularly salmonids.

By way of example, Schalk (1977) has demonstrated that fluctuations in water temperature in southern mid-latitudes often result in short winter spawning seasons with greater competition from non-anadromous fishes which periodically reduced harvests. He has further demonstrated that the distance from the mouth of the river to the point of return determines the duration of the run – a demonstration that means fewer fish on the Snake River than on the Columbia. With regard to distance of migrations, Plew (1983) has noted the relevance of significant nutritional losses – 78%-96% fat and 31%-61% protein losses by sex – for spawning runs covering distances as great as those to the Middle Snake River. At issue in all instances are the numbers of fishes migrating annually. In this regard, Chatters et al. (1991, 1995; see also Neitzel et al. 1991) model middle Holocene stream

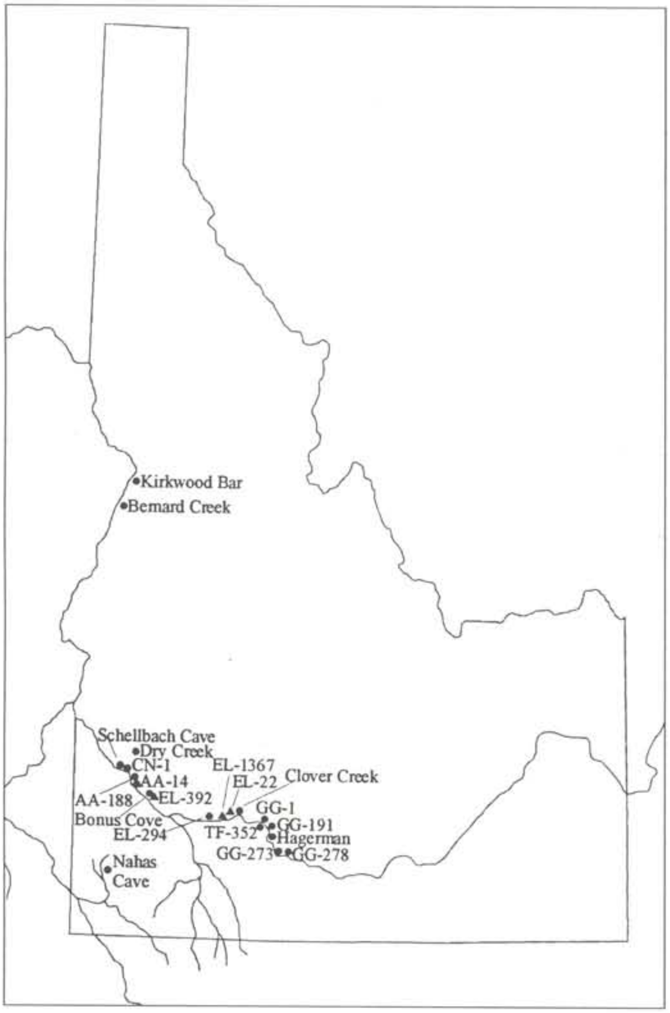

Figure 1. Map Showing the Location of Sites Discussed in the Text.

conditions to estimate the effects of warmer temperatures on the salmon fishery of the Columbia River between 8,000 and 6,000 B.P. Their findings suggest a 30%-60% loss of adults returning after 100 years of warmer conditions. Less significant fisheries such as the Snake River might have seen even greater losses. Archaeological evidence suggests that salmon were not only relatively less available but smaller with mean weight of returning adults only 6.2 kg.

In general, as we think about resource use, we assume that tactical responses were driven by the contingencies of resource encounters – a consideration consistent with optimal foraging models. As such, we assume that different groups employed variable strategies in utilizing Middle Snake River resources. The latter is exemplified by what Plew (1990) has referred to as the "camas model," in which camas and other tubers are generally more optimal in terms of co-occurring harvest/processing times, nutritional values, portability and storage.

