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Fertility of First-Generation Japanese Immigrant Women in Seattle: The Influence of Ken Affiliation, Residential Location, and Employment Status

Akiko Nosaka and Donna Lockwood Leonetti

Abstract *This study examines the variation in fertility patterns of first-generation Japanese immigrant women based on data originally collected in Seattle, WA in the 1970s. Quantitative and qualitative analyses reveal that women achieved relatively high fertility via different strategies depending on their ken affiliation (a ken is a prefecture, the first level of geographic administration in Japan, and immigrants from the same ken often mutually support one another). Some women had high fertility because they resided in Central Seattle in a dense community of Japanese immigrants. Others realized high fertility by limiting their employment, regardless of residential location. An interpretation of this difference is that women's access to, and reception of social support differed according to their ken affiliation.*

Introduction

Reproduction is considered a bio-cultural issue in anthropology because it is influenced by both biological and cultural variables. On one hand, when human females reproduce, pregnancy and breastfeeding are biologically based (Wood 1994). They also experience declining fecundity in their late thirties and eventually experience menopause, which marks the end of their reproductive ability to become pregnant (Sievert 2006). On the other hand, the frequency of pregnancies and how long and intensively a woman breastfeeds are significantly influenced by cultural meanings and practices.

Fertility, actual childbirth, is affected by additional socio-cultural variables. For example, how many children people have and the timing of those births are largely influenced by cultural expectations, social policies, and one's accessibility to technology (see Greenhalgh 1988; Townsend 1997; Krause 2005). Such influences result in distinct patterns cross-culturally. Individuals in a group share similar characteristics in terms of the number of children per family, the timing of first births, and/or the amount of time separating births between children. At the same time, there is also variation within a given cultural group because people embrace different fertility strategies according to their socio-economic resources and/or availability of support (see Hawkes, O'Connell, and Blurton-Jones 1997; Nosaka 2009).

Viewed in terms of biological constraints, cultural influences, and the effects of social assets, the fertility of immigrant women is an interesting topic to examine. When women migrate to new social settings where they face differing conditions, they are most likely to adjust their fertility strategies in contextually appropriate ways. Many studies have examined how the fertility of immigrants as a group differs from that of the host country as a whole, how the host country's policies have influenced

immigrant fertility, and/or how fertility of immigrants has changed as a result of assimilation into the host culture (see Krishnan and Krotki 1992; Moss, Stone, and Smith 1993; Kahn 1994; Alonso and Luna 2005; Sargent 2005; Waller, Berrington, and Raymer 2014 for examples). Relatively few studies, however, have closely investigated how and why the fertility strategies of women in a specific immigrant group vary according to socio-familial conditions and/or backgrounds (see Leonetti and Newell-Morris 1982b; Espenshade and Ye 1994; Ren 2009; Nosaka and Chasiotis 2010 for examples).

This study examines the fertility of first-generation Japanese immigrant women in the United States (U.S.) and how their fertility patterns and strategies appear to have differed in certain respects. It draws specifically on data originally collected by a project that investigated the social and demographic characteristics of Seattle's Japanese American population in the mid-1970s (see Leonetti and Newell-Morris 1982b). This particular project collected the data from three generations of women referred to as Issei, Nisei, and Sansei. The Issei represent first generation Japanese immigrants who came to the U.S. before 1925; they all lived in Seattle prior to World War II, were interned in concentration camps during World War II, and resettled in Seattle before 1950. The Nisei represent the American-born children of the Issei. The Sansei, in turn, are the American-born children of the Nisei.

The study presented here focuses on the data from the ninety-eight Issei women in the original study's sample. Despite the economic and cultural importance of having children in the U.S., the fertility of Seattle's Issei women varied greatly—some had many children, others had few. This study investigates some of the factors associated with the high or low fertility of these women, with a particular interest placed on their ken affiliation. Ken are Japanese administrative prefectures, and people from the same ken formed "Kenjin-kai," prefectural people's associations, which functioned as social support networks (Hosokawa 2002:156). Besides a woman's ken, other important factors that also influenced her fertility include her residential location and employment status.

Background

The migration of Japanese people to the U.S. began in the mid-1880s, about twenty years after the Meiji Restoration in 1868, which marked the end of the country's feudal system during which foreign interactions were extremely limited. Initially, one main destination for migrating Japanese was Hawaii, but there was a significant increase in the number migrating to the U.S. mainland after the Chinese Exclusion Act of 1882, which created a demand for cheap labor. A major wave of Japanese migration to Seattle, Washington began in the 1890s. Although both Japanese men and women arrived in the Seattle area, most of them were young, unmarried men from the prefectures of southwestern Japan. They were primarily wage laborers and founded their residences near their business district where the rents were cheapest, and they were able to provide working-class whites with services including restaurants, barber shops, and hotels (Miyamoto 1984:10–11; Yanagisako 1985:3). In the late 1890s and beginning of 1900s, Seattle was growing as a frontier community, which conveniently became dependent on the variety of small-scale services provided by Asian immigrants.

In general, most Japanese migrant laborers had originally planned to return to Japan after accumulating enough wealth (Bonacich 1973; Fugita and O'Brien 1991:53). Many of them, however, decided to stay as they became adjusted to American life. Consequently, Japanese immigrants in Seattle started marrying and having families, but the number of Japanese women was still limited early on. In 1907, the Japanese and the U.S. governments made the Gentlemen's Agreement, which terminated Japanese labor migration to the U.S. This agreement ironically invigorated the Japanese community in Seattle because it still allowed for the immigration of the spouses and children of those already living in the U.S. (Miyamoto 1984:11; Yanagisako 1985:3). Consequently, more marriages were arranged between the U.S. and Japan than before, resulting in the immigration of a significant number of Japanese wives.

Correspondingly, the Japanese residential area in Seattle physically expanded. In the early 1910s, Japanese residences were concentrated within several blocks around their business center district. In less than ten years, this community expanded to over twenty blocks (see Figure 1). This expansion was largely the result of the U.S. entry into World War I in 1917, which led to an influx of labor needed for a dramatic increase in ship-building activities in Seattle. Subsequently, there was an increase in demand for retail businesses and services, and Japanese immigrants quickly took on such occupations (Schmid 1944:136; Yanagisako 1985:3).

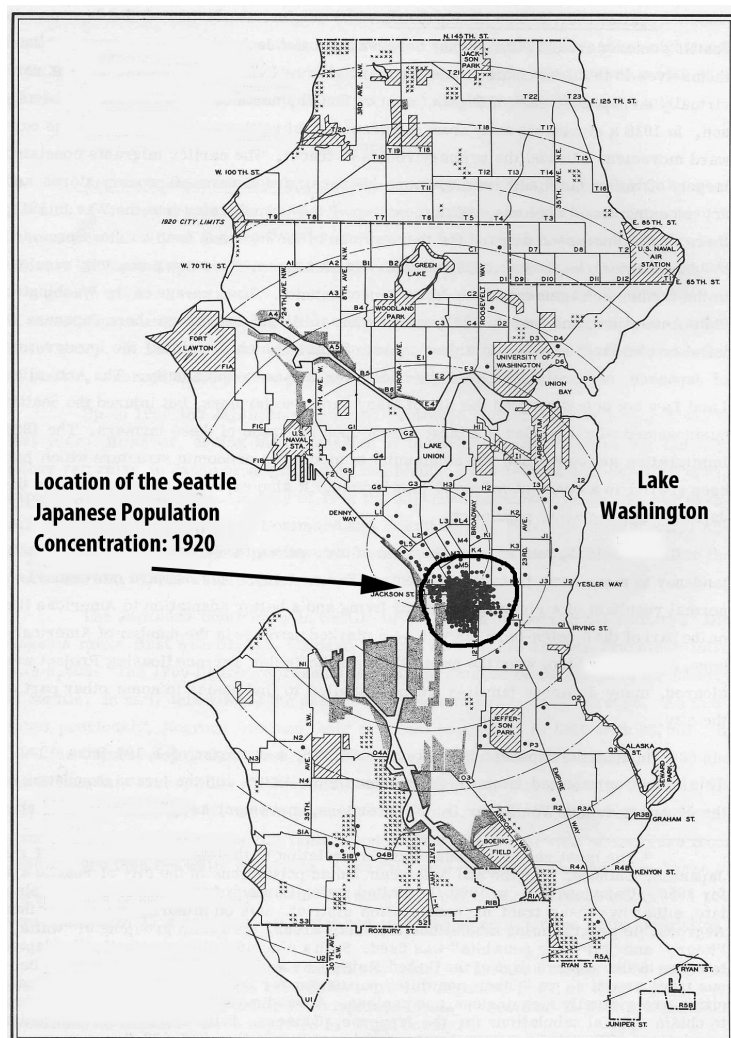


Figure 1. Map of the Central Seattle area where the Japanese residents were concentrated in 1920. (Map adapted from Schmid and McVey, Jr. 1964, Figure 1.)

There was, however, an increase in anti-Japanese immigrant sentiment. In 1921, the state of Washington signed the Anti-Alien Land Law, in which foreign-born Japanese could no longer lease or own land. To go around the law, some Japanese established land-holding corporations, and others used white intermediaries or put them in the names of their U.S.-born children who were citizens (Hosokawa 2002:102–103). Escalating crowdedness, anti-Japanese sentiment, and damage to businesses prompted some Japanese to move out of Seattle in search of better opportunities elsewhere. The Immigration Act of 1924 basically terminated further Japanese immigration. For the next forty years until enactment of the Immigration Act of 1965, there were few new Japanese immigrants, and overall this period resulted in a reduction in the size of the Japanese business district.

The 1921 Land Law and 1924 Immigration Act made it much more significant for Japanese immigrants to have children. While the first-generation immigrants, the Issei, were influenced by the traditional Japanese family ideology of procreation, they now perceived a greater socio-economic importance and incentive for having children because it was increasingly difficult for them to maintain or advance their status. Compared to their immigrant parents, their children (Nisei) were granted United States citizenship at birth and faced few legal barriers. In addition, they were able to speak English fluently. The Nisei still experienced institutional and interpersonal discrimination, but as citizens they had a clear hope for the future (Ichibashi 1932:336–358; Hraba 1979:332; Miyamoto 1984:12; Hosokawa 2002:188).

Although the Great Depression damaged their businesses and anti-Japanese sentiments and discrimination continued, Japanese immigrants generally experienced a respectable level of upward mobility. By the mid-1930s, more than seventy percent of Japanese immigrant workers in Seattle had either established independent small businesses (e.g., hotels, restaurants, barber shops, and laundries) or had non-working-class occupations (e.g., clerks, teachers, salesmen, and public officials) (Miyamoto 1984:13). Their residential area also expanded beyond their business district (Schmid 1944:47). In the early 1940s, however, they had to relinquish those businesses and occupations, and leave their homes because of the “evacuation” of Japanese Americans during the World War II (Yanagisako 1985:4). The vast majority of Japanese, both citizens and resident aliens, living in Washington, Oregon, and Alaska, were interned in the Minidoka War Relocation Center in Idaho between 1942 and 1945; some were first sent to a camp in Puyallup, Washington before going to Minidoka. Others were sent to Tule Lake, California (Leonetti and Newell-Morris 1982a:23). By the time of World War II, few Issei women were still reproducing, and they finished having children during the war or within a few years after it ended.

After the war, many Japanese did not return to the areas where they had lived before internment (Fugita and O’Brien 1991:9). The U.S. government also encouraged their geographic dispersion (Myer 1971:132–135). For the case of the Seattle Japanese community, however, many families moved back. It was estimated that sixty to seventy percent, close to four thousand seven-hundred individuals, returned to Seattle by 1946. The city also became home to about six hundred Japanese immigrants who had lived elsewhere before the war (Miyamoto and O’Brien 1947:149–151). The community regained a demographic structure similar to that

of the prewar period and was able to bring back a number of prewar organizations, including churches and voluntary associations (Leonetti 1976:61).

It was not easy, however, to re-establish their standard of living. There was a housing shortage, and many Japanese “resettled in the lower-class, central-area neighborhood, a return to the isolated and concentrated residential pattern of the 1930s” (Leonetti and Newell-Morris 1982a:24). This housing shortage in turn led to a dispersion of Japanese people into areas that had not been previously occupied by them (Miyamoto and O’Brien 1947:151). Moreover, it was a constant challenge to earn a decent income. This was especially the case for the Issei, the majority of whom were reaching their late forties and early fifties; indeed, many of them were “forced back into the unskilled, low-paying jobs in which they had started out in America” (Yanagisako 1985:5).

As the Issei aged, the economic and social power holders in the Seattle Japanese community fell increasingly into the hands of the second generation, Nisei. It should be noted that the Nisei struggled from strong racial discrimination for more than a decade after the war. Also, many of them were unable to obtain jobs commensurate with their levels of education (Varon 1967:815–816). Despite these stumbling blocks, Japanese Americans gradually and steadily worked their way into white-collar jobs, and accordingly, they started to move into predominantly White, middle-class, suburban residential areas in Seattle between 1950 and 1970 (Leonetti 1976).

Methodology

The data evaluated for this study were originally collected by a study of Seattle’s Japanese-American women that was conducted in the mid-1970s by three anthropology graduate students, one of whom is this article’s second author (see Yanagisako 1985:265). In order to trace changes in fertility and socio-economic status over their life histories, face-to-face interviews were conducted with the Issei, Nisei, and Sansei women who were residing in Seattle.

Here, this study uses only the data on the ninety-eight Issei women in the original study sample. All those women were married at least once (this includes women who divorced and/or re-married because of divorce or the death of a husband).¹ The mean age at first marriage was 20.95 (standard deviation 2.88; range sixteen to twenty-eight). Their fertility levels were divided into three categories: high, average, and low. The average number of live-births among the sample was 4.143, and therefore, average fertility was defined as four live-births (see Table 1). High fertility was defined as more than four live-births; low fertility was defined as less than four. Overall, the sample contained thirty-five women with high fertility, twenty-three women with average fertility, and forty women with low fertility, including four childless women.²

Those women were also divided into two categories, major or minor, with respect to the Japanese prefectural ken from which they came. The majority of them (eighty-two out of ninety-eight) came from the same ken as their husbands because many marriages were arranged via local networks. The Japanese in Seattle had a strong mutual aid ethic; this was especially strong among those from the same ken, and there was a tendency for concentrations “of people from the same prefectures in Japan at the same places, and in the same lines of work” (Miyamoto 1984:20–25). This meant that when immigrants came from the ken that had many

Table 1. Women's Characteristics: Fertility, Ken Affiliation, and Residential Location (n=98)

Characteristics	Frequency (%)
Fertility (Live-Birth)	
High (>4)	35 (35.7)
Average (=4)	23 (23.5)
Low (<4)	40 (40.8)
(mean 4.14; standard deviation 2.21; range 0 to 13)	
Ken Affiliation	
Major	48 (49.0)
Minor	50 (51.0)
Residence	
Central	46 (46.9)
Non-Central	52 (53.1)

fellow immigrants in Seattle, they were able to receive substantial support. Also, immigrants from the same ken were more likely to mutually support one another to retain work, and consequently, some level of connection developed between certain types of work and ken affiliation. For example, the barbers tended to be people from Yamaguchi-ken, and the majority of those in the restaurant business were from Ehime-ken (Miyamoto 1984:20). Therefore, some immigrants with certain ken affiliations had a distinct advantage and access to assistance to more effectively pursue their life strategies. Following Miyamoto's work (1984), this study included Hiroshima, Okayama, Wakayama, Yamaguchi, Kumamoto, Fukuoka, and Ehime as the ken that provided strong internal support, and has labeled them "major ken," while others are labeled "minor ken." In the study sample, there were forty-eight women who came from major ken and fifty from minor ken. A t-test indicated no statistically significant difference between them in terms of mean fertility.

This study examines how women's fertility differed between the two categories of women (major ken versus minor ken), with respect to their residential location and employment status. In general, when women (and their husbands) have good supporting networks, we can expect that they will be more likely to have (additional) children, leading to high fertility; such networks can be a source of childcare assistance, which can lessen parental burden. Typically, support from their close family members is the ideal (see Paxson 2005; Nosaka 2009), but many Issei women did not have native family members living in the U.S. Therefore, support from other Japanese immigrants must have been valuable, and living in a concentrated community of Japanese immigrants provided one with good support. In particular, we assume that women from major ken were likely to receive significant support from others with the same ken affiliation, as if they were family.

Central Seattle was the location with the highest concentration of Japanese residences and businesses. A woman's residential location was specified using a binary code ("Central" or "Non-Central") based on whether she lived in the Central Seattle area during the following five age periods of her married life: twenty to twenty-four, twenty-five to twenty-nine, thirty to thirty-four, thirty-five to thirty-nine, and forty to forty-four. The analyses for age periods less than twenty years were not conducted because there were only ten women who married before age eighteen. For a married woman who moved during a given age period, the residence ("Central" or "Non-Central") that she lived in for the longest time during that five-year period was entered. A woman who was not yet married during an entire age period was treated as a missing case. A woman who married at some point during any age period was coded according to how long she was married during that age period. For instance, when a woman married at age twenty-six or twenty-seven, she was coded for the age period twenty-five to twenty-nine. In comparison, when a woman married at age twenty-eight or twenty-nine, she was treated as a missing case for the age period twenty-five to twenty-nine. Then, a count was made of the number of age periods that were coded "Central" for each woman. Accordingly, a woman whose count summed to 0, 1, 2, or 3 was coded "Non-Central;" a woman whose count summed to 4 or 5 was coded "Central." In short, the women whose residential code was designated as "Central" lived in Seattle's concentrated Japanese community for most of their reproductive years after marriage. A t-test revealed no statistically significant difference in the mean fertility between the women in the two residential categories.

Also, a woman's employment can lower fertility (see Jones 1981; Crafts 1989; Nosaka 2012). In general, when women are more fully employed, their fertility is more likely to be compromised. This might have been especially the case for immigrants who did not come from major ken, which meant that they had less access to ken-based support. Similar to the coding for residential location, a woman's employment status after marriage was coded according to the same five age periods: twenty to twenty-four, twenty-five to twenty-nine, thirty to thirty-four, thirty-five to thirty-nine, and forty to forty-four (see Table 2). A woman who did not work during a given five-year

Table 2. Women's Characteristics According to Employment Status Per Age Period (n=98)

Age Period	0 ^a (%)	1 ^b (%)	2 ^c (%)	Missing (%)
20–24	24 (24.5)	17 (17.3)	29 (29.6)	28 (28.6)
25–29	39 (39.8)	17 (17.3)	36 (36.7)	6 (6.1)
30–34	38 (38.5)	16 (16.3)	42 (42.9)	2 (2.0)
35–39	29 (29.6)	21 (21.4)	44 (44.9)	4 (4.1)
40–44	20 (20.4)	27 (27.6)	49 (50)	2 (2.0)

^a No employment for that age period

^b Part-time employment for any duration or full-time employment for less than 2 years for that age period

^c Full-time employment for 2 or more years for that age period

period was coded 0 for that period. A woman who worked part-time for any duration, or worked full-time for less than two years during a five-year period, was coded 1. A woman who worked full-time for two or more years was coded 2. A woman who was either a student or had an unknown employment status was treated as a missing case.

To identify the strategies that Japanese immigrants used to achieved high fertility, both quantitative and qualitative analyses were used. To statistically assess factors associated with the relatively high fertility of those women, the analysis involved conducting ordinal-by-ordinal crosstab analyses, using SPSS software (statistic 24). In order to interpret those statistical results and examine how the results actually reflected, or did not reflect specific cases, the original life-history data, especially the additional information on a woman's fertility, residence, and employment history, were also closely reviewed.

Findings and Discussion

One main finding of this study is that the fertility of major ken women is associated with whether they resided in the Central Seattle area, but this is not true for their minor ken counterparts (see Table 3a and 3b). The cross-tabulation directional measures (for ordinal variables) indicate that when major ken women lived in Central Seattle for a significant amount of their reproductive years, they were likely to have more children ($p=.040$). In contrast, for minor ken women the association between the time living in this Central area and their fertility was not significant.

Table 3a. Residential Location in Relation to Fertility for Major Ken Women (n=48) [$p=.040$]

Fertility Level	Central Residence	Non-Central Residence	Total
Low	6	12	18
Average	7	2	9
High	14	7	21
Total	27	21	48

Table 3b. Residential Location in Relation to Fertility for Minor Ken Women (n=50) [Not Statistically Significant]

Fertility Level	Central Residence	Non-Central Residence	Total
Low	7	15	22
Average	7	7	14
High	5	9	14
Total	19	31	50

What is the pattern underlying how major ken women achieved relatively high fertility? The original life-history data indicate that these women who lived in the Central area during their later reproductive years were able to have more children. Specifically, major ken women who achieved high fertility were likely to be those who had children at or after age thirty-five, and in particular lived in the Central area during their thirties and early forties. Out of forty-eight major ken women, twenty-one women achieved a high fertility of five or more children, and ten of those women (47.6%) had children at or after age thirty-five. Of those ten women, eight lived in the Central Seattle area for the majority of their late twenties, thirties, and early forties; all them, except one, had at least one pregnancy during their late thirties and/or early forties while residing in Central Seattle.³ Conversely, there were eighteen major ken women who had low fertility (less than four live-births, including two childless cases), and only one gave birth to a child at or after age thirty-five. Thus, it appears that major ken women who had children in their later years were likely to have high fertility.

Interestingly, minor ken women showed a different pattern. On one hand, a small number of them achieved high fertility, reflecting a pattern similar to that of major ken women. Five of these cases had more than four children while residing in Central Seattle for an extended time (coded "Central"), and their high fertility was the result of giving birth to children in their latter reproductive years. On the other hand, a good portion of minor ken women did not achieve high fertility despite the fact that they gave birth to children at a relatively late age. There were twenty minor ken women who had children at or after age thirty-five, and eight of them had low fertility ($8/20=40\%$). This number is notably high, especially considering that there were twelve major ken women who experienced childbirth at or after age thirty-five and only two had low fertility ($2/12=16.7\%$).

One noteworthy characteristic of the eight minor ken women is their relatively late reproductive start; none of them had their first child before age twenty-five (their ages at marriage varied from twenty to twenty-eight). Among those women, four of them took more than three years to have their first child after marriage, and they all worked full-time during those years. Their late reproductive start was probably a consequence of working full-time in their twenties, eventually resulting in low fertility. In contrast, of the twelve major ken women who experienced childbirth at or after age thirty-five, nine of them had their first child before age twenty-five (their ages at marriage varied from seventeen to twenty-five). Thus, with respect to minor ken women, having children at or after age thirty-five was not a factor that led to high fertility; perhaps, their births at later ages were a product of late onset of reproduction.

Another question to consider is what factors influenced the fertility of minor ken women? It appears that their employment status showed more of a correlation to their fertility than was the case for major ken women (see Table 4). Crosstab analyses indicate that when minor ken women were more fully employed in their late twenties ($p=.050$), all of their thirties ($p=.043$, $p=.016$), and their early forties ($p=.046$), respectively, they were significantly more likely to have lower fertility. In comparison, such an association was only significant for major ken women in their late thirties ($p=.018$) and early forties ($p=.017$).

Table 4. Significance Values for the Association Between Employment and Fertility According to Age Period and Ken Affiliation

Age Period	Major Ken	Minor Ken
20–24	Not significant	Not significant
25–29	Not significant	0.050
30–34	Not significant	0.043
35–39	0.018	0.016
40–44	0.017	0.046

The difference based on ken affiliation leads to the implication that the full-time employment of minor ken women during their late twenties and early thirties might have kept them from having more children during those years. An examination of the original life-history data has revealed that there were eighteen minor ken women who worked full-time in their late twenties and early thirties, and including one childless case, eleven of them (61.1%) had low fertility; the others included five cases of average fertility and two cases of high fertility. This pattern shows that full-time employment during those early to middle reproductive years may have had a negative influence on fertility overall. An interesting finding is that among those eleven women with low fertility, only three of them had children in their early thirties and beyond, whereas nine had children in their late twenties. This means that many of the low fertility women stopped having children after their twenties, perhaps due to the burden of having to work full-time.

For example, one woman, who married at age eighteen and immigrated to the U.S. at age nineteen, worked part-time for the first five years of her married life during which she had two children. She started working full-time at age twenty-four and did not have any additional children. She continued to work full-time until she moved to the Minidoka camp at age forty-one. Another woman married and immigrated to the U.S. at age twenty-one and began a sewing school. While she was working full-time, she had two children at ages twenty-two and twenty-six, respectively. She continued to work without further children until she was forty-four when she too had to move to the Minidoka camp. Another similar case is a woman who married and immigrated at age twenty-one and began working full-time as a restaurant waitress during which time she had three children at ages twenty-two, twenty-four, and twenty-seven, respectively. Her full-time work continued until she moved to the Minidoka camp at age forty-five. These examples suggest that minor ken women who worked full-time in their thirties had more of a struggle reproductively. Although the significance value for the crosstab analysis of the relationship between a minor ken woman's employment status in their early thirties and their fertility was not remarkably strong ($p=.043$), the original life-history data supports the interpretation that their full-time employment during this age period had a crucial negative effect on the fertility.

The association can also be understood as relating to effective fecundability, which is defined as “the monthly or cycle-wise probability of conception that results in a live birth” (Holman and Wood 2001:18). It is probable that the effective fecundability of most Issei women was declining especially during their thirties, so those who did not have access to a strong, supportive community network were more directly influenced by this decline. The net result for these women, therefore, was that they had fewer children during their reproductive lives.

A close examination of the original life-history data has also revealed a pattern associated with high fertility for some of the minor ken women. As the crosstab results indicated, minor ken women who achieved high fertility were generally those who had little to no employment after they married. There were fourteen minor ken women who had more than four live-births, and ten of them (71.4%) had either no employment experience or very limited employment during their reproductive years regardless of their residential location. Also, interestingly, those fourteen women included five minor ken cases who achieved high fertility while living in Central Seattle during most of their reproductive years (up to their early forties, addressed above). None of these women worked full-time during their child-bearing years. For example, one with exceptionally high fertility did some part-time work in her twenties during which she had four children; she stopped working by age thirty and had four additional children. Another woman who had seven live-births only started working full-time after she had her last child at age thirty-seven. These cases indicate once again that a significant factor affecting the fertility of minor ken women was their employment status rather than where they lived.

Conclusion

The paths taken to achieve high fertility by major and minor ken women differed. Major ken women with high fertility were those who lived most of their reproductive lives in Central Seattle and continued to have additional children in their thirties and/or beyond. This finding supports the interpretation that major ken women were able to receive more effective support living in this Central community because of their ken affiliation. Therefore, it was easier for them to achieve high fertility. In comparison, the amount of time minor ken women spent in Central Seattle was not a factor related to their fertility. Some of those women might also have received community support, but it was not enough to have made a significant, positive contribution to their fertility.

A factor significantly influencing the fertility of minor ken women was their employment status. Those who worked little throughout their reproductive years, especially during their late twenties and early thirties, were the ones most likely to have achieved high fertility. Conversely, those who worked a lot had significantly fewer children. Hence, it seems that compared to major ken women, the access to community support for minor ken was more restricted, and therefore, their employment status affected their fertility more directly. This direct influence of employment on their fertility might have been particularly the case for those in their thirties during which their fecundity is expectedly on a progressive decline;

the data indicate that minor ken women who worked full-time in their thirties had significantly fewer children.

This study examined the fertility of Issei women by focusing on their ken affiliation, residential location, and employment status. There are, of course, other variables that may have influenced the fertility of those women. First, an experience with child-death, still-birth, or miscarriage might have affected the fertility and/or number of live-births achieved by some women. For example, some women who had to endure child-death might have ended up with a greater number of live-births in an effort to compensate for their losses. Also, the occupation and income level of a woman's husband and their overall household socioeconomic status might have significantly influenced their fertility, especially because those factors are likely to have influenced whether a woman had to work. If a woman's husband had a high income and the household economy was prosperous, she would not have to work. Moreover, their fertility might have also been influenced by broader social events, such as anti-Japanese immigration laws and movements, the Great Depression, and internment in the camps during WWII. Future studies should consider examining some of these aspects to widen and deepen our understandings of the life strategies of immigrant Issei women in the early twentieth century U.S.

Despite the need for future studies, this study has contributed to enhancing our anthropological understanding of immigrant fertility, focusing on the issue of how women from the same country pursued differing fertility strategies in the host country. Quantitative and qualitative analyses have revealed the overall patterns and individual variation characterizing the fertility among these women and provided an interpretation of those varying patterns with respect to their biological capacity and socio-cultural context.

NOTES

1. There were seven women who experienced divorce or death of a husband and did not remarry before age forty-five. Those women were included in the analyses because including or excluding them did not significantly change the statistical results.
2. Those four childless women were included in the low fertility category because there were no data on whether they and/or their husbands were infertile or had any particular conditions that contributed to their childlessness. Their respective marriage situations varied. One woman divorced when she was twenty-four years old after being married for four years, and she never married thereafter. Another woman's husband died when she was thirty-six years old after having been married for sixteen years, and she re-married at age forty-three. A third woman married at age twenty-six and continued to be married for thirty-five years to her husband, who died when she was sixty-one years old. The fourth woman married at age twenty-six, and then she and her husband separated when she was thirty-nine years old because they were sent to different camps during World War II. After the war, they were re-united and lived together until his death at which time she was fifty-three years old.

3. One exceptional case was a woman who had seven live-births. She was married at age twenty-five and lived outside the Central area for most of her late twenties and early thirties during which she had four children. She moved to the Tule Lake camp at age thirty-three and lived there until she was thirty-seven, and during those years she gave birth to three children. After the war, she moved to Central Seattle.

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Seasonal Sociopolitical Reversals and the Reinforcement of Autonomy and Fluidity among the Coast Salish

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Abstract *There has been a great deal of archaeological interest in the fluid and decentralized nature of the Coast Salish sociopolitical structure. This article addresses this unique sociopolitical organization through an analysis of five seasonal resource procurement camps in the Puget Sound region of Washington state. The seasonal camp represents a major node of the Coast Salish settlement pattern, but has remained underutilized in analyses of sociopolitical organization, in comparison to the winter village. This article directly compares the relative investment in structure, systematic patterning, and functional differentiation of space at seasonal camps to the expected patterns of the winter plankhouse villages. By analyzing these seasonal settlements through the same lens often used to interpret plankhouse villages, an inverse relationship between the two is revealed that suggests a seasonal reversal of sociopolitical structure that would have served to reinforce autonomy and fluidity among the Coast Salish.*

Introduction

The archaeology of the Coast Salish region has had a great deal of interest in the organization of the culture's decentralized and fluid sociopolitical structure. The tension between autonomy and centralization has been investigated from the scale of the household (see Coupland, Clark, and Palmer 2009; Grier and Kim 2012) to the regional settlement hierarchy (see Schaepe 2009; Ritchie et al. 2016), but in between these two scales there is a key facet of Coast Salish society that remains to be dealt with. The seasonal resource procurement camp has yet to be analyzed in detail from a sociopolitical standpoint, instead being relegated to purely functional and subsistence-oriented discussions. While they have sometimes been included in those studies that take a settlement hierarchy approach, the seasonal camp has not been given the same detailed consideration as the household in our reconstructions of Coast Salish sociopolitical life. In this article, I will be analyzing these seasonal settlements through the same lens often used to interpret plankhouse villages, directly comparing the relative investment in structure, systematic patterning, and functional differentiation of space at seasonal camps to the expected patterns of winter plankhouse villages. By focusing our lens on the seasonal resource procurement camp, I believe that we can work towards a more comprehensive understanding of Coast Salish decentralization and social fluidity.

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The Case for the Integration of Seasonal Camps into Social Analyses

Since the 1970s and 1980s, archaeologists on the Northwest Coast have become increasingly interested in the study of houses and households (Ames 2006). The often massive size and complex sets of features of these houses makes them relatively easy to identify and exciting to study. In part, this excitement comes from the window that archaeological houses give us into the social organization of past peoples (Hendon 1996). The basis for making inferences about social organization from analyses of the physical structure of houses comes from practice theory, specifically the idea that the physical structure of a place reflects the cultural schema of the people who built it and recursively structures the activities within it (Bourdieu 1977:2, cited in Thom 2005:14). This principle is seemingly exemplified on the Northwest Coast, where the primary social unit, the multi-family household, often corresponds neatly with the physical structure of the house. This provides a discrete analytical unit from which to draw conclusions about the fundamental social structures of Northwest Coast cultures.

Unfortunately, this focus on the household, driven by the belief that it is within these structures that the primary acts of social transmission and reproduction occur (Blanton 1995, cited in Coupland, Clark, and Palmer 2009), has limited our understanding of social organization to those inferences that can be made from the plankhouses of the winter village. As cultures that participated in a complex seasonal round settlement pattern (Chatters and Cooper 2016:192), the structure of the Northwest Coast winter plankhouse is only one part of the picture. During parts of the spring, summer, and fall people traveled from their winter villages to seasonal resource procurement camps that were located near predictable and abundant resource locations (Campbell 1981:61–64). These sites are typically discussed as ancillary to the village, providing the resources that would eventually be stored for the winter months. However, the transmission of culture and the reproduction of social structures does not cease simply because the locale has changed and, furthermore, space is still structured by social actions and cultural schemas at seasonal camps. It follows, then, that if we study seasonal camps in the same way we analyze the household, we can reveal the sociopolitical ideologies that structure these spaces. Therefore, in order to build a comprehensive understanding of the social organization of societies with a seasonal round settlement pattern, like the Northwest Coast, seasonal resource procurement camps need to be integrated into our analyses.

Of all the Northwest Coast contexts that household archaeology has been applied to, the Coast Salish region in particular is exemplary of the ways in which structured social orders are built into space, thereby shaping the social relations occurring in these places (Thom 2005:22). The Coast Salish sociopolitical organization is characterized by fluidity, autonomy, and decentralization. They are unique among Northwest Coast cultures in having a bilateral kinship system, which gave Salish people the option of associating with several different households from both their mother's and father's side (Angelbeck and Grier 2012:555). This kinship model acted as a check on the accumulation of power and wealth by heads of household, as household members had the option of relocating if the head of household failed

to fairly redistribute wealth or otherwise acted inappropriately (Angelbeck and Grier 2012:555–556). The Coast Salish plankhouse is designed to accommodate this constantly shifting household population, with walls that allowed expansion and contraction as individual families came and went (Suttles 1991:212–213).

The internal arrangement of hearths also reflected individual family autonomy, with each family living in their own compartment with their own hearth, and often maintaining their own food stores (Coupland, Clark, and Palmer 2009:95–96). Spatial analyses that identify these individual family compartments reveal that families within the household often specialized in specific manufacturing and subsistence tasks (see Chatters 1989; Grier 2006). Status is also manifested spatially, with certain family compartments demonstrating higher concentrations of high status goods than others, allowing for the presence of elites within the household to be identified archaeologically (see Matson 2003; Grier 2006). The ability to delineate these differences in specialization and status between compartments is a demonstration of the extent to which individual families communicated and maintained their autonomy through the organization of space.

The ethnographic evidence suggests that these expressions of autonomy followed Salish peoples past the walls of the plankhouse as they moved across the landscape during their seasonal round. In some cases, entire villages moved together to communally owned resource areas (Thom 2005:323), while in others individual families traveled independently of the household (Coupland, Clark, and Palmer 2009:95). These different options for seasonal residence were available due to a complex system of resource ownership driven by both kin and residence affiliation, which offered Coast Salish people flexibility in choosing where to spend their time outside of the village (Thom 2005:270–327). The decision of which affiliations to activate, and therefore which resource locations to access, was an important expression of individual autonomy (Thom 2009:186). Analyses of social structure that integrate these seasonal resource procurement camps should therefore provide a fuller picture of autonomy and individualism in the Coast Salish world.

A theoretical starting point for this analysis can be found in Wengrow and Graeber's (2015) discussion on seasonality and the reversal of social structures in hunter-gatherer societies. They argue that in societies with a seasonal round, consisting of both aggregated villages and dispersed foraging camps, the social structure is often reversed depending on the season, vacillating between both hierarchy and egalitarianism. In Coast Salish society, there were a number of social checks on the accumulation of wealth and centralization of power, including bilateral kinship, an inflated elite class, and potlatching (Angelbeck and Grier 2012). I hypothesize that a reversal of the relatively strict organization of the household to a relatively fluid and unbounded living situation at seasonal camps could have acted as yet another check on centralization.

Testing the Hypothesis

In order to determine whether or not a reversal of the household structure did in fact occur in Coast Salish society, seasonal camps need to be compared to those features of the plankhouse that are generally considered most useful for ana-

lyzing social organization. I will focus specifically on the investment in the physical structures, the systematic patterning of space, and the functional differentiation of space. The plankhouse represents a significant investment in a place, with many houses being maintained in the same arrangement and physical location over hundreds of years (Ames 2006; Grier 2006). The house could therefore structure its residents across generations by constraining them within the same basic spatial arrangement over time. This systematic patterning of the household is another important variable to consider when studying the Coast Salish household, with identification of specific compartments serving to inform estimates of the number of families who resided in the plankhouse. The distribution of artifact types across these compartments is further used to make inferences about the specialization and status of these different families. Overall, these three traits speak to a space characterized by boundaries which constrain people within the household, within their compartments, and within their class and specialization. Despite the option for social fluidity, while within the plankhouse, the physical arrangement of people into these bounded spaces causes their relationships with each other to be similarly bounded and strict (Thom 2005:33). If seasonal sociopolitical reversal is present, I would expect to find either a lack of or the inverse of these features at seasonal resource procurement camps.

Five sites were selected for analysis with attention to these three variables: all sites are located in the southern Coast Salish region, in the territories of Lushootseed-speaking peoples, and identified in their site reports as seasonal resource procurement camps. Seasonal resource procurement camps can be found in a variety of environments, depending on the primary resource being targeted. Therefore, sites were chosen from littoral, riverine, and inland environments in order to capture a representative view of resource camps. The citations for the site reports used in this analysis are included for reference alongside the site names.

Littoral Camps

Littoral resource procurement sites in the Puget Salish region are generally characterized by shell midden deposits and low diversity stone tool assemblages (Chatters and Cooper 2016:193). Subsistence activities at these locations include the procurement of both shellfish and fish resources, as well as opportunistic terrestrial hunting and plant gathering (Campbell 1981; Larson and Lewarch 1995). Due to the erosional history of littoral areas, occupations along the shore tend to shift location across the site through time (Campbell 1981; Larson and Lewarch 1995), but still represent continued use of the same general location and thus are categorized as a single site. The sites included in this study include Duwamish No. 1 (45-KI-23) and the West Point Site Complex (45-KI-428 and 45-KI-429), both of which are located near modern day Seattle on the Puget Sound.

Duwamish No. 1 (Campbell 1981). Duwamish No. 1 is a National Register of Historic Places property located adjacent to Elliot Bay in the Duwamish Valley and occupied from 1330 BP to 110 BP (Campbell 1981). Faunal data recovered from the site suggest a primary focus on shellfish harvesting and processing with a range of other activities including terrestrial hunting and fishing (Campbell 1981:469–472).

Other activities at the site include the manufacture of both lithic and bone tools and possibly woodworking (Campbell 1981).

West Point Site Complex (Larson and Lewarch 1995). The West Point Site Complex includes two sites, 45-KI-428 and 45-KI-429, located on a low-lying spit that extends into Puget Sound (Larson and Lewarch 1995). The spit was used as a seasonal resource procurement camp during five distinct components, beginning at 4250 BP and ending at 200 BP, shifting from a large, multi-season base camp to a smaller, specialized activity camp over this time (Larson and Lewarch 1995). Activities at the site included fishing, likely for immediate consumption, and the harvesting and drying of clams (Larson and Lewarch 1995(13):36–37).

Riverine

While areas along rivers were often preferentially chosen for village sites, additional fishing camps were sometimes needed when the village location did not provide the most appropriate access to important fisheries (Chatters and Cooper 2016:192). These sites are typically represented by scattered hearths, modified bone tools, postmolds consistent with temporary structures, and large quantities of fishbone (Chatters and Cooper 2016:193). Riverine sites discussed in this study include the Renton High School Indian Site (45-KI-501) and *Yuetswabic* (45-KI-263).

Renton High School Indian Site (Lewarch 2006). This site was occupied for three broad time periods between 550 BP and 200 BP, with occupations punctuated by periods of flooding (Lewarch 2006). Due to the recurrent use of this location for the same suite of activities, the author interprets this site as a seasonal resource camp likely used by a family lineage or closely related family lineages (Lewarch 2006:iii–iv). This is consistent with the observed ethnographic pattern of resource locations that are owned by specific descent and residence groups and thus would have been used repeatedly by a restricted group of people (Thom 2005). The primary subsistence activity at the site was salmon fishing, both for immediate consumption and for winter storage, and this was supplemented by terrestrial mammal hunting and plant gathering (Lewarch 2006:117).

Yuetswabic (Schumacher and Burns 2005). The *Yuetswabic* site is located on the Snoqualamie River floodplain and was occupied between 600 BP and 400 BP (Schumacher and Burns 2005). The site is located near an ethnographically known village, but excavations did not recover any evidence of a permanent structure, and comparisons to the nearby Tokul Creek site suggest that it was instead a large, seasonal fishing camp (Schumacher and Burns 2005:57). Unfortunately, original excavators did not publish a monograph and therefore the most comprehensive report associated with this site is a synthesis of the original collection and documentation, which somewhat limits the quality and detail of the data presented for this site (Schumacher and Burns 2005:2). Available evidence shows that fish (likely salmon), mussels, and edible plants were procured at this site.

Inland

Of all the seasonal resource procurement site types, the record associated with inland hunting and gathering locations is the weakest. This is the result of a number of factors, including the difficulties of surveying heavily forested areas and the acidity of montane soil which leads to poor preservation of bone (Chatters and Cooper 2016:193). For this reason, only one inland resource camp, Eagle Gorge Terrace (45-KI-1083) was included in this study.

Eagle Gorge Terrace (Cooper et al. 2015; Chatters and Cooper 2016). This short-term hunting field camp dating between 1307 BP and 1179 BP is situated on a terrace overlooking the Green River (Cooper et al. 2015:98). Despite its proximity to a productive salmon river, the site is entirely lacking fish resources and instead contains almost exclusively large mammals (Cooper et al. 2015:135), allowing it to be confidently placed in the inland resource camp category. In addition to the hunting and processing of big game for meat and hides, this site was used as a base for lithic procurement and core preparation (Chatters and Cooper 2016).

Analysis

The results of my review of the above sites are summarized in Table 1 and are discussed in detail in below. Determinations about the presence or absence of the three relevant variables were based on the original analyses from the site reports.

Table 1. Summary of Results

Site	Environment	Investment in Structure	Systematic Patterning	Functional Differentiation
Duwamish No. 1	Littoral	No	No	Inconclusive
West Point	Littoral	Inconclusive	No	No
Renton High School	Riverine	No	No	No
<i>Yuetswabic</i>	Riverine	No	Inconclusive	Inconclusive
Eagle Gorge Terrace	Inland	No	No	No

Investment in Structure

There was no evidence of plankhouses at any of the five sites in this study. The occupation at Eagle Gorge Terrace was likely extremely short-lived due to its nature as a hunting field camp and structures may therefore have been unnecessary, although Chatters and Cooper (2016:196) could not exclude the possibility

of a very temporary structure that left no signature. Postmolds were identified at Duwamish No. 1, West Point, *Yuetswabic*, and Renton High School, but in all cases their location, arrangement, or spatial relationship with associated features was determined inconsistent with the expected signature for plankhouses.

At Duwamish No. 1, for example, postmolds were identified in the secondary refuse area, but not in the habitation zone, and instead seem more consistent with features identified at other sites as temporary drying racks (Campbell 1981:467). Additionally, analysis of the shell midden deposits at the site demonstrated that they were the end result of a number of limited activity chains representing short-term cultural events (Campbell 1981:438), rather than being the result of any planned engineering effort, as is common at many plankhouse village sites (Grier 2014).

Similarly, at Renton High School, while postmolds were identified that could have represented permanent structures, the types and arrangements of thermal features associated with them were inconsistent with the pattern expected for a plankhouse. The number and arrangement of the postmolds further prevented researchers from identifying them as part of a plankhouse. The postmolds and their associated thermal features instead suggested “outdoor or extramural activities conducted with minimal investment in facilities” (Lewarch 2006:149–150).

Analysis of permanent structures at *Yuetswabic* was complicated by the limited horizontal extent of the excavation. Therefore, while the only postmolds identified were deemed consistent with temporary structures used for fish drying and processing (Schumacher and Burns 2005:55–56), Schumacher and Burns (2006:60) noted that a more permanent structure could be present in the unexcavated portions of the site.

The West Point site complex does have evidence that suggests a permanent structure, specifically the presence of burned wood planks (Larson and Lewarch 1995(14):28). However, none of the expected indirect indicators for domestic structures are associated with these planks, and (Larson and Lewarch 1995(14):28) therefore could not make any conclusions about possible plankhouses at the site.

It is important to note that, ethnographically, structures often were erected at seasonal resource procurement camps, especially those that were visited with some frequency. Structures at smaller sites that were typified by short-term use would have featured frames made from small diameter poles with mats placed over them (Lewarch 2006:148). These can be distinguished from resource processing features such as drying racks based on the arrangement of the postmolds and the features associated with them. Larger sites that received more regular use would have had frames constructed from larger poles and cedar planks for the walls would be transported from winter villages. In both cases, poles could be left in place for future use (Lewarch 2006:148). It is therefore not the presence or absence of structures that is relevant for the analysis, as it is unlikely that no structures at all would be used at these seasonal camps. Instead, it is the *investment* in the structures that is of interest.

The weak evidence for permanent structures at these five sites is significant because it indicates that any structures that were used seasonally were not maintained in a specific place over generations in the same way as plankhouses, and therefore would not have required the same amount of concentrated labor over

their life histories. There was certainly an investment in specific resource camp locations, as evidenced by the long site histories at Duwamish No. 1 and West Point, and (to a lesser extent) at Renton High School and *Yuetswabic*. However, there does not appear to be significant investment in the structures used at these locations. The use of these structures was therefore not constrained to the boundaries of the same structure over generations in the same way that it was in winter villages.

Systematic Patterning

One of the defining features of the plankhouse is the systematic patterning of space. In the Coast Salish region, this pattern consists of regularly placed hearth features either in one row along the central axis or in two rows along the benches, with clustering of hearths and artifacts defining separate family compartments (Chatters 1989; Lewarch 2006). This pattern would be repeated fairly consistently over time within the same household (Grier 2006:105). In all cases, the patterning of the sites in this study were directly contrasted to the plankhouse pattern in their reports, which was often used as the primary indicator that the site was a seasonal camp rather than a plankhouse village.

Two cases provided particularly telling visualizations of the lack of systematic patterning at seasonal camps. A 2016 article published on Eagle Gorge Terrace by Chatters and Cooper directly contrasted this hunting field camp with the plankhouse from the nearby and roughly contemporaneous *Tualdad Altu* (see Figure 1) (Chatters and Cooper 2016:196–197). At *Tualdad Altu*, in the excavated portion of the site, the hearths are patterned into rows and roughly cluster into two family compartments while at Eagle Gorge Terrace there is a single, loose cluster of six hearths that are not arranged in any pattern (Chatters and Cooper 2016:196–197). While two hearths at Eagle Gorge Terrace are larger, the remaining hearths do not appear organized around them in any meaningful pattern. This comparison clearly demonstrates that differing spatial logics were used at winter villages and seasonal hunting camps.

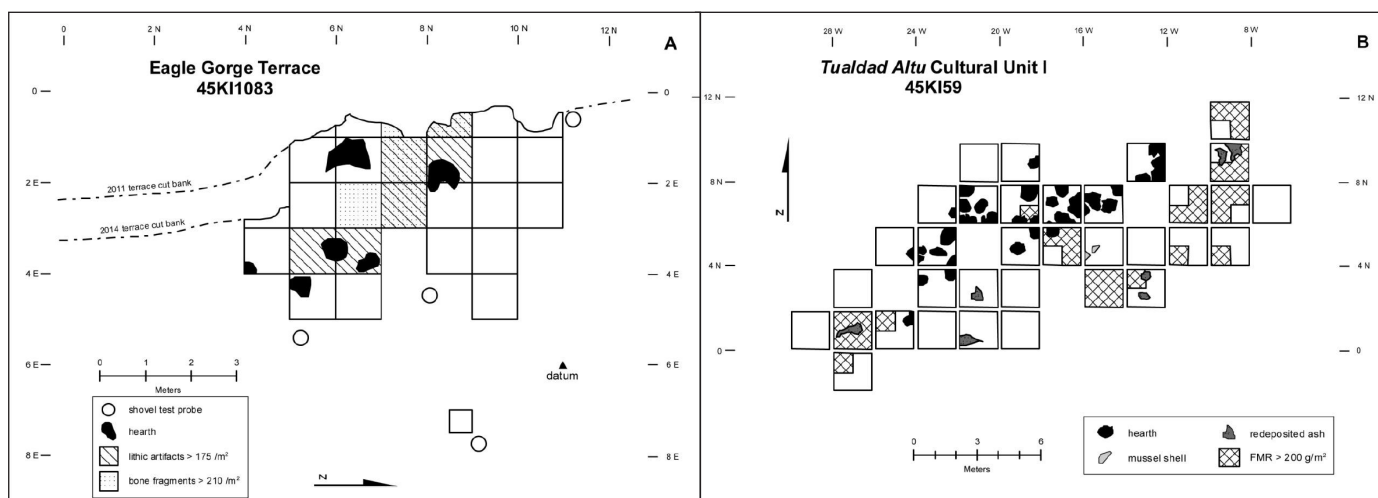


Figure 1. Plan maps of Eagle Gorge Terrace and *Tualdad Altu*. Taken from Chatters and Cooper (2016:195).

At West Point, not only is there a lack of systematic patterning of features, there is evidence that the organization of space was not strictly controlled over time. While we see relative consistency in the internal organization of plankhouses over time, at West Point space is organized very differently during each occupation. The original researchers undertook an analysis of activity zones for occupation surfaces that represented primary cultural deposits and had sufficient artifact quantities to infer activity patterning (Larson and Lewarch 1995(14):17). Only the analysis for the second occupation and fourth occupation of Component 2 (3550–2700 BP) will be discussed here. The remaining activity area analyses from the report are dated to Component 1, which predates the use of the site as a seasonally restricted resource procurement camp and were therefore not suitable for this review (Larson and Lewarch 1995:IV). The visualization of activity areas based on artifact distribution and the associated position of features and stratum are included in Figure 2.

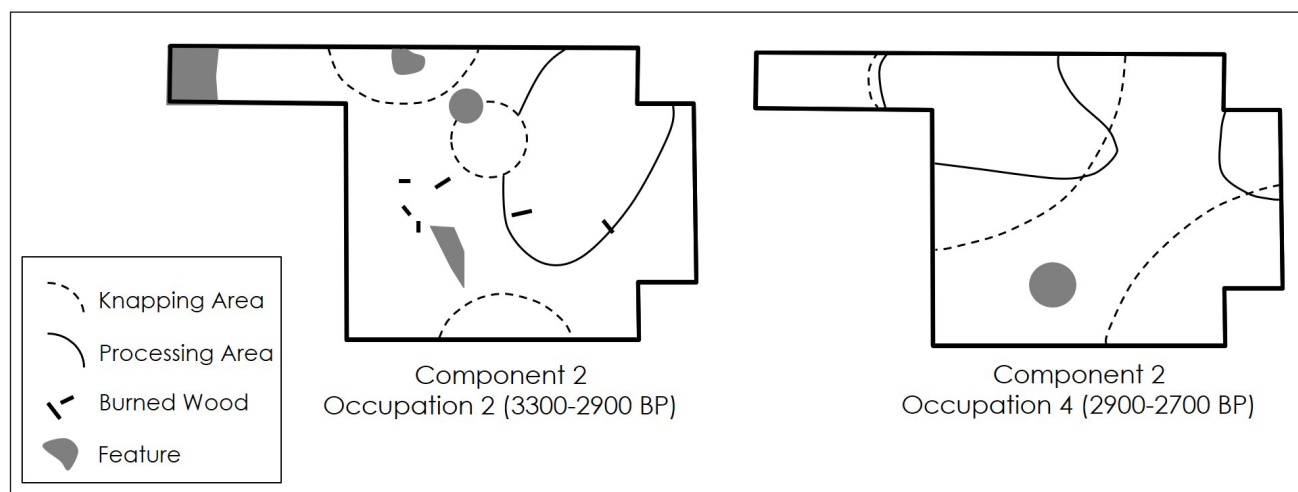


Figure 2. Plan maps showing activity areas of two occupations at West Point. Adapted from Larson and Lewarch (1995:24–26).

The number and arrangement of features and the activities taking place around them is clearly different between occupations, despite the area being used for secondary refuse, tool manufacture, and food processing in both occupations (Larson and Lewarch 1995(14):22–27). This lack of consistent patterning through time further differentiates this seasonal camp from the expected signatures for plankhouse villages.

Functional Differentiation

Functional differentiation of space is perhaps the most useful variable for understanding the social structure of the seasonal resource procurement camp. We know from the record of plankhouses that different families, residing in different compartments, tended to specialize in specific tasks (Chatters 1989). Identifying areas used for specific tasks, especially areas associated with hearths and habitation zones, can therefore be used to make inferences about how individual families were organizing themselves spatially while living in seasonal camps. The methods used to determine the activities happening

in these spaces varied in each report, but it in all cases it was discussed in enough detail for some inferences to be made about functional differentiation in hearth and habitation zones (for a detailed discussion of these analyses, see the original site reports). The focus is on these zones in particular to mirror analyses of spatial differentiation of specialization and status in plankhouses so that more direct comparisons can be made.

Botanical analysis at the Renton High School site sampled 23 features, most of which were hearths, and consistently found hardwood which suggests an emphasis on smoking salmon across all areas of the site (Lewarch 2006:153). Evidence of elderberry processing was also consistently identified and it appears that the association of elderberry and salmon processing was ubiquitous across all hearth contexts (Lewarch 2006:153–154).

At West Point, Larson and Lewarch note that space requirements and the type of activity were the primary drivers of spatial distribution at the site, with “noxious” activities like fish gutting and animal butchering generally occurring away from habitation areas (Larson and Lewarch 1995(14):11). Beyond this distribution of activities, which was driven by necessity, West Point is characterized by multifunctionality rather than differentiation. Rock oven features at this site were used to simultaneously process a diverse range of fish, shellfish, plant, and mammal resources for immediate consumption (Larson and Lewarch 1995(12):43). Furthermore, features at this site were not arranged into “functional sets” which would be suited for only a single set of processing activities (Larson and Lewarch 1995(12):84). Another interesting consideration is the lack of spatial patterning for the decorative artifacts from the site, although the sample size of these artifacts from the components dating to the seasonal use of the site makes it difficult to draw any definitive conclusions from this.

The descriptions of functional differentiation of hearthside activities are least detailed in the reports for Duwamish No. 1, *Yuetswabic*, and Eagle Gorge Terrace. At Duwamish No. 1, this is due to an extremely limited assemblage of artifacts in areas identified as habitation zones, which prevented any analysis of activity distribution in these areas (Campbell 1981:440). However, cluster analyses generally showed that there was no patterned distribution of materials at the site and comparisons between refuse and habitation areas suggest that the manufacture of both lithic and possibly bone tools was occurring in living areas (Campbell 1981:194, 449–450).

At *Yuetswabic*, due to limited horizontal exposure and extreme fragmentation of the faunal assemblage, no comprehensive analysis of intra-site spatial functionality was possible (Schumacher and Burns 2005:60). However, flotation samples indicate that the activities occurring near hearth features was diverse, including both fish and plant food processing as well as tool maintenance (Schumacher and Burns 2005, Appendix 5:9). According to the available data, this likely represents the entire suite of activities taking place at the site, and the apparent occurrence of all of these activities around all hearth features does not suggest a functional differentiation of space at *Yuetswabic*.

The assemblage at Eagle Gorge Terrace was extremely narrow and comprised almost exclusively of calcined mammal bone and lithic debitage. The distribution of bone and lithics is noted to be coterminous and concentrated between the hearth

features (see Figure 1). The range of activities is certainly the most limited at this site, so it is less likely that any functional differentiation of space would be identified, but it is still interesting to note that both of the site's activities appear closely correlated.

The available assessments of functional differentiation in the hearth and habitation areas of these sites does not show any evidence of a spatial organization based on the specialization or status of the sites' inhabitants. While the range of activities taking place at seasonal resource procurement camps is limited relative to the winter village, in most cases there is still evidence for a diverse set of activities. No site (other than Eagle Gorge Terrace) was limited to only one subsistence pursuit and in all cases there are a number of non-subsistence activities taking place, including lithic manufacture and procurement, bone tool manufacture, woodworking, and hideworking. Therefore, the range of activities alone is not sufficient for explaining the lack of functionally differentiated space at seasonal camps.