Insights regarding the potential of aboriginal harvests have been traditionally based upon historic accounts (Plew 1983; Walker 1993). Among the common examples are the harvests at the historic Liberty Millet's Fishery near Salmon Falls in 1894. Using techniques with some ethnographic parallel, two men used a small boat and seine to harvest salmon between October 2 and November 1 – the Chinook run – the largest of the salmon runs and that harvested by natives presumably engaged in procurement for winter storage. Though harvesting time and work schedule were not controlled, there are certain notable characteristics – specifically the temporal compression of the run – with days producing over 200 kg. occurring within a two-week period between October 14th and October 29th. It appears that latitudinal position, distance from stream mouth and discharge characteristics are reflected by the short period of availability and appears to be supported in part by research in Hells Canyon (Chatters 1995, Reid and Chatters 1997) where fluctuations in availability of salmonids are noted at a number of sites.

Relevant to consideration of the optimality of this resource are previously identified biological and ecological variables. Notable in this regard is the harvest and handling time for salmon which would have necessarily occurred over a period of time. While Plew (1983) has estimated that it would require 2700 lbs. (1270 kg.) of fish to meet the nutritional requirements for the domestic unit from Mid-December to Mid-March, the winter period, the historic Liberty Millet's Fishery harvest demonstrates that an adequate amount of fish could be taken. Yet, the extended period of harvest and processing time would likely have reduced the cost effectiveness of the strategy, particularly as there is a lack of constancy in individual runs on an annual basis and over periods of years.

Since groups would have necessarily remained near the river for an extended period of time, investing heavily in facilities and technology of the sort associated with

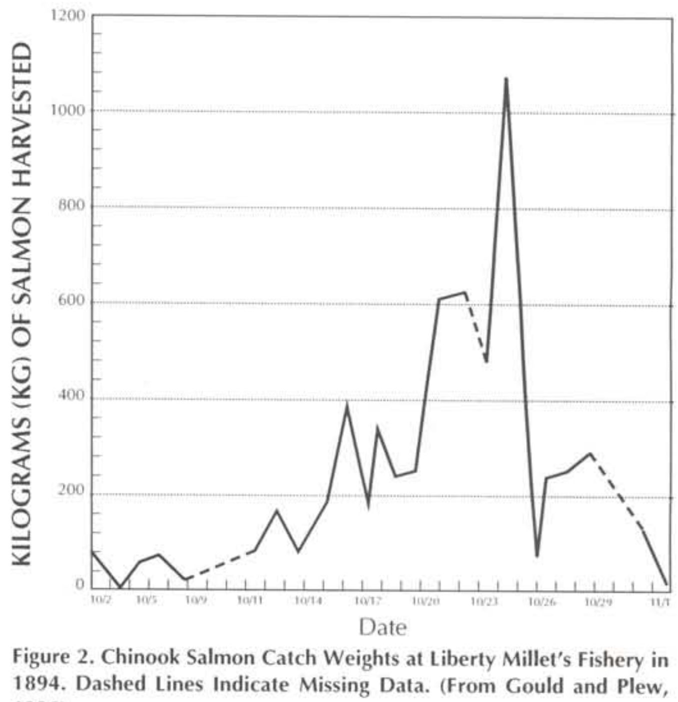

Figure 2. Chinook Salmon Catch Weights at Liberty Millet's Fishery in 1894. Dashed Lines Indicate Missing Data. (From Gould and Plew, 1996)

bulk procurement, it is curious that hunter-gatherer/forager groups would have opted for a strategy that likely placed them at greater risk in competition with resident and transient populations for local resources, especially since the fisheries are concentrated in certain locales along the Snake River.

Important to understanding the limitations of the strategy is consideration of the handling time – defined by Simms as the time to render the resource edible – which in this case means processing and preparation for storage. Historic and ethnographic data from the Northwest, where smoking was common, suggests that processing occurs over a period of six to eight weeks. Notably, processing time is linked to procurement so that an extended harvest period only extends the processing time. While drying seems to have been employed locally, O'Leary (1992, 1996) suggests that salmon rarely stores for more than a month (decay, insect infestation and canids) –in southern Idaho this "handling"equation might well have taken groups into the winter period. Coupled with what are nutritionally deficient fish, more fish only extend the handling time.

ARCHAEOLOGICAL DATA

While much is assumed about the nature of fish procurement in southern Idaho, the archaeological data supporting the assertions regarding its importance are relatively few. Though this most certainly reflects sampling and recovery strategies, many sites have not produced evidence of fishing activity either by the presence of fish remains or fishing gear. Table 1 includes data for a number of sites having produced fish remains. Based on these data, it appears that fishing occurred during the past 7,000 years, though seems to have been more common in the Late Archaic (past 1500 years). The assemblages are generally small and with calculation of MNI's few individual fish are represented by the majority of assemblages. In some instances, as with Bernard Creek Rockshelter (Randoph and Dahlstrom 1977), fish remains span thousands of years. Yet, in the case of Bernard Creek Rockshelter, approximately 60% of the remains are non-salmonid. Here, as with other sites on the Middle Snake River, collections of fish remains span many occupational episodes. Though Three Island Crossing (10-EL-294) has produced the largest assemblage of fish remains from any southern Idaho site, the remains are collectively from three distinct and radiometrically dated occupational episodes and likely represent no more than c. 300 individual fish. Of interest in this regard is Chatters' (1997) observation that the faunal assemblages from Hells Canyon and the greater Plateau contain little evidence of fish remains despite ethnographic evidence for extensive exploitation.

Beyond the presence of fish remains the sites in question lack evidence of fishing gear (with the exception of Schellbach Cave, which appears to reflect a cache), processing areas, i.e. cleaning areas as well as drying and storage facilities. Indeed, the only evidence of storage is at Three Island Crossing where two storage pits suggest the type of short-term storage described by Zeenah (1988). Given the investment of time related to extended harvesting and processing schedules, we might expect evidence of residential structures. Yet, of the 24 residential structures described by Green (1995) few have produced fish remains. Only Three Island Crossing contains a single small structure in association with a large assemblage of fish remains.

While we accept that processing, discarding, curation behaviors, and lack of preservation of such items as cordage, netting, and willow may affect the nature of the record, we continue to believe that the greater body of data indicate a lesser use of fish than is suggested by historic and ethnographic records for the area.

Of further relevance is Gould and Plew's (1996) finding that faunal assemblages along the Middle Snake River suggest a greater reliance on deer and rabbits than on fish – particularly salmon. The primary distribution of these species is undoubtedly linked to their greater optimality – especially with respect to foraging strategies. These analyses suggest an isomorphic relationship between harvested prey and variation in exploitive technology. There is, specifically, 1) a high degree of redundancy in the number of functional tool classes at each site – i.e., the same functional/technological items are represented at all sites, 2) that there are no clearly definable "specialized tools," 3) that differential functional elements are nearly the exclusive source of intersite variability, and 4) that proportional differences in the production of general tools appear to have been used for harvest of both fish and terrestrial animals. In turn, the form of production reflects expedient manufacture of generalized items on an encounter basis so as to suggest a pattern of "direct feeding" of the sort commonly associated with foragers, not the specialized or tactical tool kits of the type described by Steward (1938) – a pattern recently described by Chatters at Kirkwood Bar (1997).

RECENT IDENTIFICATIONS OF SOUTHWEST IDAHO FISH REMAINS

Sorting out the reality of the arguments summarized here will require a substantially greater data base than is presently available. As such, the reporting of even small assemblages of fish remains, as those recently reported by Yohe and Neitzel (1998) at Bonus Cove, are important to a broader understanding of the issues. In this vein, we report on recent identifications of fish remains from sites 10-EL-22, 10-EL-392 and 10-EL-1367. The remains reported here were recovered during the excavations of the past decade but only recently identified by Allen Tedrow of Idaho State University. The three sites discussed here are, on the basis of typological comparison and hydration rates in the case of 10-EL-22, of Late Archaic age.