Discussion and Future Directions

The five sites in this study broadly met the signature I would expect if the social organization structuring seasonal camps was a reversal of the social organization that structures plankhouses. Limited investment in permanent structures serves to alleviate the very physical manifestation of the household social unit that is represented by the plankhouse. The multigenerational plankhouse serves as a reminder of the longevity and stability of that household and its structure. Conversely, the more temporary nature of domestic structures at seasonal camps provides the opportunity to build and reorganize dwellings with each visit and consequently reorganize and renegotiate the social structure that both dictates and it dictated by that dwelling. This action is therefore an opportunity to assert agency that is built into the process of resettling at the camp for the season. Additionally, because these sites could have been occupied by individuals that did not that reside in the same household or village (depending on the ownership status of the resource and the affiliations being activated), this would also have been an opportunity to reaffirm and renegotiate extra-household relationships.

The lack of systematic patterning at seasonal camps demonstrates that the social structure that organizes these constantly reconstituted spaces is not as structured as the one operating at plankhouse villages. If it were, we would expect to see similar signatures in both settlement types. Instead, we see spaces that are less strictly organized and that change with each subsequent use of the site. In some cases, this is likely the result of the size and makeup of the group who produced the site. At Eagle Gorge Terrace, for example, the site was probably occupied by a small hunting party rather than a group of families and thus it is unsurprising that the hearths are arranged differently. Nevertheless, a less constrained and strictly patterned campsite would still be a reprieve from the structure of the household, even if this pattern was simply the byproduct of having fewer people at the site. At larger sites like West Point, Duwamish No. 1, *Yuetswabic*, and Renton High School, which were likely host to several families at a time, the lack of linear hearths arranged into specific family compartments more clearly speaks to the presence of a social structure that differs from that of the winter village.

The lack of functional differentiation in hearth and habitation zones further indicates that individual families were not isolated from each other at seasonal camps. Areas occupied by specific specialists or social classes cannot be identified in the record of seasonal camps as it can be in plankhouses. People did not stop being specialists and elites when they left the winter plankhouse, but they did stop spatially organizing themselves according to these social categories. Relationships at seasonal camps were in some way different than they were at winter villages. Whether these sites represent families from the same kinship group or residence group (village), it is clear that they were free to share space in a way that they did not within the plankhouse. This seems consistent with the ethnographically known ethic of sharing and hospitality that took place between owners of resource sites and visitors (Thom 2005:293–296).

Overall, the contrasting social structures in Coast Salish winter villages and seasonal camps is consistent with Wengrow and Graeber's (2015) model of reversal in hunter-gatherer societies with a seasonal round. In this model, the social structure reverses with the season to meet a culture's sociopolitical requirements at different points in the year. They believe that "this shifting back and forth allowed mature and self-conscious political actors to be continually aware that *no* social order was immutable" (Wengrow and Graeber 2015:613). Conscious or not, the seasonal reconstitution of social arrangements reinforced Coast Salish autonomy and social fluidity by providing a setting for individual choice and more egalitarian relationships. Like bilateral kinship, an inverted pear-shaped hierarchy, and a political ideology based on justified authority, seasonal social reversals would have provided a powerful check on the centralization of power.

Conclusion

This study is promising, but cursory. The research designs used in the original site reports were not intended to answer questions about sociopolitical organization and were instead focused on functionality and subsistence strategies. It seems because of the increasingly interesting insights into sociopolitical ideology that household archaeology has given us; there is a focus on the excavation of plankhouses. Truthfully, in many of these reports, authors seemed genuinely disappointed to discover that their site was lacking permanent structures. In their concluding sections, they often assured the reader that the coveted plankhouse was just outside the limits of the excavation, even when the existing data demonstrated only short-term use or summer occupation of the site. In order to build a stronger case for seasonal sociopolitical reversal in the Coast Salish region, this bias must be overcome. Research strategies for investigating seasonal camps must be prepared to analyze them in the same way that households have been analyzed, so that more quantitative assessments can be made about the spatial patterning of sites and the organization of activities in seasonally occupied habitation areas. Applying this research agenda to seasonal camps across the Salish Sea will allow us to better understand the role of seasonal camps in maintaining the decentralization of power among the Coast Salish.

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Seeing the Forest for the Trees: A Spatial Database to Enhance Potential of Legacy Collections at the Washington State University Museum of Anthropology

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Abstract *In this article we describe recent work designed to build a synthetic research program through the creation of a geospatial database of archaeological collections curated at the Washington State University Museum of Anthropology. Over the past several years, faculty, staff, and students have been engaged with significant rehabilitation work on legacy collections. However, until recently, the Museum lacked a central database of site information, which hindered our capability to develop a regional understanding of holdings and therefore a synthetic program. As described here, our efforts resulted in the compilation of data encompassing materials from 1,635 archaeological sites, 1,073 of which contain artifact collections that are currently housed at the Museum. Our phased approach will allow for the building of this foundational spatial geodatabase, which we see as a dynamic and evolving resource that will grow and change in the future. Understanding the spatio-temporal distribution of these significant archaeological resources will enhance research, educational, and stewardship capabilities for decades to come, and will ultimately boost public understanding and appreciation for the discipline and the need for public support of museum and curation facilities in the state of Washington and beyond.*

Introduction

The authors of a recent *American Antiquity* article aptly entitled “The Future of American Archaeology: Engage the Voting Public or Kiss Your Research Goodbye!,” observed that “publicly funded and mandated archaeology in the United States has been attacked multiple times during the past several years” and that we must communicate our results with the public or risk losing support (Klein et al. 2018:1). Indeed,

The public benefits of archaeology depend in a very basic way on the success of archaeology as a research field. If archaeological research does not continue to produce improved understandings of the human past, or if archaeological research loses its scientific and scholarly credibility, the public’s attention to and interest in things archaeological will diminish. At worst, it can erode into an antiquarian interest in artifacts merely because they are old or into seeking occasional titillation from archaeological fantasies of the usual “lost tribes and sunken continents” sort (Wauchope 1962; also see Williams 1991). [Lipe 2002:20]

There is no question that the benefits of archaeology are not always clear to the public, at least partially because “the work is highly technical, and research results are generally published in books and articles written primarily for other archaeologists” (Lipe 2002:20). While challenging, archaeologists have an obligation to improve the public’s understanding of archaeology, to engage with Tribal communities and local stakeholders, and to make research results more accessible—not only to preserve the field but also because it is an ethical responsibility of the discipline (Merriman and Swain 1999; McManamon 2000; Lipe 2002; Little 2002; King 2009).

While public perceptions of archaeology often revolve around field discoveries, these issues are also important for museums and curation facilities. These institutions are often underfunded and understaffed, and the public often does not know about or understand the immense research potential that lies within a museum. As observed by Merriman and Swain (1999), failing to make use of the vast potential of archives and collections ignores the research goals of archaeology and undermines claims commonly made as to the intrinsic value of maintaining such collections, often at significant cost to the public. In the United States this situation is made more challenging by the fact that museums face a “curation crisis,” a situation that refers to the fact that there are far more archaeological collections that have been (and are currently being) generated (through contract and scholarly work) than there are resources to manage them (Childs 1995). Historically, it was common for most project resources to be spent on field excavation and analysis, while curation was an afterthought, with little to no funding set aside for the maintenance and continued use of legacy collections. It is thus quite common for modern academic museums to depend heavily upon agency agreements and institutional support to keep their doors open, and thus it is critical that museums maintain public support for critical federal and state funding. While staff are often too busy with grant writing and maintenance activities to move beyond baseline work, a variety of means have been suggested to alleviate this situation, and here we focus on the notion of synthesis as a guiding framework for growth at Washington State.

Synthetic research is considered one of the greatest challenges and opportunities in archaeology today and can be a benefit to public understanding and appreciation for the discipline while promoting and informing our understanding of the human past (Altschul et al. 2017). Museums and curation facilities have holdings that encompass numerous sites (sometimes spanning multiple regions) and are positioned (with the right funding and personnel) to promote synthetic activities and create and house substantial research databases. In this article, we describe efforts along these lines at the Washington State University (WSU) Museum of Anthropology (MoA), a primary repository for Pacific Northwest archaeological collections, predominantly from the Columbia Plateau, although with collections spanning to Utah. Specifically, we focus on one aspect of ongoing work: to enhance the Museum’s stewardship of archaeological collections through the development of a geospatial database of the Museum’s legacy collection holdings, which was mostly excavated by Washington State University faculty and students in the 1960s and 1970s (Figure 1). Understanding the spatial distribution of these significant archaeological collections will help us to improve our stewardship of these collections, research accessibility, learning opportunities, and collaboration with indigenous communities.



Figure 1. WSU field excavations at Wexpúsname (45GA61). (WSU Museum of Anthropology, Image 45GA61.12530 7-396)

Background

WSU MoA is an official repository for archaeological collections and associated archival materials that meets the curation standards published in title 36 CFR pt. 79 (see <https://www.nps.gov/archeology/tools/36cfr79.htm>) in compliance with federal and state mandates. Pacific Northwest collections are primarily from sites in the Columbia Plateau in eastern Washington State and include extensive holdings from prominent sites, such as Marmes Rockshelter (45FR50; Hicks 2004), Lind Coulee (45GR97; Irwin and Moody 1978), and Wexpúsname (45GA61; Leonhardy et al. 1971; Nakonechny 1998), as well as lesser-known sites that await full study and reporting. The MoA also houses collections from outside of Washington State, including a very large collection from Utah associated with the Cedar Mesa Archaeological Project (Lipe et al. 2018). In addition to the archaeological collections, the MoA houses ethnographic collections of objects, dating to the period following contact between Euroamericans and Native communities from the Inland Northwest and elsewhere.

The MoA engages in a broad mission of promoting understanding of human cultures through research, education, and stewardship of substantial archaeological and ethnographic materials from the northwest. Staff are engaged in activities related to this mission, including collection maintenance and rehabilitation, teaching and outreach, and making the collections available for research and other creative activities. For example, the MoA provides internship opportunities for WSU undergraduate students, maintains a learning collection of unprovenienced materials for classroom use, and frequently hosts school groups from elementary to high school with staff providing talks and demonstrations that draw on material curated at the Museum. Whenever possible, the staff collaborates with local Native communities in research planning and public outreach activities. Full engagement in these endeavors is a

challenge and the two permanent Museum staff members—including the full-time Director and Assistant Professor (Shannon Tushingham) and one half-time Repository Manager (Diane Curewitz)—depend upon assistance from graduate students, interns, and staff, who are funded through “soft money” agreements and grants.

In addition to its laboratories and other curation facilities, the MoA also manages the Northwest Reading Room, which houses a large collection of books, articles, journals, reports, other media, grey literature, and unpublished materials related to the anthropology of the Pacific Northwest. Notably, many of these documents were authored by WSU students and faculty and represent decades of research and cultural resource management activities, including the *WSU Laboratory of Anthropology, Reports of Investigation* series; the *Washington Archaeological Research Center* reports; *WSU Laboratory of Archaeology and History, Project Reports*; the *Center for Northwest Anthropology, Project* reports; and the *Contributions to Cultural Resource Management* series.

Over the past several years, the MoA has invested a significant amount of energy into these resources to reinvigorate and expand the MoA to be a modern research center, including updating museum collections management practices and facilities with the goal of improving research, education, and collections stewardship activities related to our mission. However, several challenges first needed to be addressed. A primary need was to complete rehabilitation of numerous legacy collections (e.g., stabilization and repackaging objects into plastic bags to meet archival standards, scanning archival materials, and the creation of digital collections databases). This goal has largely been met: as of this writing most of the Museum collections have been rehabilitated thanks to funding provided over the past four years primarily from the Walla Walla District of the U.S. Army Corps of Engineers (WWACE) and the Washington State Department of Transportation (WSDOT).

Numerous recent research projects have made use of these collections. For example, a survey of the Museum holdings generated materials for studies on smoking pipes in the Pacific Northwest. Analyzed for ancient residues, these objects provided exciting insights into the antiquity of tobacco cultivation and use in the Columbia Plateau region (Damitio 2018; Tushingham et al. 2018). These studies not only speak to the history of sacred tobacco use but also informs programs designed to combat persistent tobacco use rates among modern Tribal communities (Snyder 2016; Tushingham et al. 2018). Other recent regional-scale work includes an analysis of Late Prehistoric lithics and pre-contact social interactions in the southern Columbia Plateau (Harris 2018), and an investigation of the historical distribution of salmonid populations based on innovations in ancient DNA analysis of salmon bone from pre-contact archaeological sites (Johnson and Kemp 2017; Johnson, Kemp, and Thorgaard 2018). The Museum also enables researchers to revisit legacy collections using modern analytical techniques and theoretical perspectives, e.g., Wexpúsnime (Nakonechny 1998), Rock Creek Shelter (Frierson 2018), and the Turkey Pen site of Cedar Mesa (Matson 2014, 2018; Lipe et al. 2018). R. G. Matson and colleagues excavated a midden at the Turkey Pen site, Cedar Mesa, Utah in 1972 (Matson 2014, 2018), which has prompted many important research contributions over the past 40 years (Lipe et al. 2018). For example, flotation analyses of midden samples and macrofloral and pollen analyses of human coprolites from the midden established that late Basketmaker II groups had a primary dependence on maize farming (Aasen

1984; Lepofsky 1986; Matson 1991). The earliest examples of the distinctive Southwestern variety of domestic turkey were found at the site (Nott 2010; Speller et al. 2010; Kemp and Lipe 2014; Lipe et al. 2016). Isotopic analysis of individual human hairs document variation in maize intake by individuals during the year (Cooper et al. 2016). Swarts and colleagues (2017) identified evidence of selection for early adaptations to temperate zone growing conditions by genomic analysis of Basketmaker II maize. The earliest example of a tattooing implement from western North America was discovered at the site (Gillreath-Brown et al. 2018). Battillo (2018) found that maize fungus was a potentially important contributor to Basketmaker II diet and nutrition. In addition to these recent examples, there have been numerous earlier works, including peer-reviewed scholarly papers, Ph.D. dissertations, and Master's theses, as well as countless paper and poster presentations, that have been based on collections currently or formerly housed at the WSU MoA. For example, see the WSU Department of Anthropology's list of dissertations and theses here: <https://anthro.wsu.edu/publications-and-research-resources/theses-and-dissertations/>.

Undergraduates students have also always been involved with museum collections, and they currently work with varied archaeological and ethnographic materials through internships and special topics courses (Figure 2). A recent example includes *Fish, Water, and People in the Northwest: Implementing Collaborative Community-Based Research at the Museum of Anthropology*, an innovative collaborative research project involving joint mentorship by a WSU faculty mentor (Tushingham) and a Tribal mentor (Josiah Pinkham, Nez Perce Tribe) with undergraduates from various disciplines who developed a series of creative displays at the MoA communicating themes outlined through community-based interviews, which were designed to increase awareness of cultural history, local Native American communities, and environmental issues (Tushingham and Pinkham 2015).



Figure 2. Museum staff and undergraduate interns working on collections rehabilitation and education project at the WSU MoA, Spring, 2014.

Geospatial Database Development

With the work of rehabilitating the physical collections and their associated standalone databases largely complete, we tackled another major challenge: the MoA, until recently, lacked a central database with site summary information. This information was somewhat atomized in various inventories and not centralized, which hindered our capability to develop a regional, synthetic program. We present the results of this effort to summarize and pull critical information together in a spatial geodatabase, including baseline data from every site from which the MoA has material.

Presently, we have focused on plotting the location of WSU collections sites in the Pacific Northwest as Phase 1 in our project to understand any overarching spatial patterns of our holdings particularly as they relate to the geography of the Columbia Plateau (Table 1). In addition to site locations and other basic data, our intent is to continue to develop the database to include other important variables (e.g., site age, site type, and the presence or absence of key artifact and feature classes like salmon bone, groundstone, obsidian, houses, and storage features). Compilation of such data is an essential step in addressing critical research questions and synthetic needs faced by regional scholars. Indeed, the Columbia Plateau—where the majority of MoA materials originate—is a particularly rich area archaeologically with great potential for understanding significant issues of global importance (hunter-gatherer subsistence intensification, the evolution of sedentism and storage, indigenous management of plants and fish, among many other topics), but much of this potential remains largely unrealized (Prentiss et al. 2005:48; Ames 2009; Collins and Tushingham 2014).

Table 1. Current and Future Development of WSU MoA Geospatial Database

Phase 1*	Phase 2	Phase 3
Site number(s)	Archaeology survey phase	Storage features
Site name(s)	Radiocarbon data	Faunal data
Coordinates	General artifact categories	Artifact types
Agency	Refined site coordinates	Artifact material
Artifacts (yes/no)	House pits	Additional feature types
Records (yes/no)	---	---
*Phase 1 of the project has been completed at the time of publication for the Pacific Northwest sites		

Methods

Over recent decades, archaeological research has increasingly integrated geographic information systems (GIS) in a variety of ways (Lock 2000; Conolly and Lake 2006; Bevan and Lake 2013). The applicability of GIS ranges from site-level plotting to the analysis of the distribution of sites throughout a region. Given that the use of GIS has become the norm in archaeological research, the lack of basic geographic information on sites in the MoA collections has been a major lacuna.

We created a database for the MoA sites, which was derived from a thorough review of existing inventories of the Museum's artifact and document storage facilities. The sites were double-checked to ensure that site data was not duplicated and that each site was linked to basic data including associated agency and project (where applicable). The most significant single source of data was provided by the WWACE, the agency whose collections make up the largest proportion of Plateau sites held by the Museum. The WWACE maintains a geodatabase of their own that includes site data and site spatial information in the form of polygons representing site footprints. The WWACE data accounts for approximately twenty-three percent of the sites in the MoA collections. We gathered the remaining spatial data using site forms and survey reports accessed through the MoA's archives and the Washington Information System for Architectural and Archaeological Records Data (WISAARD) maintained by the Washington State Department of Archaeology and Historic Preservation (DAHP) (<https://dahp.wa.gov/historic-preservation/find-a-historic-place>).

The data from non-WWACE sources were mostly in the form of point locations in Universal Transverse Mercator or latitude–longitude coordinates and Public Land Survey System (PLSS) descriptions. Sites with locational data solely in the form of PLSS descriptions were converted to a single point (in decimal degrees) using the “TRS-data” online tool that outputs the centroid of a given description down to the section, i.e., a square mile (Environmental Statistics Group 2003). The point data derived from site forms and other reports are more general than the WWACE polygonal data. Rather than undertake the laborious process of defining site footprints for several hundred sites not included in the WWACE database, the WWACE data were converted to points using the “Feature to Point” tool included in Esri ArcGIS 10.5.

These simple data are now maintained in a Microsoft Access database, which is used to update the Esri shapefile through the use of a model—a sequence of processing tools saved in a workflow that can be activated as a single process. In this case, the model is simple and consists of a sequence of two tools, where the first interprets the data in the x- and y-coordinate fields as latitudes and longitudes and the second outputs the resulting layer of points as an Esri feature class within a geodatabase maintaining the rest of the information from the working Access database (Figure 3).

Microsoft Access provides a relatively user-friendly platform for the maintenance of a dynamic database such as the one discussed here, while an Esri geodatabase is suited for the mapping and analysis of spatial data. The workflow described above allows us to use the latter functionality without sacrificing the former.

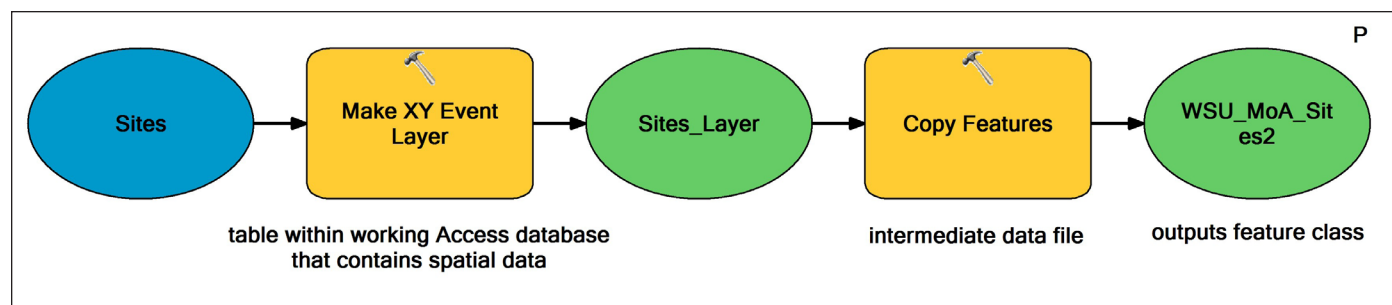


Figure 3. Esri ArcGIS model used to extract site data from Microsoft Access and output it as a feature class.

Results

The WSU MoA holds materials from 1,635 archaeological sites. One thousand seventy-three of the sites yielded artifact collections, which are currently curated at the MoA. Reflecting on the history of archaeology at WSU as a center for scholarship on the Columbia Plateau, most of the sites in the WSU MoA collections are located along the rivers of the Columbia system, in particular the Lower Snake and Lower Columbia Rivers. This is illustrated in Figure 4, which shows a distribution of sites throughout the state of Washington. Hundreds of sites are represented on this map, which mostly excludes sites in Oregon and entirely excludes sites in Utah associated with the Cedar Mesa Project. Additionally, we have not fully counted or produced coordinates for all of the BLM and Cedar Mesa sites but intend to do so in the future. Table 2 shows a minimum number of sites for Cedar Mesa and the BLM; however, the number of sites is likely to be over a thousand. The density of sites is so high in some locations that many of the points are overlapping (Figure 4). For example, the visual overlapping of sites occurs along the Lower Snake, around the confluence of the Snake and the Columbia, and along the Upper Columbia in northeast Washington. While presented at a coarse scale here, these point data are, in certain areas, abundant enough to enable spatial analysis at multiple scales: local, sub-regional, and regional, such as a recent study on the change in the distribution of sites during the Archaic in Middle Tennessee (Gillreath-Brown and Deter-Wolf 2019).

Figure 5 summarizes these data (using Leaflet), displaying the centroids of several spatial groupings of sites along with the number of sites in each group. Leaflet, a mobile-friendly interactive mapping software, would allow for the Museum to expose the distribution of sites to researchers or public without showing the exact site locations, allowing for protection of the sites. The five groupings in southeast Washington include 483 sites, approximately 30% of the MoA sites. WSU archaeologists were intensively focused on excavating sites surrounding dam constructions along the Columbia River system during the middle of the twentieth century (e.g., major development and water reclamation projects include Ice Harbor, Lake Roosevelt, Little Goose, Lower Monumental, McNary, O'Sullivan, and numerous surveys summarized at the MoA's website [<http://www.archaeology.wsu.edu>]).

Building the database also allowed us to better quantify our agency holdings and connections. Most of the collections managed by the MoA are owned by federal

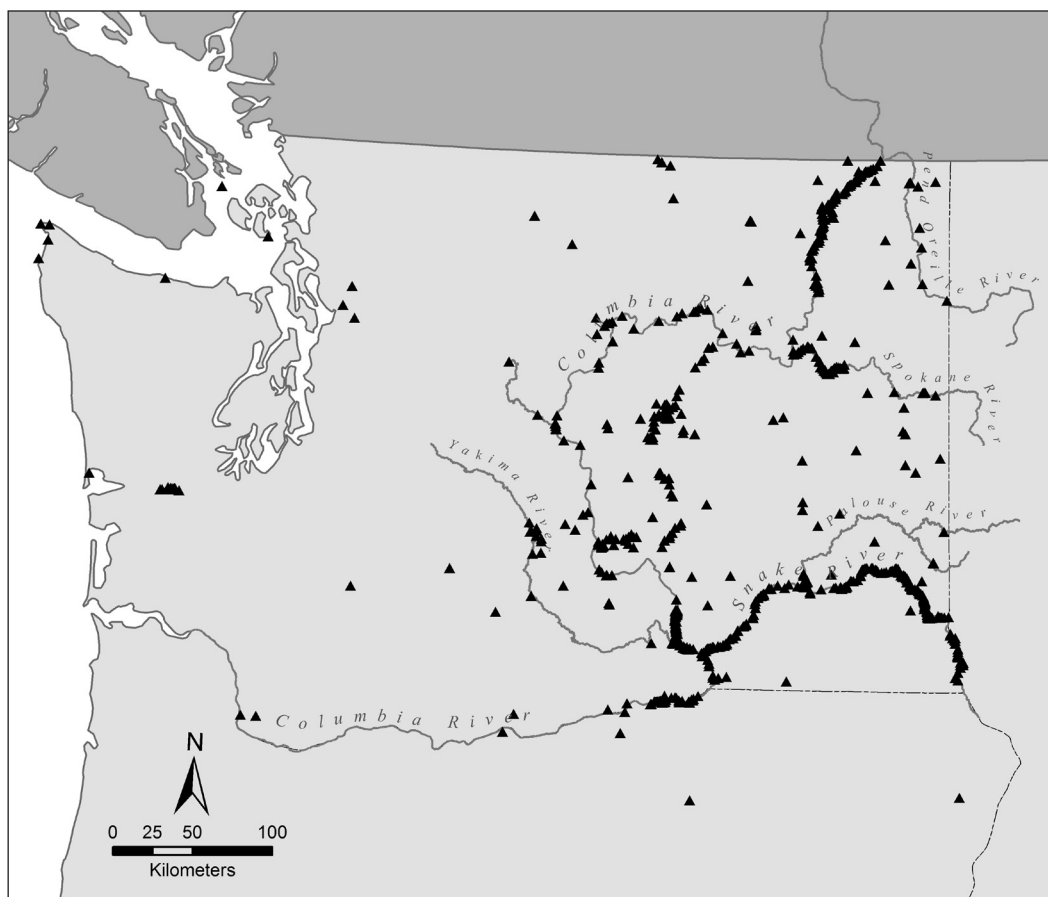


Figure 4. This map shows the distribution of archaeological sites with records or artifact collections in and around the state of Washington. Stream data from the U.S. Geological Survey National Hydrography Dataset.

Table 2. Five Largest Owners with Artifacts and Materials in the WSU MoA

Agency	Number of Sites
Bureau of Land Management, Utah	807*
Army Corps of Engineers, Walla Walla District	374
Bureau of Reclamation, Pacific Northwest Region	124
WSU Department of Anthropology	91
Bureau of Land Management, Oregon-Washington	88
*This is a minimum number of sites for BLM land in Utah, which is a product of several projects including the Cedar Mesa Project. We will be working towards finishing Phase 1 on the Utah sites in the future.	

and state agencies (Table 2) with the Utah Bureau of Land Management owning the largest single portion of the holdings. However, other holdings are significant and the MoA manages collections on behalf of the WWACE (the largest owner of Northwest Plateau sites), the Bureau of Reclamation, the U.S. Forest Service, the Washington State Department of Transportation, and others. This is in addition to materials from nearly a hundred sites that were generated as part of WSU-sponsored projects or that are “orphaned” from their owners in one way or another.

Conclusions and Future Directions

We have developed and presented in this article a framework that brings together geographic locations with other fundamental data on all of the sites curated at the MoA, although with the main focus being on the Pacific Northwest sites. This framework, along with future additions in Phase 2 and 3 (Table 1), will facilitate research, give us a better understanding of MoA holdings on a regional scale, and enhance the long-term stewardship of these collections. For example, a researcher will be able to better target site materials for their research question or search for similar sites for an inter-site analysis. We can now better share the sites and materials with local Native communities, allowing to better target materials or

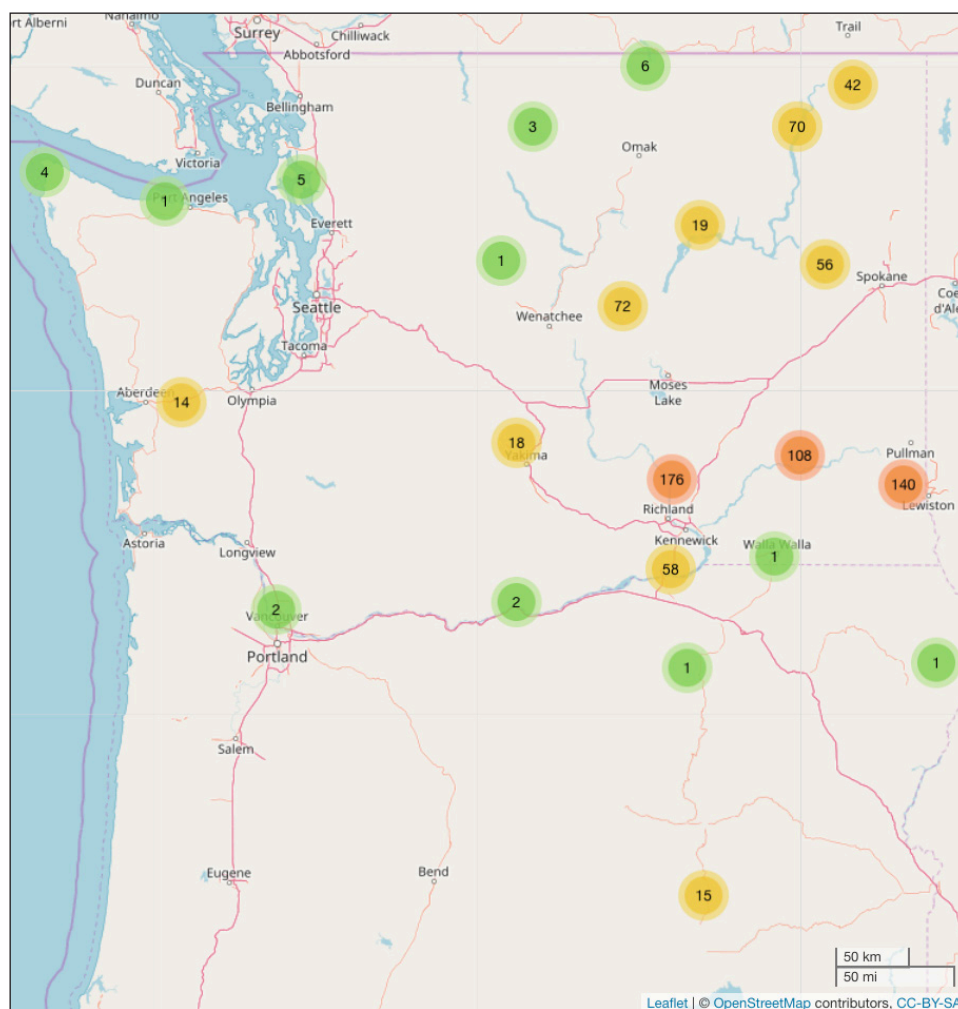


Figure 5. This map shows the centroids of several spatial groupings of sites with records or collections at the WSU MoA. The number in the center of each dot represents the number of sites within that group. Map produced under Attribution-ShareAlike 2.0 Generic (CC BY-SA 2.0). (<https://creativecommons.org/licenses/by-sa/2.0/>), which was altered by putting the site groupings. © OpenStreetMap contributors.

sites that they may be interested in. The geospatial database greatly enhances the ability to study inter- and intra-site spatial patterns at a range of scales. Figures 4 and 5 illustrate the breadth and depth of the WSU MoA's stewardship of the cultural heritage of the Columbia Plateau. The GIS database presented here is a starting point and its construction will continue with the assistance of students and MoA staff, which will provide a critical basis for future research. The overall intent is that this project will grow over time and be a long-term resource for future scholars.

Future additions to the WSU MoA sites database will include further details regarding each site, such as adding a temporal dimension and the size and scope of the associated collections (Table 1). The collections curated at the MoA represent thousands of years of history in the Pacific Northwest, both before and following the arrival of Euroamericans. Distilling previous research on these sites to broad periods and more precise radiocarbon dates where they exist would be another invaluable element in aid of a regionally-based research program. More qualitative information like site type and size are likely future additions to the database discussed in this article.

This database and its future expansions can then be paired with other kinds of geospatial datasets that might include a socio-political history of the Northwest (including boundaries of tribal ancestral land and contemporary reservations), locations of stone raw material quarries, major waterways, watersheds, human management and plant cultivation areas, and paleo-environmental histories relevant to indigenous resources. Much of these data are available from government or other sources, therefore a major goal of this work is to enable researchers at the MoA and elsewhere to integrate museum site data with other kinds of data relevant to a given study or research program. We hope to use this resource by relating MoA holdings to collections housed elsewhere and environmental and landscape-scale data.

As we develop and encourage use and research of MoA collections, it is critical that a formal research protocol is in place that is developed with local Tribal communities and collections owners. The MoA is committed to ethical use of collections, transparency of all activities, and collaboration with Tribal communities. We require all researchers, including WSU faculty and students, to complete research requests in coordination with Museum staff, collections-owning agencies, and Tribal communities as appropriate. We are actively pursuing innovative means of improved stewardship of cultural materials, embedding best practices in our work flow, and encouraging research collaborations with indigenous communities from project inception. Indeed, some of the best and most interesting research develops through such partnerships, and we encourage researchers to consider early on how their work may be communicated with the public and how it may benefit and/or involve Tribes.

The WSU MoA is one of many curation facilities and research institutes throughout the world that oversee numerous archaeological collections with limited support. Often—and certainly in our case—archaeological collections include the materials and written results of many disparate projects that have unique histories and idiosyncrasies, with varied project investigators, inventory structures, project goals, theoretical and methodological approaches, and contexts (field schools, salvage/cultural resource management-driven projects, thesis and Ph.D. projects, inadvertent discoveries, etc.). It is possible, however, to “see the forest for the trees,” by focusing our lens on the macro spatial and temporal patterning of many seemingly disparate data that derive from a constellation of projects, implement-

ed over many decades. In our view, developing a spatial database is an essential step toward synthesis, collaboration, and the development of broader, long-term impacts to enhance both the MoA's stewardship of its collections and the potential for the wealth of materials and records at the MoA to be used in research projects. As these efforts move forward, an integrative research program on the archaeology of the Columbia Plateau region will be developed around this framework at the WSU MoA. Indeed, we see this foundational spatial geodatabase as a dynamic and evolving resource that will grow and change in the future—and our intent is that it will provide an essential tool that will facilitate greater research, stewardship, and learning opportunities on the archaeology of the Northwest for decades to come.

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JONA Presents

Recollections of Anthropology in the Pacific Northwest

Coast Salish Sweep ~ Tripling Chehalis Stories

Jay Miller

Abstract *To complement and celebrate the volume (2018) dedicated to Rodney Frey's work with Plateau folklore, a comparable event on the coast is honored here. Recent collaborative effort with the Confederated Tribes of the Chehalis Reservation resulted in the 2018 University of Nebraska publication Chehalis Stories, edited by Jolynn Amrine Goertz, the last of the three major Chehalis sources. This article provides an opportunity to explore the historical context that made Chehalis Stories possible. Originally collected from Tribal members by the anthropologist Franz Boas in the 1920s, Amrine worked with her Chehalis age-mates, as well as past and present Tribal elders to examine past work done by anthropologists to understand the methodologies, shortcomings, and limitations. Building upon Amrine's work, Miller discusses the early years of story collecting and provides biographical overviews of key participants such as Katherine Palmer, Thelma Adamson, George Herzog, and Franz Boas. Previously unpublished letters between Ruth Benedict and Thelma Adamson are also included, providing insight into earlier Northwest anthropology and University of Washington anthropology.*

The University of Nebraska recently published the third collection of traditional Native stories, those collected by the anthropologist Franz Boas in the 1920s. *Chehalis Stories*, edited by Jolynn Amrine Goertz (2018), represents a collaborative effort with Robert Choke, Marion Davis, Peter Heck, Blanch Pete Dawson, and Jonas Secena, all Chehalis Tribal members of the Confederated Tribes of the Chehalis Reservation. *Chehalis Stories* now joins two previously published major collections of stories from the Confederated Tribes of the Chehalis Reservation of southwest Washington state:

- *Folk-Tales of the Coast Salish*. Collected and edited by Thelma Adamson, new introduction by William R. Seaburg and Laurel Sercombe (2009);
- *Honne, the Spirit of the Chehalis*. Narrated by George Sanders to Katherine Van Winkle Palmer, ed., new introduction by Jay Miller (2012).

These three collections represent substantial contributions to an already extensive body of stories; stories in English as well as Native languages of the Tsamosan branch of the central Coast Salish and their allies and neighbors.

This article presents a brief overview of traditional story collecting from the middle of the nineteenth century through current times. Then, special attention is given to *Honne, the Spirit of the Chehalis* and its storyteller and editor, George Sanders and Katherine Van Winkle Palmer, in a discussion of the Chehalis world view. Also discussed are Thelma Adamson and George Herzog for their contributions to early recording of Chehalis stories.

Brief Overview of Northwest Traditional Story Collecting

Scholarly study of Native “folklore” on the Northwest Coast began, as did so much else in American anthropology, with the research of Franz Boas (1894, 1901). Boas relied on the Chinuk WaWa trade jargon, an amalgam of words from Northwest, European, and Hawaiian natural languages, while working with Charles Cultee, a multi-lingual Chinookan speaker at Bay Center married to Catherine, a Chehalis. Soon after, Boas sent Livingston Farrand and James Teit to Quinault to collect stories and survey language distributions, respectively (Farrand 1902; Teit 1916).

Chehalis people have shared their stories with non-Native people since contact, though none were recorded until the middle of the nineteenth century (Amrine Goertz 2018). Some of the earliest accounts of Chehalis mythology were collected by Indian Agent James Swan—whose vivid drawings are at Yale (Miles 2007)—and ethnologist George Gibbs. Puget Sound missionary Myron Eells made note of a few legends in the 1880s (Miller 2015; Miller 2018:42–52). *Chehalis Stories* includes three Lower Chehalis stories. Between 1890 and 1894, Charles Cultee shared these three stories with Franz Boas (Amrine Goertz 2018:Appendix A). In 1905, Edmond Meany, a University of Washington (UW) professor who taught botany and history, visited the Chehalis Reservation and interviewed a number of Chehalis people; his notes contain abstracts of stories shared by Jacob Secena, *sisina’xn*, the grandfather of Jonas Secena. The following year, Robert Jackson, *Sard-Khom*, a Chehalis man who attended Carlisle Indian School, published “The Story of Sun: A Legend of the Chehalis Indians” in *Washington Magazine*, a periodical edited by Meany (Jackson 1906). Various anthropologists and linguists visited the Chehalis Reservation in the 1900s and 1910s, motivated by a desire to document Native American cultures and languages before they were “lost” forever.

Interest in Chehalis stories surged in the 1920s, which resulted in three major projects:

- George Sanders shared *Honne, the Spirit of the Chehalis: The Indian Interpretation of the Origin of the People and Animals* with Katherine Van Winkle Palmer (Palmer 1925);
- Members of the Benn, Charley, Davis, Heck, Iley, Johnson, Pete/Peter, Sanders, Secena, Williams, and Youckton families related cultural knowledge to Thelma Adamson in 1926 and 1927, which she used in *Folk-Tales of the Coast Salish* (Adamson 1934); and
- Robert Choke, Marion Davis, Peter Heck, Blanche Pete Dawson, and Jonas Secena worked with Boas in 1927 (Boas 1927).

The first publication by a Native writer was by Robert Jackson in 1906, mentioned above. In her new contribution, Jolynn Amrine Goertz provides Jackson's Native name as *Sard-Khom*, and his family as including a younger brother of Bruce Jackson and of Marion Davis, a Chehalis leader and storyteller (Amrine Goertz 2018). Robert had gone to Forest Grove (later moved to Chemawa) in Oregon, where the three brothers received different family names, and to Carlisle in Pennsylvania before he came home and met Edmond Meany.

The 1920s were the epitome of regional scholarly research, starting with the publication of *Honne, the Spirit of the Chehalis* (Palmer 1925). In 1923 and 1926, Frances Densmore (1939) recorded Makah and Quileute songs, stories, and ceremonies. In 1926, Thelma Adamson (1927, 1934, 1999, 2009) collected stories from Chehalis and Cowlitz. Ronald Olson (1925–1927, 1936) conducted fieldwork among the Quinault. Olson's ethnography was published in 1936; his collection of stories are with his notebooks at the UW archives. In 1927, when Adamson shifted to the study of ethnography, Boas (1927, 1934a, 1934b, 1935; Boas and Aginsky 1927) arrived to collect stories from the Secena family, which he did in both English and Chehalis Tsamosan; these works are now in the archives at the American Philosophical Society in Philadelphia. The enigmatic John Peabody Harrington visited the region, mostly rechecking older vocabularies and confirming place names (1942), often with Emma Millet Luscier; his papers are at the National Anthropological Archives in Washington, D.C., and available on microfilm. In the 1960s, John Donovan (1964, 1966, 1967a, 1967b, 1967c) published abbreviated stories. Land claims trials and federal petitions added to the spotty ethnographic record, bolstered by Emma Millet Luscier (Ray 1966, 1974; Taylor 1974).

For the last half of the twentieth century, the linguist Dale Kinkade (a selection of Kinkade's publications are listed in the Bibliography, and also discussed in Gerdtz and Mathewson 2004) made Tsamosan his life's work and, under the inspiration of Dell Hymes, produced ethnopoetic translations (1983a, 1984, 1985, 1987, 2008) of epic texts provided by Silas Heck, as well as examples from the 1927 Boas archive. Kinkade's major Chehalis texts in English contribute to a pan-Salish compendium (Thompson and Egesdal 2008).

More recently, Quinault (Capoeman et al. 1990; James with Chubby 2002), Chehalis (Marr, Hicks, and Francis 1980), and Cowlitz (Wilson 1999, 2001) have published attractive volumes that include favorite Tribal stories and portraits of mythic heroes, including the lesser known *Misp^h* who “made things right” along the coast (Miller 2014b).

Chehalis Changers

Yet, among all these efforts, *Honne* remains uniquely valuable for its sustained, integrated, coherent, interbraided narrative by a master raconteur. While most of its episodes appear in other books as stand-alone stories, the genius of George Sanders was that of the “old timers” who once enthralled an audience on serial winter evenings with on-going, interwoven, engaging stories that filled that night and provided enough suspense to have the audience waiting for more on the next evening. *X^wane* (impressionistically spelled *Honne* in Palmer [1925]) is one of the many Changer~Transformers who “set the world straight” prior to the arrival

of humans. Originally working in teams, these spirits have now become individualized to accord with European traditions, much as the authors of *Chehalis Stories* attach their names to versions of ageless stories of southwestern Washington State, primarily the Confederated Tribes of the Chehalis Reservation. The name “Chehalis” derives from the Native word for “sand,” the name of a major village on Grays Harbor at Westport, where Pacific Ocean whales often beached to be butchered and sold enriching its chiefs.

Changers such as *X^wane* mark the fourth of five epochs of Chehalis. The first epoch features powerful spirits who are birdlike and protective of a shiny hoop that is eventually stolen in relays by four Coyotes who are sons of Fox and by the grandson of Dog. In this way Animals superseded Birds in control of the world. The second epoch ended with a flood caused by a Bird son-in-law washing his face, exposing white patches that drew the clouds. Muskrat eventually brought up dirt from the sea bottom to remake the earth at a mountain still on the Chehalis skyline. The third epoch involves two sisters who, wishing to marry Stars, are taken into the sky by these husbands, the older one fathering a son, who is born at Claquato and eventually becomes the Moon. As a baby, one of the few males at that primordial time, he is stolen by two Salmon women, who marry him and give birth to the spirits of many fish and plants. His deformed twin, wrung from a soiled diaper by their distraught mother, joins up with his brother, becomes handsome, and eventually becomes the Sun. The fourth era, overlapping with the third, deals with Changers destroying cannibal women and monsters, providing staple foods, setting Tribal rules, and changing things to be appropriate to their present forms and conditions. The fifth age chronicles the arrival of humans and specifies present-day species, behaviors, and terrains.

George Sanders

The Sanders family descend from the Nisqually patriot Quiemuth, a brother of Chief Leschi. Both were signers of the Medicine Creek Treaty. In November 1856, Quiemuth peacefully reported to Olympia at the end of the Treaty War only to be murdered that night in the governor’s home office. His son Nisqually (Squally) Jim Sanders “roamed” around Chehalis, married, and had three surviving children: George, Andrew, and Mary. George (1880–1959) was born upriver at Klaber, the largest hop yard in the world at that time, but his family left there when he was 5 years old. His mother Lucy and both her parents were Salish Lower Cowlitz, his father’s mother was from Scatter Creek Chehalis, and his father’s father was Nisqually (Sanders 2012).

During the 1850s Treaty War, a series of forts were built to protect local citizens. Along the Chehalis River, however, relations were so close that most pioneer families refused to move into that fort because it would show lack of faith with their Native neighbors. Under the guidance of Sidney Ford, Sr., some Native men enlisted to fight hostiles. Ford’s children grew up bilingual in English and Tsamosan. The namesake son (Sidney Jr.) and his Native wife Josephine (*Kwisa*) were the parents of Daisy Ford, who married George Sanders. He had often worked at Claquato, where there were many hop yards until aphids ruined all these harvests.

The couple married when George was in his late twenties and Daisy in her teens. Both were industrious. They lived at Montesano and worked in nearby potato “spuds” fields until her mother Josephine died in the early 1920s; they inherited rich

farm lands along the Black River from her second husband, Harry Howanut, an important Chehalis leader. Daisy was a devoted mother, who kept a large garden; canned vegetable, fruits, and berries; smoked salmon; and wove baskets, which she traded with women at Olympia, the state capitol, for worn clothes. These she cut up, retailored, and sewed for her own children to wear, faithfully attending meetings of the Tribal sewing club.

Weekdays, George would milk his cows before dawn, set out the cream for pickup by a local dairy, and then walk to a rail car that took loggers into and out of the woods each day. George was a “bucker,” cutting down huge trees with a “misery whip,” the iconic long cross-cut saw that was pulled between partners. He worked as a logger well past usual retirement age and finally quit logging when power saws came into use.

George and Daisy had nine children, with seven surviving. Helen, the youngest, recalled that her grandfather Jim served as mailman, relying on a great coat with many pockets to sort out addresses: “He delivered mail on a horse, and he had various different pockets, and they’d tell him where to deliver the mail, and they said he never made a mistake. That was my dad’s dad.”

Storytelling was a family tradition: “My mom was more the storyteller. That story about Ant and Bear, Night and Day, my mother could tell that story just absolutely wonderful. You would sit there and you could just see those Ants dancing around the fire tightening their belts. Just amazing. She often told that one. My dad must have told some of the stories to his sons, he and the boys used to talk quite a bit” (Sanders 2012:xiii).

As Helen Mitchel she continues the family tradition of prominence, as head of her own logging company, Quinault Allotees Association, and most famously, lead plaintiff in *Mitchell V US I* and *II* affirmed breaches of fiduciary trust by the BIA and US.

Katherine Palmer

Katherine Evangeline Hilton Van Winkle Palmer (1895–1982) began her academic study of Tertiary geology in the Chehalis River valley (1918), while a student of Charles E. Weaver at the University of Washington in Seattle. She continued her graduate education at Cornell and settled in Ithaca, New York, for the rest of her life, raising two sons (losing one as a teenager), and, after decades of temporary positions, directing the Paleontological Research Institution. An annual award named for her is given to an outstanding amateur fossil hunter. Among her sixty publications, *Honne* (1925) stands out, thoroughly consistent with her devotion to her homeland and quest to understand its origins, both natural and cultural.

Her father, Jacob Outwater Van Winkle (1864–1934), was a much-loved country doctor hired by the Burlington Northern Pacific Railroad in 1893 to treat its workers, as well as locals, especially Indians. His wife Edith, daughter of a sea captain, was also his nurse. They married while he attended Columbia Medical School in New York City, and interned at Charity and Maternity Hospital. At Oakville, to make his rounds, Jacob first rode a horse, then a hired man drove his buggy until he bought a Ford in 1917. Transported by a driver (who lived on his property), the doctor could nap or make notes between patients. In addition to a home office,

Jacob later had a practice in a bungalow (still there) on Main Street. Today, he and his wife are fondly remembered for leading the association in the 1890s that bought the land to start the Oakville Pioneer Cemetery, which has grown over the years by adding acres, most recently from Helen Sanders, the youngest daughter of George. Thus, the tradition of family sharing continues.

Jacob's father "Winkle" was a carpenter, who joined the couple in Oakville and built the large house that remains a local landmark, with a chimney that bends so as to center at the roof line and an open third floor that served as his infirmary. A study skeleton hung in a closet off his office, terrifying local children. Other members of their families also moved west, and pioneered along the Chehalis River at Grand Mound, Gate City, and Grays Harbor. Some were clergy, and most were well educated.

The Van Winkles hosted summer picnics, especially on July 4th, and famous Easter Egg Hunts for children. They could serve 300 guests "and never borrow a dish." Their huge upright grand piano, still in the family, was the centerpiece of musical evenings. The doctor was also an avid outdoors man, fishing and hunting locally and in the mountains. Among his trophies was a huge bear rug that adorned his parlor.

Natives and pioneers interacted closely and favorably. As payment for treatments, in lieu of money, which was in short supply, the doctor received Native baskets and other craftwork, assembling a well-documented collection that has recently been returned to the Chehalis people. Interactions among local pioneers and Natives were facilitated by Chinuk WaWa (Chinook Jargon), the Northwest trade lingo widely in use until half a century ago. Sports were a shared interest. Every community, both on and off the reservation, had its own baseball team, furthering contacts among neighbors.

After her study at Cornell, Katherine returned to Oakville and approached George Sanders to record Tribal stories, which family tradition says he had told her when she was a child. In all, *Honne: The Spirit of the Chehalis* embodies a narrative tour de force interweaving episodes (that usually stand alone in books) into an integrated series of installments featuring successive aspects of the Changer's efforts (Palmer 1925). Unique to this collection, Sun and Moon (third epoch) are sisters, not twin brothers, a permutation that makes protagonists of their wives since the Sun is the mother of trees and tiny fishes as her husband is in most other versions. More creative still are references from the European world to the Devil and his friend Snake (p. 152). Especially appealing is assembling the pack horse (p. 187) using mussel shells as hooves, peacock feathers as fur, sea snails as lips, barnacles as teeth, and the long neck of the geoduck clam (which locals bawdily equate with another body part of a stallion).

Detriments to this book are less exact spellings of Native words and of words taken from Chinuk WaWa (such as Klahowya, potlatch), the regional trade language; dressing Honne in fringed clothing instead of cedar bark and tanned skins; and disparaging references to some Natives. The glossary of Native words at the end are in Nisqually Southern Lushootseed, but more accurate spellings for these names can be found in dictionaries of Upper Chehalis (Kinkade 1991), Cowlitz (Kinkade 2004), and Lushootseed (Bates, Hess, and Hilbert 1994).

Also, the late Dale Kinkade (2008:351), doyen of Chehalis studies, expressed confusion about this collection, and misidentified Sanders as Puyallup instead of the neighboring Nisqually.

At first glance this [Honne] looks like yet another version of the Moon myth, but in fact has very few episodes that correspond to episodes in other versions. It is best considered a collection of ²Ân stories; this Trickster was capable of transformation, so some stories might easily be assigned to either ²Ân or Moon. Palmer's stories also appear to show heavy influence from Puyallup, and her source, George Sanders was indeed Puyallup. (Kinkade 2008:351)

Above all, these are very genteel versions of these stories, avoiding the lusty, earthy, and gritty aspects common to many versions and often expected by present-day scholars of Native literature. Always, these and other Native epics and stories teach by negative examples. Instead of verbally criticizing a person, a story indirectly shows the error of his or her ways, allowing that person the freedom to act more appropriately. By weaving them together in these masterful installments, Salish oral literature appears at its best.

Culturally, these coherently integrated stories reflect ancient traditions of nightly storytelling that sustained a creatively interwoven narrative over many nights during rainy winters (Miller 1989, 1990, 1992a, 1992b, 2008a, 2008b).

Thelma Adamson

Folk-Tales of the Coast Salish (Adamson 1934) first published eighty-five years ago by the American Folklore Society (AFS) as Memoir 27, was—and remains—a major contribution to our knowledge of western Washington State Salish oral traditions, containing 190 texts from nineteen speakers, mostly collected in English or in English translation. The bulk (155) represents Upper Chehalis and Cowlitz Salish narrative traditions, primarily myths and tales, and constitutes the largest published collection of oral literature for either of these groups. The monograph also presents Humptulip tales (14), Wynoochee tales (3), Satsop tales (3), Puyallup tales (4), White River tales (2), and Skokomish tales (9).

This collection, the apex of her life before mental decline and institutionalization, notably includes as many as four variants of the same tale-type and a very useful forty-three-page set of abstracts with comparative notes from eight regional text collections prepared by Adele Froehlich, a former Barnard College student then working for AFS. Although Adamson standardized the written English of her narrators, she does not appear to have bowdlerized the texts.

Numerous and informative footnotes include: ethnographic explications of untranslatable Native terms, storytellers' asides, storytelling etiquette, characters' vocal qualities, consultants' gestures, consultants' acting, consultants' self-editing, and Thelma's elicitation techniques. Among its interpretative commentary are descriptive details and explanations not required by the plot action, characters' thoughts and feelings, cultural background, and similes.

The original field notebooks in which Adamson transcribed this collection of stories in 1926 and 1927 have been lost. But a handful of typed transcripts of stories remain. Comparison of the typed-up notes with the published texts reveals Adamson's (and perhaps others') editing practices.

A crucial contribution of Thelma's collection is inclusion to songs, usually integrated into the telling of stories and often a prime mover for decisive actions.

George Herzog

Herzog's role in Adamson's work came out of both personal and professional connections between the two going back to their student days at Columbia University. In 1924 Boas had contacted Erich von Hornbostel, director of the Phonogramm-Archiv at Kaiser Friedrich-Wilhelms Universität (Berlin University), seeking a student trained in comparative musicology and experienced with sound archiving to study with him at Columbia. Boas hoped to produce a scholar capable of conducting anthropological research in North American Indian music. Hornbostel recommended Herzog, who was then working as his unpaid research assistant in the Phonogramm-Archiv (Inman 1986:1).

George Herzog came to New York from Berlin and native Budapest, where he received early training in music that included piano instruction from Bela Bartok and composition classes with Zoltan Kodaly, both of whom were collecting and studying folk songs (Nettl 1991:270). Facing anti-Semitic university admission practices, he left Hungary in 1920 to study at the Academy of Music in Vienna. From there he moved to the Hochschule für Musik in Berlin, where he came under the influence of the emerging discipline of *vergleichende Musik-wissenschaft*, or comparative musicology (Inman 1986:1). The "Berlin School" had been pioneered by psychologist Carl Stumpf and physician Otto Abraham, and the founding of the Phonogramm-Archiv was the direct result of their research activities.

These scholars, along with Hornbostel, formalized the study of folk and so-called primitive music by combining empirical observation and analysis with a humanistic approach concerned with the motivation behind music expression in culture. Herzog's training in comparative musicology, together with his work at the Phonogramm-Archiv from 1922 through 1924, made him, seemingly, the perfect representative of Hornbostel and the "Berlin School" in the United States. He arrived in New York in 1925 to study with Boas at Columbia University (Inman 1986:1). Among his classmates that first year were Melville Jacobs, Otto Klineberg, and Thelma Adamson.

Herzog and Adamson appear to have become good friends, despite their different backgrounds (he a Hungarian Jew, she having grown up American Baptist in Ohio). During the summer of 1926, when Adamson, Jacobs, and Klineberg made their overland trek to Washington State for field researches, Adamson was feeling stranded in Chehalis when she wrote a long letter to Herzog back in New York:

I don't know where to begin, so much water has flowed under the bridge since I saw you last. As sum total I might say, "I have been bored, I am bored, I shall be bored.... Nothing ever happens here. At least in New York there are things to hear and see." Which reminds me, you *must* find me a Hungarian restaurant next fall.

Herzog and Adamson exchanged letters again the next summer, when he was conducting his first field trip in the Southwest, and she was back in western Washington. Boas visited during this second field trip, bringing along an Edison cylinder recorder with which they recorded the songs that would be included in *Folk-Tales of the Coast Salish*.

It is clear that Boas expected Herzog not only to conduct his own research on Native American music but to be available to transcribe the songs other Boas students recorded during the course of their ethnographic and linguistic research (recordings Boas expected his students to make). Jacobs mentioned his hope that Herzog would eventually transcribe his own western Oregon recordings as well as Adamson's, Erna Gunther's, Arthur Ballard's, and Viola Garfield's. Herzog confirmed his intention to do so and suggested, "All together one could do a pretty good survey with all this material." Herzog was interested in the delineation of musical style and hoped to assemble enough recorded material to enable him to characterize the music of the Northwest Coast, with the ultimate aim of producing comparative studies of musical style in Native North America.

By the spring of 1933 Herzog had apparently been engaged to provide transcriptions of songs to be published in *Folk-Tales of the Coast Salish*. He had feared for a time that the nineteen Chehalis cylinder recordings made by Boas and Adamson in 1927 were lost, but in April, having located them in storage at the American Museum of Natural History, Herzog requested that nine of the cylinders be sent to him for transcription. He was in the process of obtaining the song texts, some from Adamson and some from Boas. Herzog wrote to Adamson that, in addition to the Chehalis recordings, the Museum had two Dictaphone records (cylinders) numbered "20" and "21" with slips of paper containing song texts "in her writing" and the word "Nutsaq" in his writing. These two recordings are something of a mystery. Adamson worked on Nooksack material in Everson, Washington, during the summers of 1928 and 1932, but her field notes from these trips have disappeared. The two cylinder recordings were apparently made during one of these trips, but no contextual information accompanies them. It seems likely they were made in 1928, as Herzog refers to them in 1933 as if they had been in the museum for several years and were just being rediscovered. We know that Adamson worked with consultant George Swanaset while in Everson in 1928, and it's likely that, if she recorded the two cylinders that year, the singer is Swanaset. (Indeed our only glimpse of their working together is a paragraph in the Swanaset's dictated autobiography). Though the two songs on these recordings have no connection to Adamson's folktale collection—other than being additional examples of Coast Salish songs—it was decided to include them among the transcriptions in the appendix to *Folk-Tales of the Coast Salish*.

In June 1933 Herzog had finished fourteen song transcriptions and sent them to Adamson. By November she was too ill to deal with the details of publication, and the song transcriptions still hadn't been incorporated into the manuscript. In December Herzog sent copies of the transcriptions to Ruth Benedict, who was overseeing publication as editor of the *Journal of American Folklore* and the *Memoirs of the American Folklore Society* series. Herzog completed several additional transcriptions of songs that Thelma had not planned to include but that went with texts Boas had collected. In September, as the book was due at the printer, Herzog sent Benedict the final few transcriptions, along with the explanation of the symbols that were to precede the transcriptions. Boas had wanted the songs to be inserted into the stories they accompanied, but by the time the transcriptions were finally compiled, the most practical approach was to keep them together in

an appendix at the end of the volume. “Appendix: Songs” (Adamson 1934:422–430) contains nineteen song transcriptions, including music notation by George Herzog and song texts provided mainly by Franz Boas.

Herzog’s Song Transcriptions

The nineteen songs transcribed in the appendix come from three recorded collections: 1) nineteen cylinders recorded in Oakville, Washington, by Boas and Adamson, summer 1927; 2) eighteen cylinders recorded in Oakville, Washington, by Adamson alone (following Boas’s departure), summer 1927; and 3) two cylinders recorded in (probably) Everson, Washington, by Adamson in (probably) summer 1928. The original cylinders were deposited in the American Museum of Natural History. There they were given “P.R.” (phonograph record) numbers, in the case of the 1927 recordings, and “D.R.” (Dictaphone record) numbers, in the case of the 1928 recordings.

When Herzog moved from Columbia University to Indiana University in 1948, the Adamson and Adamson/Boas recordings were among the many collections of original cylinders he took with him. George List, director of the Archives of Traditional Music at Indiana University from 1954 to 1977, recalled the situation:

It seems that Herzog had received many of the collections with a promise to study them and publish the results.... The greatest problem was with the American Museum of Natural History in New York City. Herzog had received all their cylinders with the promise that he would catalog them. This he never did and never returned them. (List 1999:4)

Negotiations between Indiana University and the American Museum of Natural History enabled the Archives of Traditional Music to produce copies of the recordings for the Museum while keeping the originals for its own collection. The Adamson and Adamson/Boas collections at Indiana were eventually given the following accession numbers: 1) 54-131-F (Boas/Adamson 1927); 2) 54-130-F (Adamson 1927); and 3) 54-043-F (Adamson 1928). The American Museum of Natural History continues to hold the rights to the Adamson and Adamson/Boas recordings.

Of the nineteen transcriptions, eleven include page references to the folktale they accompany. Six of the remaining eight were recorded to accompany folktales collected by Boas (not included in Adamson’s collection), and the last two are the Nooksack songs for which no documentation survives.

Herzog’s song transcriptions employ standard European music notation enhanced with symbols or “diacritics” to depict a more precise description of the song as performed. His “Explanation of the Signs Used in the Transcriptions” (422) is nearly identical to that which accompanies the song transcriptions in his 1928 article “The Yuman Musical Style.” In this work, his first major study of musical style, Herzog acknowledged the system outlined by Abraham and Hornbostel in their 1909 “Vorschläge für die Transkription exotischer Melodien” (“Proposals for the Transcription of Exotic Melodies”) (Herzog 1928:200).

This system was intended to provide an objective means for the transcription and comparative study of music, also allowing for the transcriber’s own observations,

a synthesis of approaches intended “to treat transcription as a tool for discovery of musical intent” (Ellingson 1992:125). The model developed by Abraham and Hornbostel avoids “overt Eurocentric bias while capturing aspects of expression and musicality” (Levine 2002:xxv), and it has been widely used by scholars. (Other approaches to transcription focus on different aspects of music and reflect a variety of orientations toward the role and meaning of music culturally.)

Herzog transcribed the nineteen songs by listening repeatedly to the recordings and notating what he heard. He then fit the song texts (along with English translations for eight of the nineteen) provided by Adamson and Boas to the music so as to indicate the pitch, articulation, and duration of each sung syllable. The number of beats per minute is indicated above the staff, and where a drum beat is present but not congruent with the vocal pulse, a second metric indication is made (such complex rhythmic relationships are a common feature of Coast Salish songs generally). In some cases Herzog added a separate line of notation for the drum beat below the music staff, and where he felt it necessary, he added an explanatory footnote (i.e., “almost syncopating with the beats of the singing” [p424]). Adamson did not provide song texts for the first of the two Nooksack songs (D.R.1) (430) or the White River song “Spitsxu Chant to Bring Rain” (P.R.14b) [p429]. Herzog, required to do those transcriptions himself, commented, “The texts of ... [these songs] are uncertain; they have been written down from the phonograph records” (p. 422).

Finally, one error in the original appendix should be noted: “Lion’s Gambling Song” (P.R. 24b) (p. 424) should be “Rabbit’s Gambling Song.” Adamson and Boas both collected versions of the story of Mountain Lion and Rabbit’s competition, and Adamson included two versions in her collection (pp. 52–55). According to a letter from Adamson to Herzog, both PR.24a (correctly titled “Lion’s Gambling Song”) and PR.24b (Rabbit’s) were recorded to go with texts collected by Boas. However the misidentification occurred, a comparison of the text of PR 24b with that of PR.15b (correctly titled “Rabbit’s Gambling Song”) shows clearly that it is Rabbit’s song. He calls on his *tahmanoas* [*tahmanowas*] for a cold, clear night to enable him to win the contest by leading Lion across the frozen lake, which cannot support his weight. Rabbit wins because of the power of his song.

With the challenge of Adamson’s illness, publication of *Folk-Tales of the Coast Salish* in 1934 could not have been completed without the determination of a number of individuals, particularly her teacher and mentor Franz Boas and her teacher and editor Ruth Benedict. Interestingly, 1934 was also the year of publication of Benedict’s *Patterns of Culture*, a seminal work in the discipline of cultural anthropology and one that established Benedict as one of the preeminent scholars of her generation. George Herzog, whose appendix to *Folk-Tales* provides us with a rare window into the use of songs in Coast Salish stories, made a tremendous contribution to the budding field of comparative musicology (eventually to be called ethnomusicology) through his fieldwork, writings, and archival activities during the 1930s and 1940s. Sadly, the careers of both Adamson and Herzog ended early due to mental illness. Both died in 1983 at the age of eighty-two after many years of being institutionalized.

Returning Franz Boas

Boas joined Thelma at Oakville in 1927, bringing along the recorder for songs and formal speeches. He was following up his interest in Chehalis that grew from his work with Chinookan since Chehalis had replaced it among those Native speakers. His texts, therefore, were largely in Chehalis Tsamosan, as Thelma's were mostly in English, though they both worked with the same Secena family members. Undoubtedly, the Secenas spoke even more languages than these, as well as Chinuk WaWa, the regional trade jargon.

As a life-long multigenerational neighbor to the Chehalis community, Jolynn Amrine Goertz, related to the Moe and Hamilton families, began the editing of the Boas texts while a graduate student in English at the University of Alabama. Remarkably, she turned to her own age mates, peers, and cohorts for commentary on these stories, as well as consulting with elders, as scholars are expected to do. Yet it is this younger perspective, each traced to a contributing ancestor, that adds much to the Boas texts. She also provides biographies for these tellers of specific stories. By English name, these are Robert Choke (minister of the Indian Shaker Church), Marion Davis (multilingual boarding school graduate and skilled translator then dying of TB), Peter Heck (bishop of the Indian Shaker Church and Tribal policeman), Blanche Pete Dawson (Boas taught her to transcribe Chehalis as a school girl), and members of the Secena family: Jonas (who was blind and exceedingly patient), father Dan, mother Alice (an Ellensburg Kittitas shaman later blind yet always famous for her fruit pies), and brother Murphy. At the end of his stay, Boas was driven to Portland by Melville Jacobs, and they took Jonas along to consult an eye doctor in vain hopes that sight in his right eye could be restored. While in the city, Boas also had spectrograph X-ray sound recordings made of Jonas's speech.

Of note, Jolynn's digital skills enabled her to produce four outstanding maps plotting the locations of mythic events and persona for each of the three collections, adding greatly to our visual record of this region and serving as model for wider scholarship.

With her editing of Boas, Jolynn reviewed the full sweep of Chehalis research, expanding the overall record of *Chehalis Stories* as a "reconciliation of fragments," based on the typescript prepared by Ethel Aginsky, a Franz Boas Ph.D. whose own work focused on Puyallup and Pomo, but it is greatly informed by allied sources: Franz Boas's fourteen Chehalis field notebooks, Boas's letters, Boas's lexical files, Notes copied from Boas's field notebooks by both Aginsky and Boas, Boas's inter-linear translations of "Bear and Bee" and "Daughters of Fire," Boas's published "A Chehalis Text," Dale Kinkade's "'Daughters of Fire': Narrative Verse Analysis of an Upper Chehalis Folktale," Kinkade's "'Bear and Bee': Narrative Verse Analysis of an Upper Chehalis Folktale," and vitally Kinkade's *Upper Chehalis Dictionary*.

Throughout this text, her notes indicate the source of each story, particularly locations in the corresponding field notebook and typescript page numbers. Absolute transparency would have detracted, so many changes due to negotiating the content of the field notebooks with the typescript were made silently.

Her project began by making a diplomatic transcription of the typescript, maintaining original line breaks, marginalia, and page numbers, cross-checking the

text with the field notebooks and working through passages that seemed to contain discrepancies. After this work was completed, the text was made continuous by eliminating the original line breaks, marginalia, and page numbers. Corresponding field notebook and typescript page numbers appear as a note to each story.

After the text became continuous[;], punctuation, spelling, and typographic errors were corrected. For instance, pilcrows (¶) were replaced with paragraph breaks. Comma splices were corrected by separating complete clauses with a period. Aginsky frequently used semicolons in place of colons or commas; now the appropriate punctuation has been used in these cases. Aginsky indented songs, put songs in quotation marks, or both; the final edit consistently indents songs and omits quotation marks. Spelling, specifically of characters and place-names, has been modified to reflect Americanist transcription practices and is consistent with Kinkade's *Upper Chehalis Dictionary*. For instance, the spelling of place-names within the text come from Kinkade, but notes provide the spelling used in the typescript, field notebooks, as well as cultural and geographic contexts. Indisputable typographic errors are silently corrected. Words crossed out on the typescript were omitted, words penciled in were added, and duplications of words such as "and" or "the" were deleted.

Grammatical issues are more complicated. It is difficult to make corrections without Anglicizing the text to the point of erasing circumlocutions or idioms that have carried over from Upper Chehalis. Usually the corrections are straightforward, such as a word missing from a sentence. As an example, the typescript of the first story contains the sentence "x'wəne-x'wəne went up the river, where there no more women." The field notebook translation is quite rough for this section, but similar vocabulary and syntax are later translated as "there were no more" so she would have added the missing "were" in brackets so the sentence reads, "x'wəne-x'wəne went up the river, where there [were] no more women." When an addition or change to a sentence is clearly supported by the field notebook, correction was made silently. When the addition or change is made after looking at contextual clues, she modified the text as indicated between brackets. When further explanation is warranted, she included a note explaining discrepancies between the field notebook and typescript. In regard to editing Adamson, Jay Miller has noted, Idiomatic Indian or Red English expressions indicate that Adamson ... was recording verbatim statements. Boas's translations also contain these idiomatic expressions in the original, and they have been preserved.

Proper names are inconsistently capitalized and spelled throughout the typescript; for the sake of consistency, the definite article has been removed, thus Moon in lieu of the Moon.

Thelma Adamson's Final Letters

Correspondence between Thelma and Ruth, in Benedict's archives at Vassar, chronicle her deteriorating abilities to undertake the final edit of Coast Salish, as well as providing hints as to where and when a copy of her unfinished dissertation on Salish Tricksters and Transformers, the reason she made this story collection, resided safely in Ruth's Columbia office. We also learn of the work of Adele Froehlich and Marian Smith, as well as activities in the UW anthropology department. Note: Arrows mark ↓insertions↓.

Everson, Wash
Aug. 9, '32

Dear Ruth, {handwritten}

I suppose one should complain about something on a field-trip, so I'll begin with the weather. It has been cold, damp, and rainy most of the time. I have sometimes wished for the woolen vests I used to wear in the mountains.

I had to go down to Seattle not long ago, and while there saw Mel, Bess, Erna, Verne Ray, ↓Viola Garfield↓ and various people. A mole I had near my left eye developed an infected base, and so I had to go to a skin specialist in Seattle to see what should be done about it. As a result, I had what is known as a facial operation. A surgeon removed the growth and I stayed a week having the wound looked after. Except for a slight scar, most of which will probably disappear in time, I'm none the worse for wear.

Mel and I had a long talk about publications, but I really know nothing definite as yet. He knew nothing at all about the correspondence between Erna and me. I had also written to Mel, and he had gone immediately to Erna. He told her that the university had promised to publish my material two years ago, and really had an obligation [p. 2] to me to do so. Erna [Gunther] said that she had not known of this. She felt that they had a prior obligation to publish Olsen's Quinault Ethnography. She said also that my Upper Chehalis Tales were rather scrappy. (She has seen the Humptulip, but not the Upper Chehalis.) At present, Mel does not know where he stands with respect to publication. A number of changes have taken place in the Department, but Mel feels that Erna will probably be left in charge of publications, as she seems to be at present. If that is the case, I can't say what will happen. If Mel is put in charge, and there are any funds, he will take the material as soon as he can. Just at present, the University is cutting down in everything. The question of publications has not been discussed by the Committee since last March. I asked Mel if he thought the Committee would agree to furnish part of the funds for publishing a Memoir jointly with the J.A.F.L. and he said he thought not. On the other hand, he thought I might consider accepting funds from the J.A.F.L.S to publish a volume in the Washington Series.

I saw Erna several times and she was very pleasant, but did not mention our correspondence. Under the circumstances, [p. 3] I don't know quite what to do. The question of who is really in charge of publications may not be brought up for some time. What do you think? Should I tackle Erna once more or just let the matter stand for the time being? Mel thinks it would be best not to mention the fact that the J.A.F.L. was considering the material, for then the University might feel that it was no long under obligation to me. The whole thing is getting to be a bore, isn't it?

As for the field-work, it is going rather nicely. I worked sometime on the language, and am still taking texts off and on. Häłq'ome"ləm is one of those languages that one could spend months on. Like most Salish languages, the verbs are divided into two classes, completive and continuative. In Nooksak, the two classes are the same except for a prefix. In Häłq'ome"ləm there are terrific stem changes, when the verbs take objects there are further stem changes, so you can imagine the time one could spend on verbs alone. After getting a fairly good idea of the language, I stopped working on it more or less, except to take text at times.

The guardian-spirit material is quite nice. As far as I know now, a guardian spirit could either be inherited or obtained through personal experience, or both. Going out to look for a spirit is called "Looking for luck." The winter ceremonials are [4] call mi'lä. My informant [(George Swanaset)] and I had quite a set-to the other day. Just as we were going strong, he balked at giving me further information about the guardian-spirits. These old "dopes", in his words, are valuable, and if I am sent out here to find out about them, then I should pay high for them. They really don't belong to him, they belong to the whole tribe, and shouldn't be given away for nothing. Language is different, it doesn't come so high. Columbia University must be a capitalist, and so on. I rather gather that his idea of good pay is about ten dollars a day. We talked back and forth and I think I came out the victor. He prides himself on giving accurate information, and I should hate to lose him until I get out of him what I want. He'll tell me in time what I want to know, but I want to avoid another outburst if possible. I should like to find some pleasant Indians sometime. They're so jealous of one another. I hate to think of the day when I tell him I'm through with him. I prepared him for it when I first came by telling him there was certain information I could only get from women.

I heard there was a note in Time that said Dr Boas was ill in Germany. I hope he isn't ill again.

How are things going with you? If you have any suggestions about publications, let me know.

Very best wishes

Thelma

Stamped: From the Papers of Ruth Benedict 27.3

Shattuck Farm, Norwich, NY

August 26, 1932

Dear Thelma, {typed}

I was so glad to get your letter and know that the bad weather hadn't driven you off the place. I hope you're all over the removal of the infected mole, and that by this time the sun has come out to stay. How much longer will Eddie stay? – never having heard him called anything else, his official name comes very hard to me!

The publication business is mixed, isn't it? I'll do nothing about the matter except ask Augustin [(the publisher)] to continue to keep it safe. The time has gone by when it could have been brought out as a 1932 JAFM Memoir, and we might as well wait till Washington has some publication policy – more exactly, some director of policy. It's too bad to put it off, but it seems better. I wouldn't speak to Erna except to comment in some despair on the dilemma she's left you in. Besides, I can understand her feeling that they're under considerable obligation to publish Olsen's Quinault.

Boas is growing more energetic with every letter. He says that he walks two miles a day, and is very fit. Isn't it wonderful that he can will a recovery like that?

All the best wishes for the rest of the trip. When shall we be expecting you back?

Sincerely Yours,
Stamped: From the Papers of Ruth Benedict 27.3

March 29, 1933

Dear Thelma,

The bound volume of your Salish Tales came today. I'm sure you must have thought it had been eaten by moths, but a lot of things have postponed its final appearance. It seemed best to include abstracts of tales from your region, and the AFLS paid Adele Froehlich to do it. She's quite competent, and I hope you'll approve of the section she did. You see, since this is the first memoir the society has ever paid for from its own funds, we wanted it to conform to the highest standards.

I'm not sure where you are living now, so I don't dare send a copy of the book till I hear from you. Margaret Mead tells me that she saw you on the bus the other day, and I hope I'll see you soon. If you're making dates, do come up and have lunch with me some day.

As ever,
Stamped: From the Papers of Ruth Benedict 27.3

June 19, 1933

Dear Thelma, {typed}

I've tried quite a number of times to get in touch with you by telephone, and now they tell me the phone is disconnected. I'm anxious to have the printing of the Memoir proceed now, and George said something I couldn't make out about parts that were missing. Just what have you, and what can be sent back right away for correction?

Have you copied out your ethnological material from last year? If you have accounts of the trance states you told me of, could I see them? I'd like to use something of the kind, and can't think of anything better than yours.

All best wishes,
Stamped: From the Papers of Ruth Benedict 27.3

November 8, 1933

Dear Thelma,

I have tried to get news of you, but news is hard to get. I do hope it means that you [no r] are much better again this fall, and that the summer wasn't all spent in being ill.

Your husband planned, last time I telephoned him, to come up to Columbia within the week, but that is long ago. Perhaps he'll remember and come still. Anyway we must make some arrangements about the volume of tales. It is the 1933 Memoir, and it can't be postponed any longer. If you're not able to read it, sent it up anyway and we'll take the responsibility for it as well as we can. If you want me to, I can come for the proof or send for it.

I wish I might hear that you are quite well again. Remember me to your husband, and all best wished to you.

Sincerely yours,

Stamped: From the Papers of Ruth Benedict 27.3

Nov. 28, 1933

Dear Melville, {typed}

I suppose you know how ill Thelma is. I have had to have her husband gather together the proofs of her Salish Tales and I shall have to put them through the press as best I can without her proof reading. I take it that the Coos tale you have just sent her in manuscript and which I intercepted has some reference to that volume. Was it to be included? Or did it have some other connection entirely? If it was to be included can you tell me where? There is no Coos group. I can send you a table of contents but perhaps this will be sufficient: the last heading is a miscellaneous group headed

VI. Some Puget Sound Tales

1. Puyallup
2. White River
3. Skokomish

Remember me to your wife.

Sincerely yours,

Stamped: From the Papers of Ruth Benedict 27.3

UNIVERSITY OF WASHINGTON
DEPARTMENT OF
ANTHROPOLOGY
SEATTLE
December 7, 1933

My dear Mrs. Benedict, {typed}

I had no information about Thelma's illness — I am shocked to learn about it.

The Coos myth I sent her was intended only to provide her with more material that I thought she might see fit to use for her trickster-transformer paper. It is not a translation that ought to be published apart from my other Coos texts. I do not need it, so that you may be free to leave it with things you are holding for Thelma, or make whatever use of it for study purposes that may interest you.

My wife joins me in expressing our kindest regards.

Very sincerely

{signed}

Melville Jacobs

Stamped: From the Papers of Ruth Benedict 27.3

D U N E D E N
Rest and Convalescent Home
79 Lakeside Drive
Rockville Center NY 2614
Tuesday morning

Dear Ruth, {handwritten}

I've received the material, and have been thinking it over, planning how to arrange it. I don't need my thesis now and like you, I'd rather leave it in the office, as I do have a copy somewhere. She does not mention who her informants are or rather the narrator of each story, but there is a Julie, and I notice a reference to an informal discussion by an informant of mine from the Upper Chehalis with respect to one of the myths. I'll say, by adding the word, that Julie is the narrator, as evidently she is.

I've just been thinking, seeing the expression, and since you've studied English yourself, and not giving you my troubles as I don't mean to do anything about it, that one doesn't say gotten ... I shouldn't know how to prove it, but it [2] occurs to me that's right.

I'm taking the liberty of correcting the material a bit, as pheasant must be capitalized in the same story throughout. Whenever the speech of a character appears to be colloquial I'll leave it, although it does appear to be a bit awkward as someday we may find that it is characteristic of each character. I'll most likely abstract each story, as the collection isn't especially long, and add some concordance. I hadn't noticed or remembered that there was a concordance in addition to the abstracts,

unless it was re-published, in my volume. I'll discuss the material as a Sound collection as I notice that she has some of the myths marked Puyallup-Snohomish. In my Upper Chehalis material, since one can not discard any story, I indicated that some stories were from the Sound, the Mink for instance, as they certainly are not characteristic of the Upper Chehalis. To me the difference isn't as striking, but I'm not sure about it, and these were Puyallup stories.

If one wished to elaborate on Sound Mythology I think one could say that Pheasant is rather different. He may be an Upper Chehalis character, [p. 3] but I'd have to read to find out. Even so, he must be a little different. I believe I first found Pheasant in Haberlin {Herman Haeberlin}. When one gets something like Raven as Erna did in her Klallam, or Mink, it is so obvious that one is sure to remember it, but as time goes on with more material, the character of Pheasant appears to me to be a little strange.

As time goes on, ↓too↓ it's nice to have more material from one tribe or area, as I'm convinced that each little thing means something. The Chinook, as what was representative of one tribe, was always very nice, but the more versions we get of any one story or the more stories from one tribe, the better off we are, as even a few gives use something to say.

With very best wishes for a happy holiday,
Thelma

Stamped: From the Papers of Ruth Benedict 27.3

Monday, Sept. 21

Dear Ruth, {handwritten}

I have been meaning to send you a letter for some time. I enjoyed your letter this summer ever so much and hope that the weather is nice now in New York City.

I have just returned from a trip down town where I had a nice strong cup of coffee. One has to go with some other patient and gets to go once a week, so fortunately two other people wished to go. I simply had to do some shopping for stockings. I'm hoping someone will fancy the movies next week.

You may have [p. 2] heard that I didn't get in when I had planned, which was quite a surprise to me. When I wrote, Eddie didn't give me his permission as he is a drift and wished to know more where he was going to be. At present, he is still about the east, which given the circumstances, is better than some place else. So I am still hoping that everything will come out all right.

I have been meaning to [write] rite you about the Ballard-Waterman material for some time in case you should like to know about it. In the time that I have, I have been working at it quite steadily lately, and having [p. 3] decided to abstract it, have just finished the last one. That means the worst is over to me. Since I have been here, having had my volume along, I decided to give [it] foot notes, some distributions, in comparison with mine. I didn't start at the first, about half-way through, so I shall have to go back and put the others in, but I don't think it will take long. Also,

I shall write an ↯introduction↯ with some general ideas and some comparison of myths in the region. Waterman has one introduction but is a little old fashioned and should be rewritten altogether. I don't think it should take long to finish. [p. 4] I like Arthur Ballard's material myself, and always get something out of it for myself. There is one cute idea from the Suquamish, Bluejay being substituted for Raven and stealing the daylight. The Raven Cycle is beginning to clear up better for the Sound.

To-day was a lovely day, sunshine but a little crisp. We have had a fair amount of rain lately. I got several walks in yesterday and several nice games of badminton in last week.

I made my hooked rug while I was here. Most of the things one makes [p. 5] here are kept by the institution. They offered to let me put it down in my room, which I did. Someone was still admiring it this morning, and complimenting me that I had got the thing done. Hooking rugs is certainly easy.

I hope that you won't have too many classes this fall.

With very best regards,

Thelma

Stamped: From the Papers of Ruth Benedict 27.3

Monday May 18

Dear Ruth, {handwritten, more loopy}

I hope that you will excuse the paper. I am running out of note-paper & I may need what I have before an order I have for some on Wednesday comes.

It was so nice to see you before I left. Sorry that I did not see more of you last winter. [2] The climate and the country-side are rather nice here, but there are rules, some of which I didn't expect, but understand they will lessen in time. I could stand more cigarettes. I had a nice walk this afternoon.

I decided to come up here a short while ago, thinking that a rest and some better air might [p. 3] improve me some what, as I sometimes get dissatisfied with myself that I were more sociable or something or other. Eddie hasn't been much in evidence for some time, and especially since he undertook war-work has been much less so he volunteered to bring me up here if I came last week. I did not get as [p. 4] much done over the winter as I would have liked. I am still working on the Ballard-Waterman manuscript and it is progressing. I do hope that someday the plates will go with the manuscript. Lucy Louria, a distant cousin-in-law of Radins?? told me that she had heard the Margaret had something new, perhaps with the Bureau of Ethnology since the war. I myself [p. 5] hadn't heard of it.

I've been doing some reading and a little work on my own material.

I don't know how long that I will stay, a part of the summer at least, perhaps New York, to me, has some problems and when hot weather comes, I find it difficult looking for a summer place.

I didn't like my room last fall especially [p. 6] after I got it, and I do hope in time, that I will be more fortunate in living quarters.

Eddie's parents are out of town. I expect by this time, as they intended to leave soon.

I hope that you will have a pleasant summer. Write if you feel like it.

With very best wishes

Thelma

Stamped: From the Papers of Ruth Benedict 27.3

Monday evening

Dear Ruth, {handwritten, on lined sheets}

I haven't seen you for some time. When I saw you last you spoke of my putting some Puyallup materials in my thesis. Right off I can't remember that woman's name who has the Puyallup material. I still feel that I wouldn't like to put that unpublished material in the thesis but I could try to write the material up if it is still in manuscript and feel that no one else will do it. I won't put it in the thesis, but I could try to make a separate [p. 2] monograph of it. By this time I suppose, the material is published. I haven't been doing anything myself but reading Stith Thompson. I see you have a new book out, on race, and am sure that it is very interesting.

I'm not up to coming into the public library as yet, but could work in the material several hours a day most likely.

With very best wishes,

Thelma

Telephone Rockville Center, 9614

Stamped: From the Papers of Ruth Benedict 27.3

December 14, 1940
Mrs. Thelma Adamson Salant
79 Lakeside Drive
Rockville Center
Long Island

Dear Thelma, {typed}

I was so glad to hear from you and to know that you can work on the Myths. Marian Smith is the girl who collected Puyallup material and it has taken some time for her to get them typed. She has not a great bulk of material but it will be important to get it worked up. I am sending you her typed manuscript and also a copy of your "Folk Tales of the Coast Salish", published as a Memoir of the Folklore Society. I do not know whether you have been over the abstracting of the tales done by Adele Froehlich, the Folklore Secretary, which are published at the end of this volume. It is a concordance of published [no,] material on the area.

I also have a copy of your dissertation, but I presume you have one, and as I do not like to let this go out of the office unless it is necessary, I am [no t] not sending this today. If you can get no other copy however, I will send it.

I shall look forward to seeing you again when you come into the city and mean time I am so glad you are working on the Myths again. Let me know if there is anything else you need.

As over,

RB: b

Encl.

Stamped: From the Papers of Ruth Benedict 27.3

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More detail on these three books and their sources appears in their respective introductions.

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ABOUT THE AUTHOR

Writing up a life's worth of fieldwork devoted to detailed, coherent syntheses of major Americanist concerns among eight tribes across four directions, Miller is thinking very long term about providing data-rich reference works offering handy overviews for tribes and classes.

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The Hunting of Marine Animals and Fishing among the Natives of the Northwest Coast of America¹

Alphonse Louis Pinart

Introduction, Historical Background, and Translation by Richard L. Bland

Abstract *In the late nineteenth century, European scholars, observing the interest in traveling road shows displaying native peoples from around the world, were becoming aware that native cultures were rapidly disappearing. Museums began to rush to acquire as much information about native cultures as possible. Alphonse Louis Pinart was France's most prominent collector. He rushed to Alaska, where he collected both material and spiritual remains of the peoples of South and Southeast Alaska and the Aleutian Islands. In this article, Pinart relates how the native peoples of Alaska hunted and fished.*

Introduction

Alphonse Louis Pinart (1852–1911) became interested in languages and ethnology as a young man. He learned several European languages, often taking notes indiscriminately in German, Russian, and English, as well as his own French. After encountering ethnographic collections from Mexico in Paris, Pinart was destined to search the world in an effort to acquire as much ethnographic material as possible. He collected in many parts of the world, spending two seasons in Alaska. In his endeavors he met and married Zelia Nuttall, an anthropologist in her own right. In his zeal for collecting, Pinart went through the money his father had left him, as well as that of his wife, and died at a relatively young age. Following the historical background is a transcription of a talk that Pinart gave to his colleagues at the museum in Boulogne (Parmenter 1966).

Historical Background

Alphonse Louis Pinart was a French explorer and ethnographer who traveled the world in the late nineteenth century seeking to document disappearing native cultures. As a boy, Pinart had an opportunity to meet the Abbé Charles Étienne Brasseur de Bourbourg, an eminent scholar of Mexican studies. From that moment Pinart was hooked. With the small fortune Pinart's father had left, Pinart set off in search of native cultural material, which he brought back to museums in France.

People have always had a fascination with collecting objects they felt were curious. This reached a peak in the late 1800s when Carl Hagenbeck formed his nature park in Hamburg, Germany (Ames 2009). At this time people were coming from all over Europe to North America, among other places, to collect ethnographic materials. Aurel Krause came from Germany (Krause 1989) and Ilya G. Voznesenskii was sent from Russia (Korsun 2006; Berezkin 2007). Ivan Veniaminov had come to the Northwest Coast earlier in the century and collected a large amount of non-

material culture (Veniaminov 1984). Others who came were Franz Boas, carrying out considerable ethnographic work on the Northwest Coast, largely collecting native legends, myths, traditions, and the like, but also collecting material culture for the Berlin Museum of Ethnology (Boas 2006). Johan Adrian Jacobsen, a Norwegian, was there acquiring primarily material culture, also for the Berlin Museum (Jacobsen 1977). Many other lesser-known individuals were collecting, with various intentions: some for museums, some selling to the highest bidder for personal gain (Cole 1985, 1991). Alphonse Louis Pinart was not to be left behind. Much of what Pinart collected in Alaska was material culture (cf. Pinart 2011, 2013, 2014, 2016), though as can be seen from this article, he also collected non-material culture. Here follows a talk that Alphonse gave upon his return to France from Alaska in 1875.

Richard L. Bland

The Hunting of Marine Animals and Fishing among the Natives of the Northwest Coast of America

Called upon by the kindness of some Boulogne colleagues to speak today, I believe I can do no better in this city, which has for so long promoted all the industries that are related to exploitation of the sea, above all in this place where daily the considerable interests of our great French fisheries are discussed, than exposing quite simply, with the aid of my notes, the history of fishing and maritime hunting that I have had occasion to study during the long trip in the north of America, which I just successfully finished.

I place before you the numerous and varied tools employed by the semi-barbarous populations of the Northwest Coast of America. In describing them to you, I will try to demonstrate to you their use and will attempt to point out details.

Before beginning this short exposition, I believe it would be good to say a few words about the geographic distribution of the populations which I am going to provide for you. Without entering into a detailed enumeration, I will limit myself to saying that the long extent of the coast that will occupy us extends from the northern boundary of the United States at British Columbia, from Cape Flattery and Puget Sound to the Arctic Ocean, and understand that this, as a consequence, includes all the islands of Vancouver, Queen Charlotte, King George, as well as the immense chain of the Aleutian Islands, and that this coast is inhabited by populations that can be divided, from our point of view, into two large groups, which we will study one after another. One is the Eskimo-Aleut group, which extends from the Arctic Ocean, along Bering Sea, to the vicinity of Mount St. Elias, including all the Aleutian Islands. The other is the Koloche-Nootkan group, including the Koloches [Tlingits], Haidas, Stekines, etc., and the Columbian Nootkans. I will leave out some tribes of the Tinneh [Dene] who extend to the sea in the Gulf of Kenai (Cook's Inlet) and in many another place on the Pacific coast, because fishing for them is only secondary and they devote themselves only in a minor way to hunting marine animals.

Among the tribes belonging to the first group, Eskimos and Aleuts, as well as among some tribes of the second category, whales are the object of continual pursuit. These animals are a very great resource for the poor savages. They know how

to cleverly utilize the baleen, the skin, even the bones, and the meat furnishes them a food that comes to improve some of their customary fare, regularly composed of fish dried in the sun, which they call *isakam* (*joukali*).² Among the Eskimos and the Aleuts, those who devote themselves to this dangerous hunting are highly judged and even regarded as a kind of superhuman beings in communication with evil spirits. These people pursued only the small species of whales, and although the latter are quite varied in those seas, the different tribes of Eskimos who inhabit the coasts of the Bering Sea hunt only those that are called *baleine blanche* [white whale] or beluga (*sisonouk*), a Delphinide whose type has not yet been determined scientifically.³ The inhabitants of the Aleutian Islands and the Eskimos of the southern coast pursue *Megaptera versabilis* (Cope), the humpback whale,⁴ and *Balaenoptera velifera* (Cope), the finback whale, as well as several species of Delphinidae, such as *Gladiocephalus scammonii* (Cope), the blackfish, and *Orca rectipinna* (Cope), the killer whale.⁵ We are now going to indicate briefly the manner of hunting these different species, according to the tribe, beginning with the populations in the northern part of the territory of Alaska. On the coasts of the Bering Sea, we find a unique manner of hunting, and a single animal to the pursuit of which they are devoted. It is the beluga (*sisonouk*), or white whale, belonging, as we have said, to the family Delphinidae.

The Eskimo who has decided to go on this hunt, having put on his waterproof clothing or *kamleika* of seal or bear intestines, leaves alone in his boat or *baidarka* (kayak). As soon as he spots his prey, he makes ready the equipment like this: this [throwing] board is fastened on the front of the kayak, there the hunter places the bladder inflated with air, attached by a long line, which also is attached to the spear⁶ and the board. Everything being thus arranged, our Eskimo fixes the spear on the small projection on the instrument, which he has in his right hand. Several times he makes a strong movement from front to rear, letting go with the fingers that hold the spear onto the board. The spear is thus thrown with force and goes to strike the target. As soon as the point of the spear has entered into the body of the beluga, a clever arrangement makes the point become detached due to the resistance of the long line attached to the bladder, which then serves as a float, the body of the spear rising up on its own to the surface. The animal, when struck, dives, unrolling the line and reappears, sometimes at a great distance from the place where it was struck. The hunter then sets out as rapidly as possible to that place and to give the animal another blow. But generally, if the float employed is strong enough, the beluga is able to drag it down only a little, and reappears almost in the place where it was first struck. It should be added that the Eskimo never attacks his enemy when he meets him in some small hidden place, for example, at the mouth of a river, and he never pursues him on the sea.

The instrument that I have the honor of showing you comes from Norton Sound in the north of the Bering Sea. Another piece, filling the office of harpoon, is employed when the animal rises to the surface. It is also thrown with the aid of a throwing board, even more strongly than that which I show you. The piece that I present to you comes from Nounivak [Nunivak] Island, at the mouth of the Kuskaquim [Kuskokwim] River, in the Bering Sea.

I go now to the procedure of maritime hunting employed among the Aleuts and among the Eskimos of the south coast of Alaska. I will describe simultaneously

the manner of hunting among those two tribes, since it is the same among them both, the only difference being in the material employed to make the spear points.

Before going further it would be good to say that hunting whales in the past in these populations belonged to a special class of people, to a caste, I will say, and that whoever wanted to devote himself to that hunt had to be initiated by special ceremonies to the procedures employed by the whalers. Whoever attempted to apply himself to that industry without being initiated would have been threatened by those whose privilege it was. The latter lived apart from the villages, hidden in the most distant bays or lost in the midst of the forest. They were regarded, as I have already said, as persons having evil spirits rather than the benevolent kind. For the sake of brevity I pass over in silence the majority of the ceremonies to which they devote themselves. Let it suffice that they made mummies which they placed in caves or in crevices of rock inaccessible to other people, and that they regarded the mummies as tutelary spirits to which they came bringing offerings of food of seal or of whale (one kind of Delphinide, *Orca rectipinna* [Cope], was especially reserved for them). It is to these mummies that they claimed to take the stones with which they made their spear points. It is they who were invoked at the moment of striking the whale. The ceremony in which they created the mummy merits being recounted in some detail.

If a man or a woman, having enjoyed a certain reputation of bravery during their life, should die in the vicinity of a sacred place of the whalers, during the night the latter burst into the village and carried away the body, which they submerged in a certain river or stream, where they allowed it to soak for a rather long time. Then, removing the intestines, they smoked it first by a good fire and hung it up, allowing it to dry in the sun. Once dry, they stuffed its insides full of moss, dressed it in the finest clothing, and carried it into the designated cave. I cite literally here what I was told by an old whaler, but it seems to me that they needed to employ some other procedure in order to keep the flesh from rotting. Another interesting ceremony was that in which they boiled the body in order to extract grease with which they then rubbed the spear points, a specimen of which I just showed you here.⁷

The Aleuts use obsidian for their whaling spear points, which is found in large quantity on the flanks of the Akutan volcano. Actually they also use glass from bottles, which they manage to sharpen in a remarkable fashion. The inhabitants of the south coast of the Alaska Peninsula, the Kodiak archipelago, and Prince William Sound, use plates of a kind of schist slate that are found in great abundance in the area, but the greatest quantity being on Afognak Island in the Kodiak archipelago.

The whaler having chosen a companion, who is often his son, sets out in a baidarka (kayak) to two places: before getting into his fragile boat he needs to attach two bladders filled with air, more or less at the level of the knee, of the type by which, if he is overturned, he will be able to hold himself up in the sea, set his kayak in order, and immediately get back in it. As soon as he has arrived near a whale with the least disturbance possible, he immediately begins to give an incantation in which he invokes his *inxont* or tutelary mummies. And at the same time, he releases the spear, which will hit the animal and is broken in its body, while the shaft remains on the surface. If he thinks the animal is mortally wounded, that

is to say, if it was struck near the spinal region and the layer of blubber has been penetrated, he abandons it. The point has remained in the body, causing it to die at the end of two or three days. The whaler then begins the search for the beached whale along the shore and will generally soon find it and identify it. Each whaler has on his spear a mark that is distinctively his—of the type that if the whale should be beached at a great distance, he who encounters it finds in the wound the spear that indicates his [the hunter's] legitimate property, whom he hurries to tell. The spear employed in this hunt is very simple and is thrown with the aid of the throwing board about which I have already spoken.

In the second group of most highly distinguished populations, that is to say among the Koloches-Nootkans, there is to my knowledge only a single tribe, those of the Makaks [Makahs] or Indians of Cape Flattery (at the extreme northwest of the Washington territory), who devote themselves to this type of hunting. The Koloches [Tlingits], in particular, regard the whale as a sacred animal and never hunt it. The Makak manner of hunting the whale is different from that which we have described, so I will take the liberty of speaking to you somewhat at length. The whale which this tribe most readily hunts is the *Rhachianectes glaucus* Cope (the California gray whale).⁸ Although the instruments employed are devised more or less like those of the Eskimos of Bering Sea, the hunt is carried out with the aid of several open boats, combining their efforts. The boats invariably carry eight men: one in the front who is the harpooner, one at the rear who steers the boat, and six good rowers. The harpoon is made of a shaft of wood to which the point is attached. The point is made of a piece of iron or copper to which barbs of bone or horn are added. The point is attached to a long line that is tied to a float made of seal skin. The first harpoon, which has only a single float, is cast into the head of the animal. As for those thrown into the body, as many floats as possible are attached. When the whale has been struck and it trails thirty or forty floats stuck to its body, it is no longer able to dive and becomes an easy prey. It is the custom when hunting a whale that a lookout is placed on a hill in order to watch the activity and as soon as the animal is struck, he gives an agreed-upon signal so that the other boats might come to the aid of the hunters to tow the whale to the beach, where it is promptly cut up.

The most important hunt, after that of the whale, is for Phocidae [seals], which abound everywhere on this coast and of which the different species are scarcely defined. It is the same for the Otariidae [eared seals] whose principal representative is the sea lion (*Eumetopias stelleri*) and the *Callorhinus ursinus* or *Phoca ursina*, generally known in English by the name “fur seal” and in French by the name *chat-marin* [literally, “sea cat”].⁹ The hunt for the latter has become very important since commerce has made such a great demand for the skin of this animal. We will say a few words about it.

The *Phoca ursina* (*Callorhinus ursinus*) is found at present in the Pacific only on two groups of islands situated in the Bering Sea: the Pribilof Islands, comprising the islands of St. Paul and St. George, 120 nautical miles from Ounalashka [Unalaska], and the Commander Islands, near the coast of Kamchatka, consisting of Bering and Copper Islands. They have never been seen to the north of these two groups of islands. The fur seals arrive every year more or less at the same time, toward the end of May or during the first two weeks of June. At this time, some are

encountered along the coasts of California, in the Strait of Juan de Fuca, and all along that immense archipelago of islands that are spread from that strait to Cross Sound. But these are only lost ones which disappear after a few days. They return to the islands that I have named in order to bring forth their offspring, which takes place toward the end of June. The arrival of these island inhabitants is interesting enough that I will give a few details here. When the ice has disappeared, that is to say, toward the end of May, some of the oldest fur seals appear, who come to reconnoiter the area. At that moment all disturbance must stop on the islands. The inhabitants there are even prohibited from making a fire for fear of alarming these animals. After having examined the rocks (rookeries) where they are accustomed to establish themselves for the season, the seals disappear, returning several days later accompanied by all their herd. Each then takes its place in the rookeries. The oldest install themselves nearest to the water. It is only these last, who are at least four years old, as we will see now, which have the females and who compete for reproduction. They are veritable Mormons, each having around himself five or six females, of which they are extremely jealous. The fur seal that is too old and no longer has the strength to fight to guard his place is taken to pieces and replaced by a younger one who, without other labor, becomes the head of the harem. If the dethroned one is only injured, he goes piteously back and takes his place at the top of the rookery. Behind the first fur seals [the bulls], designated by the name *caissybe* (*sekatch*), are the *kholostiaki* or bachelors, that is to say, those who are three to four years old and who this year or next will take their place among the *caissybe*. Then come the seals of less than three years of age spread out higher on the rocks.

Between the different groups in these rookeries there are neutral zones where anyone can circulate, but misfortune to him who strays from there if he is not in a position to defend himself. This spontaneous arrangement readily facilitates the hunt.

The law enacted in 1869 by the Senate of the United States for the protection of these animals prevents killing any females or any individuals aged more than four years. When the hunt opens, the hunters, armed with large clubs, pass rapidly between the rookeries, as far as the law permits. They drive the seals located above toward the interior of the island where these animals allow themselves to be surrounded almost like a flock of sheep. They are stunned by a blow given to the head and are skinned.¹⁰ Among the number of those that are driven here, there are no females, for these can reproduce at the age of two years, taking their place at the base of the rookeries from then on. The skins, once cleaned of the greatest part of the fat, are salted, put in bundles, and sent in that state to the markets of Europe.

Another very important hunt, in view of the prices which furs bring today, is for sea otter (*Enhydra marina*), an animal which disappeared rapidly, and which, in a few years, will probably be extinct.¹¹ The manner of hunting this animal is as follows: a certain number of individuals leave together in their kayaks and go to rocks where they expect to find their prey. Having arrived at these places, they form a very large circle. As soon as the otter appears, he who is the closest to it strikes with his javelin. It immediately dives. The hunter, who knows by its wake the direction it has taken, makes a signal to his companions, who, hurrying in that direction, form a new circle. The otter reappears in order to breathe. It is struck again, and so on, until exhausted it is unable to dive to any advantage. A last javelin is then driven in

with a float which prevents it from sinking to the bottom. An interesting thing to note: the otter diving the first time can remain under water about 15 minutes. The second time, it remains a little less, and so on, until its last dive. If the otter has its young with it, and if it is assailed, it will first defend its young with great courage. This fascinating animal will then utter heart-rending cries that almost resemble the moans of humans. And when it sees that it has lost, it kills the young so that it does not fall into the hands of its enemies alive.

I did not elaborate much on this subject. I fear overstepping your patient attention, so now I hasten to the fishing.

The immense abundance of salmon in the rivers make this operation quite easy for most of the Eskimo and Koloche-Nootka tribes. Only the Aleuts have to look to the sea for the fish they use. The salmon come to their islands only in small quantity.

Fishing for salmon is done in two different ways. The nations that have not yet suffered the influence of the Russians use the [fishing] spear, while those who have been able to appropriate a light dose of civilization establish barricades [weirs]. One method employed for fishing during winter, and which I have seen in practice among the Kaniagmioutes [Koniags], consists, as several ethnographers have already noted, of making a hole in the ice and building above the hole an almost hermetically sealed hut.

Salmon that come to breathe at the surface of the water are speared quite easily.

The principal species of salmon fished for on the Northwest Coast are the following: *Salmo alpinus* (Pall) (*kholotusuh*, Esk.),¹² *Onchorhynchus orientalis* (Pall) (*k'hak*, Esk.), *Onchorhynchus proteus* (Pall), *Onchorhynchus lycaodon* (Pall) (*nulaguh*), *Onchorhynchus sanguinolentus* (Pall) (*neliyuh*, Esk.), *Onchorhynchus lagocephalus* (Pall) (*nutghlaghuh*).¹³

Besides salmon, the inhabitants also fish a great deal for the large halibut, for which a special hook is used. The halibut is particularly abundant in the Sanak Islands, among the rocks of Tchernoboury [Chernabura?], and among all the islands that extend from the Strait of Juan de Fuca to Cross Sound. The hook for the halibut is attached to a seaweed of considerable length that has been prepared for this purpose.

The cod is also abundant along the Kodiak archipelago, where the natives go to fish with nets made of *remni* or lines of seal skin or sea lion. A special line is used for tomcod (*Gadus gracilis*) (*waukhni*) in Norton Sound.¹⁴ Finally, eulachon (*Thaleichthys pacificus*) are taken at the mouth of the Nass River with the aid of a kind of eel basket.¹⁵

The Americans, who know so ably how to extract from all the resources of the country they have colonized, have, however, scarcely begun exploitation of the immense sources of revenue that cod fishing and salmon fishing on the Northwest Coast promise.

Nevertheless, in 1871, five ships went to the banks near the Shumagin Islands to fish for cod, and three ships entered the rivers to fish for salmon: two to Noushagak [Nushagak], the other to Cook Inlet.¹⁶

There is cause to believe that more complete exploration of the coasts of the territories of Alaska and British Columbia will bring into those areas many more well-equipped ships, which, armed with good maps, will no longer have to fear the dangerous reefs that are strewn along the coasts, the aspect of which has for so long frightened early navigators.

ENDNOTES

1. This translation was a talk given by Pinart to colleagues in Boulogne, which was later published in booklet form. Boulogne-Sur-Mer, Imp. de Charles Aigre, 4, Rue des Vieillards. 1875. (All notes are those of the translator unless otherwise designated.)
2. This is undoubtedly the term “yukola,” which became current during the period of the Russian colonization of America.
3. In French the term *baleine* means “whale” in the general sense and means “baleen” or “baleen whales,” that is, filter-feeders, in a more specific sense. Pinart wants to clarify that the *baleine blanche*, literally white whale or beluga (*Delphinapteras leucas*), is not a filter-feeder but a toothed whale.
4. For a contemporary illustration of natives spearing humpback whales, see Figure 41 in *The Fur Rush* by Katerina G. Solovjova and Aleksandra A. Vovnyanko (Anchorage, Alaska: Phoenix Press. 2002).
5. One should note that the scientific names have changed since Pinart’s time. The humpback whale is now *Megaptera novaeangliae*, the fin whale is *Balaenoptera physalus*, and the killer whale is *Orcinus orca*. The black fish may be any of several small-toothed whales of the genus *Globicephala*.
6. The English term for an arrow- or spear-like projectile cast with a throwing board is “dart.” The Aleuts and Alutiiq hunted both whales and sea otters with this weapon. However, darts for whaling were pretty certainly different from those intended for sea otters. As a result, I have retained Pinart’s terms of “spear” for whaling and “javelin” for sea otters in order to distinguish between the two types of tools.
7. This human grease was considered poison. For a discussion on the natives here poisoning dart points, see Robert F. Heizer. “Aconite Poison Whaling in Asia and America: An Aleutian Transfer to the New World.” In *Anthropological Papers* 24 of the *Bureau of American Ethnology Bulletin*, 133:415–468. Washington.
8. The gray whale is now designated *Eschrichtius robustus*.
9. The fur seal continues to be identified as *Callorhinus ursinus*. However, Steller’s sea lion is now designated *Eumetopias jubatus*.
10. For an illustration of fur seals being slaughtered, see Figure 63 in *The Fur Rush* by Katerina G. Solovjova and Aleksandra A. Vovnyanko (Anchorage, AK: Phoenix Press. 2002).
11. The sea otter is now designated *Enhydra lutris*. For a look at the early sea otter trade, see *Otter Skins, Boston Ships, and China Goods* by James R. Gibson (Montreal: McGill-Queen’s University Press. 1992).
12. This is presumably the Alutiiq word for the fish.
13. For *Salmo alpinus* (Pall), Pinart is probably referring to the Arctic char (*Salvelinus alpinus*), though cutthroat trout (*Salmo clarki*) may be more appropriate for this region. I am unable to find *Onchorhynchus orientalis* (Pall). Perhaps Pinart means *Salmo orientalis* Pallas, which was later fixed as *Oncorhynchus tshawytscha* (the king, chinook, or spring salmon); *Onchorhynchus proteus* (Pall) may have been *Salmo proteus* Pallas, which is now *Oncorhynchus gor-*

buscha (the humpback or pink salmon); *Onchorhynchus lycaodon* (Pall) may have been *Salmo lycaodon* Pallas, now *Oncorhynchus nerka* (the sockeye or red salmon); *Onchorhynchus sanguinolentus* (Pall) was probably *Salmo sanguinolentus* Pallas, now *Oncorhynchus kisutch* (the coho or silver salmon); and *Onchorhynchus lagocephalus* (Pall) was probably *Salmo lagocephalus* Pallas, now *Oncorhynchus keta* (the chum or dog salmon).

14. The Pacific tomcod is now identified as *Microgadus proximus*.
15. The eulachon (*Thaleichthys pacificus*) is also known as the candlefish, its oil being sufficiently combustible that it can be light like a candle. Eulachon oil was a prized commodity and trade item among the Northwest Coast Indians.
16. The salmon taken the farthest north are the best. They are also the largest. I have seen one of these fish reach 130 pounds. They weigh 80 pounds on average (*Salmo lycaodon* and *sanguinolentus*).—ALP

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ABOUT THE TRANSLATOR

Richard Bland, formerly an archaeologist for the National Park Service in Alaska, Heritage Research Associates in Eugene, and the University of Oregon Museum of Natural and Cultural History, now translates books and articles into English.

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**Abstracts from the 70th Annual Northwest
Anthropological Conference, Spokane, WA
13–15 April 2017**

Hosted by Eastern Washington University

Anthropology: Making a Difference in the Real World

Symposia¹

Paleoindian Archaeology

Lee Sappington

Are There Pre-Clovis Mammoth Sites in the Columbia Plateau?

David G. Rice

*A Paleoindian Archaeological Assemblage from a Late Pleistocene Flood Deposit
Derived from the Last Channeled Scabland Floods Across the Columbia Basin
in the Horse Heaven Hills, Benton County, Washington*

Dennis L. Jenkins

Radiocarbon Dating at the Paisley Caves

R-Patrick D. Cromwell

Identification of Faunal Remains Recovered from Coprolites in Paisley Cave 2

Brianna Kendrick

Archaeoparasitology of the Paisley Caves

James W. Brown and James C. Chatters

*Revisiting the Old Cordilleran Tradition in the Puget Sound: Reanalysis of Bifaces
from the Olcott Type Site*

Daniel Meate and Scott Williams

CAVEAT EMPTOR: A History and Technological Analysis of the Rutz Clovis Point

Site Location

Tia R. Cody and Shelby Anderson

*In Search of Mounds: Development of a LiDAR and Remote Sensing Predictive
Model of the Calapooia Watershed, Oregon*

¹ Abstracts of individual papers can be found in the digital version of *JONA* 52(2) at
<http://northwestanthropology.com>

Sara E. Palmer

Using LiDAR Data for Archaeological Recon: Tips and Tricks

John T. Dorwin

Remote Sensing at the South Flying Goose Site

Josh Moss

Refining an Automated Model for Basic Landform Classification

Maurice Major

Wherever They're Naming a "There" of Theirs: Native Place Names, Landscape Features, and Refining Archaeological Expectations in a Sea of "High Risk"

Gary Wessen, Thomas J. Brown

Western Washington Shell Midden Chronology: Demographic Information

Western Washington Shell Midden Chronology: Antiquity

Making a Difference in Community Colleges

Community colleges are strategically positioned to make a difference for students and community. Community based missions with structural linkages to local governmental, tribal, social, and economic institutions create feedback loops conducive to substantive impacts on a local scale. This session highlights some of the work in anthropology departments at community colleges across the state of Washington. Anthropology students and instructors in community colleges cross disciplinary and sub-disciplinary boundaries as they meet real challenges in local communities. Presenters highlight examples of archaeological projects that connect with cultural, linguistic, and biological anthropology as well as with history and engineering. Ethnographic and biological field work complement surveys and excavations of cultural resources. Many of the featured projects include service-learning and community-based methodologies that involve the subjects of anthropology in the design, implementation, and analysis of both research and pedagogy.

Organizer: Thomas Murphy

Jennifer Zovar

Making a Difference to Ours Students: Addressing a Variety of Wants and Needs in the Classroom

Mark Taff

The Challenges of Teaching Human Evolution at a Community College

E. F. Aranyosi

The Yama Project: A Multidisciplinary Analysis of a Transnational Community

Neal Endaacott and Luke Jones

Little Swamp Creek Site: Exposing an Unpleasant History through Fried Chicken

Thomas Murphy

All of Our Relations: Indigenizing Bioanthropology and Archaeology

Skyler Elmstrom

A Survey of Fish and Wildlife: Japanese and Big Gulch 2016

Cali Drake

The Role of Indigenous Knowledge in Observation and Service Learning

Sahayra Barojas-Tapia

*Motivations and Incentives for Installation of Rain Gardens: An Ethnographic
Assessment in the Perrinville Creek Watershed*

Jane Hutchinson

Community and Conflict: Tales of My College Career

Dale Croes

Discussion

ODOT-WSDOT Transportation Symposium

Transportation projects touch upon all aspects of cultural resources management and result in large amounts of public dollars spent on management and historic preservation. Staff from both Oregon and Washington State Departments of Transportation come together again for a session to discuss recent projects and developing issues in the field of cultural resources management for transportation projects.

Organizer: Scott Williams

Craig Holstine

The East Trent Avenue Bridge: 5 Spans and 107 Years on the Spokane River

Dean Weaver

One of The Most Disturbed Spots in All of Spokane: Lessons from A Buried Cemetery

Scott S. Williams

*"It Was Necessary to Destroy the Village in Order to Save It": Winning the Battle
but Losing the War with the McMillin Bridge Project*

Stephen Austin

*Drive It 'Til the Guardrails Fall Off: An Overview of WSDOT's Historic Bridges
Program*

Thomas J. Connolly

Revisiting Chetlessenten Village (the Pistol River Site, 35CU61) on the Oregon Coast

Dean Weaver

Coyote, the Sisters, and the Falling Rocks

CRM Issues in Transportation Projects: Panel Discussion:

Panelists: Dennis Wardlaw, DAHP; Tom Connolly, UO; Dean Weaver, WSDOT;

Scott Williams, WSDOT; Craig Holstine, WSDOT; Stephen Austin, WSDOT

Discourse and Its Effects: Gender, Health, and Race

This panel broadly explores the power of discourse in North America, how it shapes our assumptions, practices, and institutions. Adam Westermann critically examines how heteronormative assumptions about gender become persistently inflected throughout U.S. dating culture, despite social changes that have called into question naturalizing discourses about sex, gender, and sexuality. Discourse is also at the center of Erika King's paper, which provides an analysis of discourse about Dengue in a Mayan community. King's interlocutors—clinical workers and patients—discuss their ideas about disease in ways that reveal their entanglements with traditional and Western medicine, as well as their perception people in the U.S. Through detailed examples of structural institutional, and interpersonal violence she U.S. Collectively these papers help us gain insight into the complexities of structure and agency—and most importantly how individuals internalize and experience the impacts of dominant ideas about gender, health, and race.