Site 10-EL-22, the Clover Creek site, located on the north side of the Snake River near King Hill, Idaho, is adjacent to the confluence of Clover Creek and covers an area of about 100 X 50 meters. The site, which was originally investigated by Mario Delisio, produced fish remains identified as salmon (see Butler 1982) and purported evidence of aboriginal structures. Delisio's failure to report on the Clover Creek excavations prompted a 1988 excavation by Boise State University (see Plew and Gould 1990). These investigations, which were rather extensive, excavated some 64^{2}m. These excavations did not document cultural features but found abundant evidence of the manufacture of lithic tools and few faunal remains including rabbits and a small number of fish remains which are now identified as representing salmon and trout (N=27) and two cyprinid forms (N=2). The MNIs conservatively suggest no more than thirty individuals. The material assemblage is lacking in specialized fishing gear. Though it is not possible to stratigraphically separate the occupations at Clover Creek, the remains appear to reflect several occupation episodes contained within the upper 50 cm of the deposit.

In contrast, 10-EL-1367, located on the north side of the Snake River near Hammett, Idaho, covers an area of 70 X 30 meters. On the basis of materials recovered from four 1 X 2 meter test units excavated to a depth of one meter below the surface, the site produced an assemblage dominated by salmon (N=22) with only a single vertebrae assignable to catostomidae. MNIs approximate the raw numbers, though the remains were recovered from deposits extending to nearly one meter below the surface and representing several occupations of the area. The site is characterized by a generalized tool assemblage and evidence of the presence of rabbits and deer.

Site 10-EL-392 is located on the north side of the Snake River at Grandview, Idaho. The site deposits, which are badly deflated, cover an area of approximately 70 X 40 meters with the depth of the deposit estimated to have originally extended to 40-50 cm below the surface. A total 16^2 meters were excavated. These tests produced a small collection of faunal remains including deer (N=12), rabbits (N=14) and small rodents (N=36). The fish assemblage is dominated by Salmonids including 8 vertebrae and 9 otoliths (MNI=5) for a total of 13 individuals. The tool assemblage is generalized with the faunal and artifact assemblages, suggesting the isomorphic pattern described for other Snake River sites (see Plew and Sayer 1995).

The remains from sites reported here suggest a limited use of fish when calculating MNIs and probable catch weights. Though the mammalian faunal assemblages from 10-EL-22 and 10-EL-1367 are too small to reflect their relative importance to the fish recovered, the faunal remains from 10-EL-392 conform to the pattern de-

TABLE 1
SELECTED DISTRIBUTION OF FISH REMAINS AND MNI ESTIMATES

Site	Salmonid	Non-Salmon	MNI	Age Range	Reference
Hetrick	146	330 (4,611 U)		11,000-300 B.P.	Rudolph 1995
Bernard Creek	220	278	60	7,000-pres	Randolph and Dahlstrom 1978
Nahas Cave[1]	3	7	7	2,920-350 B.P.	Plew 1980
Schellbach Cave	48		10	Post A.D. 1000	Pavesic, Follett, Statham 1987
10-GG-1[2]	449	22	25	1140-250 B.P.	Huelsbeck 1981; Plew 1981
10-TF-352	66	9	?	Post A.D. 1,000	Huelsbeck 1981; Plew 1981
10-GG-273		1	1	Post A.D. 1,000	Butler and Murphey 1983
10-GG-278	1	1	2	Post A.D. 1,000	Butler and Murphey 1983
Dry Creek	1		1	2090 B.P.	Webster 1978
10-EL-22	29	2	?	Post A.D. 1,000	Plew n.d.
10-EL-392	17	5 (?)	?	Post A.D. 1,000	Plew and Sayer 1995
10-EL-1367	22		?	Post A.D. 1,000	Plew and Sayer n.d.
10-AA-188	6	11	7-8 (?)	Post A.D. 1,000	Sayer, Plager and Plew 1996
10-AA-14		1	1	Post A.D. 1,000	Sayer, Plager and Plew 1996
10-CN-1	166	2	18	Post A.D. 1,000	Sayer, Plew and Plager 1997
10-OE-269	5		5	Post A.D. 1,000	Yohe and Neitzel 1998
Three Island	19,000		300	550-250 B.P.	Gould and Plew 1996

Notes:
[1]Non-Salmonid remains were recovered below the dated stratum at 2920 B.P. at Nahas Cave (Plew 1987).
[2]10-GG-1 consists of four distinct components which date to 900-500 B.P.; 1140 B.P.; 300 B.P.; and 250 B.P. Post A.D. 1,000 is typologically based on point types and presence of pottery. The sites are, with the exceptions of Bernard Creek and Nahas Cave which have Early to Middle Archaic associations, of Late Archaic Age. A number of other sites have produced small or unidentified remains (see Meatte 1990 for discussion).

scribed elsewhere by Gould and Plew (1996) where the cost-benefit returns of deer and rabbits were generally more optimal than the fish utilized by the local occupants.

CONCLUSION

In general, the sites reviewed in this paper and the fish element identifications reported here do not confirm the ethnographic analogies often applied to these contexts. Taken as a whole they suggest a pattern of Late Archaic, small-scale foraging between A.D. 800 and the beginning of the 19^{th} century. It appears that fish, while periodically important to the diet, were never a primary source of food or consistently procured in large quantities for purposes of winter storage. An assessment of the biological, ecological and cultural constraints of salmon fishing outlined here suggests that the foraging payoffs for not extensively exploiting fish remained relatively constant over an extended period of time. Drawing upon principles of evolutionary ecology, we suggest that the greater optimality of the resource increased only after the arrival and impacts of Euro-American culture to the area.

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SHORT CONTRIBUTIONS

IMPLICATIONS OF A FREMONT OCCUPATION AT WILSON BUTTE CAVE

Ruth Gruhn

New research at Wilson Butte Cave, a large lava blister located in the central part of the Snake River Plain of Idaho, has confirmed the existence of a Fremont occupation, as postulated by B. Robert Butler in the early 1980s (Butler 1981, 1983). The evidence will be fully published soon in the final report of the 1988/89 excavations. It is based largely on the analysis of the late prehistoric artifacts from the cave by Diane Cockle, who in 1991 was able to study a large assemblage of perishable and non-perishable artifacts which were recovered from the uppermost depositional zone in the cave, Stratum A, by two local collectors before scientific excavations were first undertaken by me in 1959/60 (Gruhn 1961). Cockle's 1993 M.A. thesis will be included in the final site report.

The evidence of a Fremont occupation at Wilson Butte Cave consists of the presence of distinctive artifact types which are common in identified Fremont sites. To start with, there is a great number of small square or rectangular bone gaming pieces. This distinctive type of artifact is known from a number of Fremont settlement sites in Utah and Nevada (Wormington 1955: 176; Gunnerson 1969: 141). Over 100 specimens of these bone gaming pieces are now known from Wilson Butte Cave. All stages of manufacture of these pieces are represented in the assemblage, which indicates that they were produced at Wilson Butte Cave and are not just trade items. Also from Wilson Butte Cave, a hock moccasin is a Fremont type (Wormington 1955: 174; Gunnerson 1969: 143) also unlikely to be a trade item, as moccasins are fitted items of clothing which can be assumed to be made on order for particular individuals. In the late prehistoric period Wilson Butte Cave was a bison-hunt campsite, and there is only a single small rim fragment of coiled basketry known from the site; but a detailed study of this specimen by James Adovasio has identified it as three-rod bunched foundation, a Fremont type. Adovasio's earlier studies indicated that all known late prehistoric specimens of basketry from southern Idaho – from Little Lost River Cave no. 1, Jackknife Cave, and Pence-Duerig Cave – are Fremont types (Adovasio et al. 1982).