Organizer: J. Hope Amason

Introduction

Erika Rae King

"Lava, Tapa, Tira, Voltea": An Analysis of Discourse and Practice Surrounding Mosquito-born Illness in Pisté, Yucatán

Adam Westerman

The Means, Moment, and Materialization of Gender in Dating

Autumn Adams

Racial Injustice: A Critique of the Colonial Perspective and Approach to Mass Incarceration and Violence

Medical Anthropology

Cynthia Heckelsmiller

Exploring Age-Set Determined Domains of Plant Use in a Highland Maasai Village

Luke Kernan

Somatic Shockings across Ailment Narratives: Lessons from the Sacred Geographies of an Indigenous Spirit World

Hugo De Burgos

Posttraumatic Growth in Nicaragua and El Salvador

David Beine

The Role of Understanding Language (Particular Underlying Illness Metaphors) in Global Health: A Case Study from HIV and Aids Prevention in Nepal

Shannon Meyer

Complicated Autonomies: Disability, Family, and Medical Decision Making

Past and Current Reality, Future Vision

Frederick Strange

Peasant Struggles for the Commons

Mark Tveskov and Chelsea Rose

The Ordeal and Redemption of Christina Geisel and Mary Harris: The Rogue River War and Oregon's Own Captivity Narrative

Drew Brutzman

Staring Down the Hoarde: Resilience against the Alt-Right Movement

Kirk Packwood

Superstructural Fluctuations: The Cult of Kek, Memes, and the 2017 Presidential Election

Aaron Bocook

Invisible: Homeless in Spokane

Stacy Warren

Capitalism in the Sky—The Jetson's and the Culture of the Future

Opportunities for Archaeological Societies in Legislative Protection of Cultural Resources

Cultural resource protection is one of the primary missions of most, if not all, archaeological organizations in the Pacific Northwest. The various states in the region have varying levels of legal protection for 12:00 archaeological and historical sites. Federal protective legislation for heritage is at risk of being eroded under the current Presidential administration. This panel focuses on the role and potential actions of state and regional archaeological societies that could help safeguard the protections in place for cultural resources. Panelists from several societies discuss the types of legislative involvement that each society has experienced, successes and

failures in legal protection of archaeological materials, and strategies for protecting archaeological sites in the current political climate.

This symposium is a discussion panel. The participating organizations include: Idaho Archaeological Society, Association of Oregon Archaeologists, Association for Washington Archaeology, Northwest Anthropological Association

Organizer: Christopher Noll

Supporting Native American Self-Determination—Papers in Honor of Lawr Salo's Career and Contributions.

Lawr Salo has spent the last forty plus years working as a cultural resource manager for the Seattle-District Army Corps of Engineers (Corps). Throughout his career, Mr. Salo has honored the commitment of the U.S. Government to assist with building tribal capacity and respecting tribal self-determination. He has been an instrumental federal voice championing for Native American rights within the Corp and other federal agencies. He has worked to ensure Native American tribes were not sidelined by such complex entities as the Federal Columbia River Power System (FCRPS), or forgotten during the process of hydroelectric power facilities upgrading in the 1970–1980s. The testimony to these efforts can be witnessed through the strong partnerships he has helped forge between the Seattle-District Corps and the Coeur d'Alene Tribe, Confederated Salish & Kootenai Tribes, Confederated Tribes of the Colville Reservation, and the Kalispel Tribe of Indians. We would like to take this time to thank Mr. Salo for all of his hard work and dedication, and hope you will too by attending this session. Lastly, please note that there will be an open jam session and reception to follow. Details will be announced at the meeting, but please bring your own instrument if you wish to jam out with Lawr!

Organizer: Aaron Naumann

Aaron Naumann

Intro to Tribal Sovereignty, Capacity Building and supporting Native American Self-Determination thru Cultural Resource Management

Lawr Salo

What's Goin' On—Example from the Federal Columbia River Power System Projects

Jill Wagner

Presentation by the Coeur d'Alene Tribe

Jacqueline Cook

Chief Joseph Dam Project and Its Role in Helping Build the CCT H/A Program

Kevin Lyons

Assuring that the Public Good is Sustainably Served in Public Archaeology

David Rice
Reflections on Lawr's Career

David Munsell
Reflections on Lawr's Career

Guy Moura and Dennis Lewarch
General Discussion

Historic Archaeology

Charles T. Luttrell
Palouse Falls—Almost Sibling to Snoqualmie Falls Hydro

David R. Davis
The Yama Project: Diverse Partnership and Community College Students Combine for Archaeological Success

Aubrey M. Steingraber
Trestles and Tramways: Artifact Biographies from Monte Cristo, a Late 19th-Century Hard-Rock Mining Town Located in Washington's Cascade Range

James C. Bard
The Coins of Kam Wuh Chung, John Day, Oregon: Persistence of Chinese Culture Reflected Through Non-Monetary Uses of Chinese Coins

Chelsea Rose, Sarah Heffner, Shana Sandor, and Mary Maniery
Introducing the Chinese Material Culture Digital Database!

Public Archaeology

Cody Schwendiman, Rory Becker, and Amanda Welch
Restoring the Rivoli: The Public Archaeology of a Historic Theatre in Pendelton, Oregon

Larry Cebula and Brandon Cadwell
The Lake Roosevelt Partnership: Institutional Collaboration and a Smartphone App

Maureen Flanagan Battistella
Looking Back, Looking Forward: Notions of Heritage, Stewardship, and Sustainability among Southern Oregon Farmers and Ranchers

Public Forum: 2017 Northwest Anthropological Conference: Panel Discussion on Ethnographic Research with Pacific Northwest Tribes

This session will highlight the importance of ethnographic research with Tribes in the Pacific Northwest, and to show how the Federal compliance process

can generate ethnographic work. Panelists will include Federal Agencies who fund ethnographic research, academicians who work with regional Tribes, and representatives from Tribal cultural resource programs. We will discuss some of the differences between academically driven ethnography and compliance ethnography, both through consultants and research done by Tribes. Compliance ethnographic work highlights the living culture of Tribes in the Pacific Northwest, exemplified by issues such as: cultural adaptation to a new riverine ecology; restricted use of traditional homelands to hunt and gather culturally significant plants; the complex dynamics of access to salmon and salmon fishing; and many more. The importance of ethnographic research, specifically related to Traditional Cultural Properties, is increasingly acknowledged in management documents generated by land-managing agencies.

Organizer: John Pouley. Participants: John Pouley, Briece Edwards, Daniel Boxberger, Kevin Cannell, Sara Gonzalez, Guy Moura, Scott Williams, Brandon Reynon, Josh Wisniewski, Alan Marshall, Jennifer Engum, Joanne Taylor

Working Side-by-Side: Reflections on Collaborative Anthropology and Archaeology

This session brings together a diverse group of scholars who are on the verge, or in the midst, of a collaborative project—in both sociocultural and archaeological arenas. While collaborations of some kind have long been part of anthropological work; at the same time “collaboration” has arguably become more ambiguous in meaning. Among whom are anthropologists collaborating and why? How exactly does this happen? Our panel takes as its starting point the ongoing need for anthropologists to involve local communities in research that affects them, and then asks what benefits, if any, local communities have to gain from our projects—and who determines the methods, theoretical loci, and interpretation of data in the research and dissemination process? We aim to explore the variability of “collaboration” and the usefulness of the term itself, while asking if it is ever misused, as it gains popularity in the current literature on applied, engaged, and public anthropology. Where does one draw the line between “collaboration” and “imposition”? What are some of the best practices in moving forward with a community-based project in our current historical conjuncture? Panelists will be asked to reflect on these dynamics in relation to their diverse projects—ranging from Colville Indian Reservation environmental regulations; to interethnic marriage on San Juan Island; to lessons from the Makah and the Ozette site; to efforts toward decolonization; to how we approach teaching place-based applied anthropology.

Organizer: Jordan Levy

Amelia Marchand

Efforts of Environmental Justice and Holistic Regulation on the Colville Indian Reservation

Georgia Rae Abrams

*Colonization and Collaboration: Archaeological Research at the Roche Harbor
Homestead, San Juan Island*

Paris Franklin

Conscientious Collaboration: Archaeological approaches as inspired by the Makah

Kim Richards

The Tale of Two Cities

Brenda Covington

Cemetery, Sport Fishing, Recreation, Hydropower, Archaeology... Respect

Jordan Levy

*Teaching Applied Anthropology in the Era of Donald Trump: Reflections on Col-
laborative Research with the Washington Fair Trade Coalition*

Archaeology Surveys

John Pouley and Matthew Diederich

*Revisiting Eligibility Trends of Archaeological Sites in Oregon 2012-2016: A Fol-
low-up to the 2012 NWAC Presentation*

Patrick O'Grady, Scott Thomas, and Carolyn Temple

*Broadening the Focus: A Look at the Paleoamerican Surface Assemblage at Rimrock
Draw Rockshelter (35HA3855) in Relation to the Burns BLM District at Large*

Bryce Danner

An Overview of the Pre-Contact Archeology of the Lochsa River, North Central Idaho

Paul S. Solimano

Precontact Land-Use in the Vicinity of Dworshak Reservoir

Julia Furlong

*Mapping Settlements and Landscapes along the Mainstem Columbia River in
Central Washington through Aerial Imagery and Survey*

Jennifer Bertolani, Celia Moret-Ferguson, and Sunchine Schmidt

*Federal Columbia River Power System Cultural Resource Program: Harnessing
Power and Preserving Cultural Resources for the Future*

Association of Oregon Archaeologists (AOA) Business Meeting

Archaeology Elsewhere

Andrew Gillreath-Brown

Depopulation of the Central Mesa Verde Region: Archaeology with Future Implications

Justin B. Colon

Obsidian Industries and Exchange Spheres of Northwest Nicaragua: A Typological and Geochemical Study from the Department of Chinandega, Nicaragua

CACOA (Cool A Central Oregon Archaeology)**

Recent cultural resource investigations in central Oregon have provided opportunities to expand our understanding of the region throughout the Holocene. This symposium pulls together data from multiple locales to provide new insight into a variety of themes. Themes explored in this symposium include deeply buried Early Holocene occupations, task specific sites and a village site in the uplands, obsidian procurement in the Middle and Late Holocene, early evidence of wapato and tobacco use, sediment accumulation and its relationship to archaeological sites, and methodology for identifying archaeological sites and features. This symposium provides new information on the variability of human occupation of Central Oregon.

Organizer: Sara J. Davis

Bradley Bowden

Temporal Variation in Use of the Uplands in South-Central Oregon

Stephen C. Hamilton

Spatial Variability in Obsidian Procurement Patterns from Christmas Valley to Warner Rim

Daniel Gilmour and David Ellis

Wada, Wapato, and Western Stemmed: An Early Holocene Site near Burns, Oregon

Sara J. Davis and Michele Punke

An Upland Pithouse Village near Maupin, Oregon

Michele Punke

Holocene-Age Archaeological Site Potential and Preservation in Sediment Traps of Central Oregon

Discussion

Chemical Analyses of Residues

Jenna Lecates and Ray Von Wandruszka

Chemical Analysis of Mysterious Finds

Morgan Spraul and Ray Von Wandruszka

Analysis of Old Pharmaceuticals

Danielle Saurette and Ray Von Wandruszka

Historical Pigments

Andrew Frierson, Korey Brownstein, Shannon Tushingham, and David Gang
Proteomic Residue Analysis of Stone Tools and Implications for Future Research

Lori Phillips, Steven Hackenberger, Shannon Tushingham, Korey Brownstein,
and David R. Gang
From their Pipes to Curicaueri: Tobacco Use among the Ancient Tarascans

Jessica Devio, Shannon Tushingham, Korey Brownstein, and David R. Gang
*Ancient Cacao Recipes: An Experimental Approach to Identify Recipe Variation
in the Archaeological Record*

Katie Richards
*In Search of Chocolate in the American Southwest: Residue Analysis of Ceramics
from an Early Pueblo I Site in Southeastern Utah*

Brandon McIntosh
*What Doña Ana Phase and Modern Jackrabbits (*Lepus californicus*) Can Tell Us
about Climate Change in the Southeastern Southwest*

Nichole Fournier and Cara Monroe
*A Preliminary Ancient DNA Analysis of Middle and Late Period Humans from
Ryan Mound (CA-ALA-329), San Francisco Bay, California*

William J. Damitio, Shannon Tushingham, Korey Brownstein, and David R. Gang
*A Chemical Residue Analysis of Pre-Contact Smoking Pipes from Three Mid-Co-
lumbian Sites*

William J. Damitio, Shannon Tushingham, Korey Brownstein, and David R. Gang
*Tobacco Use Patterns Among Tribal Communities in the Pacific Northwest: Long
Term Trajectories and Implications for Modern Health Initiatives*

Global Applications of Chemical Analysis in Archaeology

Archaeometric techniques are broadening the frontiers of archaeological science and adding substantially to our knowledge of past human behavior. The participants of this session present research involving residue and isotopic methodologies in a variety of contexts and locations. Residue analysis is the study of non-artifactual traces left by humans: blood, alcohol, milk, nicotine, and other substances. There are many archaeometric techniques aimed at identifying residues, many of which are currently in development. Isotopic analysis concerns itself with the stable isotopes found within human and animal bones. Isotopic analysis can answer questions about past subsistence, mobility, or environments.

Organizer: Sydney Hanson

Sydney Hanson, Shannon Tushingham, Korey Brownstein, and David R. Gang
TExtraction of Rice Residues from Experimental Potsherds

Dominic Bush

An Isotopic Analysis of the Early Historic Fauna Recovered at the Collier Lodge Site (12PR36), Porter County, Indiana

Lori Phillips, Erin Thornton, Kitty Emery, and Carlos Peraza-Lope

Talking Turkeys: Stable Isotope Analysis of Turkeys from Postclassic Mayapán

Topics in Cultural Anthropology

Edwin Battistella

COUPON and OFTEN: Changing Patterns in American Speech

Hannah MacIntyre

Cultural and Social Biases in Educational Access for LGBTQ Public School Students

Olivia “Morgan” Manusia

Research in Identity and Video Games

Cambria Sullivan, Kerensa Allison, and Stephen Austin

“Asktransgender”: A Digital Ethnography of Common Questions and Daily Challenges Related to Transgender Communities and Identity Processes

Stories from the Past: Presentations in Honor of Priscilla Wegars, University of Idaho

Developing stories about the past based on archaeological resources is a common goal of archaeologists regardless of whether you favor pre-contact, historical, terrestrial, aquatic, or any combination of these in your archaeological research. This symposium focusses on historical archaeology to honor the long and distinguished career of Priscilla Wegars, founder of the Asian American Comparative Collection at the University of Idaho. The topics are diverse but each story is important to our understanding of the past.

Organizer: Mary Anne Davis

Mary Anne Davis

Idaho Archaeologists in Review: Revisiting The Past

Mark Warner

The Search for Relevance: Archaeology in Public in Idaho

Meredith Breen

The Art of Consumption: A Faunal and Glass Analysis from The James Castle House Archaeological Project

Mary Petrich-Guy, Renae Campbell

James Castle House Archaeology Project: Public Place in a Small Work Space

Ann Sharley

Built Environment Survey of Walla Walla's Historic Volga German Neighborhood

Molly Swords, Margaret Clark and Mark Warner

A Community Along the Tracks: An Examination of Sam Sing's Laundry in Sandpoint, Idaho

Maryanne Maddoux

Diversification in a Time of Adversity

Heather Sargent-Gross

Ophir Creek Brewery: An Analysis of a Nineteenth Century Chinese Community

Lorelea Hudson

*Expressions of Ethnicity in a Modern World, Archaeological and Historical
Traces of Pre-WWII Japanese-American Culture*

Stacy Camp

Digitizing the Archaeology of WWII Japanese Internment

Nathan J. May

Constructive Play: Fort Boise, Archaeology, and Children's Toys

Discussion

Topics in Medical Anthropology

The theme of the session, topics in medical anthropology, focuses on conversations and debates surrounding structural violence. The papers analyze how structural factors affect health and wellbeing of people around the world. As Paul Farmer, the doyen of medical anthropology, stated structural factors are social arrangements that put individuals in harm's way. The arrangements are structural because their embeddedness in the political and economic systems of our social world. Structural factors are best described as violence and violent because they are corporeally real and cause injury to people (Farmer et al. 2006). Certainly, structural factors are beyond dispensing prescriptions or providing temporary aids to marginalized areas and individuals. It is about understanding and ameliorating large-scale social structures—differences of power, wealth, privilege and health that are unfair, undesirable and discriminatory. The papers in this panel attend to the following questions: How are people embroiled in culturally, economically and politically-imposed suffering? How do the actions of government and other powerful institutions produce and reproduce unnecessary suffering? How do decisions made at the family level undermine the lives of children? In what ways

marginalized groups respond to structural factors that threaten their health? How do everyday forms of symbolic violence endanger the health of vulnerable people such as the disabled, LGBT+, etc.? Taken together, these papers make significant contributions to the existing literature on structural violence in the United States.

Organizer: Kassahun Kebede

Matthew Thomas

The Effects of Perceived Discrimination on LGBT+ Latinx Individuals in the United States

Holly Johnson

Commercial Sex Workers and the HIV/AIDS Epidemic

Tabitha Ormaechea

Forced Sterilization in Australia and the Question of Human Rights

Courtney Carroll

Mothers Perspectives and Dilemmas Regarding Vaccines in Spokane

Shawn Watson

The Role of Arc of Spokane in Disability Advocacy

Ameliorants

Elise Cuentas

Economic Growth of the Legal Cannabis Market in the Inland Northwest

Julia Smith

Terroir: From Wine to Coffee

Artifact Analysis

Thomas Ostrander

N=I: The Power of Charismatic Artifacts

Eric Gleason, Rick McClure, and Megan Wonderly

Indian Rock Obsidian: Preliminary Investigation of Toolstone Sources in the Simcoe Mountains

Terry L. Ozbun and John L. Fagan

Reading Flakes and Flake Scars

Caitlin Limberg

Paradigmatic Lithic Classification at Different Site Types on the Slopes of Mount Rainier

Loren G. Davis, Alexander J. Nyers, and Daniel W. Bean

Comparing Stemmed Projectile Point Technology among Several Early Southern Plateau Sites

Makaela O'Rourke and Scott Thomas

Pottery at Skull Creek Dunes, and Its Implications for Pottery Tradition in Southwestern Oregon

Molly Carney and Sydney Hanson

Like a Moss: Exploring Paleoethnobotanical Sample Size and Return Rates in Cultural Resource Management

Mitigating for Cultural Resource Loss in the Real World, Examples from the Confederated Tribes of the Colville Reservation (CCT) History/Archaeology Program

Mitigating cultural resource loss is complex and largely dependent on the type(s) of cultural resource(s) being adversely affected and those involved in the process. Most cultural resource specialists have been exposed to construction projects that impact archaeological sites, as in the case of the Zayo Project (Sloma). However, mitigation can be more creative as it should also address the irreparable and ongoing loss of cultural resources where Cultural Plant Team (Campbell, Adolph and Johnson, and Robson) illustrate how work with traditional plants and use areas are mitigating the effects of climate change and environmental degradation on plant communities important to tribal members. In addition to natural resources, protecting significant structures is also of high importance to the CCT (Coyote). And lastly, situations requiring immediate attention such as those created by the 2015 wildfires can occur at any time (Rorabaugh, and Dean, Bailey and Meyer). It is hoped by highlighting this range of treatments that other cultural resource practitioners will find inspiration to create contextualized solutions appropriate for ameliorating some of the loss and irreparable damage to cultural resources of the affected communities.

Organizers: Aaron J. Naumann and Jacqueline M. Cook

Aaron J. Naumann or Jacqueline M. Cook

Introduction to the Confederated Tribes of the Colville Reservation, History/Archaeology Program

Robert Sloma

Refining Where and When to Look: The Zayo Project an Example of Monitoring the Installation of Fiber Optic Infrastructure

Trisha Johnson

Mapping Traditional Cultural Plants on the Colville Reservation

Kali Robson

Mapping Traditional Cultural Plants on the Colville Reservation

Arrow Coyote

Pia Mission and Skolaskin Church—Examples of Creative Mitigation

Adam Rorabaugh

After the Burn: 2016 Northstar and Tunk Block Post-Fire Site Assessments

Claire Dean, Richard Bailey, and Jon Meyer

McLaughlin Canyon Pictograph Site Stabilization

Guy Moura

Concluding Thoughts and Discussant

Data Recovery at Anderson Creek, a Hunter-Fisher-Gatherer Camp on Sinclair Inlet, Puget Sound

A federal court injunction issued in 2013 requires Washington State to correct hundreds of fish passage barriers in western Washington by 2030. Months after the injunction was issued, Washington State Department of Transportation (WSDOT) archaeologists identified site 45KP233 within the footprint of a proposed culvert replacement project at the mouth of Anderson Creek on Sinclair Inlet in Kitsap County. Data recovery excavations conducted in September 2015 yielded a range of shell and vertebrate faunal remains, a small assemblage of stone and bone tools, and historic objects, from stratified deposits. Initial use of this small hunter-fisher-gatherer camp began approximately 800 years ago, as evidenced by a shell-free component containing vertebrate faunal remains and the majority of the site's lithic assemblage. Accumulation of shell-rich midden began shortly thereafter, and continued during multiple episodes of site use that extended into the historic period. Shell-free deposits capping the midden suggest a shift in Native American site use during the late nineteenth century. The site was buried under work.

Organizer: Roger Kiers

Roger Kiers

Anderson Creek in Context: Setting, Methodology and Stratigraphy at 45KP233

Robert J. Holstine and Megan A. Partlow

Vertebrate Faunal Remains from the Anderson Creek Site (45KP233)

Erin Littauer and Meredith Austin

Analysis of Invertebrates from Anderson Creek (45KP233): A Study of Hard and Soft Substrate Species of the Intertidal Zone on Sinclair Inlet

Roger Kiers and Scott Williams

The Non-Faunal Artifact Assemblage from Anderson Creek (45KP233)

Historical Forts Archaeology

Ryan Ives

The Preservation of Perishable Foods: Results of Recent Excavations in an Ice House and Root Cellar, U.S. Army Fort Walla Walla (45WW341)

Kim Wessler

A Historical and Archaeological Overview of Fort Yanhill's Hospital (35PO75)

Dennis Griffin

In Serach of Camps' Warner: Tracking US Military Presence in the Warner Valley, Oregon 1866–1874

Dennis Griffin

Archaeology of the Oregon National Guard: A Search for Archaeological Evidence of Early Military Encampments in Oregon

Justin Eichelberger

Socio-Cultural Identities of U.S. Army Commissioned Officers: The Negotiation of Class and Rank at Fort Yamhill and Fort Hoskins, Oregon, 1856–1866

Topics in Physical Anthropology

Physical anthropology, or biological anthropology, “is a biological science that deals with the adaptations, variability, and evolution of human beings and their living and fossil relatives” (AAPA). This symposium covers papers on all topics within the field of physical anthropology including but not limited to human skeletal biology, bioarchaeology, primatology, human and primate evolution, and human biological variation.

Organizer: Guy L. Tasa

Thomas Ostrander, Aja Sutton, and Michael Bever

A Case Study Evidencing Precontact Reinterment of Inadvertently Discovered Human Remains

Aja Sutton and Thomas Ostrander

Make No Bones about It: Practical Tips for Recognizing Human vs. Faunal Remains in the Field

Guy L. Tasa

A Skull in the Fireplace: A Narrative of Cultural Appropriation, Identification, Deconstruction, and Repatriation

Juliette Vogel

Indigenous Archaeology and Human Rights: Toward a More Ethical Treatment of Human Remains

Hilary Hemmes-Kavanaugh

Comparison of Semi-Captive and Wild Gray-Shanked Douc Langurs' (Pygathrix cinerea) Activity Budgets

Misty Weitzel

A Ten-Year Study of Soil Bacterial Communities Associated with Cadaver Decomposition in the Pacific Northwest

Sarah Addington

Evaluating Possible Relationships between the Cranial Base Angle and Linear Craniofacial Measurements

Jerielle Cartales

The Potential Conflict between Forensic Ancestral Identification and Societal Interpretation

Emily Dura and Nadine Rupert

Mother-Infant Interactions in a Wild Population of Southern Pigtail Macaques (Macaca nemestrina)

Veitia, Emily

Enrichment Use & Social Interactions in a Mixed-Species Enclosure of Sumatran (Pongo abelii) & Bornean Orangutans (P. pygmaeus) & Northern White-Cheeked Gibbons (Nomascus leucogenys)

Investigating the Dittman Biface Cache (35MA375): Stewardship, Collaboration, Consultation, and Public Outreach Associated with The First Documented Biface Cache in The Willamette Valley

In 2015, a Salem, Oregon landowner contacted the State Historic Preservation Office to report what he correctly believed to be a biface cache discovered on his property. In the subsequent year-and-a-half, the site has become arguably the most well documented biface cache in Oregon and the first reported biface cache in the Willamette Valley. Tribal consultation produced important information about the Santiam Band of the Kalapuya who traditionally occupied the area, aiding research and investigations. Experts throughout the region volunteered useful analyses involving: illustrations, obsidian sourcing, site mapping, 3D scanning, 3D printing, and technological analyses. The site has been surveyed with GPR and Magnetometer, and archaeologically excavated. Obsidian hydration and blood residue analysis on tools recovered during the excavation are planned. To date, 44 professionals from universities, tribes, state and federal agencies, and contracting firms have donated time and assistance. The landowner, who is a teacher, brought students to witness the archaeological excavations on two separate occasions. Oregon Public Broadcasting sent a reporter to cover the story and a Tribal archaeologist was invited to participate in a radio broadcast. Combined with the Oregon Parks and Recreation Department press release, other landowners in the state felt comfortable reporting finds on their property.

The story spread locally, regionally, and internationally, including mention on a London news broadcast. The Dittman Biface Cache (35MA375) symposium includes presentations on the research, analyses, results, relationships, and public outreach associated with the site.

Organizer: John Pouley

Introduction

John Pouley

"Please Contact Me if This is of Interest to You" An Introduction to the Dittman Biface Cache (35MA375), the First Recorded Biface Cache in The Willamette Valley

Sean Carroll, Loren Davis

Preliminary Results on the 3D Digital Geometric Morphometric Analysis of the Dittman Biface Cache

Marci Monaco and Meghan Johnson

Dittman Biface Cache Simulation: Caching a Database for Future Studies

Alexandra Williams-Larson

Cache and Carry: Examining Site 35WN93's Role in The Northward Trade of Obsidian Cliffs Toolstone

Briece Edwards

Relationships in Archaeology: Positive Outcomes from the Dittman Biface Cache (35MA375) Project

John Pouley

The "Value" of the Dittman Biface Cache (35MA375): Public Outreach and Archaeological Awareness

Spokane's Riverfront Park Cultural Resource Management and Beyond

Beginning in 2015, cultural resource studies have been conducted in parts of Riverfront Park—a 90-acre area surrounding the Spokane River in the heart of downtown Spokane—in support of redevelopment efforts. Known for being the site of the 1974 World's Fair, this iconic locale has been an integral part of modern Spokane's landscape for well over a century when first it began to be used for grain milling; and centuries before this, it has been part of a greater landscape used by Native Americans. This symposium shares insights into detailed historical research from census records to Chinese Exclusion Act case files, geospatial analysis, and results from recent archaeological investigations, built environment assessments, and historic preservation planning. Expanding this further, presentations also include topics on creative public outreach in an effort to reconstruct the area's historical landscape such as a project website and 3D technology; thereby highlighting how

CRM and historic preservation are making a difference in the real world. This symposium closes with Q & A for audience members.

Organizer: Ashley M. Morton

Ashley M. Morton

Before the Riverfront Park: Historical Research into Early Modern Spokane's Development and Settlement In and Around the Falls

Megan Duvall

Riverfront Park: A Journey through the Decades

Jonathan M. Haller

Spokane's Historical Population: Making Those Pivot Tables Meaningful

Ashley M. Morton

Archaeological Investigations into Spokane's Riverfront Park

Marcia Montgomery

Managing Historic Properties in Spokane's Riverfront Park—The Expo '74 Site

Trish Hackett Nicola and Alexandra Williams-Larson

The Chinese in Spokane's Riverfront Park Area

Nikki Hart-Brinkley

Digital Spokane and the Chinese Diaspora: A Spatial Dataset of Georeferenced Sanborn Maps, 1884–1925

Jonathan M. Haller

Urban Un-Planning: Digital Exploration of Downtown Spokane's Progressive Era

Discussion and Q & A Period for Presenters

History and Archaeology

Russell Holter

Contributions made by various ethnic groups in developing linear cultural resources

Caroline Herritt

Consumer Culture and Colonialism: Archaeology of Contact in the Northwest

Idah Whisenant

Preliminary Research for Testing at a Steamboat Landing Settlement in Idaho

Sarah M. H. Steinkraus, Jennifer Hushour

Historical Refuse Features At The Station House Lofts Project

David Valentine

Predicting the Formal Trash

Madilane A. Perry

And the Dig Goes On, and On and On ...

Patricia S. Hart, Ivar Nelson

Impacts of the Civilian Conservation Corps in Idaho

Refugees

Kassahun Kebede

Gender and Generations among Ethiopian Diaspora in the Washington, DC, Metropolitan Area

Matt Husain

"Humanity Is Wonderful, If Only I Could Encounter Some": Perspectives of the South Asian Economic Diaspora in the Southern Mediterranean

Archaeology Overview

Alexander Gall and Michael Smith

How Do We Preserve Vulnerable Cave Sites? A Look into the Horse Lava Tube System in Central Oregon

Gretchen Kaehler and Michael Houser

District or Distraction? Identifying and Evaluating Archaeological Districts

Kirsten Lopez

Archaeology in the 21st Century: Public, Politics and Science

Native and Non-Native Voices

Joanne Taylor

Food, Fish, and Diking Crises in the Creston Valley: An Indigenous Epistemological Solution

Sally Thompson

Blackfeet History from the Inside Out: Correcting the Perceptions of Nicholas Point

Chris Kaiser, Joseph Seelatsee, Melvin Lucei, Jason Buck, Malcolm Aleck, and Clint Wiltse

The Wanapum River Patrol

Arland Thornton and Linda Young-Demarco

What Can We Learn About the Colville Reservation Indians from the United States Censuses?

Dale R. Croes and Ed Carriere

*Re-Awakening a 2,000 Year Old Salish Sea Basketry Tradition and Sharing It
around the World: Master Salish Basketmaker and Wet Site Archaeologist
Explore 100 Generations of Cultural*

Wendy Wegner

*Opening Doors in Anthropology: Ethnographic Exploration of Collections as
Field Sites*

David-Paul B. Hedberg

*New Sources from the Archives: How the Letters of One Columbia River Indian
Fisherman Complicate the History of Salvage Excavations at Wakemap
Mound and Other Sites behind the Dalles Dam*

Posters

Anderson, Eric D., Jason B. Cooper, and Emily R. Scott

*Last Call: End Days and Final Detritus of the Hotel Butler Historic Debris at
Boeing Field, King County, Washington*

Bass, Kayley

*The Unknown History of Western Washington Logging Camps: St. Paul and
Tacoma Lumber Company's Camp #5 ca. 1920–1950*

Basu, Baishakhi

Developing Cost-Effective Event-Based Diaries for Low-Literacy Populations

Brown, Thomas J., Jonathan Duelks, and Kelly M. Derr

*Correlating Fire Histories and Demographic Signatures on Vancouver Island: A
Pilot Study*

Dampf, Steven

*Preserving Spokane's Progressive Heritage: Mitigation of the City's Historic Trolley
Track System*

Danner, Yuumi

*Being Taught How to Fish: Understanding People through Replicating Fishing
Tools*

Edwards, Briecce, Jessica Curteman, and Jon Krier

*Cultural Practices as Contributing Attributes for Landscape Modeling: A Case
Study in Tillamook Bay*

Elgar, Melissa Goodman, Molly Carney, Elizabeth Truman, William Damatio,
Emily Whistler, and Kevin Lyons

*Paleolandforms and Landuse Dynamics: Regional Analysis Using Multiproxy
Methods in the Pend Oreille Valley, WA*

Fashing, Allison, and Darcy Wayman

*The Foodways of the Cyrus-Jacobs House and the Uberuaga Boarding House in
Boise, Idaho*

Ferguson, Hannah, and Ashley M. Morton

*I Forge On: Walkability and Experiencing Early 20th Century Urban Life through
Spokane's Expert Smithy*

Frierson, Andrew, James Brown, Dominic Bush, Will Damiato, Nichole

Fournier, Samantha Fulgham, Emily Whistler, and Colin Grier
*Intra and Intersite Interpretations of Faunal Patterning at the Rock Creek Shelter
Site, Southcentral, Oregon*

Fulkerson, Tiffany, and Shannon Tushingham

Minding the Gender Gap: Publishing and Conference Trends in Western North America

Funkhouser, Jake A., Jessica A. Mayhew, and John B. Mulcahy

A Captive Ape Society: Social Structure and Dominance Hierarchy Analyses at Chimpanzee Sanctuary Northwest

Gough, Stan, Thomas W. Stafford, Jr., Emil Karpinski, Charles T. Luttrell, Jerry R. Galm, and Hendrick Poinar

Latah Mammoth Radiocarbon and DNA Analysis

Hallingstad, Ellen

Reconstructing Faunal Exploitation at the Prehistoric Woodstock Farm Site (45WH55), Whatcom County, Washington

Hann, Don

The Limits of Material Culture for Determination of Ethnicity in Eastern Oregon Placer Mines

Hannold, Cynthia, and Sam Raymond

A Comparison of Alcohol Consumption Habits at Historic Fort Boise

Heide, Gregory

Preserving Our Heritage—Passport in Time Projects on the Colville National Forest

Henebry-Deleon, Lourdes, Angela Neller, Kate Valdez, Jackie Cook, Teara Farrow-Ferman, and Robert Taylor

Cultural Affiliation for Tilcaminsh Uytpama Natitayt, the Ancient One (AKA Kennewick Man)

Holman, Darryl

Effects of Famine on Deciduous Tooth Emergence in Rural Bangladeshi Children

Holschuh, Dana

Connectors to the Past: Two Historic Bridges in Southwestern Washington

Hughes, MacKenzie

Quartzite Artifact Analysis at Woodstock Farm, Chuckanut Bay, WA

Hurst, Jori, and Dessa Meehan

Analysis of Lithics from Bone Processing and Lithic Tool Production Units at Woodstock Farm (45WH0055)

Johnson, Jeffrey Cortlund

The Gundlach Collection: A Large Sample of Projectile Points from the Upper Pend Oreille Watershed

King, Roxanna Jane

A Cross-Cultural Analysis of How Children Learn About Witchcraft and Sorcery

Krier, Jon, and Kathryn Nuss

Utilization of Multibeam Sonar Data for Modeling Submerged Areas of Archaeological Interest

Lewis, Ian Richard

Archaeology in the Classroom: How Might I Use This Tool to Get Rid of the Ooey-Goey, Bloody Bits to Make New Clothes?

Litzkow, Jamie, Anne Boyd, Richard Bailey, and Lindsey Evenson

Vanishing Images: Finding and Saving Pictograph Sites

Litzkow, Jamie, and Lindsey M. Evenson

Recognizing Ethnicity at Historic Placer Mining Sites in the Pacific Northwest

Loucks, Lily, Saffron Kruse, and Vincent Wilson

The Tools of James Castle's Art

Luther, Pat, and Thomas Marsh

Above It All: Aerial Imagery Support of Archaeological Research in the Fort Rock Basin, Oregon

Maroney, Kendra

Ground Penetrating Radar at 45PO153: Stratigraphic Analysis

Martin, Rachel

SQUIRREL! An Experiment on Mammal Bone Decay in Acidic Alkaline, and Neutral Solutions

Mylan, Jessica A.

Sustainable Tourism in Costa Rica: Aligning Tourists' Interests with Local Development

Noll, Christopher

Low Density Doesn't Mean Low Value: Evaluating the Significance of 10CR179, a Low Density Site in the Mountains of South-Central Idaho

O'Leary, Margaret

Analysis of Bone Marrow and Grease Extraction at Site 45WH055

Pan, Anwesha

Effects of Reproductive Hormones on Pregnancy Related Sickness in Rural Bangladeshi Women

Polito, Daniel J.

Lithic Debitage Analysis of the Kelly Forks Work Center Site (10CW34)

Rorabaugh, Adam N.

Omak Bell Site Excavations

Rorabaugh, Adam N.

Results of the 2016 Bungalow Dance Hall Excavations

Schroeder, William

A Clino-Cladistic Look at Pull & Push Tab Patents ca. 1950-1980

Sparks, Shane, and Kelly Yeates

*Eight Years along the Puyallup—Highlights from On-going Tacoma HOV Program
Work in Tacoma, Washington*

Stcherbinine, Sean, and Patrick McCutcheon

*Geoarchaeology of the Sunrise Ridge Borrow Pit Site (45PI408): The Origin of
Buried Soils*

Tyler, Donald E., Ryan P. Harrod, Jordyn Jones, and Ted Parsons

Reassessing the Genus Homo on the Island of Java through Virtual Reconstruction

Velasco, Lidia

*La Leyenda de Yobi, el Zorro con Cinco Colas/Emotion in Translation: A Human-
istic Study of Translation Korean to Spanish*

Wang, Penglin

Zoographic Nomenclature in Inner Asia

Whistler, Emily

*Addressing Prehistoric Bird Usage: An Analysis of Avian Material from San Juan
Islands Archaeological Sites*

Wriston, Teresa, and Geoffrey M. Smith

*The History of Lake Warner and the Clovis and Western Stemmed Point Lithic
Assemblages Left along Its Shore*

Zentgraf, Diane

A Database Collection Form for Clay Smoking Pipes

NWAC Student Paper Competition

The *Journal of Northwest Anthropology*, in partnership with Willamette Cultural Resources Associates, Ltd., will be coordinating the 2019 Northwest Anthropological Conference Student Paper Competition.

The competition is **open to any individual enrolled in a degree-granting institution** (graduate and undergraduate) who is registered for the conference (presenting the paper is not required). Subject matter is open to all anthropological subjects and will ideally incorporate this year's theme, "Confluence," into the paper. The winning papers will receive a **cash prize** (First Place = \$500, Runner-up = \$250) and be **published in the *Journal of Northwest Anthropology*** (Volume 54). **The entry deadline will be March 1, 2019.**

Go to www.NorthwestAnthropology.com/student-paper-comp for further details.



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NWAC 2019 IS COMING TO KENNEWICK, WA!

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This year's Northwest Anthropological Conference theme is "Confluence," celebrating the concept of merging histories, identities, landscapes, theories, and techniques that together better interpret our past.

NWAC will be held at the Red Lion Hotel Columbia Center in Kennewick, Washington.

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HOLOCENE GEOCHRONOLOGY AND ARCHAEOLOGY
AT CASCADE PASS, NORTHERN CASCADE RANGE,
WASHINGTON

Robert R. Mierendorf
National Park Service, Retired

Franklin F. Foit, Jr.
Washington State University



Edited by Darby C. Stapp
Journal of Northwest Anthropology Memoir 16

Journal of Northwest Anthropology Memoir 16

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“I’m going to have this book ready to share the next time I hear the shopworn assertion that “there’s no deposition or stratigraphy in the mountains, and besides, there’s really not much you can learn from alpine lithic scatters.” *Cascade Pass* is a nice illustration that even small, targeted excavations at high elevations have much to offer—there’s a tremendous amount we don’t know about peoples in the Wilderness, and this is a fine example of beginning to fill these information and perception gaps.

—Larry Todd

About the book

The *Journal of Northwest Anthropology Memoir 16* reports on archaeological investigations at Cascade Pass, a multi-component open site in Washington State on the divide between the Columbia River and Salish Sea. The research has established a site chronology spanning nearly 10,000 years based on volcanic ash layers (tephra) and dated carbon. *Memoir 16* brings to bear 30 years of research by Robert R. Mierendorf, who spent his career as an archaeologist at North Cascades National Park. To assist with the complexities of the numerous ash layers encountered beneath the surface, Bob enlisted the aid of his former Washington State University professor, Franklin F. Foit, Jr. The authors draw comparisons between archaeological signatures in components from the different time periods, which are then used to identify Holocene cultural trends and to assess the empirical fitness of two opposing views of Pass and travel usage.

Mierendorf and Foit’s work touches on a number of important contemporary issues that will be of interest to descendants of the peoples whose use is documented at Cascade Pass. It will also interest Indigenous audiences living in or near alpine environments, and researchers (especially archaeologists) around the world interested in use of alpine environments.

Coming Soon: *JONA* Memoir 17

Early Northwest Native Voices in Print—A Bibliographic Resource, by Robert E. Walls

Native-authored “literature” has been seriously neglected in the Northwest, though it has been addressed in most other regions of North America. This includes the publication of many genres of Native literature produced through alphabetic literacy and typesetting: boarding school publications, letters-to-the-editor and op-ed, entire Native produced newspapers, poetry, and quite a few booklets/pamphlets that detailed Native oral literature and customs. While Jacobs and Gunther and other Boasians were producing their ethnographic oeuvre, many of their Native consultants were off publishing on their own, though their work was almost always dismissed or ignored.

The basic purpose of *Memoir 17* is to demonstrate how Native people in the Northwest and Plateau used their written contributions to claim space in the public sphere, using the rhetorical sovereignty of the printed page to create an oppositional discourse. Through writing, Native authors were helping shape identities, negotiate politics of citizenship, contest federal and state policies, assert rights and title to ancient territories, challenge the authority of settler society, and interrupt white expectations of Indianness. And, of course, such writing intervened in various Boasian paradigms (of authenticity, for one) that essentialized the Indian as a premodern other defined by orality, for whom ‘writing’ was a corruption—uninteresting, incomplete, inauthentic.

EARLY NORTHWEST NATIVE VOICES IN PRINT— A BIBLIOGRAPHIC RESOURCE

Robert E. Walls

Edited by Darby C. Stapp

Journal of Northwest Anthropology Memoir 17

January 2019

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Wapato Valley Archaeological Project Reports

Edited by Kenneth M. Ames and Katie Henry

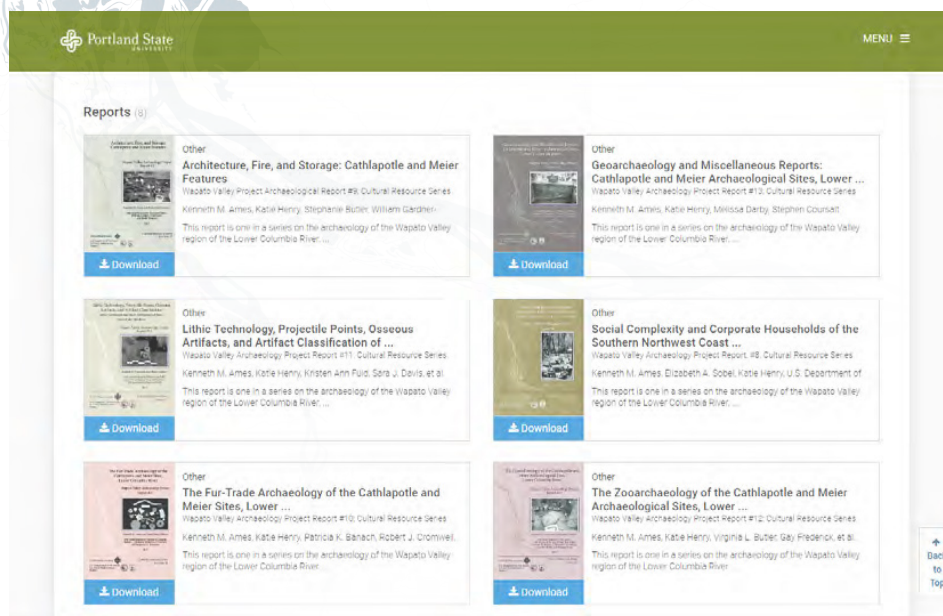
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For the first time since Portland State University Anthropology Department staff and students began exploring the Wapato Valley region of the Lower Columbia River in the 1990s, the myriad field reports, theses, and dissertations have been synthesized into a comprehensive series of reports.

Produced in partnership with the U.S. Fish and Wildlife Service as part of its Cultural Resource Series, these six Wapato Valley Archaeological Project Reports discuss aspects of the excavations and archaeology of two sites, the Meier site (35CO5) in Oregon and Cathlapotle (45CL1) on Ridgefield National Wildlife Refuge in Washington. The volumes address topics such as social complexity, trade, architecture, fire, lithic technology, zooarchaeology, and geoarchaeology. Most of the reports are revised and edited M.A. theses and Ph.D. dissertations but some contain previously unpublished/unavailable specialists' reports. The latter are generally descriptive with interpretation and discussion to follow later, but the intent is to make the data available. These reports represent the final versions of these documents, superseding any previous versions. Discussions and conclusions have been updated where appropriate. In some instances statistical analyses have been redone to accommodate new data or new understanding of the sites. Combined, these reports total over 3000 pages. That's why we are offering it in the most ecologically responsible and efficient format possible, a digital download:

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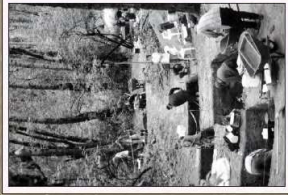
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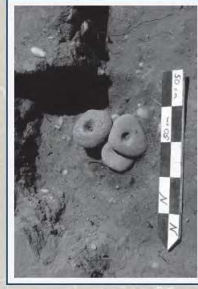
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Wapato Valley Archaeology Project
Report #13



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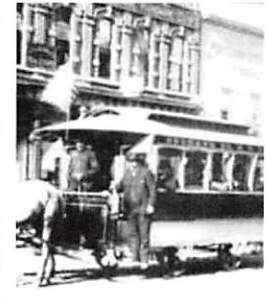
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Dean Lynn Briggs, Associate Dean and Department Chair Robert Sauders,
Ruth Galm, Jerry Galm, Kassahun Kebede, Julia Smith, Shelley Stickelmeyer,
Brent Ashton, Dan Meate, Craig Holstine, Freddy Vega

**And special thanks for all the hard work of Serena Borges, Michael Childress,
Jennifer Dahl, Melissa Fisher, Stan Gough, Jeff Johnson, LeAnn Knoles, Jamie
Litzkow, and Matthew Thomas**

FOURTH FLOOR

(Main Wing)

FOURTH FLOOR
COMSTOCK
ROOM
FIFTH FLOOR
CANNON HILL
ROOM

SEVENTH FLOOR

(Executive Tower)

PRESIDENTIAL SUITE

TRIUM LOBBY

FINCH
ROOM

RIVERSIDE
II

RIVERSIDE
I

CORBIN
ROOM

ROOFTOP
TERRACE

LOWER LEVEL

(Main Wing, first floor)

RIVERFRONT EXHIBIT HALL

TWELFTH FLOOR

(Parkside Tower)

Women's
Restroom

Men's
Restroom

SKYLINE BALLROOM

SKYLINE I

SKYLINE II

LOBBY LEVEL

(Main Wing, second floor)

WILLOW II

WILLOW I

CATERING &
BARQUET
OFFICES

Coat room

Convention Office

Men's
Restroom

Women's
Restroom

BALLROOM D

PRE-FUNCTION AREA

AUDUBON
ROOM

RIVERFRONT BALLROOM

MANITO
ROOM

BALLROOM
C

BALLROOM
B

BALLROOM
A

Conference Events and Meetings

Conference Registration (Conference registration is required for all conference events; single day registration and a limited number of banquet tickets may be purchased at the desk.)

Convention wing entrance lobby

Wednesday – April 12, 2017	5:00 p.m. – 8:00 p.m.
Thursday – April 12, 2017	7:00 a.m. – 5:00 p.m.
Friday – April 12, 2017	8:00 a.m. – 5:00 p.m.
Saturday – April 12, 2017	8:00 p.m. – 12:00 p.m.

(The registration desk is also the information desk, the lost and found, and the message enter)

Meetings:

Association of Oregon Archaeologists (AOA)

Thursday, April 12, 2017 3:40 – 5:00 p.m. (Comstock)

NWAC Business Meeting Lunch

Friday, April 13, 2017 12:00 – 1:30 p.m. (Willow 2)

Association of Washington Archaeologists (AWA)

Friday, April 13, 2017 5:00 – 7:00 p.m. (Audubon-Manito)

Conference Events and Meetings

Wednesday – April 12, 2017

Opening Reception 5:00 – 8:00 p.m. (hosted beer, wine and hors d'oeuvres)
Convention Wing Entrance Lobby/Prefunction area

Thursday – April 13, 2017

Student Luncheon and Career Fair 12:00 – 1:30 p.m.
Ballroom D

Conference Reception 5:00 - 7:00 p.m. (hosted beer, wine and hors d'oeuvres)
Skyline Ballroom (Twelfth floor, Entrance lobby elevators)

AWA Pub Crawl 6:00 – 10:00 p.m.
(Sponsored by the Association for Washington Archaeology (AWA))
(Participants must be 21 years of age or older)
Leaves from Convention Wing entrance lobby

Friday – April 14, 2017

Banquet Reception 6:00 – 7:00 p.m. (no host bars)
(Skyline Ballroom)
Conference Banquet 7: 00 – 9:00 p.m. (tickets required)

Banquet Speaker: Dr. Robert Sutton, Chief Historian, National Park Service (retired 2016)
“What The Past Tells Us About The Future Of Cultural Resource Management”

Day-by-day

Thursday Morning

<u>Session</u>	<u>Room</u>	<u>Time</u>	<u>Type</u>
1 Paleoindian Archaeology	Ballroom A	9:20-12:00	General
2 Site Location	Audubon-Manito	8:40-10:40	General
3 Making a Difference in Community Colleges	Audubon-Manito	10:40-12:00	Symposium
4 ODOT-WSDOT Transportation Symposium	Ballroom B	9:00-11:40	Symposium
5 Discourse and Its Effects: Gender, Health, and Race	Corbin	8:50-10:00	Symposium
6 Medical Anthropology	Corbin	10:20-12:00	General
7 Past and Current Reality, Future Vision	Comstock	9:00-11:00	General
8 Opportunities for Archaeological Societies in Legislative Protection of Cultural Resources	Comstock	11:00-12:00	Discussion Panel
Poster Session A	Willow 1	10:00-12:00	Posters

Thursday Afternoon

<u>Session</u>	<u>Room</u>	<u>Time</u>	<u>Type</u>
9 Supporting Native American Self-Determination – Papers in Honor of Lawr Salo’s Career and Contributions.	Ballroom A	1:30-4:50	Symposium
10 Community Colleges continued	Audubon-Manito	1:30-4:30	General
11 Historic Archaeology	Ballroom B	1:30-3:10	General
12 Public Archaeology	Ballroom B	3:30-4:30	General
12A Refugees	Ballroom C	1:30-2:10	General
12B Public Forum: Panel Discussion on Ethnographic Research with Pacific Northwest Tribes	Ballroom C	2:30-4:30	Discussion
13 Working Side-by-Side: Reflections on Collaborative Anthropology and Archaeology	Corbin	1:30-4:10	Symposium
14 Archaeology Surveys	Comstock	1:30-3:40	General
Posters Session B	Willow 1	2:00-4:00	Posters

Day-by-day

Friday Morning

<u>Sessions</u>	<u>Room</u>	<u>Time</u>	<u>Type</u>
15 Archaeology Elsewhere	Audubon-Manito	9:00-9:40	General
16 CACOA (Cool A** Central Oregon Archaeology)	Audubon-Manito	9:40-12:00	Symposium
17 Chemical Analyses of Residues	Ballroom A	9:00-10:00	General
18 Global Applications of Chemical Analysis in Archaeology	Ballroom A	10:40-12:00	Symposium
19 Topics in Cultural Anthropology	Ballroom B	9:00-10:20	General
20 Stories from the Past: Presentations in Honor of Priscilla Wegars, University of Idaho	Ballroom B	10:40-12:00	Symposium
21 Topics in Medical Anthropology	Corbin	9:00-11:20	Symposium
22 Ameliorants	Corbin	11:20-12:00	General
23 Artifact Analysis	Comstock	9:20-11:40	General
Posters Session C	Willow 1	10:00-12:00	Posters

Friday Afternoon

<u>Sessions</u>	<u>Room</u>	<u>Time</u>	<u>Type</u>
24 Mitigating for Cultural Resource Loss in the Real World, Examples from The Confederated Tribes of the Colville Reservation (CCT) History/Archaeology Program	Audubon-Manito	1:30-5:00	Symposium
25 Chemical Analysis Symposium continued	Ballroom A	1:30-4:30	Symposium
26 Priscilla Wegars symposium continued	Ballroom B	1:30-4:30	Symposium
27 Data Recovery at Anderson Creek, a Hunter-Fisher-Gatherer Camp on Sinclair Inlet, Puget Sound	Corbin	1:30-2:50	Symposium

Day-by-day

Friday Afternoon continued

<u>Sessions</u>	<u>Room</u>	<u>Time</u>	<u>Type</u>
28 Historical Forts Archaeology	Corbin	3:10-4:50	General
29 Topics in Physical Anthropology	Comstock	1:30-5:00	Symposium
Poster Session D	Willow 1	2:00-4:00	Posters

Saturday Morning

<u>Sessions</u>	<u>Room</u>	<u>Time</u>	<u>Type</u>
30 Investigating The Dittman Biface Cache (35ma375): Stewardship, Collaboration, Consultation, and Public Outreach Associated with The First Documented Biface Cache in The Willamette Valley	Audubon-Manito	9:00-12:00	Symposium
31 Spokane's Riverfront Park Cultural Resource Management and Beyond	Ballroom A	9:00-12:00	Symposium
32 Historic Archaeology	Ballroom B	9:00-11:40	General
34 Archaeology Overview	Corbin	10:20-11:20	General
35 Native and Non-Native Voices	Comstock	9:40-11:40	General

Thursday Morning Sessions

Thursday, April 13, 2017

Session 1: *Paleoindian Archaeology*

(Ballroom A)

- 9:20 **Are There Pre-Clovis Mammoth Sites in the Columbia Plateau?** Lee Sappington
- 9:40 **A Paleoindian Archaeological Assemblage from a Late Pleistocene Flood Deposit Derived from the Last Channeled Scabland Floods Across the Columbia Basin in the Horse Heaven Hills, Benton County, Washington** David G. Rice
- 10:00 **Radiocarbon Dating at the Paisley Caves** Dennis L. Jenkins
- 10:20 **Break**
- 10:40 **Identification of Faunal Remains Recovered from Coprolites in Paisley Cave 2**
R-Patrick D. Cromwell
- 11:00 **Archaeoparasitology of the Paisley Caves** Brianna Kendrick
- 11:20 **Revisiting the Old Cordilleran Tradition in the Puget Sound: Reanalysis of Bifaces from the Olcott Type Site** James W. Brown and James C. Chatters
- 11:40 **CAVEAT EMPTOR: A History and Technological Analysis of the Rutz Clovis Point**
Daniel Meate and Scott Williams

Session 2: *Site Location*

(Audubon-Manito)

- 8:40 **In Search of Mounds: Development of a LiDAR and Remote Sensing Predictive Model of the Calapooia Watershed, Oregon** Tia R. Cody and Shelby Anderson
- 9:00 **Using LiDAR Data for Archaeological Recon: Tips and Tricks** Sara E. Palmer
- 9:20 **Remote Sensing at the South Flying Goose Site** John T. Dorwin
- 9:40 **Refining an Automated Model for Basic Landform Classification** Josh Moss
- 10:00 **Wherever They're Naming a "There" of Theirs: Native Place Names, Landscape Features , and Refining Archaeological Expectations in a Sea of "High Risk"** Maurice Major
- 10:20 **Western Washington Shell Midden Chronology: Demographic Information**
Gary Wessen, Thomas J. Brown
- 10:40 **Western Washington Shell Midden Chronology: Antiquity**
- 11:00 **Break**

Session 3: *Symposium. Making A Difference in Community Colleges*

Organizer: Thomas Murphy

(Audubon-Manito)

Community colleges are strategically positioned to make a difference for students and community. Community-based missions with structural linkages to local governmental, tribal, social, and economic institutions

Thursday Morning Sessions

create feedback loops conducive to substantive impacts on a local scale. This session highlights some of the work in anthropology departments at community colleges across the state of Washington. Anthropology students and instructors in community colleges cross-disciplinary and sub-disciplinary boundaries as they meet real challenges in local communities. Presenters highlight examples of archaeological projects that connect with cultural, linguistic, and biological anthropology as well as with history and engineering. Ethnographic and biological fieldwork complement surveys and excavations of cultural resources. Many of the featured projects include service-learning and community-based methodologies that involve the subjects of anthropology in the design, implementation, and analysis of both research and pedagogy.