The pottery from Wilson Butte Cave is of major interest. In the 1959/60 excavations, a dozen sherds of a relatively thin, fine light brown to gray ware with indications of globular or round-bottomed bowl forms and a micaceous temper were recovered from Stratum A (Gruhn1961: 98-100). At the time, I dubbed the type Wilson Butte Plain ware; and believed it to be an unusual variant of Shoshonean pottery. In 1980, however, B. Robert Butler had these sherds examined by Utah Fremont experts, who pronounced them to be Great Salt Lake Gray ware, the local Fremont ware in northern Utah (Butler 1981: 2-3). The new excavations at Wilson Butte Cave in 1988/89 recovered nine more sherds of this ware. In 1991, Diane Cockle found a total of 77 potsherds in the two amateurs' collections from Wilson Butte Cave. On the basis of observation of color, surface finish, thickness, temper, and rim shape, she classified 37 of the sherds as Great Salt Lake Gray ware. Plastic decoration on the rim sherds included one or two rows of fingernail punctation, punctation combined with light incision, or a herringbone design impressed on vessel lips. One body sherd had a zigzag design painted in black on grey.

The remaining sherds in the amateurs' collections from Stratum A were classifiable as Shoshonean ware – thick, coarse, sand-tempered, undecorated, straight-sided vessels. The pottery collection, then, would suggest that there was a Shoshone occupation of the cave as well as the Fremont occupation at some time in the late prehistoric period. There is a mixture of small projectile points types from Stratum A as well: most of the late projectile points are Rosegate Corner-notched or other corner-notched forms which occur commonly on Utah Fremont sites (Holmer and Weder 1980: 56-60), and a minority are Desert Side-notched points long associated with the Shoshone (Holmer and Weder 1980: 60).

It appears, then, that in the late prehistoric period, over a period of perhaps six centuries, to judge from a single radiocarbon date of ca. 500 B.P. and obsidian hydration dates ranging from ca. 1000 B.P. to ca. 400 B.P. on small projectile points, Wilson Butte Cave was occupied at times by two different ethnic groups; *or* at least artifacts commonly considered typical of each group were left in the uppermost deposit, Stratum A. The stratigraphy within Stratum A, which consisted of densely packed vegetal material in a matrix of aeolian silt, is not defined clearly enough to be able to say whether Fremont and Shoshone materials were contemporary or sequent at Wilson Butte Cave. However, there are two well-stratified and well-dated open sites with pottery now known in southern Idaho which can give us some perspective. These are Wahmuza on the Fort Hall Reservation (Holmer 1986), and Dagger Falls on the Middle Fork of the Salmon River (Torgler 1995). It has been cogently argued (Holmer 1994) that at both sites, there is continuity in the artifact record extending from two to four thousand years ago right up into the historic period. I will suggest that the material from these sites, taken along with the Wilson Butte Cave material, indicates a gradual *in situ* transition from a local Desert Archaic tradition through an Idaho variant of Fremont to the historic Shoshone in southern Idaho.

As there are no perishables at either Wahmuza or Dagger Falls, the discussion must focus on the projectile points and especially the pottery. At Wahmuza, an early-dated occupation floor (ca. A.D. 700), with traces of two dwelling floors and an associated midden, featured large and small corner-notched points and also some thin, globular gray pottery (Holmer and Ringe 1986: 274-275). In higher occupation levels at the Wahmuza site, dated after ca. A.D. 1450, the globular gray ware and small corner-notched points occur on the very same living floors with the typical flat-bottomed conical Shoshonean pottery and also Desert Side-notched points (Holmer and Ringe 1986: 275). As at Dagger Falls, the distinctive Wahmuza Lanceolate point type continues to be common throughout the entire site sequence, indicating continuity through several thousand years to historic Shoshone.