11:20 **Making a Difference to Ours Students: Addressing a Variety of Wants and Needs in the Classroom** Jennifer Zovar

11:40 **The Challenges of Teaching Human Evolution at a Community College**
Mark Taff, E.F. Aranyosi

(This symposium will continue in this room at 1:30 as Session 10)

Session 4: **Symposium. *ODOT-WSDOT Transportation Symposium***

Organizer: Scott Williams

(Ballroom B)

Transportation projects touch upon all aspects of cultural resources management and result in large amounts of public dollars spent on management and historic preservation. Staff from both Oregon and Washington State Departments of Transportation come together again for a session to discuss recent projects and developing issues in the field of cultural resources management for transportation projects.

9:00 **The East Trent Avenue Bridge: 5 Spans and 107 Years on the Spokane River** Craig Holstine

9:20 **One Of The Most Disturbed Spots In All Of Spokane: Lessons From A Buried Cemetery**
Dean Weaver

9:40 **"It Was Necessary to Destroy the Village in Order to Save It": Winning The Battle but Losing the War with the McMillin Bridge Project** Scott S. Williams

10:00 **Drive It 'Til the Guardrails Fall Off: An Overview of WSDOT's Historic Bridges Program**
Stephen Austin

10:20 **Break Thursday Morning Sessions**

10:40 **Revisiting Chetlesenten Village (the Pistol River Site, 35CU61) on the Oregon Coast**
Thomas J Connolly

11:00 **Coyote, the Sisters, and the Falling Rocks** Dean Weaver

11:20 **CRM Issues in Transportation Projects: Panel Discussion:**

Panelists: Dennis Wardlaw, DAHP; Tom Connolly, UO; Dean Weaver, WSDOT; Scott Williams, WSDOT; Craig Holstine, WSDOT; Stephen Austin, WSDOT

Thursday Morning Sessions

Session 5: **Symposium. *Discourse and Its Effects: Gender, Health, and Race***

Organizer: J. Hope Amason

(Corbin)

Symposium Abstract: This panel broadly explores the power of discourse in North America, how it shapes our assumptions, practices, and institutions. Adam Westermann critically examines how heteronormative assumptions about gender become persistently inflected throughout U.S. dating culture, despite social changes that have called into question naturalizing discourses about sex, gender, and sexuality. Discourse is also at the center of Erika King's paper, which provides an analysis of discourse about Dengue in a Mayan community. King's interlocutors—clinical workers and patients—discuss their ideas about disease in ways that reveal their entanglements with traditional and Western medicine, as well as their perception people in the U.S. Through detailed examples of structural institutional, and interpersonal violence she U.S. Collectively these papers help us gain insight into the complexities of structure and agency—and most importantly how individuals internalize and experience the impacts of dominant ideas about gender, health, and race.

8:50 **Introduction**

9:00 **“Lava, Tapa, Tira, Voltea”: An Analysis of Discourse and Practice Surrounding Mosquito-born Illness in Pisté, Yucatán** Erika Rae King

9:20 **The Means, Moment, and Materialization of Gender in Dating** Adam Westerman

9:40 **Racial Injustice: A Critique of the Colonial Perspective and Approach to Mass Incarceration and Violence** Autumn Adams

10:00 **Break**

Session 6: ***Medical Anthropology***

(Corbin)

10:20 **Exploring Age-Set Determined Domains of Plant Use in a Highland Maasai Village**
Cynthiann Heckelsmiller

10:40 **Somatic Shockings Across Ailment Narratives: Lessons from the Sacred Geographies of an Indigenous Spirit World** Luke Kernan

11:00 **Posttraumatic Growth in Nicaragua and El Salvador** Hugo De Burgos

11:20 **The Role of Understanding Language (Particular Underlying Illness Metaphors) in Global Health: A Case Study from HIV and Aids Prevention in Nepal** David Beine

11:40 **Complicated Autonomies: Disability, Family, and Medical Decision Making** Shannon Meyer

Session 7: ***Past and Current Reality, Future Vision***

(Comstock)

8:40 **Peasant Struggles for the Commons** Frederick Strange

Thursday Morning Sessions

- 9:00 **The Ordeal and Redemption of Christina Geisel and Mary Harris: The Rogue River War and Oregon's Own Captivity Narrative** Mark Tveskov, Chelsea Rose
- 9:20 **Staring Down the Hoarde: Resilience Against the Alt-Right Movement** Drew Brutzman
- 9:40 **Superstructural Fluctuations: The Cult of Kek, Memes, and the 2017 Presidential Election** Kirk Packwood
- 10:00 **Invisible: Homeless in Spokane** Aaron Bocook
- 10:20 **Capitalism in the Sky--The Jetson's and the Culture of the Future** Stacy Warren
- 10:40 **Break**

Session 8: **Discussion Panel. *Opportunities for Archaeological Societies in Legislative Protection of Cultural Resources*** Organizer: Christopher Noll
(Comstock)

11:00 Cultural resource protection is one of the primary missions of most, if not all, archaeological organizations in the Pacific Northwest. The various states in the region have varying levels of legal protection for archaeological and historical sites. Federal protective legislation for heritage is at risk of being eroded under the current Presidential administration. This panel focuses on the role and potential actions of state and regional archaeological societies that could help safeguard the protections in place for cultural resources. Panelists from several societies discuss the types of legislative involvement that each society has experienced, successes and failures in legal protection of archaeological materials, and strategies for protecting archaeological sites in the current political climate. This symposium is a discussion panel. The participating organizations include: Idaho Archaeological Society, Association of Oregon Archaeologists, Association for Washington Archaeology, Northwest Anthropological Association

Posters Poster Session A

10:00-12:00 (Willow 1)

- 1 **A Database Collection Form for Clay Smoking Pipes** Diane Zentgraf
- 2 **A Clino-Cladistic Look at Pull & Push Tab Patents ca. 1950-1980** William Schroeder
- 3 **The Tools of James Castle's Art** Lily Loucks, Saffron Kruse, Vincent Wilson
- 4 **Recognizing Ethnicity at Historic Placer Mining Sites in the Pacific Northwest**
Jamie Litzkow and Lindsey M. Evenson
- 5 **The Foodways of the Cyrus-Jacobs House and the Ubuaga Boarding House in Boise, Idaho** Allison Fashing and Darcy Wayman
- 6 **A Comparison of Alcohol Consumption Habits at Historic Fort Boise**
Cynthia Hannold and Sam Raymond
- 7 **Connectors to the Past: Two Historic Bridges in Southwestern Washington** Dana Holschuh
- 8 **Last Call: End Days and Final Detritus of the Hotel Butler Historic Debris at Boeing Field, King County, Washington** Eric D. Anderson, Jason B. Cooper, Emily R. Scott

- 9 **The Unknown History of Western Washington Logging Camps: St. Paul and Tacoma Lumber Company's Camp #5 ca. 1920-1950** Kayley Bass
- 10 **The Limits of Material Culture for Determination of Ethnicity in Eastern Oregon Placer Mines** Don Hann
- 11 **Reassessing the Genus Homo on the Island of Java Through Virtual Reconstruction**
Donald E. Tyler, Ryan P. Harrod, Jordyn Jones, Ted Parsons
- 12 **A Captive Ape Society: Social Structure and Dominance Hierarchy Analyses at Chimpanzee Sanctuary Northwest** Jake A. Funkhouser, Jessica A. Mayhew, John B.

Thursday Afternoon Sessions

Session 9: **Symposium. *Supporting Native American Self-Determination – Papers in Honor of Lawr Salo's Career and Contributions.***

Organizer: Aaron Naumann

(Ballroom A)

Lawr Salo has spent the last forty plus years working as a cultural resource manager for the Seattle-District Army Corps of Engineers (Corps). Throughout his career, Mr. Salo has honored the commitment of the U.S. Government to assist with building tribal capacity and respecting tribal self-determination. He has been an instrumental federal voice championing for Native American rights within the Corp and other federal agencies. He has worked to ensure Native American tribes were not sidelined by such complex entities as the Federal Columbia River Power System (FCRPS), or forgotten during the process of hydroelectric power facilities upgrading in the 1970-80s. The testimony to these efforts can be witnessed through the strong partnerships he has helped forge between the Seattle-District Corps and the Coeur d'Alene Tribe, Confederated Salish & Kootenai Tribes, Confederated Tribes of the Colville Reservation, and the Kalispel Tribe of Indians. We would like to take this time to thank Mr. Salo for all of his hard work and dedication, and hope you will too by attending this session. Lastly, please note that there will be an open jam session and reception to follow. Details will be announced at the meeting, but please bring your own instrument if you wish to jam out with Lawr!

- 1:30 **Introduction**
- 1:50 **Intro to Tribal Sovereignty, Capacity Building and supporting Native American Self-Determination thru Cultural Resource Management** Aaron Naumann
- 2:10 **What's Goin' On -- Example from the Federal Columbia River Power System Projects**
Lawr Salo
- 2:30 **Presentation by the Coeur d'Alene Tribe** Jill Wagner
- 2:50 **Chief Joseph Dam Project and Its Role in Helping Build the CCT H/A Program**
Jacqueline Cook
- 3:10 **Assuring that the Public Good is Sustainably Served in Public Archaeology** Kevin Lyons
- 3:30 **Break**
- 3:50 **Reflections on Lawr's Career** David Rice

Thursday Afternoon Sessions

- 4:10 **Reflections on Lawr's Career** David Munsell
- 4:30 **General Discussion** Guy Moura and Dennis Lewarch
- Session 10: **Community Colleges Symposium** continued
(Audubon-Manito)
- 1:30 **The Yama Project: A Multidisciplinary Analysis of a Transnational Community**
- 1:50 **Little Swamp Creek Site: Exposing an Unpleasant History through Fried Chicken**
Neal Endascott, Luke Jones
- 2:10 **All of Our Relations: Indigenizing Bioanthropology and Archaeology** Thomas Murphy
- 2:30 **A Survey of Fish and Wildlife: Japanese and Big Gulch 2016** Skyler Elmstrom
- 2:50 **The Role of Indigenous Knowledge in Observation and Service Learning** Cali Drake
- 3:10 **Break Thursday Afternoon Sessions**
- 3:30 **Motivations and Incentives for Installation of Rain Gardens: An Ethnographic Assessment in the Perrinville Creek Watershed** Sahayra Barojas-Tapia
- 3:50 **Community and Conflict: Tales of My College Career** Jane Hutchinson
- 4:10 **Discussion** Dale Croes
- Session 11: **Historic Archaeology**
(Ballroom B)
- 1:30 **Palouse Falls – Almost Sibling to Snoqualmie Falls Hydro** Charles T. Luttrell
- 1:50 **The Yama Project: Diverse Partnership and Community College Students Combine for Archaeological Success** David R. Davis
- 2:10 **Trestles and Tramways: Artifact Biographies from Monte Cristo, a Late 19th–Century Hard-Rock Mining Town Located in Washington's Cascade Range** Aubrey M. Steingraber
- 2:30 **The Coins of Kam Wuh Chung, John Day, Oregon: Persistence of Chinese Culture Reflected Through Non-Monetary Uses of Chinese Coins** James. C. Bard
- 2:50 **Introducing the Chinese Material Culture Digital Database!**
Chelsea Rose, Sarah Heffner, Shana Sandor, Mary Maniery
- 3:10 **Break**
- Session 12: **Public Archaeology**
(Ballroom B)
- 3:30 **Restoring the Rivoli: The Public Archaeology of a Historic Theatre in Pendelton, Oregon**
Cody Schwendiman, Rory Becker, Amanda Welch
- 3:50 **The Lake Roosevelt Partnership: Institutional Collaboration and a Smartphone App**
Larry Cebula, Brandon Cadwell
- 4:10 **Looking Back, Looking Forward: Notions of Heritage, Stewardship, and Sustainability Among Southern Oregon Farmers and Ranchers** Maureen Flanagan Battistella

Thursday Afternoon Sessions

Session 12A: *Refugees*

(Corbin)

1:30 **Gender and Generations Among Ethiopian Diaspora in the Washington, DC, Metropolitan Area** Kassahun Kebede

1:50 **“Humanity Is Wonderful, If Only I Could Encounter Some”: Perspectives of the South Asian Economic Diaspora in the Southern Mediterranean** Matt Husain

2:10 **Break**

Session 12B *Public Forum: 2017 Northwest Anthropological Conference: Panel Discussion on Ethnographic Research with Pacific Northwest Tribes*

Organizer: John Pouley. Participants: John Pouley, Briece Edwards, Daniel Boxberger, Kevin Cannell, Sara Gonzalez, Guy Moura, Scott Williams, Brandon Reynon, Josh Wisniewski, Alan Marshall, Jennifer Engum, Joanne Taylor

(Ballroom C)

2:30 This session will highlight the importance of ethnographic research with Tribes in the Pacific Northwest, and to show how the Federal compliance process can generate ethnographic work. Panelists will include Federal Agencies who fund ethnographic research, academicians who work with regional Tribes, and representatives from Tribal cultural resource programs. We will discuss some of the differences between academically driven ethnography and compliance ethnography, both through consultants and research done by Tribes. Compliance ethnographic work highlights the living culture of Tribes in the Pacific Northwest, exemplified by issues such as: cultural adaptation to a new riverine ecology; restricted use of traditional homelands to hunt and gather culturally significant plants; the complex dynamics of access to salmon and salmon fishing; and many more. The importance of ethnographic research, specifically related to Traditional Cultural Properties, is increasingly acknowledged in management documents generated by land-managing agencies.

Session 13: *Symposium. Working Side-by-Side: Reflections on Collaborative Anthropology and Archaeology*

Organizer: Jordan Levy

(Corbin)

This session brings together a diverse group of scholars who are on the verge, or in the midst, of a collaborative project – in both sociocultural and archaeological arenas. While collaborations of some kind have long been part of anthropological work; at the same time “collaboration” has arguably become more ambiguous in meaning. Among whom are anthropologists collaborating and why? How exactly does this happen? Our panel takes as its starting point the ongoing need for anthropologists to involve local communities in research that affects them, and then asks what benefits, if any, local communities have to gain from our projects – and who determines the methods, theoretical

Thursday Afternoon Sessions

loci, and interpretation of data in the research and dissemination process? We aim to explore the variability of “collaboration” and the usefulness of the term itself, while asking if it is ever misused, as it gains popularity in the current literature on applied, engaged, and public anthropology. Where does one draw the line between “collaboration” and “imposition”? What are some of the best practices in moving forward with a community-based project in our current historical conjuncture? Panelists will be asked to reflect on these dynamics in relation to their diverse projects – ranging from Colville Indian Reservation environmental regulations; to inter-ethnic marriage on San Juan Island; to lessons from the Makah and the Ozette site; to efforts toward de-colonization; to how we approach teaching place-based applied anthropology

1:30 **Introduction**

1:50 **Efforts of Environmental Justice and Holistic Regulation on the Colville Indian Reservation**
Amelia Marchand

2:10 **Colonization and Collaboration: Archaeological Research at the Roche Harbor Homestead, San Juan Island** Georgia Rae Abrams

2:30 **Conscientious Collaboration: Archaeological approaches as inspired by the Makah**
Paris Franklin

2:50 **The Tale of Two Cities** Kim Richards

3:10 **Break**

3:30 **Cemetery, Sport Fishing, Recreation, Hydropower, Archaeology... Respect** Brenda Covington

3:50 **Teaching Applied Anthropology in The Era of Donald Trump: Reflections on Collaborative Research with the Washington Fair Trade Coalition** Jordan Levy

4:10 **Discussion**

Session 14: *Archaeology Surveys*
(Comstock)

1:30 **Revisiting Eligibility Trends of Archaeological Sites in Oregon 2012-2016: A Follow-up to the 2012 NWAC** John Pouley, Matthew Diederich

1:50 **Broadening the Focus: A Look at the Paleoamerican Surface Assemblage at Rimrock Draw Rockshelter (35HA3855) in Relation to the Burns BLM District at Large**
Patrick O’Grady, Scott Thomas, Carolyn Temple

2:10 **An Overview of the Pre-Contact Archeology of the Lochsa River, North Central Idaho**
Bryce Danner

2:30 **Precontact Land-Use in the Vicinity of Dworshak Reservoir** Paul S. Solimano

2:50 **Mapping Settlements and Landscapes Along the Mainstem Columbia River in Central Washington Through Aerial Imagery and Survey** Julia Furlong

Thursday Afternoon Sessions

- 3:10 **Federal Columbia River Power System Cultural Resource Program: Harnessing Power and Preserving Cultural Resources for the Future**
Jennifer Bertolani, Celia Moret-Ferguson, Sunshine Schmidt
- 3:30 **Break**
- 3:40 **Association of Oregon Archaeologists (AOA) Business Meeting**

Posters Poster Session B

2:00-4:00 (Willow 1)

- 1 **A Cross-Cultural Analysis of How Children Learn About Witchcraft and Sorcery**
Roxanna Jane King
- 2 **Sustainable Tourism in Costa Rica: Aligning Tourists' Interests with Local Development**
Jessica A. Mylan
- 3 **Effects of Reproductive Hormones on Pregnancy Related Sickness in Rural Bangladeshi Women** Anwesha Pan
- 4 **La Leyenda de Yobi, el Zorro con Cinco Colas/Emotion in Translation: A Humanistic Study of Translation Korean to Spanish** Lidia Velasco
- 5 **Preserving Spokane's Progressive Heritage: Mitigation of the City's Historic Trolley Track System** Steven Dampf
- 6 **Developing Cost-Effective Event-Based Diaries for Low-Literacy Populations**
Baishakhi Basu
- 7 **Cultural Practices as Contributing Attributes for Landscape Modeling: A Case Study in Tillamook Bay** Briece Edwards, Jessica Curteman, Jon Krier
- 8 **Paleolandforms and Landuse Dynamics: Regional Analysis Using Multiproxy Methods in the Pend Oreille Valley, WA**
Melissa Goodmaa Elgar, Molly Carney, Elizabeth Truman, William J. Damitio, Emily Whistler, Kevin Lyons
- 9 **Minding the Gender Gap: Publishing and Conference Trends in Western North America**
Tiffany Fulkerson, Shannon Tushingham
- 10 **I Forge On: Walkability and Experiencing Early 20th Century Urban Life Through Spokane's Expert Smithy** Hannah Ferguson, Ashley M. Morton
- 11 **Effects of Famine on Deciduous Tooth Emergence in Rural Bangladeshi Children**
Darryl Holman
- 12 **Cultural Affiliation for Tilcaminsh Uytpama Natitayt, the Ancient One (AKA Kennewick Man)**
Lourdes Henebry-Deleon, Angela Neller, Kate Valdez, Jackie Cook, Teara Farrow-Ferman, Robert Taylor

Friday Morning Sessions

Friday, April 14, 2017

Session 15: *Archaeology Elsewhere*

(Audubon-Manito)

9:00 **Depopulation of the Central Mesa Verde Region: Archaeology with Future Implications**

Andrew Gillreath-Brown

9:20 **Obsidian Industries and Exchange Spheres of Northwest Nicaragua: A Typological and Geochemical Study from the Department of Chinandega, Nicaragua** Justin B. Colon

Session 16: **Symposium. CACOA (Cool A** Central Oregon Archaeology)**

Organizer: Sara J. Davis

(Audubon-Manito)

Recent cultural resource investigations in central Oregon have provided opportunities to expand our understanding of the region throughout the Holocene. This symposium pulls together data from multiple locales to provide new insight into a variety of themes. Themes explored in this symposium include deeply buried Early Holocene occupations, task specific sites and a village site in the uplands, obsidian procurement in the Middle and Late Holocene, early evidence of wapato and tobacco use, sediment accumulation and its relationship to archaeological sites, and methodology for identifying archaeological sites and features. This symposium provides new information on the variability of human occupation of Central Oregon.

9:40 **Temporal Variation in Use of the Uplands in South-Central Oregon** Bradley Bowden

10:00 **Spatial Variability in Obsidian Procurement Patterns from Christmas Valley to Warner Rim**

Stephen C. Hamilton

10:20 **Break**

10:40 **Wada, Wapato, and Western Stemmed: An Early Holocene Site near Burns, Oregon**

Daniel Gilmour, David Ellis

11:00 **An Upland Pithouse village near Maupin, Oregon** Sara J. Davis, Michele Punke

11:20 **Holocene-Age Archaeological Site Potential and Preservation in Sediment Traps of Central Oregon** Michele Punke

11:40 **Discussion**

Session 17: *Chemical Analyses of Residues*

(Ballroom A)

9:00 **Chemical Analysis of Mysterious Finds** Jenna Lecates, Ray Von Wandruszka

9:20 **Analysis of Old Pharmaceuticals** Morgan Spraul, Ray Von Wandruszka

9:40 **Historical Pigments** Danielle Saurette, Ray Von Wandruszka

10:00 **Break**

Friday Morning Sessions

Session 18: **Symposium. *Global Applications of Chemical Analysis in Archaeology***

Organizer: Sydney Hanson

(Ballroom A)

Archaeometric techniques are broadening the frontiers of archaeological science and adding substantially to our knowledge of past human behavior. The participants of this session present research involving residue and isotopic methodologies in a variety of contexts and locations. Residue analysis is the study of non-artifactual traces left by humans: blood, alcohol, milk, nicotine, and other substances. There are many archaeometric techniques aimed at identifying residues, many of which are currently in development. Isotopic analysis concerns itself with the stable isotopes found within human and animal bones. Isotopic analysis can answer questions about past subsistence, mobility, or environments.

10:40 **Introduction**

11:00 **TExtraction of Rice Residues from Experimental Potsherds**

Sydney Hanson, Shannon Tushingham, Korey Brownstein, David R. Gang

11:20 **An Isotopic Analysis of the Early Historic Fauna Recovered at the Collier Lodge Site (12PR36), Porter County, Indiana** Dominic Bush

11:40 **Talking Turkeys: Stable Isotope Analysis of Turkeys from Postclassic Mayapán**

Lori Phillips, Erin Thornton, Kitty Emery, Carlos Peraza-Lope

(This symposium will continue in this room at 1:30 as Session 25)

Session 19: ***Topics in Cultural Anthropology***

(Ballroom B)

9:00 **COUPON and OFTEN: Changing Patterns in American Speech** Edwin Battistella

9:20 **Cultural and Social Biases in Educational Access for LGBTQ Public School Students**

Hannah MacIntyre

9:40 **Research in Identity and Video Games** Olivia "Morgan" Manusia

10:00 **"Asktransgender": A Digital Ethnography of Common Questions and Daily Challenges**

Related to Transgender Communities and Identity Processes Cambria Sullivan, Kerensa Allison

10:20 **Break**

Session 20 **Symposium. *Stories from the Past: Presentations in Honor of Priscilla Wegars, University of Idaho***

Organizer: Mary Anne Davis

(Ballroom B)

Developing stories about the past based on archaeological resources is a common goal of archaeologists regardless of whether you favor pre-contact, historical, terrestrial, aquatic, or any combination of these in your archaeological research. This symposium focusses on historical archaeology to honor the long and

Friday Morning Sessions

distinguished career of Priscilla Wegars, founder of the Asian American Comparative Collection at the University of Idaho.

The topics are diverse but each story is important to our understanding of the past.

- 10:40 ***Idaho Archaeologists in Review: Revisiting The Past*** Mary Anne Davis
11:00 ***The Search for Relevance: Archaeology in Public in Idaho*** Mark Warner
11:20 ***The Art of Consumption: A Faunal and Glass Analysis from The James Castle House Archaeological Project*** Meredith Breen
11:40 ***James Castle House Archaeology Project: Public Place in a Small Work Space***
Mary Petrich-Guy, Renae Campbell

(This symposium will continue in this room at 1:30 as Session 26)

Session 21 **Symposium. *Topics in Medical Anthropology***

Organizer: Kassahun Kebede

(Corbin)

The theme of the session, topics in medical anthropology, focuses on conversations and debates surrounding structural violence. The papers analyze how structural factors affect health and wellbeing of people around the world. As Paul Farmer, the doyen of medical anthropology, stated structural factors are social arrangements that put individuals in harm's way. The arrangements are structural because their embeddedness in the political and economic systems of our social world. Structural factors are best described as violence and violent because they are corporeally real and cause injury to people (Farmer et al. 2006). Certainly, structural factors are beyond dispensing prescriptions or providing temporary aids to marginalized areas and individuals. It is about understanding and ameliorating large-scale social structures – differences of power, wealth, privilege and health that are unfair, undesirable and discriminatory. The papers in this panel attend to the following questions: How are people embroiled in culturally, economically and politically-imposed suffering? How do the actions of government and other powerful institutions produce and reproduce unnecessary suffering? How do decisions made at the family level undermine the lives of children? In what ways marginalized groups respond to structural factors that threaten their health? How do everyday forms of symbolic violence endanger the health of vulnerable people such as the disabled, LGBT+, etc.? Taken together, these papers make significant contributions to the existing literature on structural violence in the United States.

- 9:00 **Introduction**
9:20 **The Effects of Perceived Discrimination on LGBT+ Latinx Individuals in the United States.**
Matthew Thomas
9:40 **Commercial Sex Workers and the HIV/AIDS Epidemic** Holly Johnson
10:00 **Forced Sterilization in Australia and the Question of Human Rights** Tabitha Ormaechea
10:20 **Break**
10:40 **Mothers Perspectives and Dilemmas Regarding Vaccines in Spokane** Courtney Carroll
11:00 **The Role of Arc of Spokane in Disability Advocacy** Shawn Watson

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Session 22: *Ameliorants*

(Corbin)

- 11:20 **Economic Growth of the Legal Cannabis Market in the inland Northwest** Elise Cuentas
11:40 **Terroir: From Wine to Coffee** Julia Smith

Session 23: *Artifact Analysis*

(Comstock)

Dale Croes

- 9:20 **N=I: The Power of Charismatic Artifacts** Thomas Ostrander
9:40 **Indian Rock Obsidian: Preliminary Investigation of Toolstone Sources in the Simcoe Mountains**
Eric Gleason, Rick McClure, Megan Wonderly
10:00 **Reading Flakes and Flake Scars** Terry L. Ozbun, John L. Fagan
10:20 **Paradigmatic Lithic Classification at Different Site Types on the Slopes of Mount Rainier**
Caitlin Limberg
10:40 **Break**
11:00 **Comparing Stemmed Projectile Point Technology Among Several Early Southern Plateau Sites**
Loren G. Davis, Alexander J. Nyers, Daniel W. Bean
11:20 **Pottery at Skull Creek Dunes, and Its Implications for Pottery Tradition in Southwestern Oregon**
Makaela O'Rourke, Scott Thomas
11:40 **Like a Moss: Exploring Paleoethnobotanical Sample Size and Return Rates in Cultural Resource Management** Molly Carney, Sydney Hanson

Posters Poster Session C

10:00-12:00 (Willow I)

- 1 **Low Density Doesn't Mean Low Value: Evaluating the Significance of 10CR179, a Low Density Site in the Mountains of South-Central Idaho** Christopher Noll
2. **Quartzite Artifact Analysis at Woodstock Farm, Chuckanut Bay, WA** MacKenzie Hughes
- 3 **The Gundlach Collection: A Large Sample of Projectile Points from the Upper Pend Oreille Watershed** Jeffrey Cortlund Johnson
- 4 **Analysis of Lithics from Bone Processing and Lithic Tool Production Units at Woodstock Farm (45WH0055)** Jori Hurst, Dessa Meehan
- 5 **The History of Lake Warner and the Clovis and Western Stemmed Point Lithic Assemblages Left Along Its Shore** Teresa Wriston, Geoffrey M. Smith
- 6 **Lithic Debitage Analysis of the Kelly Forks Work Center Site (10CW34)** Daniel J. Polito
- 7 **Latah Mammoth Radiocarbon and DNA Analysis** Stan Gough, Thomas W. Stafford, Jr., Emil Karpinski, Charles T. Luttrell, Jerry R. Galm, Hendrick Poinar

- 8 **Correlating Fire Histories and Demographic Signatures on Vancouver Island: A Pilot Study**
Thomas J. Brown, Jonathan Duelks, Kelly M. Derr
- 9 **Above It All: Aerial Imagery Support of Archaeological Research in the Fort Rock Basin, Oregon** Pat Luther, Thomas Marsh
- 10 **Ground Penetrating Radar at 45PO153: Stratigraphic Analysis** Kendra Maroney
- 11 **Utilization of Multibeam Sonar Data for Modeling Submerged Areas of Archaeological Interest**
Jon Krier, Kathryn Nuss
- 12 **Omak Bell Site Excavations** Adam N. Rorabaugh
- 13 **Results of the 2016 Bungalow Dance Hall Excavations** Adam N. Rorabaugh

Friday Afternoon Sessions

Session 24: **Symposium. *Mitigating for Cultural Resource Loss in the Real World, Examples from The Confederated Tribes of the Colville Reservation (CCT) History/Archaeology Program***
Organizers: Aaron J. Naumann And Jacqueline M. Cook
(*Audubon-Manito*)

Mitigating cultural resource loss is complex and largely dependent on the type(s) of cultural resource(s) being adversely affected and those involved in the process. Most cultural resource specialists have been exposed to construction projects that impact archaeological sites, as in the case of the Zayo Project (Sloma). However, mitigation can be more creative as it should also address the irreparable and ongoing loss of cultural resources where Cultural Plant Team (Campbell, Adolph and Johnson, and Robson) illustrate how work with traditional plants and use areas are mitigating the effects of climate change and environmental degradation on plant communities important to tribal members. In addition to natural resources, protecting significant structures is also of high importance to the CCT (Coyote). And lastly, situations requiring immediate attention such as those created by the 2015 wildfires can occur at any time (Rorabaugh, and Dean, Bailey and Meyer). It is hoped by highlighting this range of treatments that other cultural resource practitioners will find inspiration to create contextualized solutions appropriate for ameliorating some of the loss and irreparable damage to cultural resources of the affected communities.

- 1:30 **Introduction to the Confederated Tribes of the Colville Reservation, History/Archaeology Program**
Aaron J. Naumann Or Jacqueline M. Cook
- 1:50 **Refining Where and When to Look: The Zayo Project an Example of Monitoring the Installation of Fiber Optic Infrastructure** Robert Sloma
- 2:10 **Break & Quick Introduction to the Plant Talks (Presenter: Kali Robson)**
- 2:30 **Mapping Traditional Cultural Plants on the Colville Reservation** Trisha Johnson
- 2:50 **Mapping Traditional Cultural Plants on the Colville Reservation** Kali Robson
- 3:10 **Break**
- 3:30 **Pia Mission and Skolaskin Church – Examples of Creative Mitigation** Arrow Coyote
- 3:50 **After the Burn: 2016 Northstar and Tunk Block Post-Fire Site Assessments** Adam Rorabaugh
- 4:10 **McLaughlin Canyon Pictograph Site Stabilization** Claire Dean, Richard Bailey, Jon Meyer

Friday Afternoon Sessions

4:30 **Concluding Thoughts and Discussant** Guy Moura

5:00 **Association of Washington Archaeologists (AWA) Business Meeting**

Session 25: **Chemical Analysis Symposium** continued

(Ballroom A)

1:30 **Proteomic Residue Analysis of Stone Tools and Implications for Future Research**

Andrew Frierson, Korey Brownstein, Shannon Tushingham, David Gang

1:50 **From their Pipes to Curicaueri: Tobacco Use Among the Ancient Tarascans** Lori Phillips,

Steven Hackenberger, Shannon Tushingham, Korey Brownstein, David R. Gang

2:10 **Ancient Cacao Recipes: An Experimental Approach to Identify Recipe Variation in The**

Archaeological Record Jessica Devio, Shannon Tushingham, Korey Brownstein, David R. Gang,

2:30 **In Search of Chocolate in the American Southwest: Residue Analysis of Ceramics from an Early Pueblo I Site in Southeastern Utah** Katie Richards

2:50 **Break**

3:10 **What Doña Ana Phase and Modern Jackrabbits (*Lepus californicus*) Can Tell Us About Climate Change in the Southeastern Southwest** Brandon McIntosh

3:30 **A Preliminary Ancient DNA Analysis of Middle and Late Period Humans from Ryan Mound (CA-ALA-329), San Francisco Bay, California** Nichole Fournier, Cara Monroe

3:50 **A Chemical Residue Analysis of Pre-Contact Smoking Pipes from Three Mid-Columbian Sites** William J. Damitio, Shannon Tushingham, Korey Brownstein, And David R. Gang

4:10 **Tobacco Use Patterns Among Tribal Communities in the Pacific Northwest: Long Term Trajectories and Implications for Modern Health Initiatives**

William J. Damitio, Shannon Tushingham, Korey Brownstein, David R. Gang

Session 26: **Priscilla Wegars symposium** continued

(Ballroom B)

1:30 **Built Environment Survey of Walla Walla's Historic Volga German Neighborhood** Ann Sharley

1:50 **A Community Along the Tracks: An Examination of Sam Sing's Laundry in Sandpoint, Idaho** Molly Swords, Margaret Clark and Mark Warner

2:10 **Diversification in a Time of Adversity** Maryanne Maddoux

2:30 **Ophir Creek Brewery: An Analysis of a Nineteenth Century Chinese Community** Heather Sargent-Gross

2:50 **Break**

3:10 **Expressions of Ethnicity in a Modern World, Archaeological and Historical Traces of Pre-WWII Japanese-American Culture** Lorelea Hudson

3:30 **Digitizing the Archaeology of WWII Japanese Internment** Stacy Camp

Friday Afternoon Sessions

- 3:50 **Constructive Play: Fort Boise, Archaeology, and Children's Toys** Nathan J. May
4:10 **Discussion**

Session 27: **Symposium. *Data Recovery at Anderson Creek, a Hunter-Fisher-Gatherer Camp on Sinclair Inlet, Puget Sound***
Organizer: Roger Kiers
(Corbin)

A federal court injunction issued in 2013 requires Washington State to correct hundreds of fish passage barriers in western Washington by 2030. Months after the injunction was issued, Washington State Department of Transportation (WSDOT) archaeologists identified site 45KP233 within the footprint of a proposed culvert replacement project at the mouth of Anderson Creek on Sinclair Inlet in Kitsap County. Data recovery excavations conducted in September 2015 yielded a range of shell and vertebrate faunal remains, a small assemblage of stone and bone tools, and historic objects, from stratified deposits. Initial use of this small hunter-fisher-gatherer camp began approximately 800 years ago, as evidenced by a shell-free component containing vertebrate faunal remains and the majority of the site's lithic assemblage. Accumulation of shell-rich midden began shortly thereafter, and continued during multiple episodes of site use that extended into the historic period. Shell-free deposits capping the midden suggest a shift in Native American site use during the late nineteenth century. The site was buried under highway fill in the 1950s. The results of data recovery are presented, with consideration of comparable sites and thoughts on future work.

- 1:30 **Anderson Creek in Context: Setting, Methodology and Stratigraphy at 45KP233** Roger Kiers
1:50 **Vertebrate Faunal Remains from the Anderson Creek Site (45KP233)**
Robert J. Holstine, Megan A. Partlow
2:10 **Analysis of Invertebrates from Anderson Creek (45KP233): A Study of Hard and Soft Substrate Species of the Intertidal Zone on Sinclair Inlet** Erin Littauer, Meredith Austin
2:30 ***The Non-Faunal Artifact Assemblage from Anderson Creek (45KP233)***
Roger Kiers And Scott Williams
2:50 **Break**

Session 28: ***Historical Forts Archaeology***
(Corbin)

- 3:10 **The Preservation of Perishable Foods: Results of Recent Excavations in an Ice House and Root Cellar, U.S. Army Fort Walla Walla (45WW341)** Ryan Ives
3:30 **A Historical and Archaeological Overview of Fort Yamhill's Hospital (35PO75)** Kim Wesseler
3:50 **In Search of Camps' Warner: Tracking US Military Presence in the Warner Valley, Oregon 1866-1874** Dennis Griffin
4:10 **Archaeology of the Oregon National Guard: A Search for Archaeological Evidence of Early Military Encampments in Oregon** Dennis Griffin

Friday Afternoon Sessions

- 4:30 **Socio-Cultural Identities of U.S. Army Commissioned Officers: The Negotiation of Class and Rank at Fort Yamhill and Fort Hoskins, Oregon, 1856-1866** Justin Eichelberger

Session 29: **Symposium. *Topics in Physical Anthropology***

Organizer: Guy L. Tasa

(Comstock)

Physical anthropology, or biological anthropology, "is a biological science that deals with the adaptations, variability, and evolution of human beings and their living and fossil relatives" (AAPA). This symposium covers papers on all topics within the field of physical anthropology including but not limited to human skeletal biology, bioarchaeology, primatology, human and primate evolution, and human biological variation.

- 1:30 **A Case Study Evidencing Precontact Reinterment of Inadvertently Discovered Human Remains**
Thomas Ostrander, Aja Sutton, Michael Bever
- 1:50 **Make No Bones About It: Practical Tips for Recognizing Human vs. Faunal Remains in the Field**
Aja Sutton And Thomas Ostrander
- 2:10 **A Skull in the Fireplace: A Narrative of Cultural Appropriation, Identification, Deconstruction, and Repatriation** Guy L. Tasa
- 2:30 **Indigenous Archaeology and Human Rights: Toward a More Ethical Treatment of Human Remains** Juliette Vogel
- 2:50 **Break**
- 3:00 **Comparison of Semi-Captive and Wild Gray-Shanked Douc Langurs' (*Pygathrix cinerea*) Activity Budgets** Hilary Hemmes-Kavanaugh
- 3:20 **A Ten-Year Study of Soil Bacterial Communities Associated with Cadaver Decomposition in the Pacific Northwest** Misty Weitzel
- 3:40 **Evaluating Possible Relationships Between the Cranial Base Angle and Linear Craniofacial Measurements** Sarah Addington
- 4:00 **The Potential Conflict between Forensic Ancestral Identification and Societal Interpretation**
Jerielle Cartales
- 4:20 **Mother-Infant Interactions in a Wild Population of Southern Pigtail Macaques (*Macaca nemestrina*)** Emily Dura, Nadine Rupert
- 4:40 **Enrichment Use & Social Interactions in a Mixed-Species Enclosure of Sumatran (*Pongo abelii*) & Bornean Orangutans (*P. pygmaeus*) & Northern White-Cheeked Gibbons (*Nomascus leucogenys*)**
Emily Veitia

Friday Afternoon Sessions

Posters Poster Session D

2:00-4:00

(Willow 1)

- 1 **Geoarchaeology of the Sunrise Ridge Borrow Pit Site (45PI408): The Origin of Buried Soils**
Sean Stcherbinine, Patrick MCutcheon
- 2 **Intra and Intersite Interpretations of Faunal Patterning at the Rock Creek Shelter Site, Southcentral, Oregon** Andrew Frierson, James Brown, Dominic Bush, Will Damiato, Nichole Fournier, Samantha Fulgham, Emily Whistler, Shannon Tushingham, Colin Grier
- 3 **Reconstructing Faunal Exploitation at the Prehistoric Woodstock Farm Site (45WH55), Whatcom County, Washington** Ellen Hallingstad
- 4 **Zoographic Nomenclature in Inner Asia** Penglin Wang
- 5 **Addressing Prehistoric Bird Usage: An Analysis of Avian Material from San Juan Islands Archaeological Sites** Emily Whistler
- 6 **SQUIRREL! An Experiment on Mammal Bone Decay in Acidic Alkaline, and Neutral Solutions**
Rachel Martin
- 7 **Being Taught How to Fish: Understanding People Through Replicating Fishing Tools**
Yuumi Danner
- 8 **Analysis of Bone Marrow and Grease Extraction at Site 45WH055** Margaret O'Leary
- 9 **Preserving Our Heritage—Pasport in Time Projects on the Colville National Forest**
Gregory Heide
- 10 **Archaeology in the Classroom: How Might I Use This Tool to Get Rid of the Ooey-Gooney, Bloody Bits to Make New Clothes?** Ian Richard Lewis
- 11 **Eight Years along the Puyallup—Highlights from On-going Tacoma HOV Program Work in Tacoma, Washington** Shane Sparks, Kelly Yeates
- 12 **Vanishing Images: Finding and Saving Pictograph Sites** Jamie Litzkow, Anne Boyd, Richard Bailey, Lindsey Evenson

Saturday Morning Sessions

Saturday, April 15, 2017

Session 30: **Symposium. *Investigating The Dittman Biface (35ma375): Stewardship, Collaboration, Consultation, and Public Outreach Associated with The First Documented Biface Cache in The Willamette Valley***

Organizer: John Pouley

(Audubon-Manito)

In 2015, a Salem, Oregon landowner contacted the State Historic Preservation Office to report what

Saturday Morning Sessions

he correctly believed to be a biface cache discovered on his property. In the subsequent year-and-a-half, the site has become arguably the most well documented biface cache in Oregon and the first reported biface cache in the Willamette Valley. Tribal consultation produced important information about the Santiam Band of the Kalapuya who traditionally occupied the area, aiding research and investigations. Experts throughout the region volunteered useful analyses involving: illustrations, obsidian sourcing, site mapping, 3D scanning, 3D printing, and technological analyses. The site has been surveyed with GPR and Magnetometer, and archaeologically excavated. Obsidian hydration and blood residue analysis on tools recovered during the excavation are planned. To date, 44 professionals from universities, tribes, state and federal agencies, and contracting firms have donated time and assistance. The landowner, who is a teacher, brought students to witness the archaeological excavations on two separate occasions. Oregon Public Broadcasting sent a reporter to cover the story and a Tribal archaeologist was invited to participate in a radio broadcast. Combined with the Oregon Parks and Recreation Department press release, other landowners in the state felt comfortable reporting finds on their property. The story spread locally, regionally, and internationally, including mention on a London news broadcast. The Dittman Biface Cache (35MA375) symposium includes presentations on the research, analyses, results, relationships, and public outreach associated with the site.

9:00 **Introduction**

9:20 **“Please Contact Me If This Is of Interest to You” An Introduction to The Dittman Biface Cache (35ma375), The First Recorded Biface Cache in The Willamette Valley** John Pouley

9:40 **Preliminary Results On The 3d Digital Geometric Morphometric Analysis of the Dittman Biface Cache** hSean Carroll, Loren Davis

10:00 **Dittman Biface Cache Simulation: Caching A Database for Future Studies** Marci Monaco, Meghan Johnson

10:40 **Dittman Cache Site Debitage Analysis: Caching in on the Experimental Database** Meghan Johnson, Marci Monaco

11:00 **Cache and Carry: Examining Site 35wn93’s Role in The Northward Trade of Obsidian Cliffs Toolstone** Alexandra Williams-Larson

11:20 **Relationships in Archaeology: Positive Outcomes from The Dittman Biface Cache (35ma375) Project** Briece Edwards

11:40 **The “Value” Of The Dittman Biface Cache (35ma375): Public Outreach and Archaeological Awareness** John Pouley

Session 31: **Symposium. *Spokane’s Riverfront Park Cultural Resource Management and Beyond***
Organizer: Ashley M. Morton
(Ballroom A)

Beginning in 2015, cultural resource studies have been conducted in parts of Riverfront Park—a 90-acre area surrounding the Spokane River in the heart of downtown Spokane—in support of redevelopment efforts. Known

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for being the site of the 1974 World's Fair, this iconic locale has been an integral part of modern Spokane's landscape for well over a century when first it began to be used for grain milling; and centuries before this, it has been part of a greater landscape used by Native Americans. This symposium shares insights into detailed historical research from census records to Chinese Exclusion Act case files, geospatial analysis, and results from recent archaeological investigations, built environment assessments, and historic preservation planning. Expanding this further, presentations also include topics on creative public outreach in an effort to reconstruct the area's historical landscape such as a project website and 3D technology; thereby highlighting how CRM and historic preservation are making a difference in the real world. This symposium closes with Q & A for audience members.

- 9:00 **Before the Riverfront Park: Historical Research into Early Modern Spokane's Development and Settlement In and Around the Falls** Ashley M. Morton
- 9:20 **Riverfront Park: A Journey Through the Decades** Megan Duvall
- 9:40 **Spokane's Historical Population: Making Those Pivot Tables Meaningful** Jonathan M. Haller
- 10:00 **Archaeological Investigations into Spokane's Riverfront Park** Ashley M. Morton
- 10:20 **Break**
- 10:40 **Managing Historic Properties in Spokane's Riverfront Park – The Expo '74 Site**
Marcia Montgomery
- 11:00 **The Chinese in Spokane's Riverfront Park Area** Trish Hackett Nicola
Williams-Larson, Alexandra
- 11:20 **Digital Spokane and the Chinese Diaspora: A Spatial Dataset of Georeferenced Sanborn Maps, 1884-1925** Nikki Hart-Brinkley
- 11:40 **Urban Un-Planning: Digital Exploration of Downtown Spokane's Progressive Era**
Jonathan M. Haller
- 12:00 **Discussion and Q & A period for presenters**

Session 32: *History and Archaeology* (Ballroom B)

- 9:00 **Contributions made by various ethnic groups in developing linear cultural resources** Russell Holter
- 9:20 **Consumer Culture and Colonialism: Archaeology of Contact in the Northwest** Caroline Herritt
- 9:40 **Preliminary Research for Testing at a Steamboat Landing Settlement in Idaho** Idah Whisenant
- 10:00 **Historical Refuse Features At The Station House Lofts Project**
Sarah M. H. Steinkraus, Jennifer Hushour
- 10:20 **Break**
- 10:40 **Predicting the Formal Trash** David Valentine
- 11:00 **And the Dig Goes On, and On and On ...** Madilane A. Perry
- 11:20 **Impacts of the Civilian Conservation Corps in Idaho** Patricia S. Hart, Ivar Nelson

Saturday Morning Sessions

Session 34: *Archaeology Overview*

(Corbin)

- 10:20 **How Do We Preserve Vulnerable Cave Sites? A Look into the Horse Lava Tube System in Central Oregon** Alexander Gall, Michael Smith
- 10:40 **District or Distraction? Identifying and Evaluating Archaeological Districts**
Gretchen Kaehler, Michael Houser
- 11:00 **Archaeology in the 21st Century: Public, Politics and Science** Kirsten Lopez

Session 35: *Native and Non-Native Voices*

(Comstock)

- 9:40 **Blackfeet History from the Inside Out: Correcting the Perceptions of Nicholas Point**
Sally Thompson
- 10:00 **The Wanapum River Patrol**
Chris Kaiser, Joseph Seelatsee, Melvin Lucei, Jason Buck, Malcolm Aleck, Clint Wiltse
- 10:20 **Break**
- 10:40 **What Can We Learn About the Colville Reservation Indians from the United States Censuses?**
Arland Thornton, Linda Young-Demarco
- 11:00 **Re-Awakening a 2,000 Year Old Salish Sea Basketry Tradition and Sharing It Around the World: Master Salish Basketmaker and Wet Site Archaeologist Explore 100 Generations of Cultural**
Dale R. Croes, Ed Carriere
- 11:00 **Opening Doors in Anthropology: Ethnographic Exploration of Collections as Field Sites**
Wendy Wegner
- 11:20 **New Sources from the Archives: How the Letters of One Columbia River Indian Fisherman Complicate the History of Salvage Excavations at Wakemap Mound and Other Sites Behind the Dalles Dam** David-Paul B. Hedberg

Abstracts

GEORGIA RAE ABRAMS

Pacific Lutheran University

Colonization and Collaboration: Archaeological Research at the Roche Harbor Homestead, San Juan Island

A unique area of the Northwest, San Juan Island history is often told from the perspective of Euroamerican entrepreneurs and large-scale farmers. Small-scale homesteaders, their wives, and children are rarely documented beyond the census. Tension between ethnic groups is recounted, but cooperation and intermarriage often goes unnoted. Based on research at 45SJ548 in Roche Harbor on San Juan Island during 2015 and 2016, this paper explores the ways that anthropological archaeology benefits from collaboration with local communities. Excavations at the historic homestead were aided by research from the local historical society and oral histories were provided by residents. In the analysis phase of the project, continuing work with community members has clarified the results of the research and excavations. This paper explores avenues for future collaborative research with tribal communities of Western Washington to better understand the context of intermarriage during the early 20th century on San Juan Island.

AUTUMN ADAMS

Central Washington University

Racial Injustice: A Critique of the Colonial Perspective and Approach to Mass Incarceration and Violence

I will compare the structural, institutional, and individual violence experienced by indigenous peoples in the U.S., which is a consequence of colonial policies and practices. This structural violence includes great inequality economically, socially and politically, while the institutional violence is evidenced in police violence and mass incarceration. Finally, this disproportionate victimization and criminalization affecting indigenous peoples in the U.S. flow from these structural and institutional factors.

SARAH ADDINGTON

University of Dundee

Evaluating Possible Relationships Between the Cranial Base Angle and Linear Craniofacial Measurements.

The aim of this research was to examine possible correlations between the cranial base angle and linear craniofacial measurements including the bizygomatic breadth, bicondylar breadth, palatal length from anterior nasal spine, and palatal length from deepest point inferior to anterior nasal spine. Measurements were taken from thirty cranial anonymized MSCT scans, selected from the raw data of European Caucasoid paranasal patients, aged 18-50 years, taken in Germany by Volker Keil and Uwe Roy using a Siemens SOMATOM Sensation 64 spiral MSCT scanner. Angular and linear measurements were taken by rendering 2D and 3D model images in InVesalius 3.0. Intraobserver error rates yielded results within the 99% level of repeatability ($p < 0.01$), while interobserver error rates yielded an approximate reproducible rate within the 95% ($p < 0.05$) range; however bicondylar breadth yielded a standard error rate of 6.48%. An independent t-test expressed no significant variance between sexes. A Pearson correlation test revealed statistically non-significant results.

ERIK D. ANDERSON, JASON B. COOPER, AND EMILY R. SCOTT

AMEC Foster Wheeler

Last Call: End Days and Final Detritus of the Hotel Butler Historic Debris at Boeing Field, King County, Washington

Hotel Butler was a boisterous Seattle hotel serving politicians, celebrities and prospectors. Its story encompasses the boom and bust of turn-of-the-century Pioneer Square. Constructed in the 1870s, the original 3-story building burnt in the Seattle Fire of 1889. Resurrected in stone and brick in 1890 as an office building and then as a 5-story hotel in 1894, it catered to returning Klondike miners. The notable hostelry added two more floors in 1903, and an almost

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continuous stream of music and booze poured from the popular Rose Room during Prohibition years. The Rose Room was silenced in 1929 as the hotel limped into the beginning years of the Great Depression. Hotel Butler closed in 1933 and its remaining items auctioned in 1934. A serendipitous discovery at the King County International Airport uncovered several diagnostic historic artifacts near the Duwamish River. These final fragments tell the story of a hotel's last days.

E. F. ARANYOSI

Olympic College

The Yama Project: A Multidisciplinary Analysis of a Transnational Community

Yama Village was a Japanese transnational immigrant settlement on Bainbridge Island, occupied from the 1880s until the 1920s. It was first settled by Japanese bachelors who were recruited to the US to work in the Port Blakely sawmill, and soon grew to a thriving community of over 200 residents. The village was abandoned in the 1920s, after the sawmill closed and residents moved elsewhere in search of employment. Today, nearly 100 years after abandonment, Olympic College, in cooperation with our local partners and sponsors, are attempting to rediscover the lives of the people of Yama, and to reconstruct this "lost chapter" in Washington State history. The unique demographics of community colleges make the Yama Project beneficial both to this particular project, and to archaeology as a discipline within the umbrella of anthropology and the social sciences.

STEPHEN AUSTIN

Washington State Department of Transportation

Drive It 'Til the Guardrails Fall Off: An Overview of WSDOT's Historic Bridges Program

For transportation planners, historic bridges illicit a multitude of emotions ranging between disdain and adoration. Some view compliance with federal law, in the form of evaluating a structure's potential eligibility, as a feckless and burdensome process that hampers improvements to infrastructure and public safety. Yet preservationist and bridge constituents continue to advocate for their conservation. Why would we do this to ourselves? Washington is home to over 7000 bridges with more than 300 determined NRHP eligible since 1980. It is estimated that half of all historic bridges in the state were demolished by 1970, a statistic that continues to rise as eligible bridges succumb to degradation and replacement. How does WSDOT evaluate the historical significance of a bridge? How does it manage its inventory of historic highway bridges? What is the fate of these nonrenewable resources in the face of modern transportation demands? The answer is, it depends.

JAMES C. BARD

Ancient Artifact LLC

The Coins of Kam Wah Chung, John Day, Oregon: Persistence of Chinese Culture Reflected Through Non-Monetary Uses of Chinese Coins

Kam Wah Chung (KWC) was a frontier Chinese medical clinic, general store, community center and residence of two Chinese immigrants, Ing "Doc" Hay and Lung On, located in John Day, Oregon. "Doc" Hay practiced traditional herbal medicine and Long On was proprietor of their general store. Left untouched for decades, KWC State Heritage Site is a remarkable time capsule capturing the life and times of the late 19th and early 20th century Chinese community. Chinese coins found within the building and their unique uses and contexts reveal much about the cultural uses of numismatic material culture as these two men maintained aspects of traditional Chinese culture, religion, ritual behavior, and medicinal practices. Like an archaeological site, the surviving Kam Wah Chung building historic site was carefully documented and the re-purposed coins were found in unique contexts that allow meaningful interpretation.

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SAHAYRA BAROJAS-TAPIA

Edmonds Community College

Motivations and Incentives for Installation of Rain Gardens: An Ethnographic Assessment in the Perrinville Creek Watershed

Community-based participation to better address water quality, reduce pollution, and enhance habitat in the Salish Sea basin is vital for conservation efforts of local municipalities. At the request of The Nature Conservancy and the Snohomish Conservation District, a team of researchers from Edmonds CC in Lynnwood, Washington conducted a rapid ethnographic study of residents of the Perrinville watershed with the goal of helping the Cities of Edmonds and Lynnwood with their efforts to better manage stormwater and to improve their ecology. The study included participant observation, informal interviews, and a door-to-door and online survey. These methods revealed strong community preferences for the aesthetics of rain gardens, concern for the health of the Perrinville Watershed, and a willingness to undertake and contribute to stormwater mitigation. The results helped inform a presentation to the Edmonds City Council made by the Snohomish Conservation District and Edmonds CC researchers.

KAYLEY BASS

Central Washington University

The Unknown History of Western Washington Logging Camps: St. Paul and Tacoma Lumber Company's Camp #5 ca. 1920-1950

For years, the timber industry has been an integral part of western Washington's economy, as it is home to the majority of the state's most profitable timber. Despite the importance of the timber industry to Washington, there is little information on life in logging camps, possibly due to their impermanent structures and distance from major cities. The logging camps located within the timberlands, once owned by the St. Paul and Tacoma Lumber Company, can provide information on the organization of camps and the daily lives of the men that inhabited them. My research employs archaeological approaches, such locating, mapping, and documenting a logging camp and any artifacts or architectural remnants, as well as historical methods, such as archival research. The combination of archaeological and historical approaches help to construct a picture of life at the St. Paul and Tacoma's logging camps.

BAISHAKHI BASU

University of Washington

Developing cost-effective event-based diaries for low-literacy populations

Data on life course events are ideally collected by the individuals experiencing those events. In populations with low literacy levels, self-collection of reliable event data is complicated by the need to record event dates. This study examines the efficacy of a culture-specific, inexpensive diary developed for use in rural Matlab thana, a sub-district of Bangladesh. A calendar was developed that included color-coded icons to provide participants with meaningful cues for specific days of the week. A sample of 30 married women from rural villages collected menstrual cycle data for one week. Women were provided calendars and verbal instructions in a local dialect. Ninety percent of women complied and successfully recorded the daily data; 10% of women either could not follow the instruction or dropped out of the study. I conclude that comprehensive prospective data can be self-collected in low-literacy populations, for event-based anthropological research.

Abstracts

EDWIN BATTISTELLA

Division of Humanities and Culture, Southern Oregon University

COUPON and OFTEN: Changing Patterns in American Speech

This paper report on two traditional shibboleths, the pronunciations of the words “often” and “coupon,” in the speech of university students in Bellingham, Washington, and Ashland, Oregon. The research reported here is embedded in a larger longitudinal study of Pacific Northwest pronunciation and usage, now in its third year. About 500 undergraduates were surveyed about their pronunciation of the words “coupon” and “often,” which have traditionally had both preferred and stigmatized pronunciations (respectively COOP-on and CUE-pon and OFFen and OFTen). Today both pronunciations are acceptable to grammatical authorities and most speakers, but the choice of pronunciation is pattern by social class variation. In this presentation, I review the nature of the stigmatized usages, drawing on twentieth century grammatical commentary, describe the broader Northwest voices survey and some key results, and explore the correlation between social class perception and stated pronunciation preferences, which produce some surprising patterns.

MAUREEN FLANAGAN BATTISTELLA

Southern Oregon University

Looking Back, Looking Forward: Notions of Heritage, Stewardship, and Sustainability Among Southern Oregon Farmers and Ranchers

A 2016 Oregon Heritage Commission grant funded an oral history project to collect stories of farmers and ranchers in Jackson County. One objective of the project was to understand how Southern Oregon’s family farms have changed over time. I heard stories of Century Farm and Ranch properties, from multi-generation farming families and new growers here in Jackson County. Using a guided interview to elicit family histories, several significant themes emerged over the course of the project: Succession, Economic Viability, Gender, and Land Use. Perhaps the most remarkable aspect of the interviews was how the informants articulated the meanings of the words Heritage, Stewardship, and Sustainability as a reflection of their own history and future. This paper presents notional characteristics and shades of meaning for these three words and suggests reasons why one of these words might be more important to an informant than another.

DAVID BEINE

Moody Bible Institute-Spokane

The Role of Understanding Language (Particular Underlying Illness Metaphors) In Global Health: A Case Study from HIV and Aids Prevention in Nepal

Words have power, particularly in their unintended consequences. The words associated with health and illness in every culture are informed by the metaphors that undergird them (their referents). We in the West use war imagery to make sense of and communicate about illness. In Nepal the primary metaphor used to talk about illness is eating not warfare. Yet health educators in Nepal most often use the warfare metaphor and imagery (even though they do so using the Nepali language) to communicate ideas about illness. The result has often been major confusion (e.g. AIDS was first understood as a type of beer or an invading army from Tibet). This paper examines the role of language, specifically the use of underlying metaphors which inform these words and evoke their associated meanings and will explore the relationship between language, culture and public health efforts in Nepal and around the globe

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JENNIFER BERTOLANI, CELIA MORET-FERGUSON, SUNSHINE SCHMIDT

Contractors for Bonneville Power Administration

Federal Columbia River Power System Cultural Resource Program: Harnessing Power and Preserving Cultural Resources for the Future

The Columbia River Basin has been a seminal route for travel, and trade, with steady inhabitation extending beyond the past 13,000 years. Beginning with the Bonneville Dam in 1938, this precontact landscape was drastically altered as Bonneville Power Administration led efforts to transmit and market this new-found hydroelectric energy. In 1997, the Federal Columbia River Power System (FCRPS) Cultural Resource Program was formed to carry out NHPA responsibilities. This highly collaborative program ensures Section 106 Compliance of three Federal agencies, with cooperation of 10 federally recognized tribes, four SHPOs, and seven Federal land managers. With over 4,000 archaeological and traditional sites to manage, this talk provides a brief overview of the history and efforts the Program has taken to identify and assess the changing condition of these resources. Also highlighted are some of the creative ways the Program has mitigated for adverse effects to certain resources.

AARON BOCOOK

Eastern Washington University

Invisible: Homeless in Spokane

Homelessness is a problem in Spokane, Washington, just as it is in most cities in the United States, both small and large. While discourse on homelessness is often centered around the stigma of the stereotypical “visible” homeless population, this paper is a collection of examples that deal with the phenomenon the “invisible” homeless population of Spokane. Through a series of three detailed and personal ethnographies, including my own experience with homelessness, a better perspective may be gained of what homelessness in Spokane is like for the “invisible” homeless, and illustrate the need for more robust research into the real numbers of the homeless population in cities like Spokane.

BRADLEY BOWDEN

Historical Research Associates, Inc.

Temporal Variation in Use of the Uplands in South-Central Oregon

Settlement models for the Northern Great Basin suggest that large villages in the lowlands were occupied throughout the winter, while smaller task specific sites in the uplands were occupied sporadically in the spring, summer, and fall for various procurement tasks (Fagan 1974; Weide 1968). Some studies have also identified potential variation through time of upland use (Brashear 1994). The recent investigation of several upland sites between Christmas Valley and Warner Rim for the PDCI Uprate project resulted in the identification of over 130 temporally diagnostic projectile points, radiocarbon dates from four sites, OSL samples from one site, and over 1,000 obsidian specimens, allowing for an examination of settlement through time in the region. Analysis of these data indicates that the uplands in this part of Oregon were most intensively used during the Middle to early Late Holocene periods.

MEREDITH BREEN

University of Idaho

The Art of Consumption: A Faunal and Glass Analysis from the James Castle House Archaeological Project

In the Fall of 2016, the University of Idaho partnered with the Boise City Department of Arts and History, Boise National Forest, Versar INC., and Idaho Archaeological Society to conduct an excavation on the property formerly occupied by noted Idaho artist, James Castle. The intent of the project was to identify materials associated with Castle’s daily life and activities as an artist. In addition to the recovery of art production materials, another outcome of the project was the recovery of a variety of artifacts reflecting Castle and his family’s daily life. This paper discusses

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some of the findings of the project focusing specifically on the food ways of the Castle family, based on the faunal and glass recovered from the excavation.

JAMES W. BROWN AND JAMES C. CHATTERS

Washington State University and Applied Paleoscience

Revisiting the Old Cordilleran Tradition in the Puget Sound: Reanalysis of Bifaces from the Olcott Type Site

The Old Cordilleran Culture, defined by Butler in 1961 as a founding tradition in the western Americas was based, in part, on artifacts collected from Olcott Site. Olcott then became the informal type locality for what Nelson later called the Olcott Phase, his basal phase of Puget Sound prehistory. Despite the site's prominence in the archaeological lexicon, the Olcott site has received little formal analysis beyond the 1964 descriptions by Kidd. No chronological information has been obtained aside from crude stylistic cross-dating with chronologies outside the region. To address these issues, we used an analytic paradigm already applied to the nearby Granite Falls (45SN28 and 303) and Marymoor (45K19) collections to characterize the distinctive Olcott site bifaces and projectile points. Results show that much of the stylistic variation described previously can be attributed to rejuvenation, not initial manufacture. Sourcing of one obsidian artifact suggests at least some post-Mazama occupancy.

THOMAS J. BROWN, JONATHAN DUELKS, KELLY M. DERR

University of British Columbia, Historical Research Associates Inc.

Correlating Fire Histories and Demographic Signatures on Vancouver Island: A Pilot Study

Paleo-environmental changes and demography are critically interrelated in archaeology. However, data from these two variables are often difficult to compare directly, forcing us to rely on highly qualitative and/or subject correlations that lack temporal and spatial resolution. In an effort to improve upon our understanding of the link between environmental and demographic changes on the Pacific Northwest, we present a pilot study from Vancouver Island, where we attempt to statistically correlate demographic and environmental signatures using Summed Probability Distributions of calibrated radiocarbon dates as a proxy for demographic changes and charcoal data to reconstruct fire histories. Problems with data comparability, spatial and temporal incongruities and potential solutions are also discussed.

DREW BRUTZMAN

Eastern Washington University

Staring Down the Horde: Online Resilience against the Alt-Right Movement

As the 2016 Presidential election demonstrated, rising White Nationalist sentiments present a growing, terrifying force in Western politics, spread primarily through online channels – Internet communities of various types. Some online spaces are significantly more susceptible to alt-right incursions than others. This paper examines basic principles of what tools an online space uses to be more adept than others in mitigating alt-right rhetoric, ideology, and actions – and ultimately demonstrating a hard-set resilience against the alt-right movement, its people, and its politics.

DOMINIC BUSH

Department of Anthropology, Washington State University

An Isotopic Analysis of the Early Historic Fauna Recovered at the Collier Lodge Site (12PR36), Porter County, Indiana

The Collier Lodge Site (12PR36) is found within the limits of the former Grand Kankakee Marsh; a once expansive, taxonomically-rich wetland environment that covered over 200,000 hectares in northwest Indiana. During a phase known as the Removal Period (AD 1795–1840), invasive Euro-Americans settlers attempted to blend Western preconceptions of settlement and subsistence with the realities of life in the untamed American Midwest. These

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seemingly oppositional forces came to a fascinating intersection in the form of animal use, both in terms of the native fauna and introduced livestock. In this study, an analysis of the carbon and nitrogen isotopic signatures was carried out for 30 faunal specimens recovered at 12PR36. The $\delta C13$ and $\delta N15$ values were used to gauge the role of maize, an imported C4 plant, in the foddering of domesticated species and in the procurement of wild species through a phenomenon known as “garden hunting.”

STACEY CAMP

University of Idaho

Digitizing the Archaeology of WWII Japanese Internment

In an era when technology has permitted unprecedented forms of data sharing and acquisition, archaeologists have shifted their methodologies in both the field and in the laboratory. In terms of collections management, the technological revolution has allowed artifacts to be shared with the public online. It has also permitted innovative ways of conducting comparative analyses on collections, and facilitated conversations regarding archaeological discoveries amongst scholars and the public. This paper will look at an example of such digital scholarship entitled “Internment Archaeology” (www.internmentarchaeology.org), which is inspired by Dr. Priscilla Wegars’ work on Idaho’s Kooskia Internment Camp, a WWII incarceration facility that housed a predominantly Japanese population.

LOLA CAMPBELL

Cultural Plant Inventory and Huckleberry Restoration on the Colville Reservation.

Traditional cultural plants are of deep interest to the tribes and First Nations who have gathered them since time immemorial, and continue to harvest them today. These plants are an intrinsic part of the culture, identity and sovereignty of native people. Some of the most widely distributed species have been inventoried and documented on the Colville Reservation since 2013, including huckleberries, xasxes (couscous or Canby’s lovage), Indian carrots (or yampah) and more. When we encounter these plants during surveys, we document population size, vigor and habitat, learning more about their preferred environments. Many populations appear to be healthy so far, but sometimes restoration is needed. The North Star fire of 2015 destroyed large populations of big huckleberry, perhaps the best-known of all cultural plants. Restoration of huckleberry sites began in 2016, with assistance from the CCT/BIA Burned Area Emergency Response Team, Summer.

MOLLY CARNEY AND SYDNEY HANSON

Washington State University

Like a Moss: Exploring Paleoethnobotanical Sample Size and Return Rates in Cultural Resource Management

It is well established in the paleoethnobotanical community that larger sediment sample sizes lead to higher rates of recovered plant remains. While paleoethnobotany has the potential to answer important questions about seasonality, past climates, and changes in resource exploitation through time, it is not often included in cultural resource management project proposals. This paper discusses the results of an anonymous survey of contract paleoethnobotanists and cultural resource managers. We explore the reasons behind archaeobotany’s infrequent and insufficient application in CRM, and offer time and cost-effective strategies for resource managers.

COURTNEY CARROLL

Eastern Washington University

Mothers Perspectives and Dilemmas Regarding Vaccines in Spokane

Vaccines have been proven to combat the effects of many life-threatening illnesses, such as pertussis and the seasonal flu. While vaccines have many health benefits and can save lives the rate of prenatal vaccines remains very low.

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This paper presents why the rates of prenatal vaccines remains very low. Based on data collected through various mixed methods (interviews with OBGYN's to get a sense of the structure of prenatal care in Spokane, interviews with mothers to understand their perspectives on prenatal vaccines, short surveys, and participant observation) the paper presents how mothers are utilizing available resources, but are still missing critical pieces in their prenatal care. The results show that mothers in Spokane are not being informed of the recommended prenatal vaccinations, or the benefits these vaccinations have on themselves and their babies.

SEAN CARROLL AND LOREN DAVIS

Preliminary Results on the 3d Digital Geometric Morphometric Analysis of the Dittman Biface Cache

The Pacific Slope Archaeological Laboratory, in association with the Oregon State Historic Preservation Office, collected 3D digital structured light scans of the 14 bifaces recovered in the Dittman Biface Cache. The collected 3D scans allow for the bifaces to be subjected to digital morphometric analysis using Geographic information systems-based Lithic Morphometric Research (GLiMR). This analysis provides for the automation of traditional lithic analysis measurements as well as the development of novel digital approaches to lithic analysis. The results of the preliminary findings from the digital geometric morphometric analysis of the Dittman Biface Cache are presented here in an attempt to provide insight into the innovations to lithic analysis that 3D scanning can provide.

JERIELLE CARTALES

Western Oregon University

The Potential Conflict between Forensic Ancestral Identification and Societal Interpretation.

Forensic anthropology is the application of physical anthropology to a legal setting. Analysis of ancestry, utilized by forensic anthropologists, depends on classification groups created in the past but is hindered by the mantle of racism. This study evaluated how the general educated public, portrayed by members of Western Oregon University (WOU), viewed ancestral terminology and whether or not this opinion was influenced by age, position at WOU, or ethnicity. Age was the most significant factor in reaction to and understanding of the selected terminology. Participants provided a wide variety of definitions, indicating that forensic anthropologists, and WOU specifically, has not satisfactorily educated the public as to the terms associated with biological affinity in their appropriate scientific setting. However, the forensic anthropology program at WOU was in its infancy at the time of the study. As the program expands in the future, perhaps we will see a trend towards unity in definitions.

LARRY CEBULA AND BRANDON CADWELL

Eastern Washington University and the National Park Service

The Lake Roosevelt Partnership: Institutional Collaboration and a Smartphone App

Beginning in 2011, Lake Roosevelt National Recreation Area (LARO) and Eastern Washington University (EWU) partnered on a digital project to tell the stories woven into the landscape of this vast area of eastern Washington. Together they created a series of digital stories for the web and app-based platform, SpokaneHistorical.org, stories that are also being used to populate Lake Roosevelt's "Learn About the Park" section of its website and that will soon appear on the park's own smartphone app. This innovative collaboration between an NPS unit, a public university, and more than 30 students has created lasting content that has reached thousands of visitors.

LARO District Interpreter Brandon Cadwell and EWU Professor Larry Cebula will describe how the collaboration came together, some of the advantages and obstacles to the partnership, and will demonstrate some of the digital products that students have produced.

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TIA R CODY AND SHELBY ANDERSON

Portland State University

In Search of Mounds: Development of a LiDAR and Remote Sensing Predictive Model of the Calapooia Watershed, Oregon

Kalapuya mound sites are considered highly sensitive locations by the Grand Ronde Tribe. According to the Tribe and written accounts, the Calapooia Watershed contains hundreds of unrecorded mounds extending from Albany to Eugene, Oregon. Protecting mound sites is a priority but traditional archaeological survey of the watershed is impractical as it covers roughly 234,000 acres and is 94% privately owned. We are developing a plan in collaboration with the Grand Ronde Tribe for a LiDAR and remote sensing predictive model to identify the Kalapuya mounds. Still in development, this predictive model will identify unrecorded mound sites remotely. The project will assist the Grand Ronde Tribe's proactive preservation of these sites and will also be generalizable to other regions. We will use LiDAR acquired from the Oregon Department of Geology and Mineral Industries, publicly available remotely sensed infrared imagery, and aerial photography all within a Geographic Information System (GIS).

JUSTIN B COLON

Florida Atlantic University, Archaeological Services, LLC

Obsidian Industries and Exchange Spheres of Northwest Nicaragua: A Typological and Geochemical Study from the Department of Chinandega, Nicaragua

This Master's thesis examines 2,871 obsidian artifacts from the Department of Chinandega, in northwestern Nicaragua. This research represents the first systematic study of obsidian artifacts in this region, and focuses on two aspects of the obsidian artifacts. First, a macroscopic typological analysis of artifacts collected from twelve sites ranging the geomorphological boundaries of the department and, second, geochemical sourcing of the obsidian from these sites. Results indicate that each pre-Hispanic site contained multiple sets of long-distance trade networks centered on a few major geographical mining sites. This research represents the first inter-site comparison of obsidian from this region of Nicaragua and will provide future researchers with useful baseline data. It is expected that similar studies can address questions regarding the acquisition and manufacture of obsidian artifacts, settlement patterns and trade networks, and ultimately contribute some new information to the cultural chronology of this under-studied region of Central America.

THOMAS J CONNOLLY

University of Oregon Museum of Natural & Cultural History

Revisiting Chetlessenten Village (the Pistol River Site, 35CU61) on the Oregon Coast

Chetlessenten was the main village of the Tututni Athapaskan people residing on Pistol River, Oregon. In 1962, a new alignment of the Oregon Coast Highway (US 101) destroying most of the site. Limited professional archaeological work, and much excavation by amateurs and interested neighbors, was done prior to grading for the new highway. Artifacts from the site were mostly dispersed among private collectors; some of the materials were illustrated as line drawings in Eugene Heflin's 1966 publication. In the 1990s, field notes from the 1960s and personal reminiscences were drawn on for additional reporting on the site. In 2016, slumping at the Highway 101 road cut threatened to further damage remaining parts of the site, prompting focused testing. This paper reviews the site history, reports on the recent work, and presents photographs of artifacts from the site from museum and privately held collections not previously publicly available.

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BRENDA COVINGTON

Colville Tribes

Cemetery, Sport Fishing, Recreation, Hydropower, Archaeology... Respect

Over time, we have preferred to segment our world and views into increasingly distinct confines. After we have explicitly defined our position, we produce bookshelves, even libraries, full of material explaining how to work cooperatively with all interested parties. In an environment where intended use and purpose are often at odds for a multitude of reasons, defining and beneficial traits to bring to the discussion are an open-mind and the desire to listen, understand, and strive for a mutually beneficial outcome. Let's talk about stabilizing an archaeological site in Lake Roosevelt reservoir.

ARROW COYOTE

Pia Mission and Skolaskin Church – examples of Creative Mitigation.

The Confederated Tribes of the Colville Reservation and the Bonneville Power Administration agreed to off-site mitigation to satisfy 36 CFR 800.14(b), the Programmatic Agreement for the resolution of adverse effects. Creative Mitigation was used to resolve the adverse effects to archaeological sites on Lake Roosevelt Reservoir that are continually being impacted by the reservoir. One of the mitigation projects is Pia Mission that is of historical and religious significance to the Colville Reservation membership, particularly to the Lakes and Colville tribal members. The other mitigation project is Skolaskin Church that is of historical and religious significance to the Colville Reservation membership, particularly to the Sanpoil tribal members.

DALE R. CROES AND ED CARRIERE

Washington State University and Suquamish Tribe

Re-Awakening a 2,000 Year Old Salish Sea Basketry Tradition and Sharing it Around the World: Master Salish Basket maker and Wet Site Archaeologist Explore 100 Generations of Cultural Knowledge

Ed Carriere and I have been working with the U.W. Burke Museum to replicate 2,000 year old waterlogged archaeological basketry found in the early 1960s from along the Snoqualmie River near Seattle. Ed learned old style split cedar limb/root clam basket making from his Great Grandmother, Julia Jacobs, who raised him. Ed's goal has always been to go back as many generations in his family to master their work. As a wet site archaeologist specializing in ancient basketry on the Northwest Coast, I work from the other direction, deep-time, statistically linking ancient basketry styles from throughout the region to the present. I had a great idea while re-assessing the 2,000 year old basketry collection from the Snoqualmie River site, asking Ed to try replicating these baskets that statistically linked through 100 generations from this site through 1,200, 750, and 500 year old Salish Sea wet site basketry to his Great Grandmother's old style in an approach we call Generationally-linked archaeology. Local Native weavers and anthropologists applaud this work and last summer we shared our work with the Indigenous Ainu on Hokkaido, Japan, and with archaeologist at the Wetland Archaeology Research Project (WARP) conference in Bradford, England to a good response.

R-PATRICK D. CROMWELL

University of Oregon Museum of Natural and Cultural History, University of Nevada Reno

Identification of Faunal Remains Recovered from Coprolites in Paisley Cave 2

Following the results of pollen analysis on coprolites from Paisley Cave 2 from levels covering a time period from the Pleistocene to soon after the eruption of Mount Mazama, the remaining materials were examined to determine what faunal remains were present. The process of preparing the coprolites for pollen analysis did not affect the integrity of faunal remains preserved in the coprolites. The faunal remains provide clues about possible biological abundance

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on the landscape and insights into predator-prey interactions. This analysis is a portion of a larger ongoing project centered on materials from Paisley Cave 2.

ELISE CUENTAS

Eastern Washington University

Economic Growth of the Legal Cannabis Market in the Inland Northwest

Since the legalization of recreational marijuana in Washington in 2012, there has been exponential growth in the cannabis storefronts in Eastern Washington. The first store opened officially in the beginning of 2014. There are now 34 dispensaries in our area with more advertised to open their doors within the next 6 months. While a new legal market like this generally grows quickly, this level of expansion should create winners and losers, with some businesses thriving and others failing. This paper explores, through interviews with several cannabis dispensary owners, the ways that these businesses can be successful against a challenging market setting. I explore the business models they use, what allows expansion to continue, how products are selected and priced, and what is involved in creating a successful cannabis dispensary in today's market.

WILLIAM J. DAMITIO, SHANNON TUSHINGHAM, KOREY BROWNSTEIN, AND DAVID R. GANG

Washington State University

A Chemical Residue Analysis of Pre-Contact Smoking Pipes from Three Mid-Columbian Sites

The presence of stone pipes and pipe fragments in archaeological sites across the Inland Pacific Northwest indicates that smoking has a part of the spiritual and social lives of native peoples throughout the region for several millennia. Ethnographic evidence and early historical accounts suggest that the traditionally preferred smoke plants in the Inland Pacific Northwest were *Nicotiana quadrivalvis* (Indian tobacco) and *Arctostaphylos uva-ursi* (kinnikinnick or bearberry). Recent studies have indicated that tobacco has a significant temporal depth of use in the region. This paper presents the results of chemical residue analyses of twelve smoking pipes and pipe fragments from Mid-Columbian archaeological sites. The presence of nicotine in one of these pipes demonstrates that tobacco was smoked in this region as early as c. 1400 years ago. The potential utility of metabolomic analysis to make further conclusions regarding the residues in these pipes will also be discussed.

STEVEN DAMPF

Historical Research Associates

Preserving Spokane's Progressive Heritage: Mitigation of the City's Historic Trolley Track System

In the late nineteenth century, new forms of urban transit were emerging. Horse-drawn streetcars had plied the streets of cities since the 1830s, and some attempts to adapt the familiar steam engine to urban use were made in the United States after the Civil War. Cable-driven systems began to appear with some success in the 1870s and 1880s, but these were generally rendered obsolete by the introduction and refinement of electric-powered trolleys in the 1880s. In the boomtown environment of early Spokane, all four different technologies were on display. The Spokane Street Railway Company began service with horse-drawn cars on rails in 1888. Within four years, other companies had built competing steam-powered, cable-car, and electric-trolley systems. Historical Research Associates, Inc., is assisting the City with mitigation and preservation of the historic trolley track system as a part of the City's efforts to maintain and upgrade its transportation infrastructure.

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BRYCE DANNER

University of Idaho

An Overview of the Pre-Contact Archaeology of the Lochsa River, North Central Idaho

The Lochsa River, a tributary of the Clearwater River, is an important feature for understanding Pacific Northwest prehistory. Many journals and reports were made from the contact period to the 1970s; they detailed specific sites, but combining the data from these would provide a better comprehension of what the river means to the people that inhabited the region. Utilizing survey methodologies, studying past ethnographic accounts, and reanalyzing previous archaeological reports, this project focused on locating places occupied prior to the contact period. The latest fieldwork, conducted across the river, found 10 new archaeological sites. Further research consisted of an interview with the Nez Perce tribe in order to confirm known uses of the area with the newly recorded sites. With this data, this paper attempts to identify the condition of archaeological sites and discuss where the research is now and where we should direct it in the future.

YUUMI DANNER

University of Idaho

Being Taught How to Fish: Understanding People through Replicating Fishing Tools

Fish hooks are simple enough to recognize their function at a glance, but the recognition does not feed people enough to appreciate what these tools mean. Fishing tools are merely one aspect of traditional living. However, understanding them is one step forward to know a culture better. Among the Plateau culture area, Klamath traditional trout fishing tools appear different from the others', yet there is not enough study conducted among them to know why. This project examines Klamath bone gorges and double-barbed hook technologies by holding an inquiry into similar fishing tool traditions outside of the region and replicating them. Replication process is determined by environmental factors, knowledge from other traditions, and practicality. With this study, I attempt to approach three aspects: material selection, production process, and usage. The replication process, however, taught me not only the fishing tool making but also stone tools and the Klamath lifeways.

DAVID R. DAVIS

Bainbridge Island Historical Museum

The Yama Project: Diverse Partnerships and Community College Students Combine for Archaeological Success

In order to offer a quality archaeological field school experience, faculty from Olympic College coordinated through various regional institutions and sponsors to conduct a three-year archaeological investigation of Yama Village (45KP105) on Bainbridge Island, WA. Occupied from approximately 1883 to 1927, Yama was a Japanese immigrant village whose residents worked mainly at the local sawmill. Village amenities included a hotel, church, general store, community center/Buddhist Temple, photography studio and a tea garden. Yama represents one of the earliest examples of Japanese-American transnational identity formation. Two field seasons, incorporating intensive surface survey and sub-surface excavation, have been completed by students and staff. As a result, 43 features were recorded, and 4,700+ artifacts were recorded, collected, and cataloged. The students gained valuable applied cultural resource management training, as well as individual research, and group laboratory experience. These results demonstrate how inter-agency relationships can provide quality educational experiences that benefit all involved.

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LOREN G. DAVIS, ALEXANDER J. NYERS, DANIEL W. BEAN

Oregon State University, Department of Anthropology

Comparing Stemmed Projectile Point Technology Among Several Early Southern Plateau Sites

We seek to examine the degree to which early projectile point hafting and blade technologies are shared among early southern Columbia River Plateau sites and what this might imply about the existence and operation of cultural transmission networks. To do this, we use digital 3D scanning to capture the form of stemmed projectile points from the Cooper's Ferry, Hatwai, Lind Coulee, and Marmes Rockshelter sites. We then subject these 3D scan models to traditional and newly developed geometric morphometric analyses. The results of these analyses are presented to examine variation in point form across time and space. We discuss the question of to what degree we can measure shared cultural transmission networks by considering how closely technological design attributes are expressed within and between early southern Plateau sites.

SARA J. DAVIS AND MICHELE PUNKE

Historical Research Associates, Inc.

An Upland Pithouse Village near Maupin, Oregon

Residential sites are common along the Columbia River and its major tributaries in Oregon (e.g., Deschutes and John Day Rivers). Recent investigations for the PDCI Uprate project along Deep Creek in the uplands 15 miles south of the Deschutes River identified 12 to 15 housepit depressions on the surface and one possible housepit feature buried under thick sand. Excavations and analyses at the site suggest that it was a winter village occupied over multiple periods during the last 3,000 years, as well as potentially in pre-Mazama times. The site likely functioned as a sheltered upland haven adjacent to a year-round water source where fauna and flora procurement were important tasks. Of particular interest, tobacco seeds recovered from a potential storage pit date to at least 2010 cal. B.P. This tobacco deposits dates 900 years earlier than the earliest archaeological evidence of tobacco use in the Pacific Northwest.

MARY ANNE DAVIS

Idaho State Historical Society

Idaho Archaeologists in Review: Revisiting The Past

Archaeological research in Idaho dates back more than 100 years starting with a survey in northern Idaho in 1912. This presentation provides a limited view of sites and people that have made Idaho archaeology so captivating through the years.

DR. HUGO DE BURGOS

University of British Columbia, Okanagan

Posttraumatic Growth in Nicaragua and In El Salvador.

In this paper, I explore the cultural conditions that allow people to appreciate life and thrive in a healthy fashion instead of succumbing to an illness in the face of traumatic events. I particularly address the construction of non-medical narratives about traumatic experiences and the way in which vernacular accounts inadvertently and effectively work as an antidote for Posttraumatic Stress Disorder (PTSD). My preliminary findings provide new evidence for the indeterminacy of a universal response to traumatic experience that in part explains the lack of general consent on what exactly constitutes a traumatic event. Although I use the DSM-5 Criteria for PTSD to establish some comparable parameters, my research focuses mainly on the subjective narrative of symptoms and survival strategies. Finally, I explore the ways in which ordinary people conceive traumatic memory, and the intersection of such concepts with biomedical models of PTSD in Nicaragua and El Salvador.

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CLAIRE DEAN, RICHARD BAILEY AND JON MEYER)

McLaughlin Canyon Pictograph Site Stabilization.

In the summer of 2015, the Tunk Block Fire roared through McLaughlin Canyon, engulfing a pictograph site. The Bureau of Land Management partnered with the Confederated Tribes of the Colville Reservation to assess and document the fire damage. Initial assessment of the site found spalling and cracking on the pictograph panel in addition to evidence of micro fractures representing areas of weakness in the rock. The federal and tribal partners decided to attempt to stabilize the panel despite the limited potential for long-term success. Dean and Associates Conservation Services used specialized grout and cementitious adhesives to fill twelve cracks/detached areas identified on the panel. We present the results of the initial assessments and treatments. Continued site monitoring will be necessary in following years.

JESSICA DEVIO, SHANNON TUSHINGHAM, KOREY BROWNSTEIN, AND DAVID R. GANG,

Department of Anthropology, Washington State University; Institute of Biological Chemistry, Washington State University

Ancient Cacao Recipes: An Experimental Approach to Identify Recipe Variation in The Archaeological Record

Recipes are highly personal forms of knowledge that reflect personal values, socioeconomic or political affiliations. Therefore, understanding recipe variation found in archaeological samples can inform us about a wide range of factors relating to past populations. Cacao and cacao-based beverages were highly valued by the Maya of Mesoamerica. Residue analysis has primarily been used to identify cacao residues using a biomarker approach. Most of these studies have not sought to identify other ingredients in cacao beverages. This paper presents the results of an experimental cacao brewing study. Beverages were brewed with ingredients commonly found in cacao recipes including vanilla, achiote, all-spice, and chili pepper. The vessels were analyzed using LC-MS. The study utilized both a biomarker and metabolomics approach. The results of this study are promising and suggest that we can identify recipe variation using a combined biomarker and metabolomics approach.

JOHN T DORWIN

Eastern Washington University

Remote sensing at the South Flying Goose Site 45PO435

In the summer of 2014, during the course of National Register evaluation of 45PO435, a site on the Kalispel Indian Reservation along the Pend Oreille River in the mountains of eastern Washington, an isolated small burned structure was located by means of magnetometry and ground penetrating radar. Its existence was confirmed by means of soil augering. Its dimensions were delineated by a combination of augering, excavation and electrical resistance. This paper discusses the contributions made by each of these techniques to create a stronger picture of the whole. Functionality, ethno-botany and geoarchaeology of the structure were explored by Molly Carney.

CALI DRAKE

Edmonds Community College

The Role of Indigenous Knowledge in Observation and Service Learning

As a Cherokee Nation tribal member, Indigenous wisdom about Mother Nature and the ways of plants and animals accumulated by our ancestors is of sacred importance and relevant to dealing with the challenges and barriers that humankind is currently facing. Addressing environmental adaptation can be strengthened by developing skills in observations of the web of life, so important to Indigenous cultures. Participant observation and service learning can be useful tools in the application of Indigenous knowledge to modern-day problems for ecological projects, such as the LEAF School's monitoring of wildlife corridors in Japanese and Big Gulch for the City of Mukilteo and Snohomish

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County. Current efforts include piloting the launch of Smithsonian Institution's eMammal, an open-source software, to document the effect of urban environment on wildlife distributions, populations and abundance and aid wildlife conservation in a joint effort between expert researchers and citizen scientists across the U.S. and worldwide.

EMILY DURA AND NADINE RUPPERT

Central Washington University and Universiti Sains Malaysia

Mother-infant interactions in a wild population of Southern pigtail macaques (*Macaca nemestrina*)

The Southern pigtail macaque (*Macaca nemestrina*) is an understudied species distributed within Southeast Asia. Data are lacking on how infants in this species acquire independence from their mothers. We investigated mother-infant interactions in a wild population to determine the infant's role in this relationship. We used focal sampling to observe infants over a 5-month period in the Segari Melintang Forest Reserve, Perak, Malaysia. Correlation and GLMM testing showed that as infant age increased, contact time with mothers significantly decreased. Mother rank, parity and infant self-directed behavior did not explain mother-infant contact trends. Infants are more responsible for a greater proportion of contacts broken from the mothers between 175-250 days old, which implies a distinct period of infant independence

MARGARET DUVALL

Spokane City-County Historic Preservation Office

Riverfront Park: A Journey Through the Decades

The City of Spokane's Historic Preservation Office created a project website in order to highlight the extensive research done for the Spokane Parks Department by Fort Walla Walla Museum and Spokane Tribe of Indians Preservation Program archaeologists in plotting out the possibility of historic archaeological remains on the site of Riverfront Park in downtown Spokane. Riverfront Park is undergoing a \$60M redevelopment effort which involves major excavation of this extremely important "heart" of Spokane. The area includes Spokane Tribe traditional cultural properties such as the falls; the site of the founding of Spokane, the core of the industrial and governmental beginnings of the city; the epicenter of the railroads; and most recently, the site of the Expo '74 World's Fair. The website explores the history of this very specific area of the city decade by decade, complete with historic photographs and Sanborn maps laying out its development.

BRIECE EDWARDS

Relationships in Archaeology: Positive Outcomes from the Dittman Biface Cache (35MA375) Project

As professionals, we are all too aware of the quantity of resources on the landscape and the rates at which they are lost to looting, development, and economic progress. As a result, Relationships become an invaluable tool for identification and protection of cultural resources. The Dittman Biface Cache (35MA375) project exemplifies this often underreported instrument in the professional's toolkit. For more than a year the 35MA375 project has been the nexus of many Relationships. Based on the personal choices of the landowner, the commitment of many individuals to the profession, and the aspiration to recognize new Relationships, The Confederated Tribes of Grand Ronde has been supportive of this project. The 35MA375 project exemplifies the 'positive' Relationship outcomes necessary for the profession of archaeology to move into the next generation.

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BRIECE EDWARDS, JESSICA CURTEMAN, JON KRIER

The Confederated Tribes of Grand Ronde

Cultural Practices as Contributing Attributes for Landscape Modeling: A Case Study in Tillamook Bay

Today's ever-diversifying development actions are encroaching on both the terrestrial and submerged loci of Oregon's coastal resources. As a result, there is a need for a model and analysis tool to incorporate cultural practice and other resources for inclusion in management plans. The relevance of such a model goes beyond its applicability to identify terrestrial sites, but can contribute to resources associated with paleolandscapes. By adapting and applying cultural practice-based information to an isostatic rebound and bathometric based paleolandscape terrain, is it possible to identify "high probability" use areas of long extant landscapes? A landform off-shore of today's Tillamook Bay provides an opportunity to develop and experiment with such a model. Through historic documents, oral histories, and stories the distribution of cultural resources are mapped and rated. The refinement of such a practice inclusive model may lead to avoidance and protection of both off- and on-shore cultural resources.

JUSTIN EICHELBERGER

Oregon State University and National Park Service

Socio-Cultural Identities of U. S. Army Commissioned Officers: The Negotiation of Class and Rank at Fort Yamhill and Fort Hoskins, Oregon, 1856-1866.

During the 19th Century the American West played host to the colonial expansion of the United States that resulted in a system of Indian reservations guarded by the U.S. Army. These forts became liminal environments where the Army operated both as the oppressors and protectors of indigenous peoples and as stages for the display and transmission of Euro-American socio-cultural ideals. Commissioned officers at these posts played an important role as actors in the drama of colonial westward expansion holding identities as both frontiersmen and as bastions of 19th century American socio-cultural norms of social inequality. This paper examines the material expression of these norms as reflected in artifact assemblages recovered from six officer's houses at Fort Yamhill and Fort Hoskins. Analysis of these assemblages suggests that these officers were highly competitive individuals who were interested in displaying and affirming their identities as colonizers and as members of the socio-cultural elite.

SKYLER ELMSTROM

Western Washington University

A Survey of Fish and Wildlife: Japanese and Big Gulch 2016

As part of an ongoing project, students, staff, and faculty of the Learn-and-Serve Environmental Anthropology Field (LEAF) School with the support of volunteers and members of surrounding communities continue to monitor fish and wildlife at both Big Gulch and Japanese Gulch in Mukilteo, Washington as part of a partnership with the City of Mukilteo and Snohomish County Airport to restore and preserve each stream's salmon-bearing capacity. This year's efforts resume investigations of pre-spawn mortality and overall stream health through the lens of wildlife tracking and camera traps, in-stream salmon survey observations, chemical and biological monitoring, and spatial analysis. In 2016, 141 volunteers assisted with conducting wildlife surveys, monitoring water quality, and collecting geospatial data, and have underscored the importance of citizen science and the power of community colleges to foster community engagement to fill critical gaps in the assessment of salmon and steelhead habitat in the Pacific Northwest.

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MELISSA GOODMAN ELGAR, MOLLY CARNEY, ELIZABETH TRUMAN, WILLIAM DAMATIO, EMILY WHISTLER, KEVIN LYONS

Washington State University, Kalispel Tribe of Indians

Paleolandforms and landuse dynamics: regional analysis using multiproxy methods in the Pend Oreille Valley, WA

This project illustrates the potential of minimally-invasive field recovery techniques coupled with multiproxy geoarchaeological analyses to reconstruct landscape dynamics. Between 2012-2016, we analyzed onsite and offsite sediments from four sites along the Pend Oreille River on Kalispel Tribal lands to assess anthropogenic markers. Sediments were collected from excavation profiles or auger cores at small increments (2-3 cm). We assessed sediments for: 1) multielemental analysis by calibrated portable-XRF, 2) bulk sediment analyses including organic and inorganic carbon, pH, electrical conductivity, texture; and 3) microartifacts by dry sieving. This approach revealed trends in the paleolandforms where Native American ancestral communities lived that cannot be observed in the field. Human activities were primarily documented by organic enhancement and removal of topsoil (i.e., for construction). Modern sediments surface sediments indicate impacts of mining. Multiproxy geoarchaeology provides significant data recovery to augment site and regional studies, and can enhance cost savings when used with auger survey.

NEAL ENDACOTT AND LUKE JONES

Edmonds Community College

Little Swamp Creek Site: Exposing an Unpleasant History through Fried Chicken

Discovery of historical materials on the bank of Little Swamp Creek, Kenmore WA, (Site # 45K11292) in July 2016 indicated they came from a now closed, nearby restaurant, The Coon Chicken Inn. These materials included items such as glassware, bottles, and platters dating from the 1920's until the restaurant closure in 1949. One of the ceramic pieces exhibits a racist caricature that was considered socially acceptable for many in American society at the time. It was a signature logo for the Coon Chicken Inn restaurants. The restaurant closed in 1949 as a result of civil rights protests associated with the changing social climate following World War II. Edmonds Community College is using this collection to teach students archaeological cataloging, curation and analytical methods. It provides students with a hands-on learning experience about an unpleasant aspect of Washington's history through analysis of material remains.

ALLISON FASHING AND DARCY WAYMAN

University of Idaho

The Foodways of the Cyrus-Jacobs House and the Ubuaga Boarding House in Boise, Idaho

In 2012 the University of Idaho partnered with the Basque Museum and Cultural Center and Idaho Archaeology Center to do a short excavation of a well. The well was unexpectedly discovered during renovations of the Cyrus-Jacobs/ Ubuaga Boarding House in Boise, Idaho. The excavations generated over sixteen thousand artifacts, most of which had been previously analyzed. Left unanalyzed were the faunal remains from the excavations. This poster presents the results of the analysis of several hundred faunal remains which complete the analysis of the Cyrus Jacobs/ Ubuaga Boarding House collection, and tells us about the foodways of the Jacobs family and the Ubuaga boarding house residents.

HANNAH FERGUSON; ASHLEY M. MORTON, M.A., RPA

Whitman College; Fort Walla Walla Museum

I Forge On: Walkability and Experiencing Early 20th century Urban Life through Spokane's Expert Smithy

What was life like for the working class individual in turn of the 20th century Spokane? What kind of cultural meaning can be understood from the proximity of a worker's living space to their work space and what can this say about the

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broader experience of urban life? Recently, historical and archaeological exploration of Spokane's Riverfront Park revealed a ca. 1890-1913 blacksmith activity area (45SP794) associated with German immigrant Peter Sondgerath, proprietor of Spokane's Blacksmith Company. Given this prominent smithy of the Inland Empire—who had built the architectural ironwork for numerous principal Spokane buildings—was known to have lived at his workshop only in one instance, a walkability analysis was conducted on hotels and boarding houses Sondgerath occupied in relation to his workshop. Combining city directories and geospatial information systems (GIS) technology, this poster explores the social relationship this blacksmith had with an ethnically diverse and growing industrial city.

NICHOLE FOURNIER AND CARA MONROE

Washington State University and University of Oklahoma

A Preliminary Ancient DNA Analysis of Middle and Late Period Humans from Ryan Mound (CA-ALA-329), San Francisco Bay, California

This paper will present the results of a preliminary analysis of mitochondrial DNA from the third molar of 20 adult humans from the Ryan Mound site (CA-ALA-329) aimed at determining the degree of preservation before analyzing a large portion of the burial assemblage. Mitochondrial DNA was extracted from the molars using a slightly modified version of the protocol proposed by Kemp et al. 2007. A total of 15/20 individuals were assigned to a haplogroup, and 10/15 were assigned to a clade. Interestingly, a rare haplogroup C lineage defined by a mutation at np 16124 was found. Results show that this population is well preserved, suggesting that additional analysis will be successful. Further, the clades identified have meaningful implications for the Hokan-Penutian hypothesis.

PARIS FRANKLIN

Pacific Lutheran University

Conscientious Collaboration: Archaeological approaches as inspired by the Makah

Participation in collaborative archaeological research has been expanding since the 1960s. In this paper, I seek to demonstrate the value of collaboration by reflecting on some of the most productive approaches seen in the current literature on transforming archaeology. In addition, I emphasize the importance of involving local communities and living descendants in the development of research questions; the interpretation of the significance of artifacts; and the research dissemination process. By reflecting on my experiences in an on-site undergraduate course about the Makah and their purposeful engagement with the Ozette dig of 1970, I argue that while research collaborations between archeologists and non-archaeologist living descendants present certain challenges, the inclusion of the descendant communities in the research and dissemination process is mutually beneficial for knowledge production that is of interest to both parties. I conclude by providing an overview of my proposed graduate research project grounded in these collaborative approaches.

ANDREW FRIERSON, JAMES BROWN, DOMINIC BUSH, WILL DAMITIO, NICHOLE FOURNIER, SAMANTHA FULGHAM, EMILY WHISTLER AND COLIN GRIER

Washington State University

Intra and Intersite Interpretations of Faunal Patterning at the Rock Creek Shelter Site, southcentral Oregon

This poster reports on results of an analysis of the faunal assemblage from the Rock Creek Shelter (35LK22) in the Warner Valley region of the Northern Great Basin. The site is a stratified rockshelter with dated cultural deposits that range from ca. 7490 BP to 740 BP. We identified and quantified the taxa and elements represented in the assemblage (n=1046), and recorded cultural (cut marks, burning) and taphonomic bone modifications (rodent gnawing, weathering). We present an intrasite analysis focused on variation in faunal assemblage characteristics among the three trenches excavated at the site to infer the organization of activities both within and immediately outside the rockshelter. We also

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consider site function, addressing the degree to which the overall faunal assemblage conforms to expectations derived from different settlement/subsistence patterns posited for the region. With the extensive time span represented, we also consider change through time in the use of the rockshelter.

ANDREW FRIERSON, KOREY BROWNSTEIN, SHANNON TUSHINGHAM, DAVID GANG

Department of Anthropology, Washington State University; Institute of Biological Chemistry, Washington State University

Proteomic Residue Analysis of Stone Tools and Implications for Future Research

Identification of residues on archaeological material is a powerful tool in interpreting past human behaviors, particularly those that relate to the use of plants and animals. Proteomics, which uses nanoscale liquid chromatography combined with tandem mass spectrometry (nano LC-MS/MS) to identify and quantify traces of protein residues, is a method of analysis that has seen limited use in archaeology. For this study, the proteomics approach was used to analyze three replicated flake tools that were used to experimentally butcher cattle (80s taurus) meat as a way to assess the use of proteomics as a method for the analysis of residues on lithic materials. This conference paper will report the results from this study that demonstrated that proteomics analysis can be used to identify species specific protein residues bound to lithic material and can address some of the shortcomings of standard immunological methods.

TIFFANY FULKERSON, SHANNON TUSHINGHAM

Washington State University

Minding the Gender Gap: Publishing and Conference Trends in Western North America

Gender disparities in academic anthropology follow well-recognized inequities in the sciences. In this paper we review historical patterns in the publishing and conference presentation rates of different genders. We also examine trends in the professional affiliation of first author works. With its robust body of anthropological literature, the California, Great Basin, and Pacific Northwest regions provide a baseline for comparison between nation-wide trends.

JAKE A. FUNKHOUSER, JESSICA A. MAYHEW, JOHN B. MULCAHY

Primate Behavior & Ecology Program, Central Washington University

A Captive Ape Society: Social Structure and Dominance Hierarchy Analyses at Chimpanzee Sanctuary Northwest

Captive sanctuary settings are a novel arena to investigate primate social networks and behavioral flexibility, which can then be used in an applied (advising management practices) and/or theoretical manner (examine evolutionary hypotheses of primate sociality). We investigated the social structure and dominance hierarchy of seven chimpanzees (Pan Troglodytes) at Chimpanzee Sanctuary Northwest, WA. Using focal-animal and instantaneous scan sampling, we collected 108.5 hours of associative, affiliative, and agonistic data from June to September 2016. Data were analyzed in SOCPROG to derive dominance hierarchies and network statistics for (1) the chimpanzee group and (2) the chimpanzee-human group. The results indicate that (1) human caregivers occupy more central positions than previously assumed and (2) conventional methods using single behavioral measures (e.g., agonism) to assess hierarchy may be inadequate in captivity. These conclusions add to the growing evidence of humans' influence on animal systems and question the methodological underpinnings of dominance theory.

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JULIA FURLONG

Eastern Washington University

Mapping Settlements and Landscapes along the Mainstem Columbia River in Central Washington through Aerial Imagery and Survey

The Wanapum reservoir pool level was lowered for Wanapum Dam spillway repairs from March 2014 until April 2015 exposing archaeological sites inundated since the 1960s. During this drawdown period, the drawdown zone was surveyed for cultural materials and monitored for erosion control. Chronology of documented temporally diagnostic projectile points/knives suggests human presence from ca. 13,000 cal B.P. to 150 B.P. The wealth of data garnered during the drawdown has the potential to expand our understanding of prehistoric settlement patterns along the mainstem Columbia River in central Washington. Data recorded by archaeologists using sub-meter accuracy GPS receivers, high resolution aerial photography of the drawdown zone, and LiDAR derived data is used to address settlement patterns and site density along a 28 km stretch of the Columbia River including West Bar, Crescent Bar, and sites 45KT27 and Sunset Creek (45KT28).

ALEXANDER GALLAND MICHAEL SMITH

Archaeological Services, LLC

How Do We Preserve Vulnerable Cave Sites? A Look Into The Horse Lava Tube System in Central Oregon.

Central Oregon is home to many lava tube caves that were used by indigenous people for a variety of purposes over thousands of years. As the region becomes more populated, these cave sites, particularly those on private lands, become more susceptible to damage from both inadvertent impacts and intentional looting. This paper examines one such cave site outside of Bend. In 2016, Archaeological Services surveyed a large parcel on the outskirts of the city, finding a cave that was not noted on maps for the area. It was evident that the cave contained a precontact site containing faunal remains, obsidian debitage, and a bone atlatl spur. It was also clear that the cave was being subjected to on-going looting. Further research showed that this cave site was investigated in the 1990s, but was mapped in the wrong location. Working with the project developers and the Confederated Tribes of the Warm Springs, the cave will be avoided. However, what are the long-term solutions to protecting these sensitive and vulnerable sites?

ANDREW GILLREATH-BROWN

Washington State University

Agricultural and Social Landscapes Leading Up to the Depopulation of the Central Mesa Verde Region: Archaeology with Future Implications

Ancestral Pueblo communities of the central Mesa Verde region (CMV) were heavily reliant on maize agriculture for their subsistence needs (AD 600–1285). Studies at smaller scales are needed to understand the relationship between Pueblo farmers and agricultural landscapes. Movements of small settlements across the landscape may seem inconsequential, but may presage larger changes if we know how to decode them. Variations in the size and location of farmland had known and significant consequences for local pre-Hispanic farming societies. This research underscores the likelihood that the depopulation of this area was, at least in part, due to a critical imbalance between food and people. Furthermore, the effects of shifts on societies known archaeologically and historically can help to predict what the effects of current and future scenarios might be on society. The archaeological record has time-depth, from which we can create an analog to understand present and future implications.

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DANIEL GILMOUR AND DAVID ELLIS

Willamette Cultural Resource Associates

Wada, Wapato, and Western Stemmed: An Early Holocene Site near Burns, Oregon

In the fall of 2015, Willamette CRA conducted data recovery excavations at 35HA3293, an early Holocene site in Burns, Oregon. The site had been damaged by excavation of a utility trench through the site, and a damage assessment had recovered the fragment of a Western Stemmed point. Our excavations encountered a feature at 90 cm below surface, from which a charcoal sample yielded a calibrated radiocarbon date of approximately 10,200 BP. Two other charcoal samples from other site areas supported this age. A sample of feature fill produced evidence of use of serviceberries, chenopod or wada, and wapato. The presence of wapato in the Great Basin has rarely been documented. Geoarchaeological data indicate the early Holocene occupation was on an alluvial fan with nearby wetlands and not far from the shoreline of Pluvial Lake Malheur. The work at this site demonstrates the importance of deeper excavations to identify early Holocene sites.

ERIC GLEASON, RICK MCCLURE, MEGAN WONDERLY

Independent Researcher

Indian Rock Obsidian: Preliminary Investigation of Toolstone Sources in the Simcoe Mountains

In 1996 surface exposures of naturally occurring nodular obsidian were found near the summit of Indian Rock, the highpoint of the Simcoe Mountains in Klickitat County, Washington. The Indian Rock source is one of only a handful of obsidian toolstone locations identified in Washington, and one of several in the Simcoe Mountains. X-Ray Fluorescence analyses from two laboratories linked this source with artifacts from archaeological sites at distances of up to 100 miles from the source location, primarily to the west side of the Cascade Range. The context of the archaeological specimens indicates a temporal span of source utilization ranging from 6,000 rcybp to the late pre-contact period. The 2016 field reconnaissance at Indian Rock provided the first step to achieving the broader research goal of understanding the cultural and geologic context of the obsidian toolstone sources in the Simcoe Mountains.

STAN GOUGH, THOMAS W. STAFFORD JR., EMIL KARPINSKI, CHARLES T. LUTTRELL, JERRY R. GALM, HENDRIK

Eastern Washington University, Stafford Research Laboratories Inc., McMaster University, Washington State Parks and Recreation Commission

Latah Mammoth Radiocarbon and DNA Analyses

A Latah, Washington (Coplen Spring) locality mammoth rib in the collections of the Conner Museum, Pullman yielded a radiocarbon date of 12,135 +/- 35 14C years B.P. (UGAMS-A24638), stable carbon and nitrogen isotope data, and mtDNA sequence data. Bones from multiple mammoth and other animals were collected from the Coplen Spring between 1876 and 1878. The collectors reported finding artifacts adjacent to the spring but their disposition is unknown and unverified. All mammoth bones in the Field Museum Latah Mammoth mount are from the Coplen Spring. Conner Museum mammoth rib data demonstrate contemporaneity of mammoth with the earliest human presence in the Pacific Northwest at Paisley Caves and as little as 102 calendar years before Manis mastodon hunting. Preliminary mitochondrial DNA sequencing places the Conner Museum specimen within Haplogroup F with *Mammuthus columbi* and possible hybrids.

DENNIS GRIFFIN

Oregon State Historic Preservation Office

In Search of Camps' Warner: Tracking US Military Presence in the Warner Valley, Oregon 1866-1874

Following the discovery of gold and growing reports of Indian trouble in eastern Oregon, the US Military established a series of four forts to protect settlers and miners flocking to this part of the state and to insure continued use of local

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military roads. One of these forts, Camp Warner, served as the primary military fort in the Warner Valley from 1866 to 1874. Camp Warner actually consisted of two separate fort locations; old Camp Warner in use from 1866-1867, and new Camp Warner in use from 1867-1874. In its heyday, Camp Warner consisted of over 80 structures that housed over 270 men along with some officers' families and served as an important military outpost during both the Snake (1866-1868) and Modoc (1872-1873) Wars. This paper outlines recent attempts to relocate both fort sites, now located on both private and federal lands, and to determine their state of preservation. To facilitate the abandonment of Old Camp Warner to its new location to the west, a stone bridge was constructed across wetlands that were part of the Warner lakes. The site of this bridge was also relocated and evaluated.

DENNIS GRIFFIN

Oregon State Historic Preservation Office

Archaeology of the Oregon National Guard: A Search for Archaeological Evidence of Early Military Encampments in Oregon

Starting as early as 1843, militia laws were passed authorizing the forming of a battalion of mounted riflemen to protect local lands from invasion and local insurrection. With a growing concern over Indian conflicts, subsequent laws called for the building of blockhouses and arms magazines and the training of troops. Starting in 1865, cash payments were offered to induce volunteers to drill and to pay expenses for companies to parade and participate in regional maneuvers. In 1887, this militia was designated the Oregon National Guard. A recent search through Oregon military records has highlighted a minimum of 63 training opportunities at 34 different named camps between 1890 and 1939. This paper outlines the design and use of these period camps and the possibility of such camps being discovered in the archaeological record.

JONATHAN M. HALLER

Stateline GIS

Spokane's Historical Population: Making Those Pivot Tables Meaningful

Building upon the recent archaeological investigations in Spokane's Riverfront Park, this paper expands historical data compilation into larger sections of Downtown Spokane and synthesizes the population data through demography and spatial statistics. With a focus on perceptions of this historical urban environment as a temporary residence or staging area in the development of the region, this paper also demonstrates the lively and complex population that lived in the area and served as the foundation of the city that we know t

JONATHAN M. HALLER

Stateline GIS

Urban Un-Planning: Digital Exploration of Downtown Spokane's Progressive Era

Exploring 3D technologies to reconstruct historical urban landscapes of Spokane's Riverfront Park following the recent archaeological investigations in Spokane's Riverfront Park, this paper discusses utilizing compiled historical population data and maps in conjunction with urban planning software to review the built environment of select portions of Spokane's downtown. By incorporating known construction details to influence a procedural 3D model generation of the historical downtown we can reconstruct the appearance of a diverse and cosmopolitan area that has gone under numerous and dramatic urban renewal projects. Pushing further, we can display this information in Augmented/Virtual Reality and create an interactive experience as community outreach. This paper aims to show: a means of preservation in a digital age, new methods of reconstructive analysis and a platform for public engagement.

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ELLEN HALLINGSTAD

Western Washington University

Reconstructing faunal exploitation at the prehistoric Woodstock Farm site (45WH55), Whatcom County, Washington

Mammal and avian remains were analyzed in order to reconstruct faunal exploitation patterns within prehistoric coastal midden site 45WH055 (2750-2450 BP) in Whatcom County, Washington. This research has two purposes: 1) to assess the consistency of this assemblage with cultural and ecological patterns of other Locarno Beach phase (3500-2400 BP) sites, and 2) to compare assemblages from previously identified activity areas within 45WH055 to determine how exploitation patterns differ between the thermal feature and bone processing areas of the site. These analyses rely upon the identification of specimens by 1) body portion (axial, appendicular, or cranial), 2) element, and 3) family. This research aims to augment the current body of knowledge surrounding hunting and butchering practices during the Locarno Beach phase, as well as provide an unprecedented analysis of intra-site faunal exploitation variation.

STEPHEN C. HAMILTON

Historical Research Associates, Inc.

Spatial Variability in Obsidian Procurement Patterns from Christmas Valley to Warner Rim

More than 1,000 obsidian and fine-grained volcanic artifacts from 19 archaeological sites studied as part of the PCDI Uprate project in south-central Oregon were analyzed using XRF trace element provenance analysis. A total of 56 geochemical groups were identified, of which 46 have known locations. Analysis of this large dataset is employed to describe lithic conveyance ranges, focusing on distance and directionality of toolstone procurement. The analysis does not account for diachronic change, but based on frequencies of diagnostic projectile points from the sites, much of the dataset probably consists of artifacts from the Middle and Late Holocene, corresponding to the middle Bergen through the middle Boulder Village periods. Results indicate toolstone source utilization was highly variable from north to south, and in the upland areas, patterning in source directionality appears to be largely influenced by utilization of the uplands by groups from the adjacent lowland settlement areas.

DON HANN

Malheur National Forest

The Limits of Material Culture for Determination of Ethnicity in Eastern Oregon Placer Mines

A suite of Asian ceramic and metal artifacts has been described as a "horizon style" indicative of the presence of immigrant Chinese laborers at sites in western North America. In the placer mining districts of eastern Oregon these artifacts have been treated as "ethnic markers" to distinguish immigrant Chinese mine operations from those of Euro-American miners. A comparison of historic mining sites documented on the Malheur National Forest with historic census and mine claim records suggests that reliance on this interpretation of the material culture greatly underestimates the number of immigrant Chinese miners and the scale of their placer mining activities. This has implications for studies which suggest limited assimilation by immigrant Chinese laborers based on their presumed reliance on imported Chinese goods.

CYNTHIA HANNOLD AND SAM RAYMOND

University of Idaho

A Comparison of Alcohol Consumption Habits at Historic Fort Boise

Archaeologists have regularly documented alcohol consumption at many military forts in the nineteenth century west. What is less understood is the variability of alcohol consumption among different groups within a military fort. This work investigates alcohol consumption patterns at Fort Boise. It is based on a comparison of multiple archaeological

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assemblages including the bottle glass recovered from the Surgeon's Quarters (excavated in 2014) and a collection of bottles recovered from excavations in the 1970s and 80s. The intent is to summarize the types of alcohol consumed at the Fort Boise and variation in alcohol consumption between the Fort surgeon and "regular" military personnel.