Holmer and his associates believe that the early fine globular gray pottery at Wahmuza is just a variant of Shoshonean pottery (Holmer and Ringe 1986: 279; Ringe 1986); however, it was also said by them to be similar to Great Salt Lake Gray ware (Holmer and Ringe 1986: 274), which is the typical northern Utah Fremont pottery. Others (Plew 1979, Dean 1992) have also observed the close similarity between Fremont and Shoshonean wares. Nevertheless, Holmer and his associates categorically deny that the early Wahmuza assemblage is Fremont; and argue strongly for direct continuity from Archaic into historic Shoshone. But it isn't necessary to deny a Fremont occupation in order to maintain the evidence for local long-term continuity. On the basis of the associated points and the pottery, one could just as well identify the 8th century living floor at Wahmuza as an Idaho Fremont occupation; and interpret the later appearance of typical flat-bottomed Shoshonean pottery and Desert Side-notched points alongside the corner-notched point types and globular gray pottery, as either marking the intrusion of a Shoshone element into the local Fremont population, *or* a local transition from Fremont to historic Northern Shoshone in Idaho, with no population change.

Thus it is time to open the question of continuity from Fremont to Shoshone again. A marked cultural break has long been argued on the basis of discontinuity in the perishable material culture: historic Shoshone basketry is different in construction and design from Fremont basketry; and Adovasio (cf. Adovasio 1986; Adovasio and Pedler 1994) has argued strongly that to judge from the basketry, there is no possibility of a transition or evolution of prehistoric Fremont into historic Shoshone. As well, there is the question of language. Shoshoni pertains to the Numic branch of the Uto-Aztecan family; and because of the very close linguistic similarities among the Numic languages, which are widely dispersed throughout the Great Basin, a very late northward migration of the Shoshone into their historic territory has been inferred (Lamb 1958). In other words, material and linguistic evidence has led to a long-standing model of migration, intrusion, and population replacement in the northern Great Basin in the late prehistoric period (cf. Bettinger and Baumhoff 1982; Adovasio 1986; Bettinger 1994).

Recently, however, questions have been raised about this model. Indeed, a number of contributors to a major volume on the Numic expansion (Madsen and Rhodes 1884) challenge it. Even the linguistic prehistory model has been questioned. For one thing, it has been pointed out that the notion of a late prehistoric spread of Numic languages throughout the Great Basin does not take account of the dynamics of band organization in relatively severe, restrictive environments, in which a flux in band membership and communication of essential ecological information between groups are highly adaptive elements which would serve to maintain linguistic homogeneity over large areas (cf. Shaul 1986, Gruhn 1987, Simms 1994). Close similarity among the Numic languages, then, may have led linguists to a false foreshortening of the time depth of these languages in the Great Basin.

Questions have recently been raised as well about the archaeologists' conventional view of culture change in the Great Basin. Jones (1994), Hughes (1994), and Kelly (1997) have addressed the fundamental problems in attempting to define ethnicity from elements of material culture. Upham (1994) has analysed the long-standing dynamic interplay and flux between foraging and horticultural subsistence strategies, nomadic and sedentary lifeways in the Desert West, which confound a rigid categorical definition of an archaeological culture. Most recently, in a behavioralist approach to analysis of the

Fremont phenomenon, Madsen and Simms (1998) have also utilized the concept of adaptive strategies which were highly variable over space and time.

All of these recent conceptual approaches lead to a reasonable consideration of the notion of fundamental continuity of population in the northern Great Basin, despite noted changes in material culture over time. In this view, "Fremont" and "Shoshone" may simply be historical phases in the development of the local population in southern Idaho. I hasten to say that this interpretation is a working hypothesis, which calls for criticism, and testing at well-stratified sites. Clearly it is time for Idaho archaeologists to reconsider the dynamics of culture change during the last millennium of prehistory.

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