SYDNEY HANSON, SHANNON TUSHINGHAM, KOREY BROWNSTEIN AND DAVID R. GANG

Department of Anthropology, Washington State University; Institute of Biological Chemistry, Washington State University

***T*Extraction of Rice Residues from Experimental Potsherds**

This paper presents the results of recent research seeking to determine whether two subspecies of rice (japonica and indica) can be distinguished by their residues. Indica rice, domesticated in India, is the dominant subspecies grown and consumed in Thailand today. However, it is believed that japonica rice, domesticated in China, was the first domesticated variety of rice introduced to Thailand. The transition from indica to japonica rice cultivation likely took place in the Iron Age (500 BC–AD 500) as stronger trade relationships between India and Thailand were established (Castillo et al. 2015). The exact timing of this transition, however, remains unknown. In this study, japonica and indica rice residues were successfully extracted from experimental potsherds. Preliminary results indicate that these two subspecies leave behind distinct residues. The application of this method to archaeological potsherds may elucidate the timing of introduction of indica rice into Thailand.

PATRICIA S. HART AND IVAR NELSON

University of Idaho and Independent Historian

***I*mpacts of the Civilian Conservation Corps in Idaho**

The Civilian Conservation Corps, involving jobless young men from ages 17 to 25, was the most popular New Deal program during the Great Depression between 1933 and 1942. Over that period, it included some 92,000 enrollees and staff in 284 camps in Idaho, making the state the most densely populated CCC program in the nation. Its impact was widespread and deep, resulting in lasting impact on society and individuals. Hart and Nelson will discuss findings of a four-year and ongoing investigation of the human impact of CCC programs in the region. Based upon evidence from archives, museums, libraries and agency collections, including photographs, reports, newspaper articles, camp magazines, letters, interviews, and films, they will preview the forthcoming open access, 'born digital' online portal at the University of Idaho Library which will provide the public access to this unique moment in cultural and social history.

NIKKI HART-BRINKLEY

Rouge Valley Council of Governments

***D*igital Spokane and the Chinese Diaspora: A Spatial Dataset of Georeferenced Sanborn Maps, 1884-1925**

To study Chinese diaspora throughout the Pacific Northwest during the Gold Rush period, researchers can reference more than 70 Sanborn Fire Insurance maps that were collected for the urban Spokane area for years between 1884 and 1925. The maps were scanned and then georeferenced using ESRI's ArcMap desktop software platform. Building footprints were digitized into a GIS feature and address information was recorded in the feature attribute table. Census, City Directory, and Chinese Exclusion Act data was then joined to the building footprint data. The resulting dataset has broad research uses and is available for download in spatial and tabular formats. The end goal of this project will produce an interactive 3D web map application with associated census data joined to building locations.

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CYNTHIANN HECKELSMILLER

Washington State University

Exploring Age-Set Determined Domains of Plant Use in a Highland Maasai Village

Ethnobiological knowledge (EK) of plants and animals is acquired over an individual's lifetime according to environmental, behavioral, and cultural factors. Cultural factors such as dietary ideals and taboos dictate who can use resources like wild food plants in a society, and also can change from childhood to adulthood. These factors contribute to intra- and intergenerational variations in knowledge. This preliminary study explores the acquisition of edible wild plant EK among different age-groups in a Maasai village using interviews, free lists, and plant identification walks. The results suggest that there is a domain of wild plant foods that are specific to younger age-sets. Future research should follow-up on free list data and include more systematic naturalistic observations to elucidate plant use and knowledge transmission. Applications for understanding plant use in Maasai society include nutrition improvement initiatives and the preservation of traditional knowledge.

DAVID-PAUL B. HEDBERG

Portland State University

New Sources from the Archives: How the Letters of One Columbia River Indian Fishermen Complicate the History of Salvage Excavations at Wakemap Mound and other sites behind The Dalles Dam, 1950 – 1957.

Analysis of a substantial cache of personal correspondence from Wilson Charley, a Yakama Nation Tribal Councilman and fisherman, reveals his strategy to use archaeological site protections as a way to assert tribal sovereignty and stop The Dalles Dam. Before tribal consultation or the National Historic Preservation Act, Charley attempted partnerships with archaeologists working on the sites of his ancestors. Interested in a Celilo Falls National Monument, Charley reached out to individuals in the vanguard of American environmentalism as well as volunteer groups like the Oregon Archaeological Society. Ahead of his time, all these groups ignored him. However, his story is significant because it demonstrates that indigenous leaders were not passive protesters of the dam and proposed innovative strategies. Further, it also establishes a degree of culpability for those who ignored him and exposes contradictions in how individuals viewed human and non-human nature in the 1950s.

GREGORY HEIDE

Colville National Forest

Preserving our Heritage - Passport in Time Projects on the Colville National Forest

This poster will present a variety of historic structure renovations on the Colville National Forest through the USFS Passport in Time Program. These project have allowed the USFS to renovate and maintain some of the more unique structures for the far Northeastern corner of Washington State.

HILARY HEMMES-KAVANAUGH

Central Washington University

Comparison of Semi-Captive and Wild Gray-Shanked Douc Langurs' (Pygathrix cinerea) Activity Budgets.

In 2005 the Endangered Primate Rescue Center (Cúc Phương National Park, Vietnam) acquired 5ha of forest as a pre-release habitat for endangered primates. Our study assessed whether this site was suitable for the expression of grey-shanked douc (GSD) langurs' (Pygathrix cinerea) wild behavioral repertoire. We observed four langurs living in the pre-release habitat from 16-10-03 to 16-12-02. Our observational methods were adapted from a previous study of wild GSD langurs (P.cinerea) (Long 2008). We used data Long collected from wild langurs to compare with data we collected from the study subjects. Members of both groups spent the majority of their time resting (semi captive=57%; wild=37%). For both groups, when feeding increased, resting decreased and maximum social behavior

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(semi captive=1200h; wild=1100h) occurred after a resting peak (semi captive=1100h; wild=0900h). Our results indicate that the semi-captive space encourages natural behaviors of langurs living within it.

LOURDES HENEBRY-DELEON, ANGELA NELLER, KATE VALDEZ, JACKIE COOK, TEARA FARROW-FERMAN, ROBERT TAYLOR

Central Washington University, Wanapum Heritage Center, Confederated Tribes and Bands of the Yakama Nation, Confederated Tribes of the Colville Reservation, Confederated Tribes of the Umatilla Indian Reservation, Nez Perce Tribe

Cultural Affiliation for Tiičáminsh Uytpamá Natítayt, the Ancient One, (AKA Kennewick Man)

The Ancient One (Kennewick Man) was repatriated in February under the Water Infrastructure Improvements Act of 2016. The Confederated Tribes of the Colville Reservation, Nez Perce Tribe, Confederated Tribes of the Umatilla Indian Reservation, Confederated Tribes and Bands of the Yakama Nation, and the Wanapum Band of Priest Rapids (Claimant Tribes) have always and continue to assert that he is an ancestor and that they are culturally affiliated to him. This poster demonstrates the existence of a relationship of shared group identity which can be reasonably traced between the Ancient One and the Claimant Tribes. Biological data offers the most direct line of evidence in identifying the identifiable earlier group to which the Ancient One belonged and the present day affiliation of the identifiable earlier group to the Claimant Tribes. Biological traits recognized as representative of this earlier group include cranial morphology, stable isotopes values, and DNA data.

CAROLINE HERRITT

University of Idaho

Consumer Culture and Colonialism: Archaeology of Contact in the Northwest

The archaeology of Euro-American contact has not been well studied in the northwest. By looking at the consumer culture of fur trade forts, Christian missions, and indigenous sites; such as Fort Colville, Spokane House, South Dune, Spalding Mission, and Cataldo Mission via ceramic analysis, the nuances of race and class dynamics during this time period can begin to be uncovered and the history of this time period can be synthesized.

DARRYL HOLMAN

Department of Anthropology, University of Washington, Seattle

Effects of Famine on Deciduous Tooth Emergence in Rural Bangladeshi children

Effects of Famine on Deciduous Tooth Emergence in Rural Bangladeshi Children. Darryl Holman, Baishakhi Basu, Department of Anthropology, University of Washington, Seattle, WA. Emergence of the deciduous dentition is considered to be robust against moderate environmental insults. We examine the effects of nutrition and other covariates on the timing of deciduous tooth emergence in a sample of 397 rural Bangladeshi children born before, in utero during, and born after a severe famine. Children were examined monthly for up to 3 years, typically starting from birth. Hazards analysis quantified effects of famine and other covariates on emergence of the 10 left deciduous teeth. Relative to children born after the famine, children born up to a year before the famine showed significantly delayed emergence in 6 of the 10 teeth. Children who were in utero during the famine exhibited few effects on tooth emergence, suggesting a protective mechanism through maternal buffering.

DANA HOLSCHUH

Archaeological Services, LLC

Connectors to the Past: Two Historic Bridges in Southwestern Washington

Every bridge has a story and this poster presents two distinct examples of NRHP-eligible historic bridges in southern Washington and the unique stories uncovered while documenting and evaluating these structures. BNSF Railroad

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Bridge 81.4 over the Cowlitz River was recommended as eligible for the NRHP under Criterion A, for its association with the history of the Northern Securities Company, and the growth and collaboration of the railroads involved leading up to, and following the Northern Securities Case in 1904. This bridge also has engineering significance under Criterion C as an intact example of a two-span Pennsylvania (petit) Truss using pinned connections. The second bridge, which carries NE Etna Road over Cedar Creek in northern Clark County, was recommended eligible under Criterion C, for embodying the distinctive characteristics of a type, method of construction, and the work of a master engineer Homer M. Hadley.

CRAIG HOLSTINE

Washington State Department of Transportation

The East Trent Avenue Bridge: 5 Spans and 107 Years on the Spokane River

Spokane has been called the "City of Bridges," for the number of structures crossing the river that shares its name. That number increased rapidly in the city's early years when timber and steel bridges failed at alarming rates. Bridge replacements became rare events after reinforced concrete construction began in 1907. The East Trent Avenue Bridge, a five-span earth-filled concrete arch, has carried traffic since its completion in 1910. Currently classified "structurally deficient," the bridge is nearing the end of its service life. This presentation addresses preservation challenges, replacement design options, legal compliance requirements, and the role of "consulting parties" in those efforts.

ROBERT J. HOLSTINE AND MEGAN A. PARTLOW

Central Washington University, Cultural and Environmental Resource Management Program, Department of Anthropology

Vertebrate Faunal Remains from the Anderson Creek Site (45KP233)

The faunal analysis of the Anderson Creek Site (45KP233) revealed a complex assemblage of vertebrate remains. The six analytical units yielded a total NISP of 15,086 vertebrate remains, including a variety of mammals, dominated by elk and deer, plus a trace of birds and snake, but no sea mammal or turtle. Fish remains dominate, particularly salmon, with significant numbers of small flatfishes, spiny dogfish, sculpin and surfperch. There are few herring remains (1% of identified fish) in the sample, mostly derived from 1/8" screening. A pilot study of 1/16" screen sample from one excavation unit did not indicate a significant problem from screen size. For example, herring composed 0.2% of identified fish bones in the 1/8" fraction and 2% of the combined 1/16" and 1/8" fraction from this unit, implying that herring do not compose a significant proportion of fish remains even with the finer screen.

LORELEA HUDSON

SWCA Environmental Consultants

Expressions of Ethnicity in a Modern World, Archaeological and Historical Traces of Pre-WWII Japanese-American Culture

Artifacts and structures produce data for historical archaeology. They can be used to construct chronologies, explore social arrangements, and identify function and ethnic groups. Japanese men came as laborers to the Pacific Northwest in the late 19th century, working in logging camps, on the railroad, and in other industrial settings. By the early 20th century, Japanese families (re)turned to farming as they sought greater economic opportunity. Two such first generation Japanese families, the Fukudas and Horis, were independent farmers and tenants on the Neely Farm in the White River Valley of King County. The most prominent signature of this occupation is a bathhouse, or furo, and associated artifacts. While nearly three quarters of the state's Japanese-American farmers were in the White River Valley, only one bathhouse or furo has been identified to date. This paper explores the potential for identifying other such structures and archaeological deposits in agricultural and industrial settings in the region.

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MACKENZIE HUGHES

Western Washington University

Quartzite Artifact Analysis at Woodstock Farm, Chuckanut Bay, WA

The purpose of this investigation is to gain a better understanding of the use of quartzite as a raw material for tool production during the Locarno Beach phase at the site of Woodstock Farm, Chuckanut Bay, WA (45WH55). Characteristics of quartzite, including hardness, grain-size, irregular intrusions and planar formation, make it more difficult to successfully knap compared to other raw materials abundant in the area. The quartzite artifacts from this site were analyzed for size, tool type, grain size, refit, and distribution throughout the proposed activity areas to determine the chaîne opératoire regarding quartzite use during this phase. Results from this investigation will yield important information to reconstruct cultural practices on the northwest coast during this time period.

JORI HURST, DESSA MEEHAN

Western Washington University

Analysis of Lithics from Bone Processing and Lithic Tool Production Units at Woodstock Farm (45WH0055)

This project, titled "Analysis of Lithics from Bone Processing and Lithic Tool Production Units at Woodstock Farm (45WH0055)," analyzes lithics excavated from site 45WH0055, directly on Chuckanut Bay, Bellingham, Washington. 45WH0055 was a highly utilized Locarno Beach Phase settlement (3500-2400 BP). The goal of our analysis was to determine if Ian Lewis' 2013 thesis classification of activity areas was supported by type, quantity, and distribution of lithic artifacts. He hypothesized that two different activity areas on the site were used for bone processing and lithic tool production with very little crossover. A separate goal of this project determined if the bone processing assemblage was most likely to be for butchering or bone tool production, a distinction not made in Lewis' thesis. We analyzed each artifact based on technological attributes reflecting degree of modification and reduction stage; all lithics collected were classified based on their presence or absence of human modification.

MATT HUSAIN

Community, Culture, and Global Studies, The University of British Columbia, Canada

"Humanity is Wonderful, if only I Could Encounter some": Perspectives of the South Asian Economic Diaspora in the Southern Mediterranean

My paper examines the illegal migration flows out of South Asia and how threads of kinship, reciprocity including gift-giving, and affiliations develop a trans-alliance linkage between illegal migrants and/or refugees living in developed economies of the Southern European Union, such as Athens. My paper investigates two interrelated objectives: 1) by examining the social and economic factors and legal structures that motivate migrants to relocate in order to remit money back home, and 2) by documenting how rural South Asian migrants navigate the informal migration routes to the Mediterranean and connect with other migrants as they travel from South Asia. By highlighting the migrant's point of view, my research findings lend critical understanding to the relationship between migration and transformations of capitalism, poverty, and security issues, and thus strengthens global governance policy and practice frameworks. The findings also expand our understanding of how rural communities in South Asia interpret transformations in capitalism and are subsidized, in effect, by remittance earnings. The findings also help to understand the characteristics of the South Asian enclaves in a specific setting in the EU, such as their experiences with exploitation and social injustice, and their ability to establish cohesive communities while attempting to integrate into mainstream culture. Finally, my paper explores how effective policy interventions towards migration governance can be articulated with a better understanding of state agendas and migrant responses to social causes and motivations that drive individuals and families to migrate.

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JANE HUTCHINSON

University of Washington

Community and Conflict: Tales of my College Career

Since 1984, Washington State Community Colleges have made a difference in my personal direction and career path through volunteer work, work study programs, and mentor/mentee relationships. Across the past thirty-three years I have attended five different campuses in the Puget Sound area and, no matter what stage of life I am in, the diverse community and course offerings these campuses provide help to propel me forward on personal and professional levels every time I return. From the Seattle Mayor's Office to a wetland in Granite Falls, I'll share highlights of my research and experiences with civic engagement and how it's led me to where I am today working with wildlife and conflict around Washington State.

RYAN IVES

Eastern Washington University Archaeological and Historical Services

The Preservation of Perishable Foods: Results of Recent Excavations in an Ice House and Root Cellar, U.S. Army Fort Walla Walla (45WW341).

Recent excavations within the root cellar and an ice house on the grounds of the historic U.S. Army Fort Walla Walla illustrate changes to perishable food storage preservation techniques used by the U. S. Army during the later years of Fort Walla Walla. These structures served as collective storage for naturally produced ice from the nearby ice pond as well as cold storage for root crops. Technological advancements in the mechanical production of ice at around the same time as the construction of these structures changed access to these seasonally scarce resources.

DENNIS L. JENKINS

Museum of Natural and Cultural History

Radiocarbon Dating at the Paisley Caves

Radiocarbon dating has played an enormous role in establishing the Paisley 5 Mile Point Caves site as one of the premiere pre-Clovis sites in the Americas. There are currently 241 radiocarbon dates from this site. The process of accurately dating the natural and cultural deposits of the site has been an intense exercise in the application of the scientific method. This paper examines the categories of materials dated, the reasons for their selection, and implications of their results.

HOLLY JOHNSON

Eastern Washington University

Commercial sex workers and the HIV/AIDS epidemic

As defined by the Department of State (DOS) commercial sex refers to any sex act on account of which anything of value is given to or received by any person. Using this definition that I will also use throughout my research. In recent years it has become clear that in many states throughout the world commercial sex is playing a significant role in nourishing and even escalating the HIV epidemic. If given the opportunity to present this research I would investigate this relationship between commercial sex workers and the HIV epidemic in various different states, such as; Cambodia, China, Nigeria and El Salvador. Within my research I would like to include the data and prevention programs from the World Health Organization (WHO). I would also like to research the background of some commercial sex workers and make connections between socio-economic status of the individual as well as the state they are residing in. This research would be an investigation into the connection between commercial sex workers and the HIV epidemic; by no means do I want to blame anyone group or state for encouraging the HIV epidemic. HIV/AIDS while more common place for developing states is still a medical issue within already developed states including Europe and the United States.

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JEFFREY CORTLUND JOHNSON

Eastern Washington University

The Gundlach Collection: A Large Sample of Projectile Points from the Upper Pend Oreille Watershed

The intent of this project is to present a large dataset of projectile points from the Albeni Falls Reservoir by their geographic and temporal distribution. This dataset will provide stylistically comparable projectile point forms and their relationship to the local and greater Columbia Plateau culture area. To begin building this database, analysis of the Gundlach collection which contains a large amount of projectile points (n=462), spanning from Albeni Falls along the river to Lake Pend Oreille, will be used. This former private collection was donated to the Kalispel Tribe of Indians with locational information. While specific deposition information is not available, the stylistic phenomena that occur within the collection are temporally sensitive and will be of comparable use to archaeologists working in the region

TRISHA JOHNSON

Mapping Traditional Cultural Plants on the Colville Reservation.

The Traditional Cultural Plant Project has been gathering information on important traditional plants since 2013. Inventories include size, health and phenology of populations, GPS coordinates and elevation, aspect, slope, general soil characteristics, landmarks and associated plant communities. Impacts from fire, grazing, logging and invasions of noxious weeds are recorded. We also have a large collection of photographs to accompany the database, and are starting to generate GIS layers and maps. Although the Colville Confederated Tribes restricts access to the exact locations of these cultural plant populations, maps can include many other features as layers, including soils, watersheds, the boundaries and intensities of fires, and major vegetation types. Story-maps take mapping a step further, offering additional information and versatility through the inclusion of photographs and other graphics, tables, written descriptions, and more. These maps can be shared as web pages or presentations, providing detailed information on important plants and inviting collaborations.

GRETCHEN KAEHLER AND MICHAEL HOUSER

Department of Archaeology and Historic Preservation

District or Distraction? Identifying and Evaluating Archaeological Districts

Identification and NRHP evaluation of Archaeological Districts can be difficult because the focus is often on individual archaeological sites. In this paper we offer some guidance on identifying archaeological districts using the Columbia Hills Archaeological District (CHAD) as an example. We also discuss some methods of NRHP evaluation of archaeological district that do not rely extensively on "the archeological criterion," Criterion D.

CHRIS KAISER, JOSEPH SEELATSEE, MELVIN LUCEI, JASON BUCK, MALCOLM ALECK, CLINT WILTSE

Grant County PUD

The Wanapum River Patrol

The Wanapum River Patrol keep constant watch over the ancestral lands of the Wanapum People along a stretch of the Columbia River in Washington State from Richland to Rock Island Dam near Wenatchee- a distance of approximately 110 miles (about 177 km). Locations of significance to the Wanapum are closely monitored in order to protect those places from various natural and anthropogenic processes as well as looting and vandalism. River Patrol and Grant County PUD Cultural Resource staff work in cooperation with local, state, and federal law enforcement, land managing agencies and various tribes to prevent and investigate violations of federal and state cultural resource law within the Priest Rapids Hydroelectric Project lands as well as those lands affected by normal hydroelectric operation. Through public involvement and understanding, and with the Wanapum River Patrol constantly watching the landscape, the cultural resources in this region are better preserved for generations to come.

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KASSAHUN KEBEDE

Eastern Washington University

Gender and Generations among Ethiopian Diaspora in the Washington, DC Metropolitan Area.

The paper discusses generational shifts in gender relations among first and second-generation Ethiopian-Americans in the Washington, D.C., metropolitan area. Using extensive structured and unstructured interviews, I identify three generational units in terms of their perspectives on gender status and role in the host land. Hence, some the first generation women and men affirm patriarchal traditions at least in the domestic spheres while a significant group of the first generation and almost all second-generation Ethiopian immigrants challenge the authority and control that characterizes the traditional roles and relations. Such changes resulted in strains, conflict and even family breakups within diaspora households. In this paper, I particularly highlight how women's increased access to financial resources, the presence of protective social institutions, and the everyday practicalities of living in the new social space motivate them to contest and even change patriarchal traditions.

BRIANNA KENDRICK

University of Oregon, Museum of Natural and Cultural History

Archaeoparasitology of the Paisley Caves

Parasite egg sacs from coprolites recovered from archaeological contexts can often offer unique views into the diets and health of early humans. Excavations of the Paisley Caves site of Central Oregon have resulted in the discovery of human coprolites dating back approximately 14,300 cal. BP years ago. In spring 2016, thirty coprolites and their corresponding sediment samples from Paisley Caves were processed for pollen. Portions of the coprolites separated from the main coprolite matrix included bone, fur, macrobotanicals, and amorphous plant materials. These remaining materials were stored in double-distilled water and refrigerated for later analysis. Microscopic examinations of the remaining coprolite materials is showing the presence of parasite egg sacs. Here we report on current research on these parasite egg sacs, what we have accomplished, and what we hope to achieve in the near future.

LUKE KERNAN

University of Victoria

Somatic Shockings across Ailment Narratives: Lessons from the Sacred Geographies of an Indigenous Spirit-World

Aboriginal Australian stories have a deep sense of history and myth; they captivate and express a unique worldview—each narrative manifests the applied wisdom of traditional understandings of illness embedded within local land and biology in confronting ailment “Dreamings.” These experiences of “the sacred” encode as deep philosophical concepts—but also warn adherents about how cultural illnesses infect the living land as they become symbolically translated through human suffering. These narratives generate concepts of illness and give insight into the etiology of disease and the patternings of cosmology. This paper will explore and theorize how ailment Dreamings actively shock self-awareness into embodied-subjective selves by using a combination of fieldwork data, primary accounts, and secondary sources from the Wadeye region (NT, Australia) to examine how these spiritual and physical phenomena manifest into “reality,” ruminate within peoples’ thoughts, and viscerally alter perceptions about the lived world and its poetic narration.

ROGER KIERS

Washington State Department of Transportation

Anderson Creek in Context: Setting, Methodology and Stratigraphy at 45KP233

A proposed culvert replacement prompted data recovery excavations at archaeological site 45KP233, which sits at the State Route 16 crossing of Anderson Creek on the southern shore of Sinclair Inlet, an arm of Puget Sound. The

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site is near the southern edge of the band of uplift associated with a large earthquake on the Seattle fault, which uplifted marine terraces around Sinclair Inlet roughly 300 years prior to initial site occupation. An excavation block of nine square meters at the water's edge presented unique logistical and methodological challenges, but revealed stratified site deposits including an initial shell-free component, shell midden deposits, and a post-midden historic layer. Although few sites have been previously identified and excavated in the vicinity, the rich ethnographic and historic context demonstrate the importance the area has held for generations.

ROGER KIERS AND SCOTT WILLIAMS

Washington State Department of Transportation

The Non-Faunal Artifact Assemblage from Anderson Creek (45KP233)

Data recovery of multiple components at site 45KP233 yielded a small but interesting sample of lithic artifacts, bone tools, and historic objects. Stone is most conspicuous in the lowermost shell-free component. Debitage and formed tools indicate that late-stage shaping or sharpening of stone tools occurred during the occupants' seasonal encampments, with at least one episode of obsidian reduction represented. Sandstone abraders and several bone points suggest that wood and bone tools may have played a more important technological role than chipped stone at the site. Historic artifacts from the uppermost midden and post-midden deposits suggest primarily Native American occupation rather than Euro-American, but the historic component does indicate a post-contact change in site use. Data recovery findings from this small hunter-fisher-gatherer camp are summarized, with an eye toward future work.

ERIKA RAE KING

Central Washington University

'Lava, Tapa, Tira, Voltea': An Analysis of Discourse and Practice Surrounding Mosquito-borne Illness in Pisté, Yucatán

This paper explores disease and the discourse related to treatment of Dengue in Pisté, Yucatán, and a medically pluralistic sociocultural environment. It addresses what kinds of discourses are constructed, by whom, and how individuals respond to the evolution of the sociocultural landscape in regards to environmental risk. How is discourse constructed in various circles, between clinic workers as well as former patients, family members, and the general public? From this analysis I draw conclusions about how discourse is both indicative of how people in Pisté construct medicine, treatment, and environmental risk, as well as how this reflects a global conversation about these topics.

ROXANNA JANE KING

Washington State University

A cross-cultural analysis of how children learn about witchcraft and sorcery

The purpose of this research is to investigate the modes and processes of social learning involved in the transmission and acquisition of witchcraft and sorcery. Much literature exists on the development of reasoning in natural domains (Carey 2009; Kuhn 1989; Wellman & Gellman 1992) and causal explanatory reasoning (Frazier, Gelman, & Wellman 2009; Lombrozo 2006; Wellman 2012) but there are few sustained, systematic explorations of reasoning in supernatural domains (Legare et al. 2012). Following the approach outlined by Garfield et al (2015), this study relies exclusively on the electronic Human Area Relation Files to investigate the social learning of witchcraft and sorcery cross-culturally. This research addresses debates over when children acquire religious knowledge and from whom they acquire this knowledge. Preliminary results suggest witchcraft and sorcery are primarily learned in early childhood. Parents and older generations are instrumental in transmitting knowledge and practices associated with witchcraft and sorcery to children.

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PETER KNUTSON

Seattle Central College

Art and Anarchy in the Community College

In a downwardly mobile world of no guarantees, false promises of progress and inescapable debt, classical anarchist works speak to community college students with an existential relevance. Since the 1999 WTO demonstrations the most popular coordinated studies class at Seattle Central College has been “Art and Anarchy,” a transculturative offering which juxtaposes elements such as Butoh and Dada with existential critique in the style of Bakunin, Zamiatin and Ai Wei Wei. As was characteristic of Occupy, horizontal approaches to community and learning effectively spark reflection on daily life amongst these economically marginal students.

JON KRIER, KATHRYN NUSS

Oregon State University

Utilization of Multibeam Sonar Data for Modeling Submerged Areas of Archaeological Interest

Due to rising sea levels since the last glacial maximum (LGM), evidence of early human presence along the Oregon Coast has been submerged. The goal of this project is to create higher resolution bathymetric digital elevation models (DEMs) using multibeam sonar data available from the National Oceanic and Atmospheric Administration (NOAA) for two areas of interest along the Oregon Coast chosen for their archaeological potential. Using currently available data, resulting bathymetric DEMs had limited applicability. This study expands the quality of data available for current analysis by archaeologists and provides a framework for further research. More complete bathymetric surveys are needed to better assess archaeological site potential on the Oregon Coast.

JENNA LECATES, RAY VON WANDRUSZKA

Department of Chemistry, University of Idaho

Chemical Analysis of Mysterious Finds

Excavations by historical archaeologists often produce items that defy identification. Sometimes the artifacts are small and fragmented, including scraps of metal, shards of glass, and pieces of pottery. Often they are (almost) empty containers of generic appearance, or artifacts and materials that were initially misidentified. Attempts to solve the mystery through chemical analysis can be both thrilling and frustrating. The thrills come when there is a Eureka! Moment where the evidence comes together to reveal the identity of the object. Frustration may set in when the measurements are inconclusive, or a seemingly promising materials turn out to be only dried mud. Our laboratory has conducted hundreds of analyses of such mysterious finds. The acquisition of artifacts that are worthwhile but puzzling to historical archaeologists, the approach to the analyses, and the chemical detective work that follows, are best described through examples of recent investigations.

JORDAN LEVY

Pacific Lutheran University,

Teaching Applied Anthropology in the Era of Donald Trump: Reflections on Collaborative Research with the Washington Fair Trade Coalition.

Grounded in literature on place-based course designs, this paper explores approaches to teaching applied anthropology through qualitative team-based research projects in the Tacoma region. I explore some of the challenges and benefits of designing an undergraduate course where students conduct a collaborative research project with a community partner, and examine the significance of choosing the Washington Fair Trade Coalition to research local perceptions of trade agreements during the first five months of the Trump Administration. For this project students have been involved in the entire rapport building and research design processes – developing research questions; determining

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which populations among whom to conduct anthropological research; and how to disseminate research results – alongside the WAFTC and instructor. I argue that while teaching applied anthropology through hands-on projects with community partnerships increases faculty workload, when institutional support is in place, such approaches to experiential learning can produce fruitful results for all parties involved.

IAN RICHARD LEWIS

Western Washington University; Seattle Pacific University

Archaeology in the Classroom: How might I use this tool to get rid of the ooey-gooney, bloody bits to make new clothes?

Anthropology and archaeology lend themselves well to incorporation into the STEAM push in many public school programs nationwide. After all, the study of humanity and its long path has certainly involved much Science, Technology, Engineering, Art, and Math. As a professional archaeologist, as well as an intermediate/middle school history teacher, I have found that the use of archaeology in the social studies classroom, as a medium for explaining required standards and texts, both captivates students and engages them in critical thinking and inquiry, in-depth discussion, problem-solving, and hypothesis creation. Also, seventh graders simply appreciate smashing hammer and anvil stones, scraping and cutting leather hide to bits, and pulping cedar with cobble choppers. In another context, art, the exploration of artifacts allows for practice of concepts such as lines, shading, and texture, as well as realism, to name but a few.

CAITLIN LIMBERG

Central Washington University

Paradigmatic Lithic Classification at Different Site Types on the Slopes of Mount Rainier

Under the existing theoretical model, rockshelter sites on the slopes of Mount Rainier were used repeatedly and were used for a more limited activity set than open-air sites found on the mountain. Rockshelter sites are thought to be places of short-term occupancy consistent with hunting and/or overnight residence activities. This comparison will focus on the distribution of functional and technological traits exhibited by lithic assemblages to determine if rockshelter lithic assemblages are representative of a truncated range of variability compared to open-air site assemblages. These similarities and differences are compared to see if they are consistent with the expectations from the site type's model.

ERIN LITTAUER AND MEREDITH AUSTIN

Washington State Department of Transportation

Analysis of Invertebrates from Anderson Creek (45KP233): A study of hard and soft substrate species of the intertidal zone on Sinclair Inlet

Shell midden deposition along the bank of Anderson Creek on Sinclair Inlet began shortly after 700 years ago and continued episodically into the historic period. The primary midden deposit, identified as Layer 6, was rarely thicker than 15 cm, but evidence of three sublayers observed during the data recovery excavation suggested changes in midden composition over time. Analysis of invertebrate samples collected during initial site testing had indicated a heavy reliance on hard substrate species, most notably gastropods not readily available from the adjacent intertidal zone. Following data recovery efforts, detailed quantification and analysis of invertebrate samples from Layer 6 provided additional insight on the apparent trend or preference for hard substrate species. Evidence of a sparser, historic midden deposit, Layer 4, indicates continued shellfish exploitation into at least the late nineteenth century.

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JAMIE LITZKOW, ANNE BOYD, RICHARD BAILEY, AND LINDSEY EVENSON

Bureau of Land Management

Vanishing Images: Finding and Saving Pictograph Sites

There are many ways archaeologists discover pictographs in the field, the main one (obviously) being visual recognition; but what is a researcher to do if the lighting isn't right? Or pictographs are badly faded and covered in lichen and moss? In most cases, undocumented rock art is discovered quite serendipitously as an archaeologist scans cliff faces and the walls of rockshelters. A lot of conditions have to be just right, however, for badly-faded pictographs to be recognized in the field. There is little doubt that even the most thorough archaeologist could be missing important images due to bad lighting, shadows, or poor visual acuity. This presentation highlights the dramatic results that can be accomplished by recognizing areas with a high probability for rock art, photographing potential panels, and applying pictograph enhancing software to bring even the most faded images back into the light of day. Specific examples are provided from a previously unrecorded pictograph site in the Channeled Scablands of Eastern Washington.

JAMIE M. LITZKOW AND LINDSEY M. EVENSON

Bureau of Land Management and Transcon Environmental

Recognizing Ethnicity at Historic Placer Mining Sites in the Pacific Northwest

Not all placer mining sites are alike. Research conducted over the last twenty years has recognized the potential for placer sites to complete the historical record by addressing questions of population growth, ethnic relations, and socioeconomic pressures. This is especially true in the Pacific Northwest, where the earliest population booms were often fueled by a frenetic search for wealth and independence. The recovery of gold in the region's vast Columbia River drainages drew California 49ers, Chinese, and other groups into a complex political environment. By the time placer deposits were discovered near Fort Colville in 1855, international dramas were already playing out between Native Americans, First Nations peoples, and the U.S. and British governments. This presentation summarizes relevant socioeconomic and political themes, and offers methodologies that can be used to recognize, interpret, and protect placer mining sites with the potential to yield data important to illuminating the role of ethnicity in our local mining history.

KIRSTEN LOPEZ

Oregon State University

Archaeology in the 21st Century: Public, Politics and Science

Cultural Resource Management is important in the utility of client compliance and ethics, the value of which is at risk of being challenged. History has shown that archaeology as a field of inquiry has pushed modern understanding of human variation in ways that have changed concepts of human history, North American prehistory, and race. Almost two decades into this new millennium, we are confronted with questions about how we fit into the world we inhabit today—political movements swirl around us as we continue our scientific pursuit and serve clients with much needed compliance contracting—all while our work and message seems lost. This paper brings archaeology to issues of race, class, and climate upheaval, exploring how some recent events such as the Malheur Occupation and Dakota Access Pipeline have pushed archaeology into the public eye, and political arena.

LILY LOUCKS, SAFFRON KRUSE, VINCENT WILSON

University of Idaho

The Tools of James Castle's Art

James Castle was a self-taught artist native to Idaho, whose works were shaped through the experiences of his childhood and adult life. By creatively applying the materials and resources around him, Castle sought art as an outlet and means

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of non-traditional communication. The James Castle Project of 2016 was an archaeological collaboration to excavate a portion of his original house site. This poster presents an overview of the materials recovered archaeologically that were Castle's art making tools. This can give greater insight to his creative techniques and how the materials he used reflected his physical surroundings.

PAT LUTHER AND THOMAS MARSH

Museum of Natural and Cultural History - University of Oregon

Above it All: Aerial Imagery Support of Archaeological Research in the Fort Rock Basin, Oregon

Aerial imaging using drone technology has rapidly become less expensive and more accessible to researchers in recent years. Our goal is to share the accessibility of this exciting technology with researchers, as well as to highlight our work in support of Dennis Jenkins and his ongoing research in the Northern Great Basin using aerial imaging taken during the 2016 summer archaeological field school season at the Connley Caves and at Silver Lake, Oregon. High resolution photography was used to map the sites and the ongoing archaeological investigations occurring there. These photos will serve later research purposes, as well as future research planning, activity reporting and archival purposes.

CHARLES T. LUTTRELL

Washington State Parks and Recreation Commission

Palouse Falls - Almost Sibling to Snoqualmie Falls Hydro

The official Washington State cataract is 198 feet of natural majesty in an arid and isolated scabland environment. Little known to most Pacific Northwest historians, tribal interests, and Palouse Falls State Park visitors, at least three schemes were put forth in the twentieth century to harness Palouse Falls for hydroelectric development. Two pre-1910 proposals powered rural electric railways. A third plan during the Reagan Administration would have supplemented public power in Franklin County. The impressive setting of this eastern Washington waterfall is yet preserved, but only by surprising events that thwarted earlier would-be entrepreneurs.

KEVIN J. LYONS

Kalispel Tribe of Indians

Assuring that the Public Good is Sustainably Served in Public Archaeology

Public Archaeology as a process, rather than as products, has long been held as a National priority. But of late we, the servants of that public trust, witness the capricious appetites of the few tolerated by a feckless many attempt to undo that trust in an effort to make "America [exclusive] again". As a generation of civil service earns its honorable retirement, let us not forget the good they have provided or the mantle of responsibility that remains. From them we have learned the importance of the ethical conduct of research, the fair treatment of our peers, and the transparent sharing of knowledge are the loadstone against which we test the goodness of the process through its products. Though much has been achieved much more still remains in the delivery of our service. If these are indeed the days of a crisis, then let us not waste this opportunity.

HANNAH MACINTYRE

Washington State University

Cultural and Social Biases in Educational Access for LGBTQ Public School Students

This study is an attempt at consideration and evaluation of the educational access of LGBTQ students, and the cultural and social influences in the Dallas-Fort Worth Metroplex area. It is largely shaped through the theoretical framework of Judith Butler's Performance Identity Theory, with the linguistic aspects expanded through the consideration of the Sapir-Whorf Hypothesis. It utilizes a multifaceted approach, covering an analysis of the existing literature and public data, ethnographically captured perspectives of current teachers and administrator and recent students, and statistical

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evaluation to holistically assess educational access and evaluate its' cultural and social biases within the north Texas, Dallas-Fort Worth Metroplex. The statistical evaluation replicates a national study (Fetner and Kush, 2008) to test the model's viability and utility at a micro level, in the southern region. The study concludes with recommendations for future analyses as well as policy revisions and reforms.

MARYANNE MADDUX

Oregon State University

Diversification in a Time of Adversity

The Wing Hong Tai/Hai Company was a mercantile, laundry, and gaming house in The Dalles, Oregon which operated through the late 19th and early 20th centuries. During the Chinese Exclusion Era (1882 -1943) racial tensions and constantly changing laws impacted the daily lives of Overseas Chinese individuals in the Western United States. As foreign business owners the Wing Hong Tai/Hai Company partners faced obstacles which impeded their economic success in The Dalles. Despite historical documentation that originally depicted the business as a laundry, the Wing Hong Tai/Hai Company partners provided varying services depending on their financial needs and the demands of their customers. As innovative entrepreneurs the partners circumvented scrutiny and legal pressure by diversifying their business. The experiences of the Wing Hong Tai/Hai Company partners are recorded within historical documentation, the archaeological record, and the extant environment.

MAURICE MAJOR

Washington Department of Natural Resources

Wherever They're Naming a "There" of Theirs: Native place names, landscape features, and refining archaeological expectations in a sea of "high risk."

Washington's current archaeological predictive model classifies wide buffers inland of coastlines and around rivers and streams as "high risk," but we know that humans prefer particular habitats and that Northwest Tribes developed deep cultural relationships with certain landscape features. Native place names have been used to identify specific archaeological sites, but looking beyond that, physical attributes of named places on the Pacific Coast and mid-Columbia River show that archaeological potential changes with the terrain and environment of marine coasts and rivers, and that as distance from the water's edge increases, the archaeological record diminishes or changes in ways eluding the model. Landscape features identified by this analysis are proposed as a means to assess archaeological potential and suggest likely feature types. I wish to thank the Quileute Tribe and Confederated Tribes of the Umatilla Indian Reservation for their generosity with their cultural heritage.

OLIVIA "MORGAN" MANUSIA

Eastern Washington University

Research in Identity and Video Games

This research explores how socially privilege or marginality affect the way players interact with and think about single player role-playing games. There is little research done about these issues in single-player role-playing games; this study aims to help close that gap. Players' social identity and life experiences shape their experiences of the stories and themes in video games. This research builds on an exploratory project I did which suggested that an individual's social identity has an effect on how players think about choices and non-player characters in Fallout 4. This study uses semi-structured interviews, both in person and over Skype with players to explore dialogues and discourses about these issues in relation to the Dragon Age series and the Mass Effect series. Through these interviews this project brings to the forefront counter-narratives from those who are not portrayed positively, frequently or accurately in video games.

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KENDRA MARONEY

Kalispel Tribe of Indians

Ground Penetrating Radar at 45PO153: Stratigraphic Analysis

Ground penetrating radar (GPR) was conducted at residential site 45PO153 along the Pend Oreille River in the spring of 2016. GPR was first used as a reconnaissance survey tool to identify possible areas of interest for excavation. It is a tool often used to recognize subsurface anomalies or targets to be further analyzed through excavation. This survey method can be particularly useful for the identification of substrate changes, as might be observed with house floors or cooking features. After the GPR survey was completed, four test unit blocks were excavated in the area. The GPR data was reexamined so that GPR profiles could be correlated to the excavations. The radar profiles were aligned with the excavation units, and directly evaluated with stratigraphic profiles. This re-entry to the data allowed for ground truthing of our remote sensing method and a different perspective on real substrate changes.

RACHAEL MARTIN

Central Washington University

SQUIRREL! An Experiment on Mammal Bone Decay in Acidic, Alkaline, and Neutral Solutions

This experiment modeled mammal bone preservation in extreme pH value soils. The preservation process was simulated using liquid solutions of vinegar (pH 3) and ammonia (pH 11) to represent low and high a pH values, while tap water (pH 7) was used as a control. Two femora from each of three ground squirrels were placed in the three solutions for 23-hour periods over 13 days, weighing them daily. All bones lost weight over the course of the experiment, with the acidic solution showing the most weight loss. Weight loss in alkaline solution was not much different than loss in neutral water. These results are similar to prior experiments showing greater bone decay in acidic soils.

NATHAN J. MAY

University of Idaho

Constructive Play: Fort Boise, Archaeology, and Children's Toys

This paper examines children in the archaeological record in a military context during the Victorian age in the United States. The objective of the paper is to identify children and adolescents' to the archaeological record (whether the toys were commercially manufactured or were homemade objects of amusement), and to describe the relationship children had to these toys as instruments of instructions. In addition, this paper will be drawing evidence from the University of Idaho led 2014 excavations of the Surgeons Quarters at Fort Boise.

BRANDON MCINTOSH

Department of Anthropology, Washington State University

What Doña Ana Phase and Modern Jackrabbits (*Lepus californicus*) Can Tell Us About Climate Change in the Southeastern Southwest

This paper documents the environmental conditions of the Tularosa Basin/Hueco Bolson during the Late Formative Period in the Jornada Mogollon Region of the U.S. Southwest by comparing stable carbon isotope values of black-tailed jackrabbits (*Lepus californicus*) from archaeological site LA 12361 to modern jackrabbits in southern New Mexico and west Texas. Recent research by Smith and his collaborators show that carbon isotope values of jackrabbit bone collagen produce an effective proxy for plant communities, and by extension environmental conditions, within which these herbivores foraged. It is possible not only to understand jackrabbit diet and environmental conditions in prehistory, but also to compare dietary and environmental proxies with modern jackrabbit carbon values to document environmental change since the 13th Century. Additionally, a discussion of stable hydrogen isotope analysis for differentiating between C4 or CAM plants in jackrabbit diets will be presented as a method to increase interpretive precision of environmental variability.

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DANIEL MEATTE AND SCOTT WILLIAMS

Washington State Parks and Washington State Dept. of Transportation

CAVEAT EMPTOR: A History and Technological Analysis of the Rutz Clovis Point

On Nov. 9, 2013, the final gavel fell at auction of the Rutz Clovis Point from East Wenatchee, Washington. Its selling price at the Morphy Auction House in Denver, Pennsylvania, was \$276,000 - the most ever for a single prehistoric stone artifact in North America. It may also have set a new record for stretching the truth. The Rutz Clovis Point appears in a number of professional publications about Clovis-age assemblages and technology. Yet, it has never been adequately described, its provenience documented, nor any technological analysis of it undertaken. This paper traces the history of the Rutz Clovis point since its reported discovery in the 1950's. It then compares this history with the results of a technological analysis of the point. We conclude the point is a fake or a prehistoric biface recently modified into the shape of an oversized Clovis point.

SHANNON MEYER

University of Washington—Anthropology Honors Program

Complicated Autonomies: Disability, Family, and Medical Decision Making

Complicated Autonomies: Disability, Family, and Medical Decision Making looks at the ways in which complex interpersonal relationships between medical professionals, family members, and disabled persons affect the medical care received by people with disabilities. It explores power and control, both in the context of family and clinical environments, looking at how the cultural construction of disability plays into the practice of medical decision making, and ultimately their effect on the enactment of medical care for people with disabilities throughout their lives. Through interviews and focus groups, this project works to create narratives, and explore how these narratives interact, using a critical feminist disability studies lens. These complicated autonomies, influenced by sociocultural conceptions of disability, dynamics of family interaction, and perceptions and practices of medical professionals become the lived experiences of disabled people, and fundamentally altering the ways in which they receive care.

MINA MINA

Edmonds Community College

Humanizing Narratives to Bring About Holistic Understanding of the Past: An Oral History Project

Growing up as a member of an Egyptian minority, I have been oriented with stories that give a different perspective on Egypt's history -- one that raises attention to a history of oppression. For the past five years, my interest in gathering such stories has led to undergraduate research on Coptic identities at the U. of Washington and then motivated me to return to Edmonds CC to assist with a local oral history project. This project, initiated by Dr. Thomas Murphy, empowers different, local communities to tell their own history, and to give the students an opportunity to conduct anthropological studies through interviews. In conducting oral histories, the complexity of in-person communication produces a dynamic account, which allows a personalized history that future generations can value and relate to, and one that allows future analysts to hear the life stories of the history creators that propelled their actions.

MARCI MONACO AND MEGHAN JOHNSON

Archaeological Investigations Northwest

Dittman Biface Cache Simulation: Caching a Database for Future Studies

Experimental replication of the bifaces recovered from the Dittman Biface Cache site (35MA375) located near Salem, Oregon, provided information to help answer lithic technological questions. This study attempts to determine possible reduction strategies and technologies employed in the manufacture of obsidian bifaces through the examination of experimental debitage. The author's simulated reduction of the bifaces recovered at the Dittman site in two phases.

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Phase one consisted of the initial reduction; recreating what occurred at the quarry. The individual reductions were timed, collected, and analyzed. In phase two, the authors reduced bifaces using two reduction techniques; core reduction with the focus on producing usable flakes and bifacial reduction with the intent of producing a percussion bifacial tool blank. The debitage was analyzed to identify platform attributes, dorsal scars, curvature, shape, and size of flakes. Our goal was to determine how the bifaces were made and for what purpose they were used.

MARCIA MONTGOMERY

CH2M

Managing Historic Properties in Spokane's Riverfront Park

Spokane's Riverfront Park is on the site of the 1974 World's Fair. The environmental-themed event became a platform to reclaim Havermale Island and other industrial areas surrounding the Spokane River for post-fair use as a park. Reclaiming this land as a park was a concept first introduced decades before by the Olmstead Brothers. After the fair, the City redeveloped the Expo '74 site opening Riverfront Park in 1976. In 2016, Expo'74-related resources were determined eligible for listing in the National Register of Historic Places as a historic district for their exceptional importance. The identification of this less than 50 year old historic district occurred after the development of the City's Master Plan (2014). This presentation describes the identification and preservation planning process developed by CH2M in collaboration with the Spokane City Parks Department and Spokane Historic Preservation Office to integrate historic preservation planning into the park's future.

ASHLEY M. MORTON

Fort Walla Walla Museum

Archaeological Investigations into Spokane's Riverfront Park

Led by Fort Walla Walla Museum's Heritage Research Services and the Spokane Tribe of Indians Preservation Program, two archaeological surveys to date have been conducted in Spokane's Riverfront Park in fulfillment of a SEPA review and DAHP archaeological excavation permit to support the City of Spokane Parks and Recreation Departments Riverfront Park Redevelopment Project. This paper discusses methods and findings while surveying and testing in the park's Gondola Meadow and around the Loeff Carousell. Discussion will focus on the identification of two historical-period sites and one National Register eligible feature, a ca. 1890-1913 blacksmith activity area (45AP794).

ASHLEY M. MORTON

Fort Walla Walla Museum

Before the Riverfront Park: Historical Research into Early Modern Spokane's Development and Settlement in and Around the Falls

This paper explores historical research results from a detailed assessment on the archaeological potential in Spokane's Riverfront Park conducted for the City of Spokane's Parks and Recreation Department. Numerous records, from the decennial federal census and city directories to historical Sanborn Fire Insurance maps, were compiled to reveal the park was once home to a dynamic, ethnically and socially diverse group of people amidst an industrially and commercially mixed landscape. From mills and railroad depots to hotels, saloons, city government buildings and a Chinatown, we'll explore early modern development surrounding the Spokane Falls.

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JOSH MOSS

SWCA Environmental Consultants, Portland

Refining an Automated Model for Basic Landform Classification

A geomorphologic landform classification is useful as a broad mapping guideline for a variety of land use and environmental planning applications, with a variety of specific uses within the fields of archaeology and anthropology. Existing automated models based on Digital Elevation Models (DEMs) are not available as tools compatible with ArcGIS and they introduce errors into the classified landform layer. This paper will present an improved method of classifying landforms from DEMs as well as a tool for ArcGIS that is optimized for functionality based on an original Python script. The improved model will be verified by comparison with landform classification conducted through photographic interpretation.

AMELIA MARCHAND

Colville Tribes

Efforts of Environmental Justice and Regulation on the Colville Indian Reservation

Environmental regulation within Tribal jurisdictions is an ongoing effort to speak and educate professionals in a cross-cultural manner. Implementing compartmentalized regulations upon societies whose culture is holistic and place-based is challenging, with efforts to raise cultural awareness and respect tribal traditions rewarding experiences. This discussion will view aspects of anthropology and the intersecting facets of climate and environmental justice, federal Indian law, cultural resources, and civil rights on the Colville Indian Reservation. Examples of current work projects on food sovereignty and climate change from the perspective of an environmental regulator – who is a Tribal woman – will be shared.

THOMAS MURPHY

Edmonds Community College

All of our Relations: Indigenizing Bioanthropology and Archaeology

As a cultural anthropologist teaching bioanthropology and archaeology, I have employed various strategies for bringing social and environmental justice into the pedagogy of the biological sciences and field archaeology courses. Over the past two decades collaborations with Coast Salish tribal communities and municipal governments have enabled conversion of lecture-based bioanthropology courses into lab and field-based experiences through which students support the work of local tribes and municipalities in the application of traditional ecological knowledge to sustainability challenges in their own neighborhoods. Field courses in human ecology and archaeology provide more intensive experiences for students to work alongside tribal elders and municipal staff. Highlights of these partnerships include archaeological and ecological projects that helped bring salmon back to Japanese Gulch, near the site of Point Elliott treaty; construction of stóljxwáli (Place-of-Medicine) Ethnobotanical Garden and q'wəld'ali (Place of the Cooking Fire) Cultural Kitchen; and field schools in support of Tribal Canoe Journey.

JESSICA A. MYLAN

Western Oregon University

Sustainable Tourism in Costa Rica: Aligning Tourists' Interests with Local Development

One quarter of Costa Rica's export income comes from ecotourism which is the country's most prominent form of tourism. This poster showcases the local tourist attractions, landscapes, and services eco-tourists utilize during their travels to Costa Rica. It draws on pictures, participant observation, and oral interviews to highlight the major attractions and interests of locals in Tárcoles, Carara National Park, and Jaco along the Pacific Coast. It also illustrates the ways in which tourists traveling to Costa Rica can benefit the lifestyles of the community through the promotion of

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its members' human welfare through a sustainable use of the natural environment. It argues that there are opportunities in Tárcoles for the community to take advantage of the tourists visiting nearby attractions and also develop sustainable services that preserve the environment and create economic benefits for locals.

AARON NAUMANN

Confederated Tribes of the Colville Reservation

Intro to Tribal Sovereignty, Capacity Building and supporting Native American Self-Determination thru Cultural Resource Management

The interaction between Native American tribes and the United States government has been predicated on nation-to-nation recognition, as witnessed through the presence of such instruments as treaties. Unfortunately, these relationships have been far from equitable. The federal government's legal and moral imperative stemming from the recognition of its historic and continuing affliction of injustice is partly captured in its "federal trust responsibility" to Native Americans. These responsibilities have been codified over the last forty years into directives instructing federal agencies to provide Native American tribes the necessary resources to build capacity in support of self-determination. While mostly this concept is discussed at the governance level, it is actually meant to be applied at all levels including the management of cultural resources. It on the basis of these directives that Lawr Salo has operated, and it is hoped through his example others can find inspiration to continue this important work.

AARON J. NAUMANN OR JACQUELINE M. COOK

Introduction to the Confederated Tribes of the Colville Reservation, History/Archaeology Program

The Confederated Tribes of the Colville Reservation consists of the Wenatchi, Entiat, Chelan, Methow, Moses-Columbia, Sanpoil, Nespelem, Okanogan, Lakes, Colville, Palus, and Chief Joseph Band of the Nez Perce. This presentation provides an introduction to the history of our people and the work being done at the Colville Tribes' History/Archaeology Program.

TRISH HACKETT NICOLA

Family Traces

The Chinese in Spokane's Riverfront Park Area

The Chinese Exclusion Act was enacted to limit the number of Chinese, specifically laborers, from entering the United States and to keep those already here from becoming naturalized. It was in effect from 1882 to 1943. This legislation created thousands and thousands of files on Chinese whether they were born in the United States or immigrants. Many of the Chinese who lived and worked in Spokane's Chinatown are included in the Chinese Exclusion Act case files at the National Archives in Seattle. The files contain biographical information and usually a photo. Because Caucasian and Chinese witnesses were required for testimony, the files can contain the information on the working relationships between the White business owners and the Chinese and their families. This presentation will explain the Act and present examples of Spokane's Chinese community and their interactions with their White neighbors.

CHRISTOPHER NOLL

Idaho Archaeological Society

Low Density Doesn't Mean Low Value: Evaluating the Significance of 10CR179, a Low Density Site in the Mountains of South-Central Idaho

In 2016, Versar conducted a survey and site evaluation project along Sage Creek, in the Lost River Valley of south-central Idaho. Subsurface survey revealed a low density scatter of chipped stone tools and debitage. Despite the low quantity of identified artifacts, they exhibit a high degree of raw material variability. A temporally diagnostic projectile

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point fragment indicates that the site was occupied between 700 and 150 years ago. Analysis of the assemblage identified indications of horizontally discrete tool maintenance areas. Based on the raw material pattern, age, and probable activity at this site it was likely an integral part of a seasonally organized resource procurement system. The site serves as an important example of a key piece of the subsistence system that can only be recognized through careful analysis of a unique, but low density, artifact assemblage.

PATRICK O'GRADY, PH.D.; SCOTT THOMAS, M.A.; CAROLYN TEMPLE, M.A.

University of Oregon Museum of Natural and Cultural History; Burns District Bureau of Land Management

Broadening the Focus: A Look at the Paleoamerican Surface Assemblage at Rimrock Draw Rockshelter

(35HA3855) in Relation to the Burns BLM District at Large

The Burns District Bureau of Land Management and the University of Oregon Archaeological Field School have been conducting surveys at Rimrock Draw Rockshelter and surrounding environs since 2005, often in collaboration with volunteers from the Oregon Archaeological Society. These efforts have resulted in the recovery of over 75 temporally diagnostic Paleoamerican artifacts in the vicinity of Rimrock Draw. Survey and inventory by BLM agency personnel in other portions of the Burns District has yielded approximately 1400 more, with some portions of the district producing significantly higher numbers than others. This presentation will touch upon relationships between the surface archaeology of Rimrock Draw in comparison with patterns for Paleoamerican sites elsewhere on the district, examining the frequencies of point types, breadth of obsidian source use, temporal indications as expressed through obsidian hydration, and upcoming research plans.

MARGARET O'LEARY

Western Washington University

Analysis of Bone Marrow and Grease Extraction at Site 45WH055

Bone marrow and grease extraction provides an invaluable nutritional resource for human populations. This study analyzes bone fragmentation to determine extent of marrow and grease extraction from mammal and bird remains at a coastal Late Locarno Beach Phase site, 45WH055. Traditionally, studies on fragmentation focus on identifiable elements and tend to ignore indeterminate fragments (Outram 2001). 45WH055 is highly fragmented, making it difficult to determine element or species for the majority of material. Adapting methods developed by Outram, I examined cancellous versus diaphysis bone, longest length of individual fragments, and the distribution of appendicular, axial and cranial bone to reveal how indeterminate fragments can illuminate the extent of bone processing. The study of marrow/grease extraction through fragmentation patterns demonstrates the importance of bone fat as an essential resource during the Late Locarno Beach Phase. Additionally, this study demonstrates that indeterminate fragments can bolster a traditional faunal analysis.

TABITHA ORMAECHEA

Eastern Washington University

Forced Sterilization in Australia and the Question of Human Rights

Forced sterilization is and historically has been a political tool used as a means of regulating the growth of the "undesirable" populace in an effort to improve their race. The global eugenics movement of the early twentieth century was heavily influenced by the ideology of Australia. Through the years those who have been targeted have varied based on the interests of the Australian government. The paper analyzes the historical framework of this practice and how this practice has evolved into a globally contentious human rights issue. Forced sterilization is a practice that has been condemned by nearly all developed nations, NGOs and the UN yet Australia continues the usage of this practice. These various political actors cite this practice as a blatant human rights violation and have taken many steps

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to stop the use of forced sterilization. In this paper I present the exploration of the differing philosophies and analysis of the actions by the various global political actors in an attempt to terminate the use of this sordid political tool. My paper also include the Australian government's reactions to these condemnations and how the government justifies the continued use of this controversial political practice.

MAKAELA O'ROURKE; SCOTT THOMAS

Museum of Natural and Cultural History, University of Oregon, Burns BLM

Pottery at Skull Creek Dunes, and its Implications for Pottery Tradition in Southwestern Oregon

Prehistoric pottery is rare in Oregon, and the presence of pottery at the Skull Creek Dunes site in Catlow Valley of Southern Oregon is potentially important. This paper builds on the previous excavation and research by Scott Thomas of the Burns BLM and describes the pottery and work done on it since. These sherds represent one of the oldest pottery traditions in Oregon, and were likely made on site. Initial dating places the site around 1250 CE. In addition to the sherds, small possible gaming pieces and fired clay cones were also discovered at the site, as well as lithic and faunal components. Although previously thought to be Shoshone due to an associated site, this paper also explores the possibility of a Fremont origin for this pottery.

THOMAS OSTRANDER

Environmental Science Associates

N=1: The Power of Charismatic Artifacts

Modern archaeological research favors quantitative analysis of large statistically significant data sets. Singular artifacts are often relegated to obscurity in the site catalog. While data driven analysis has revolutionized the field, charismatic artifacts (i.e. artifacts capable of evoking a human connection to a time, place, or event) are a tool that cannot be discarded. They present the most direct opportunity to actively engage the public, conveying a sense of place and providing a relatable human connection to our ancestors – crucial elements in fostering a respect and interest in heritage. This talk will focus on four such charismatic artifacts (a chisel, a shoe, a doll, and a bone) that greatly facilitated the interpretation of the sites they were recovered from. This talk will use these examples to show how charismatic artifacts can best be integrated into archaeological reports to provide independent talking points for more effective media and community engagement.

THOMAS OSTRANDER, AJA SUTTON, AND MICHAEL BEVER

Environmental Science Associates, Unaffiliated, Environmental Science Associates

A Case Study Evidencing Precontact Reinterment of Inadvertently Discovered Human Remains.

In 2015, a burial containing the ancestral remains of an adult male was inadvertently discovered in the Bay Area town of Hillsborough, CA, within a large shell mound; site CA-SMA-78. The site contains a significant number of intact burials and scattered remains within and below a thick midden. A pit feature with blackened bone and charcoal was found adjacent to the facedown partially intact skeleton. Analysis of the pit's contents revealed butchered elk bone and the majority of the adult male's lower limbs. Precontact disturbance of burials within a heavily utilized site is not unusual; however, relocation, low heat burning with faunal material, and subsequent reburial, has not been previously observed and appears to be evidence of ritualized reinterment. This burial provides a rare view into pre-contact treatment of inadvertently discovered bone, suggesting that past peoples in this geographic area may have held physical human remains in reverence.

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TERRY L. OZBUN AND JOHN L. FAGAN

AINW (Archaeological Investigations Northwest, Inc.)

Reading Flakes and Flake Scars

Reading the ancient language of lithic reduction technologies from archaeological assemblages of flakes and flaked-stone tools reveals cultural information about the people who made them. For archaeologists, lithic literacy begins with understanding the basic anatomy of flakes and flake scars. Variability in the expression of this basic anatomy directly reflects past cultural choices of people practicing a technological tradition. Direct analogy through experimental flintknapping and stone tool use provides a basis for understanding the range of technological choices available at each step of a complex process. Practiced flintknappers learn to recognize the structure of a technological system, including its failures and successes, indelibly written into the attributes of flakes and flake scars. We propose a framework for combining analyses of flake attributes, types, and assemblages for an anthropological understanding of lithic technologies.

KIRK PACKWOOD

Independent / University of Montana

Superstructural Fluctuations: The Cult of Kek, Memes, and the 2017 Presidential Election

Orthodox interpretations of base-superstructure theory posit that transformations in the economic base of a society must be reflected in the superstructure. The world's first significant online religion, The Cult of Kek, emerged organically in 2015 among the Alt-right in large part to promote the election of Donald Trump to the United States presidency using modern Internet memes. Memes are defined and bounded replicating units of cultural information which in the modern era have become extremely popular as a method of passing humor - often mixed with and related to political beliefs. Firsthand ethnographic work within the Cult of Kek suggests memes have the power to alter the political landscape significantly. The extremely odd emergence of the Cult of Kek was made possible by a shifting of the economic base of Western nations toward a digital information-based economy.

SARA E. PALMER

Washington State Department of Natural Resources

Using LiDAR Data for Archaeological Recon: Tips and Tricks

As Washington state LiDAR data comes online for public use, you'll want to make this powerful tool part of your archaeological survey kit. Learn some field-tested techniques for LiDAR use and get an update on DNR's plans for upcoming LiDAR data releases.

**ANWESHA PAN, DARRYL HOLMAN, YESENIA NAVARRO, BAISHAKHI BASU, CARA SKALISKY,
AND KATHLEEN O'CONNOR**

Department of Anthropology, University of Washington, Seattle

Effects of reproductive hormones on pregnancy-related sickness in rural Bangladeshi women.

We examine the association between reproductive hormones and nausea, vomiting and dizziness in pregnancy. Twice weekly interviews and urine specimens were collected from 203 women across pregnancy. Repeated measures logistic regression estimated the effect of urinary concentrations of estrone conjugates (EIC), pregnanediol-3-glucuronide (PDG) and human chorionic gonadotropin (hCG) on the probability of each symptom, after controlling for age. Increased concentrations of EIC were found to reduce all three symptoms. Higher hCG concentrations increased the probability of nausea and vomiting. Older women were less likely to experience nausea and dizziness. Overall prevalence's of nausea and vomiting are low compared to other populations. The dizziness symptom paralleled the timing of nausea and vomiting in pregnancy, but occurred at higher frequencies.

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MADILANE A. PERRY

And the Dig Goes On, and On and On...

Archaeological site 45FE71 on northeastern Washington State's Curlew Lake includes an original homestead cabin which is the oldest and the only homestead-related structure on the lake. By the mid 1990s it was obvious that the cabin's continued survival required replacement of the failing 1953 foundation. The site includes homestead and mid twentieth century material as well as earlier aboriginal components. The necessity of disturbing this material to replace the foundation led property owner and archaeologist Madilane Perry to attempt excavation for the foundation replacement as a controlled archaeological excavation. From the initial 1994 soil auger tests to the ongoing work along the cabin's interior walls, the excavation has continued as time and funds became available. Excavation and analysis are incomplete but some possibly useful information, including what appears to be the first radiocarbon date from the Curlew Lake Basin, has been produced.

MARY PETRICH-GUY AND RENAE CAMPBELL

University of Idaho

James Castle House Archaeology Project: Public Place in a Small Work Space

Self-taught artist, James Castle, lived his entire life in Idaho (1899-1977). From a young age, he created his works from everyday materials, such as mail, matchboxes, pages of siblings' homework, and found or made objects. Castle moved to Boise with his family in the 1930s. While at this house, he used a converted chicken coop/shed as a private workspace and residence for many years. In October 2016, archaeologists from the University of Idaho (UI) collaborated with the James Castle House, Boise City Department of Arts and History, Boise National Forest, Idaho Archaeological Society, and Versar, Inc. to investigate Castle's shed workspace in hopes of better understanding the context of James Castle's life. During a one-week public archaeology project, UI staff, Idaho students, and public volunteers conducted field investigations of the former Castle property, and excavated in and around Castle's primary workspace, the shed.

**LORI PHILLIPS, STEVEN HACKENBERGER, SHANNON TUSHINGHAM, KOREY BROWNSTEIN,
AND DAVID R. GANG**

**Department of Anthropology, Washington State University; Department of Anthropology, Central
Washington University; Institute of Biological Chemistry, Washington State University**

Title: From their Pipes to Curicaueri: Tobacco Use Among the Ancient Tarascans

Residue analysis has been used within Mesoamerican archaeology to look at topics ranging from ceremonial usage of cacao to the chemical composition of Maya Blue pigment. Surprisingly little research has been conducted on the usage of medicinal or ritually smoked plants despite the fact that iconographic and ethnographic accounts describe the importance of smoking, specifically tobacco, among the Maya, Aztec, and other indigenous groups. We investigated this topic by examining tobacco use among the ancient Tarascan's through residue analysis of experimental and archaeological pipes. This research not only adds to our knowledge of Mesoamerican ritual and medicinal practices but also to the growing literature of indigenous uses of psychoactive plants.

LORI PHILLIPS, ERIN THORNTON, KITTY EMERY, AND CARLOS PERAZA-LOPE

**Department of Anthropology, Washington State University; Florida Museum of Natural History, University
of Florida; Centro Instituto Nacional de Antropología e Historia**

Talking Turkeys: Stable Isotope Analysis of Turkeys from Postclassic Mayapán

The ancient Maya utilized two species of turkeys: the Ocellated Turkey (*Meleagris ocellata*) native to the Yucatán Peninsula, northern Guatemala, and northern Belize and the Common Turkey (*Meleagris gallopavo*) from Central

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Mexico. The exact timing of Common Turkey domestication and its introduction to the Maya area is unknown, although evidence from the Preclassic exists. The Ocellated Turkey was never domesticated but many scholars have proposed it may have been managed by the Maya. To understand the human–turkey relationship, particularly management strategies and contextual usage, we used stable carbon and nitrogen isotope analysis of turkey remains from the Postclassic site of Mayapán. Our results show the presence of both species; however, isotopic analysis reveals a difference in diet between the two, interpreted here as a difference in animal management strategies. In this paper, we discuss these isotopic differences and the implications they have for understanding ancient Maya human and animal relationships.

DANIEL J POLITO

University of Idaho

Lithic Debitage Analysis of the Kelly Forks Work Center Site (10CW34)

Lithic debitage analysis can be key to understanding the past lifeways of hunter-gatherers, especially those behaviors related to site activities, mobility, exchange, and settlement patterns. Lithic debitage is the direct result of discrete episodes of human behavior and is most likely deposited into the archaeological record at the location of the enactment of these manufacturing and curation activities. The Kelly Forks Work Center site (10CW34) in the Clearwater River National Forest is an ideal site to analyze the lithic debitage to investigate these lifeways (n=16,252). Twenty-six radiocarbon dates, ranging from 13,740 to 280 cal. BP, documented recurring occupations of the site beginning in the early prehistoric period and continuing through the middle and late-prehistoric periods into historic times. An aggregate and attribute analysis of this debitage assemblage was performed to infer the aforementioned behaviors and their significance to the site and region as a whole.

JOHN POULEY

“Please Contact Me If This Is of Interest to You” An Introduction to the Dittman Biface Cache (35ma375), the First Recorded Biface Cache in the Willamette Valley

During a summer landscaping project, a Salem, Oregon area landowner encountered the first biface cache discovered in the Willamette Valley. At the time, the landowner was unaware that his weekend project would attain notoriety across the state, country, and even abroad. Due to his stewardship, and willingness to report his find, university, tribal, federal, state, and contract archaeologists from throughout the northwest collaborated, donating their time and services. Of approximately 32 biface cache sites in Oregon (of ~40,000 sites), 35MA375 is possibly now the most well documented. The site possesses the ability to contribute important information on prehistoric trade routes, trade items, and insight into how the landform was utilized by the Santiam band of the Kalapuya. The initial contact between the landowner and the State Historic Preservation Office and a brief summary of the subsequent events that transpired are addressed in this introduction to the Dittman Biface Cache (35MA375).

JOHN POULEY

The “Value” Of the Dittman Biface Cache (35ma375): Public Outreach and Archaeological Awareness

Investigating the Dittman Biface Cache (35MA375) attempted from the onset to include public outreach and archaeology awareness. The landowner, who is a teacher, used the archaeological excavations on his property as a fieldtrip opportunity for his students. Oregon Public Broadcasting (OPB) sent a reporter to record the story. Oregon Parks and Recreation Department (OPRD) sent communications staff to collect video, photos, and information for a later press release. The media exposure covered all of Oregon, most of the United States, and was even referenced in a London news broadcast. Numerous landowners across Oregon contacted SHPO after hearing about the site through one form of media or another, to report archaeological sites on their property, or, if they had a collection of artifacts

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that they wished to return to an area tribe. Additional public outreach is planned regarding some of the amazing background research associated with the landform containing the site.

JOHN POULEY AND MATTHEW DIEDERICH

Oregon SHPO

Revisiting Eligibility Trends of Archaeological Sites in Oregon 2012-2016: A follow-up to the 2012 NWAC presentation

In 2012, archaeological site eligibility recommendations and determinations from 1966-2011 were presented at the Northwest Anthropological Conference in Pendleton, Oregon. Regional and temporal patterns as well as suspected biases relating to site type or age (e.g., prehistoric or historic) were addressed. In 2017, data from the last full five years (2012-2016) are compared against the patterns identified in 2012. The comparison will address whether the same patterns persist, or if different, due to what potential causes.

MICHELE PUNKE

Historical Research Associates, Inc.

Holocene-Age Archaeological Site Potential and Preservation in Sediment Traps of Central Oregon

Sediment accumulation in the uplands of the Plateau and Great Basin is discontinuous and often unpredictable. This paper discusses areas of sediment accumulation at archaeological sites in the uplands of central and north-central Oregon as they relate to early human occupation of the area and preservation of the archaeological record.

DAVID G. RICE

Senior Archaeologist, Us Army Corps of Engineers (Retired)

A Paleoindian Archaeological Assemblage from A Late Pleistocene Flood Deposit Derived from The Last Channeled Scabland Floods Across the Columbia Basin in The Horse Heaven Hills, Benton County, Washington

In 1978 an unusual discovery of artifacts from a unique setting was made during archaeological monitoring for ground disturbance at a housing development on private lands in the Horse Heaven Hills near Richland, Washington. An assemblage of 24 associated lithic artifacts was recovered from a late Pleistocene high-energy turbidite flood deposit, redeposited from receding glacial Lake Lewis, at a time when there was a considerable lake stand behind Wallula Gap in the Pasco Basin of eastern Washington. The enclosing sediment contained rhythmite geological features that correlate to the events of multiple channeled scablands flooding (commonly known as the "Lake Missoula Floods") across eastern Washington during the late Pleistocene. After more than 40 years of searches across the Columbia Basin by several researchers, it is now confirmed that the last Missoula floods were witnessed by native indigenous peoples, who may have died from the catastrophic and sudden effects. The 24 lithic artifacts include a variety of chipped and ground stone tools related to an early, pre-Clovis, expression of the Western Stemmed Point Tradition. These water-born specimens bear evidence of edge damage and water polish effects from the impact flood, as well as having been redeposited later from lake shore slumping from receding waters. Stratigraphic associations, dated by others, place limiting dates for this artifact assemblage as early as 15,400 calendar years B.P. to as late as 13,300 calendar years B.P.

KATIE RICHARDS

Washington State University

In Search of Chocolate in the American Southwest: Residue Analysis of Ceramics from an Early Pueblo I Site in Southeastern Utah

Alkali Ridge Site 13 is one of the largest and earliest known Pueblo I sites in the American Southwest. Located in southeastern Utah, the site was originally excavated by J.O. Brew in the early 1930s. Recent residue studies on

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pottery from Site 13 have shown surprising evidence for cacao at this early site. If correct, this would push back the earliest evidence for cacao in the northern Southwest by hundreds of years; however, the vessels tested have resided in museum collections for over 80 years, and there is a concern with possible contamination. Recent excavations at Site 13 in 2012 and 2013 have provided new and more controlled datasets to test for cacao residue. These newly excavated sherds were tested for cacao residue using UPLC-MS, and while none of the biomarkers of cacao were found, there is evidence for nicotine at this early Pueblo I site.

KIM RICHARDS

Eastern Washington University,

The Tale of Two Cities

Academia has wrestled with the concept of objectivity since its inception. It assumes that we as researchers are somehow above human emotion and are able to remove ourselves from our own epistemologies and bias. Even as the Holy Grail of objectivity begins to crack and crumble it continues to shape the way we interact, work with, and even find our research topics. Today many think of research as a buffet, in which we have endless options, where we can choose to do what we want, with whom we want and the only consequence will be bad indigestion. Yet, there is a growing number of researchers who are guided by the needs and desires of community, where research can mean revitalization, healing and even decolonization.

DR. KALI ROBSON

Mapping Traditional Cultural Plants on the Colville Reservation.

Are traditional cultural plant populations being damaged by the droughts, wildfires and ferocious storms that accompany climate change? Are the plants doing well in spite of this, or do some need protection, or even restoration? To answer these questions, we must ask the plants. In 2016 the Traditional Cultural Plant Team began monitoring some of the best-known and most important herbaceous perennials, including bitterroot, Indian potatoes, camas, and more. We selected known locations for these species and established permanent 25-meter transects through representative populations. Ten one-square-meter plots were randomly selected from along each transect, and the percent cover for all plant species (including weeds), plus non-living variables, were estimated for each plot. For the focus species, we collected demographic data, counting individuals within each plot. When possible, we separated numbers of mature individuals from juveniles, or counted flowers on each plant. Additional years of monitoring are needed to capture trends.

ADAM N. RORABAUGH

After the Burn: 2016 Northstar and Tunk Block Post-fire Site Assessments.

The CCT History/Archaeology Program conducted pedestrian survey to assess fire damage for archaeological sites impacted by the 2015 Northstar and Tunk Block Fires within the boundaries of the Colville Indian Reservation. 183 sites were evaluated for impacts caused by fire, fire suppression, or rehabilitation activities. Field effort primarily consisted of pedestrian survey. Evaluated sites ranged from precontact and historic sites and also included rock features, cairns, and culturally modified trees. Part of the field effort also included data recovery excavations of two historic archaeological sites: the Bungalow Dance Hall and Omak Bell sites. This paper discusses specific case studies of adverse site impacts from the fires including rock imagery affected by spalling, historic structures impacted by fire, sites affected by erosion due to vegetation loss, and features impacted by fire suppression dozer lines. Additionally, the aforementioned data recovery efforts at the two sites adversely impacted from the fires are discussed.

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ADAM N. RORABAUGH

Colville Confederated Tribes

Omak Bell Site Excavations

The CCT History/Archaeology Program did a total station survey and excavation of the historic Bell property as part of the 2015 Tunk Fire damage assessment. Excavations of the structure revealed that fire damage was limited to surface deposits, but there were disturbed artifacts from the dozer line. Excavation revealed erosional sedimentary deposits over a collapsed roof and floor of the structure. A total of 1031 historic artifacts were recovered. The assemblage primarily consisted of bottle glass, nails, and metal fragments. In addition, 74 faunal remains were recovered, the majority of which (N=42) were from an articulated juvenile *Canis familiaris* burial. Two distinct temporal components were observed, the earliest being the occupation of the structure followed by later use as a historic dump and hunting area. Future efforts at this site may shed further light on the early development of Omak, specifically the relationship between early homesteads and the Biles-Coleman railroad.

ADAM N. RORABAUGH

Colville Confederated Tribes

Results of the 2016 Bungalow Dance Hall Excavations

The CCT History/Archaeology Program conducted excavation and total station survey of Bungalow Dance Hall as part of a larger site impact assessment for the 2015 Northstar Fire. Two research questions were also posed: 1) Are there spatial differences in artifact types in the dancehall? 2) Can the different uses of the dance hall through time be distinguished as distinct site components namely use as a cabin for the mining elite and later as a house of ill repute? The total station survey mapped adjacent, non-fire damaged, structures to the northeast and a historic midden associated with the dancehall and cabins. Excavation revealed the structure's foundation and differences in artifact distribution based on interior and exterior deposits, showing spatial differences. Deposits were shallow and distinct components from the two historic occupations could not be distinguished but recovered artifacts reflected both uses of the dancehall.

CHELSEA ROSE, SARAH HEFFNER, SHANA SANDOR, AND MARY MANIERY

Southern Oregon University and PAR Environmental Services, Inc.

Introducing the Chinese Material Culture Digital Database!

Southern Oregon University's Laboratory of Anthropology and Hannon Library have partnered with PAR Environmental Services, Inc. on a digital database featuring Chinese artifacts commonly found on archaeological sites across the West. The database will feature high quality photographs, accurate terminology, and list the common function for hundreds of artifacts in a searchable and peer reviewed online format. The goal is to promote accurate and consistent artifact terminology, dispel pervasive myths, and share resources with our colleagues and the interested public to promote the history of the Chinese immigrant diaspora in the West.

LAWR SALO

U.S. Army Corps of Engineer

What's Goin' On -- Example from the Federal Columbia River Power System Projects

2nd Paper Abstract - This presentation shows the effect of laws that support preservation of historic properties being affected by Federal projects. Using only the example of archaeological site inventory at 14 Federal hydropower projects in the Columbia River Basin, it examines the effects of law over an 80-year span. Before 1935, 39 sites had been recorded in the project areas; as of 2015, that number had increased to 4,227. The presentation tries to show the effect of each change in law as a rough measure of effectiveness. Finally, the presentation suggests ways to examine the effects of law on archaeological and ethnographic data.

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ROBERT LEE SAPPINGTON

University of Idaho

Are There Pre-Clovis Mammoth Sites in the Columbia Plateau?

The remains of mammoths have been reported in the southern Columbia Plateau since the 1870s. Most discoveries have been treated as paleontological finds although lithic and bone artifacts have occasionally been reported. Due to their physical size and high profile with the public, another mammoth seems to found every year somewhere in the Pacific Northwest. So far no Clovis points have been found in association with those remains and therefore the sites are generally forgotten. However, mammoth sites that were dismissed decades ago in Wisconsin and Florida have recently been re-analyzed and shown to pre-date Clovis culture. The evidence from the Manis site near Sequim, WA, and at Paisley Caves, OR, indicates that pre-Clovis populations were indeed present in the Pacific Northwest. Mammoth sites in the Plateau are now being reviewed and it seems likely that some of them will eventually demonstrate evidence of the first Americans.

HEATHER SARGENT-GROSS

University of Idaho

Ophir Creek Brewery: An Analysis of a Nineteenth Century Chinese Community

In 1862 gold was found in the Boise Basin of southern Idaho, and within eight years the population of the Boise Basin reached 3,834 individuals, 46 percent of whom were Chinese immigrants. Between 2002 and 2003, archaeologists at the Boise National Forest excavated a foundation near Placerville. This work discusses excavations at Ophir Creek Brewery, a suspected bunkhouse occupied by Chinese immigrants. Analysis of the archaeological materials recovered from the Ophir Creek Brewery adds significant information to the knowledge about Chinese communities in the Boise Basin. This work highlights the importance of working on “old” collections as well as sheds new light on how Chinese immigrants contributed to the development of mining communities in southern Idaho, and contributes to a broader understanding of Chinese life in the turn of the century American West.

DANIELLE SAURETTE, RAY VON WANDRUSZKA

Department of Chemistry University of Idaho

Historical Pigments

Historical pigments show up quite often among artifacts recovered in archaeological excavations. The identification of these materials can be quite challenging and require careful chemical analysis. The first task usually is to establish that the compounds in question, often no more than a streak on a shard or a few grains in a bottle, are in fact pigments. This goes hand-in-hand with the second task, i.e. the determination of their chemical nature. Pigments can be organic (carbon based, e.g. indigo) or inorganic (mineral based, e.g. ultramarine). The latter are chemically more stable, and tend to survive the ravages of time much better. Most pigments recovered from 19th – early 20th century period are indeed inorganic. The elucidation of their chemical nature can provide interesting insights into the customs of the people who used them.

WILLIAM SCHROEDER

University of Montana, PhD Candidate, Cultural Heritage and Applied Anthropology

A Clino-cladistic Look at Pull & Push Tab Patents ca. 1950-1980

Pull tabs revolutionized the way beverage cans and food containers were opened and their contents removed. Ernal Fraze is credited with this, yet he was not alone in the invention nor was he technically the first. Until recently, pull tabs were not considered diagnostic because they had not yet met the 50-year-old threshold. As of 2015, ring pull tabs entered the historic era, yet relatively little is known about these artifacts. A database with hyperlinks has been built to

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provide an archival reference in order to place these artifacts in *terminus ante* and *post quem* timeframes for historical archaeologists who have located and will more frequently encounter these items of disposable material culture. This research charts the genealogy of beverage can opening patents and designs (taxa; genus), similarities (clades), and trends (clines) based on records in the United States Patent and Trademark Office filed and accepted between ca.1950 and 1980.

CODY SCHWENDIMAN, RORY BECKER, AMANDA WELCH

Eastern Oregon University

Restoring the Rivoli: The Public Archaeology of a Historic Theatre in Pendleton, Oregon.

The Rivoli Restoration Coalition was founded in 2010 to restore the shuttered historic Rivoli Theater in Pendleton, Oregon and transform it into a performing arts center. The coalition's goal is to use the theater to showcase excellence in arts, information and entertainment in the Pacific Northwest while preserving the building's history. Construction on the basement of the theater is slated to begin in either fall of 2017 or spring of 2018, which is necessary to support the theater's modern role as a performing arts center. The modifications include removing sediments from beneath the theater seating area. Student and public involvement in excavation of these sediments prior to construction has been a valuable opportunity for these groups to participate in archaeological assessment activities, while also increasing public awareness of local history, archaeology, and historic preservation issues in eastern Oregon.

ANN SHARLEY

Architectural History & Archaeology! LLC

Built Environment Survey of Walla Walla's Historic Volga German Neighborhood

In 2015 the City of Walla Walla was awarded a Certified Local Government (CLG) grant for reconnaissance level built environment survey of a seven-block residential area within the Walla Walla city limits. During project fieldwork and research the area was identified as the heart of Walla Walla's historic Volga German enclave. This paper briefly traces the history of the Walla Walla Volga German community and describes some of the late 19th and early 20th century buildings presently extant in the project area.

ROBERT SLOMA

Refining where and when to look: The Zayo project an example of monitoring the installation of fiber optic infrastructure.

Cultural Resource Monitoring is a pragmatic method to identify archaeological sites when appropriate preconstruction testing is not feasible. The 200-mile long Zayo Fiber Optic Line project across Central Washington offers an example for examining the efficacy of cultural resource monitoring in the context of fiber optic installation. In 2016, the Confederated Tribes of the Colville Reservation, History and Archaeology Program, targeted archaeologically sensitive areas and monitored approximately 7% of the entire Zayo Fiber Optic Line corridor. Seven archaeological sites were newly identified and information was updated for seven previously documented sites. The monitoring plan for the Zayo project and associated field observations are discussed to refine future investigations limited to using monitoring as a form of broad-scale archaeological testing. Zayo project results also support increased use of Cultural Resource Monitoring to identify sites on large complex projects already subjected to pre-construction testing.

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JULIA SMITH

Eastern Washington University

Terroir: from wine to coffee

The idea of terroir, “a taste of place,” has spread far beyond wine to include a variety of foods from around the world. Coffee is no exception; a system of geographic indicators has been proposed to label coffee from particular regions. This paper compares the system of geographic indicators for wine to the developing system of geographic indicators for coffee, focusing particularly on Costa Rica but also other countries that emphasize the specialty coffee market. It will explore why legal definitions of coffee regions have been slow to be protected and how ideas from wine regions could help to solve some of the concerns around identifying coffee regions.

PAUL S. SOLIMANO

Willamette Cultural Resources Associates, Ltd.

Precontact Land-use in the Vicinity of Dworshak Reservoir

Willamette Cultural Resources Associates, Ltd. recently completed the reanalysis of the archaeological materials excavated in 1963 from 10-CW-1, the Bruce’s Eddy Site, on the North Fork of the Clearwater River. To place the results into a broader, contemporary framework, we compiled local archaeological data, including a reanalysis of over 500 projectile points from the Dworshak Reservoir. This work suggests that after ca. 5,000 years ago large, robust structures at the river’s mouth coincide with widespread, but relatively light use of the landscape upstream. Many sites are in use, including 10-CW-1, but they are not used intensively. After 2,000 years ago more intensive use of large residential sites is found. Upstream, fewer sites are in use, but use is substantially more intensive. We recommend additional work along the North Fork including more fine-grained landform analysis, examination of upstream archaeological material in collections and linking this material to ethnographic information.

SHANE SPARKS AND KELLY YEATES

ICF- Seattle

Eight Years along the Puyallup— Highlights from On-Going Tacoma HOV Program Work in Tacoma, Washington

The ICF Cultural Resources Team has assisted the Washington State Department of Transportation (WSDOT) on numerous phases of work related to the Tacoma HOV Program and I-5 to Port of Tacoma Road Puyallup Bridge Replacement Projects. The work conducted since 2009 has included long-term archaeological monitoring, subsurface surveys, and data recovery excavations in or adjacent to the project APE. ICF has coordinated closely with WSDOT and the Puyallup Tribe of Indians for the entirety of the work. This poster presents an overview of the key project highlights for the completed and ongoing work which includes: the data recovery of 45PI930 – a deeply buried salmonid processing site, the recordation of historic-era Bay Street and related pre I-5 transportation network, the identification of deeply buried beach deposits which have increased archaeological potential adjacent to the Puyallup River, and the successful implementation of a GIS-based, mobile monitoring data recordation system.

MORGAN SPRAUL, RAY VON WANDRUSZKA

Department of Chemistry, University of Idaho

Analysis of Old Pharmaceuticals

Remnants of pharmaceuticals rank high among archaeological samples that are submitted for chemical analysis. The analyst can often a priori deduce from the shape of, and the markings on, the container that the materials under consideration are in fact pharmaceuticals. The determination of their exact nature and the manner of use, however, usually relies on chemical evidence. The older the material in question is, the more likely it is that it was directly derived from plant, animal, or mineral sources. Mineral medicines, especially, are often found in their near-original

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state, because they persist for almost unlimited periods of time. Their chemistry can sometimes be confusing, because minerals have many elemental components, obfuscating the question concerning their presumed medical effects. Pharmaceuticals have always been important cultural markers and identifying them provides a window into the past.

SEAN STCHERBININE AND DR. PATRICK MCCUTCHEON

Central Washington University

Geoarchaeology of the Sunrise Ridge Borrow Pit Site (45PI408): The Origin of Buried Soils

The Sunrise Ridge Borrow Pit Site is a precontact site located in the subalpine zone of Mount Rainier National Park. Site stratigraphy consists of unaltered tephra and intercalated dark, buried soils overlying glacial drift. Precontact occupation has been split into two coarse components based partially on the ambiguity of these dark, buried soils; notably their unknown parent material, depositional environment, and relationship with contiguous strata. Grain-size, chemistry, pH, organics, and CaCO₃ were measured from the strata of four excavation units, three features, and one off-site unit to determine parent material and depositional environment. Depositional environment and parent material determinations were used to discuss relationships of strata to create a better depositional history model. A more complete depositional history of the Sunrise Ridge Borrow Pit Site increases the understanding of occupational intensity and periodicity, better permitting the site's entry into discussions of precontact land use in the Cascade Range.

AUBREY M STEINGRABER

ASM Affiliates, Inc.

Trestles and Tramways: Artifact Biographies from Monte Cristo, a Late 19th-Century Hard-Rock Mining Town Located in Washington's Cascade Range

In the 1890s, the town of Monte Cristo, located in the Mount Baker-Snoqualmie National Forest, promised to be one of the state's most profitable hard-rock mining towns. However, due to a series of environmental and economic hardships, the mines were not as profitable as originally anticipated. After little more than a decade, mining had mostly ceased, and the town was abandoned. In 2015, ASM Affiliates conducted archaeological monitoring during a CERCLA removal action project targeting the Monte Cristo Mining Historic District. This paper documents the archaeological work undertaken during the 2015 field season and the subsequent analysis of 385 artifacts collected from 6 different sites during the removal action. Through select artifact biographies, this paper tells the stories of some of the companies and people involved in both the international and local manufacturing networks supplying specialized mining technologies and consumer goods to Pacific Northwest mining towns in the late 1800s.

SARAH M.H. STEINKRAUS AND JENNIFER HUSHOUR

Tierra Right of Way

Historical Refuse Features at the Station House Lofts Project

In the winter of 2016 an emergency excavation permit was issued by DAHP for data recovery at the Station House Lofts Project in Redmond, Washington. Multiple historical refuse concentrations had been discovered during archaeological monitoring of construction for the project and after the permit was issued, these concentrations were excavated. Over 2,000 historic era artifacts were uncovered. This presentation will discuss the data recovery results.

FREDERICK STRANGE

EWU Emeritus Professor of Anthropology

Peasant Struggles for the Commons

What is the commons? Is it not the common rights of commoners? A concrete instance in the form of land claimed in common by a country village in Mexico, multi-purpose land many times lost and recovered down through the

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centuries, may serve as a template for the broader shared commons that is disappearing under dominant neoliberal, “privatizing” (enclosure?) policies today. Do their struggles mirror ours? A brief history of land tenure in a peasant village raises bristling issues: will peasants survive their long-standing marginalization? How is it that their struggle for their commons never ceases? Can peasant adaptability and methods of self-organization serve as a model and inspiration for our struggles with privatization and loss of our commons?

CAMBRIA SULLIVAN AND KERENSA ALLISON PH.D.

Lewis-Clark State College

“Asktransgender”: A digital ethnography of common questions and daily challenges related to transgender communities and identity processes

Limiting our discourse to transgender bathroom access, while an important topic, blocks acknowledgement of the greater scope of challenges faced by this marginalized population. Based on analysis of over 500 text posts made to asktransgender, a division of the social media website Reddit, this project examines the unique problems faced by the transgender population in their day-to-day lives. Preliminary findings suggest that 50% of the analyzed discussions centered around the themes of appearance or identity, indicating that transgender and gender non-binary people may feel a strong pressure to fit into societal expectations about gender roles and appearance. This information is valuable in the real world because it provides a new and unique perspective about normal gender roles in society as told in the voices of those who do not identify with the roles they have been assigned at birth.

AJA SUTTON AND THOMAS OSTRANDER

Unaffiliated, Environmental Science Associates

Make No Bones About It: Practical Tips for Recognizing Human vs. Faunal Remains in the Field.

Encountering bones, human or faunal, is an inevitable part of archaeological field investigation. Discovering unidentified bones can be stressful for archaeologists inexperienced in human and/or faunal osteology; they must navigate the complex cultural and legal framework governing human remains, often without complete information. Decisions regarding issuing a “stop work” for construction, or halting an ongoing archaeological excavation are extremely time sensitive, and proper identification of osteological material is crucial. This talk will provide a structured methodology for assessing unidentified remains, and explain the ways osteologists come to their decisions. While final identification must be left to formally train osteological experts, non-experts may benefit from practical tips for identifying and differentiating between human and faunal remains in the field, as well as photographic tricks for facilitating the expert osteologist’s job remotely. Content Warning: This presentation will contain photographs of and content related to human remains.

MOLLY SWORDS, MARGARET CLARK, AND MARK WARNER

University of Idaho and CH2M Hill

A Community Along the Tracks: An Examination of Sam Sing’s Laundry in Sandpoint, Idaho

Like other western American railroad towns, Sandpoint, Idaho, saw an influx of thousands of Chinese workers during construction of the Northern Pacific rail line. Most workers moved on as construction of the railroad continued down the line. Examination of a Chinese laundry excavation provides an interesting snapshot of the lives those who stayed and made Sandpoint their home. This collection provides an opportunity to study both the private and public lives of these Chinese. The co-mingling of traditional Chinese artifacts with distinctly American artifacts coupled with newspaper articles from the time, pose questions about the cultural adaptation of the dwellers, community integration, and tolerance

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MARK TAFF

Columbia Basin College

The Challenges of Teaching Human Evolution at a Community College

Introduction to Biological Anthropology is often the most popular anthropology class at community colleges. The majority of students are non-biology majors, using the class to fulfill a science requirement. One of the biggest challenges is resistance to the theory of evolution. Since evolution is central to everything discussed, the success of the class depends on helping students overcome this resistance. In this session, I discuss some strategies to help students approach the topic of evolution with a more open-mind. I have found three main sources to problems many students have with the theory of evolution. These include: resistance to evolution because of religious, personal, and political belief; misconceptions as to what evolution is and is not; and failing to see the relevance evolution has to their lives. Overcoming these barriers helps make students more receptive to the information used by biological anthropologists to understand patterns and process of human evolution.

GUY L. TASA

Washington Department of Archaeology and Historic Preservation

A Skull in the Fireplace: A Narrative of Cultural Appropriation, Identification, Deconstruction, and Repatriation.

This paper documents a skull reported to the Washington Department of Archaeology and Historic Preservation by the Samish Indian Nation in 2014. A two year investigation into those remains and the unusual circumstances surrounding their original discovery over 100 years ago and their current presentation are discussed in the context of cultural appropriation. Difficulties involved in their identification, recovery, removal, and their ultimate repatriation are summarized. Lastly, the extremely unusual find is evaluated against other such finds commonly held by the public and received by the state under Washington's human remains law.

JOANNE TAYLOR

The University of British Columbia

Food, Fish, and Diking Crises in the Creston Valley: An Indigenous Epistemological Solution

I critically explore food security and food sovereignty in the Creston Valley Floodplain of British Columbia, Canada. I examine processes of exclusion from the bi-lateral Columbia River Treaty (CRT) negotiations which results in the marginalization of Indigenous First Nations Ktunaxa from their traditional fishing, hunting, and gathering sites. I also analyze how the operation of one of four CRT Dams – The Libby, in Montana, upstream of the floodplain— threatens the integrity of European settlers' diking infrastructures thus perilously turning the floodplain into a food insecure area. Climate change and landscapes of monoculture cropping also decrease the security of this food producing area. While these devastating environmental impacts are calamitous to ecosystem function, ongoing expansionary tendencies and capital accumulation of hydro wealth continue to subordinate Indigenous peoples' decision making powers. However, preliminary findings from my doctoral research reveal that Indigenous epistemologies and praxis can significantly contribute to solving some of the most pressing socio-political and environmental crises in this area, if not the world.

MATTHEW THOMAS

Eastern Washington University

The Effects of Perceived Discrimination on LGBT+ Latinx Individuals in the United States.

Numerous studies indicate that discrimination plays a large role in the mental, emotional, and physical health of minorities. This paper describes the ways in which the health of Latinx individuals who are LGBT+ is affected by perceived and anticipated discrimination, both somatically and psychologically. Much of the literature within the topic focuses on sexual instead of gender minorities, or more specifically, MSM (men who have sex with men). This

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paper argues for more research to be done on groups such as WSW (women who have sex with women), transgender individuals, bisexual individuals, etc. Based on previous research, there are obvious intersectionalities in regards to the health of LGBT+ Latinx individuals. Being LGBT+ is quite a stressor on its own, and when joined with the racism that accompanies being Latinx, the combination is quite challenging.

SALLY THOMPSON

Cultural Heritage Consulting

Blackfeet History from the Inside Out: Correcting the Perceptions of Nicholas Point

An unusual team of Blackfeet elders, an anthropologist, and a world-renowned community artist is assisting Blackfeet youth in learning and sharing their history from the inside out. The project's grounding comes through critical examination of the paintings and narrative descriptions created in 1846 by Jesuit priest Nicholas Point, reflecting their lifeway before reservations. Students, working with elders, correct their history as they learn it. This five-year project will continue to explore subsequent historic content drawing on oral history, art, photography and narrative. Key events in Blackfeet history will be memorialized through public art throughout the reservation. As one student said, "Let's create reasons for people traveling to Glacier National Park to stop and learn about our history as we would tell it." This project could be a model for Northwest tribes because of Nicholas Point's visual and narrative descriptions of the Coeur d'Alene, Salish and Nez Perce.

ARLAND THORNTON AND LINDA YOUNG-DEMARCO

Institute for Social Research, University of Michigan

What Can We Learn about the Colville Reservation Indians from the United States Censuses?

United States Censuses provide information for documenting Indian life during the late 19th and early 20th centuries. These census data can be used to study literacy, English speaking ability, naming patterns, marital status, and intermarriage. In this paper we examine the 1885, 1900, 1910, and 1930 census data that Frederick Hoxie and colleagues assembled, computerized, and archived for Indians on the Colville Reservation in northeastern Washington. We investigate the usefulness and quality of the Colville data for documenting social and demographic attributes and change. We focus on the amount of missing data, over-time consistency of reporting, and consistency with theoretical expectations. We document errors, but also show that the data are quite reliable in demonstrating basic social and demographic patterns and change on the Colville Reservation. We also discuss substantial social trends documented by the data.

**SHANNON TUSHINGHAM, KOREY BROWNSTEIN, WILLIAM J. DAMITIO, JELMER EERKENS,
AND DAVID R. GANG**

Washington State University and UC Davis

Tobacco Use Patterns Among Tribal Communities in the Pacific Northwest: Long Term Trajectories and Implications for Modern Health Initiatives

Recent breakthroughs in archaeological residue analysis contribute to our understanding of the deep time co-evolutionary relationship between humans and certain psychoactive and medicinal plants throughout the world. Residue analysis of pipes and other materials associated with tobacco and other smoke plants, for example, can address questions relating to the history of smoking practices and plant management/cultivation. The studies also provide insight into the colonialization and commercialization of tobacco over the long term historical record, a process that transformed its use from a sacred plant and sacrament used in limited contexts by Native peoples in the Americas, to a commercialized commodity packaged and produced with multiple additives in a way that has addicted hundreds of millions of people around the world. In this paper, we summarize our NSF funded research, our

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experimental approach, and recent studies conducted in collaboration with tribal communities in the Pacific Northwest Coast, Plateau, and California.

MARK TVESKOV AND CHELSEA ROSE

Southern Oregon University Laboratory of Anthropology

The Ordeal and Redemption of Christina Geisel and Mary Harris: The Rogue River War and Oregon's Own Captivity Narratives

The Native American attacks upon the Harris and Geisel families anchor most narratives about the Rogue River War of 1855-56. Curious about their enduring strength to signify key elements of this colonial encounter in southern Oregon, SOULA explores these events through the lens of battlefield archaeology, ethno-history, and gender and literary studies. The stories of Mary Harris and Christina Geisel conform to the tropes of 17th century New England captivity narratives that redeem and rationalize settler colonialism through the suffering of a white woman at the hands of indigenous people, but they also innovate that trope to recast the victim in a more active way reflecting new identities informed by novel ideas of western rugged individualism. Despite this innovation, these narratives continue to excluded Indigenous actors, including women such as Betsy Brown, a Tolowa woman instrumental in freeing Mrs. Giesel from captivity.

DONALD E. TYLER, RYAN P. HARROD, JORDYN JONES, TED PARSONS

University of Idaho and University of Alaska Anchorage

Reassessing the Genus Homo on the Island of Java through Virtual Reconstruction

Several species of human ancestors have been found from South Africa, Ethiopia, and Flores. The discovery of Homo floresiensis has led to rethinking the phylogeny of human ancestors in Southeast Asia. Remains from Java, similar to those from Flores, seem to represent multiple taxa based on metric and nonmetric characteristics of the cranial and dental morphology. Virtual reconstruction of the casts aided in the reanalysis of each fossil. Three-dimensional models were generated using a desktop laser scanner that provided more precise measurements and high-resolution photography and photo modeling software created a denser point cloud with greater surface fidelity. The results of the analysis support the assertion that the fossil specimens from Java may represent two species, Meganthropus palaeojavanicus and Homo erectus. This is most apparent with the presence of a double sagittal ridge associated with Sangiran 31 that is different from the ridge found on the Sangiran 17 fossil specimen.

DAVID VALENTINE

Idaho Power Company

Predicting the Formal Trash

Archaeologists working in and around western communities often encounter historic trash deposits. Are these deposits ad hoc dumps or the result of citizens attempting to dispose of waste in a more formal and official manner? An attempt to develop a context for Boise, Idaho trash disposal identified local newspapers as being a good way to identify formal city dumps and predict the locations of additional trash deposits. Articles in back issues of the Idaho Daily Statesman proved to be very helpful, as they give approximate locations of official city dumps starting with the first designated location in 1902. These articles also give a good idea of the trends in solid waste management that Boise adopted. This allowed the development of a map showing predicted buried trash deposits based on formal city dumps.

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EMILY VEITIA

Central Washington University

Enrichment use & social interactions in a mixed-species enclosure of Sumatran (*Pongo abelii*) & Bornean Orangutans (*P. pygmaeus*) & Northern White-Cheeked Gibbons (*Nomascus leucogenys*)

Enrichment encourages species-specific behaviors in captive animals. In this study, enrichment use and social interactions were observed in a mixed-species enclosure at the Oregon Zoo, housing Sumatran (*Pongo abelii*) and Bornean (*P. pygmaeus*) orangutans, alternately, with white-cheeked gibbons (*Nomascus leucogenys*). EV conducted 15-minute focal samples from August - September 2015, totaling 180 total hours. Chi-square tests were used to determine whether subjects were equally likely to use arboreal or terrestrial enrichment. Two orangutans were equally likely to use both while another was more likely to use terrestrial enrichment. One orangutan and both gibbons were more likely to use arboreal enrichment. Another prediction was subjects would be more likely to interact with their conspecific over hetero-specifics. Both orangutans and gibbons interacted with conspecifics more and rates of aggression in the enclosure were low overall. Gradual reduction of terrestrial enrichment and increased appeal of arboreal enrichment might encourage arboreality for all apes.

LIDIA VELASCO

Anthropological Society, Ronald E. McNair

La lleyenda de Yobi, el Zorro con Cinco Colas/Cheonyeon-yeowoo Yeowoobi - Emotion in Translation: A Humanistic study of Translation Korean to Spanish

With the growth of globalized media, researchers have focused on how to translate across cultures and decipher emotions, especially when translating popular media. The components included in translation are not only knowledge of the language, but also knowledge of the cultural connotation expressed by a word. Using a children's animated movie named Yobi, the five Tailed Fox, I analyzed Korean-Spanish translation using theories based on emotion, cultural connotation and language. Emotions in Korean are not easily translated into Spanish because of cultural differences in emotional expression. My study showed that the word choices of the translator affects not only the story, but also the viewer's perception of the feelings from the characters. There are emotions in Korean that are not translated into another language, due to the differences of how their culture expresses emotion. In this study, Andrew Correwa the translator of this animated movie used word choices that changed and altered a scenes connotation, to make it more understandable for the Spanish viewers. Translators must make complex word choices to deal with differences between the emotions of the character as intended in the source language and the emotional expectations of the target language audience. Translators, to do a good translation, need to consciously reflect on word choice to balance these intentions and expectations.

JULIETTE VOGEL

Washington Department of Archaeology and Historic Preservation

Indigenous Archaeology and Human Rights: Toward a More Ethical Treatment of Human Remains.

The field of anthropology has an unsavory history as a colonial institution. A common theme in the discipline has been the objectification of subjugated cultures for their "curiosities," including material goods, cultural practices, and even human remains. This paper examines these past wrongs and explores the growing trend of remedying this history by incorporating indigenous perspectives in archaeology and physical anthropology. A special emphasis is placed on the treatment of human remains, discussing Washington State Human Remains legislation as well as recent developments in the case of Kennewick Man.

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PENGLIN WANG

Central Washington University

Zoographic Nomenclature in Inner ASLA

The abundance of animals in the wilderness inspired early people to pursue their artistic gratification to the point of creating the so-called 'wild-animal style' in the Eurasian steppes. What was happening then was that people keeping domesticated animals and armed with rudimentary weapons and tools were gaining control of the steppes and hunting animals for food consumption and fur or skin clothing. Intimidated as the people were by the power of fierce animals such as wolves, there was little hesitation in acquiring admiration and awe toward the animals. Symbolized as a collective herd, zoographic preponderance left its marks on ethnic nomenclature. Many of the onomastic initiations were closely modeled on animal symbolism and funniness. Whereas in certain cultures a set of animals traditionally play a role in time-indication and birth symbolism, we know how various animals customarily come to serve as names for individual persons and collective groups of people.

MARK WARNER

University of Idaho

The Search for Relevance: Archaeology in Public in Idaho

Mark Warner, University of Idaho

Idaho has a long and vibrant record of interesting archaeology. Yet that array of work has only sporadically reached wider audiences in the state. Doing such work can be frustrating but it is essential for helping people realize the educational and cultural significance of archaeology to our state's heritage. This work presents some of the recent efforts that have been undertaken by the University of Idaho to engage the citizens of the state. It also acknowledges the profound impact that Pricilla Wegars has had on Idaho archaeology and how her works have grown the field of historical archaeology nationally.

STACY WARREN

Eastern Washington University

Capitalism in the Sky- The Jetson's and the Culture of the Future

What is perhaps the most well recognized urban cultural landscape of the future is not the product of professional architects, experienced planners, social scientists, or any sort of academic. Instead, widely viewed and still remembered by millions of people, "Orbit City"-- the home of the Jetson's in the animated television series of the same name- set the stage for our expectations about daily life in the city of the future. Its basic features were presented in 24 weekly episodes that began in 1962 and purported to characterize life in 2062. This paper describes and critically examines the class, gender, and race conditions, the infrastructure of Orbit City, the social-cultural features of urban life, and the technology available for urban life 100 years in the future. The analysis finds little that is visionary, logical, or based of adequate or accurate data, but a great deal that has become part of popular cultural discourse about future expectations.

SHAWN WATSON

Eastern Washington University

The Role of Arc of Spokane in Disability Advocacy

Disabled rights have been largely under-researched in the United States (Scotch 2009:7). Although provisions are in place to protect the disabled population, they continue to face discrimination and exclusion from society at large. This discrimination affects their quality of living and segregates the disabled from the society at large. This impact study is based on a series of interviews, focus groups, and participant observation with the leadership of the Arc of Spokane and, with the disabled themselves. The paper presents how organizations such as the Arc of Spokane work to protect

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the disabled population. The paper presents the effect these organizations have on the affected disabled, society at large, and the government organizations they communicate with. Through better understanding of how the Arc of Spokane operates, we will be able to bring better awareness to an overlooked population. In addition, this is important to the fields of public and medical anthropology with a focus on disability studies because the impact study works to answer how the cultural phenomenon of stigmatization and social exclusion is especially prevalent within the context of disability.

DEAN WEAVER

Washington State Department of Transportation

...One of the most disturbed spots in all of Spokane: Lessons from a Buried Cemetery.

The inadvertent discoveries of two burials under Division Street in Spokane offer clues to the early history of Spokane Falls and illustrate the challenges of urban Cultural Resource Management. Learn how WSDOT, the Spokane Tribe of Indians, and the City of Spokane have dealt with this site and how it continues to factor into land use planning at this increasingly crucial intersection.

DEAN WEAVER

Washington State Department of Transportation

Coyote, the Sisters, and the Falling Rocks

Even though a road project may be small in scale, its cultural implications can be large. WSDOT is designing a rock fall prevention project near Wallula Gap, where freeze-thaw cycles are causing basalt boulders to break free and fall onto the highway and railroad below. This presentation will describe the rich and occasionally tragic history of this area, the development of this project, and the realities and challenges of sensitively managing archaeological and traditional resources while improving traveler safety.

WENDY WEGNER

University of Idaho

Opening Doors in Anthropology: Ethnographic Exploration of Collections as Field Sites

In the summer of 2016, I participated in the Smithsonian Summer Institute in Museum Anthropology. This four week, intensive fellowship allowed for anthropology students to take a closer look at material culture from collections. Each cabinet door opened to a variety of objects with a story to tell and a multilayered social life. While not widely utilized, collections exploration by anthropologists is an emerging and beneficial addition to ethnographic work. A close look at objects allows the researcher to enter the world of the maker, better understand material and process. Using examples from my experience in several collections since SIMA, I will highlight the ins-and-outs of collections navigation, how collections management has evolved, and the benefits of looking and “listening” to objects as they tell their story. As this field expands, so do the possibilities of re-connecting source communities with their cultural heritage.

MISTY WEITZEL

Western Oregon University

A Ten-Year Study of Soil Bacterial Communities Associated with Cadaver Decomposition in the Pacific Northwest.

Decomposing human remains are a vital disruptor of the rich and diverse soil ecosystem. Bacteria in soil, neighboring organisms, and the cadaver form a complex community structure that could have profound implications for estimating the postmortem interval (PMI) long after remains are skeletonized. Samples were collected from soils associated with two domestic pigs decomposing over a period of ten

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years in the Pacific Northwest. DNA was extracted from soil samples and high-throughput DNA sequencing was used to characterize bacterial communities. Bacterial communities in soil under the decaying pig changed dramatically over time, whereas communities adjacent to the pig remained remarkably similar over ten years. Understanding gravesoil ecology could be an invaluable tool for long-range time since death estimations in forensic investigations.

GARY WESSEN, THOMAS JAY BROWN

Wessen & Associates, Inc. and University of British Columbia

Western Washington Shell Midden Chronology: Demographic Information

1,025 calibrated radiocarbon dates from 224 shell midden sites in western Washington are considered as a possible proxy for prehistoric population levels in this region. Summed probability distributions suggest fluctuating population levels during the last 4,000 years, including a sharp population rise beginning ca. 800 years ago and an equally steep decline ca. 500 years ago. The latter, if real, is consistent with ideas about a possible continent-wide smallpox epidemic during the 16th Century. Caution is appropriate, however, as some characteristics of the individual site assemblages raise questions about what is actually represented in this data.

GARY WESSEN

Wessen & Associates, Inc.

Western Washington Shell Midden Chronology: Antiquity

1,025 calibrated radiocarbon dates from 224 shell midden sites in western Washington indicate that nearly all of these sites represent the last 4,000 years and no site appears to be older than ca. 6,100 years. This temporal range is more limited than that for similar sites on other portions of the west coast of North America and begs the question: Is the use of shellfish resources more recent here or do environmental factors account for the apparent absence of older sites? Consideration of how these sites are distributed in the landscape argues that the sample of known sites is strongly influenced by changing sea levels during the Holocene. It is therefore likely that older shell midden sites are present in this region, but they are unlikely to be encountered in the places where western Washington archaeologists have traditionally emphasized.

KIM WESSELER

Oregon State University

A Historical and Archaeological Overview of Fort Yamhill's Hospital (35PO75)

During the summer of 2016, Oregon State University conducted preliminary excavations of the hospital at Fort Yamhill, Oregon (35PO75). Fort Yamhill (1856-1866), has been a focus of OSU's field schools for over a decade, offering glimpses into garrison life through the view of the officers and the enlisted men. However, up until recently, little was known about how the Army Medical Department operated within Fort Yamhill's system. Extensive archival research was conducted in order to create an understanding of military hospital operation and medical practices of this era and was combined with detailed information regarding fort medical staff to produce an image of the hospital and its operation throughout Fort Yamhill's occupation. Archaeological excavations were used to provide insight into the hospital's construction and medical practices. Additionally, hospital records were used in conjunction with contemporary diaries to offer discussion on the condition of enlisted men at Fort Yamhill.

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ADAM WESTERMANN

Central Washington University

The Means, Moment, and Materialization of Gender in Dating

My research will analyze expectations in a date or dates. The purpose of my research is to better understand social change in American culture through dating scripts or expectations, including gender roles. I will explore these subjects through individual interviews. There are four models I'll be using to define and examine the interviews. The first is attachment theory, specifically romantic adult attachment. The next three are dating as an economic exchange, social exchange, and as agapic love, as suggested in "Agapic Love" (Belk and Coon, 1993). Preliminary research in the scholarly literature suggests that current dating scripts haven't changed notably over the past 35-40 years (Eaton and Rose, 2011). Through my research I expect to find solid evidence in support and clarification of this finding.

IDAHO WHISENANT

University of Idaho

Preliminary Research for Testing at a Steamboat Landing Settlement in Idaho

The specific area of research for my thesis and this presentation concentrates on historic Pend Oreille City located on a small spit of land at the most southwestern section of Lake Pend Oreille in Northern Idaho. Presentation on this 1866 settlement site now overtaken by vegetation explores the preliminary research for testing to be conducted in the summer of 2017. Pend Oreille City is regarded as the first Euro-American settlement in north Idaho and a waypoint for gold-seeking travelers going east to Montana and British Columbia desiring an easier route by steamboat across Lake Pend Oreille. In preparation for archaeological investigation, the methodology and a comprehensive history of the diversity of cultures in frontier life in the broader area will be reviewed, which includes a native presence, early Idaho history and daily life, all the way to the second largest naval training station in WWII.

EMILY L. WHISTLER

Washington State University

Addressing Prehistoric Bird Usage: An Analysis of Avian Material from San Juan Islands Archaeological Sites

This poster will discuss the preliminary findings of a research project into the human-bird interactions on the San Juan Islands. I analyzed avian remains from three collections held at the Burke Museum excavated from sites located on the San Juan Islands. Fisherman's Bay (45-SJ-254) is located on Lopez Island and yielded a total of 27 bones of which were identifiable to at least the family level. English Camp (45-SJ-24) is located on San Juan Island yielded a total 210 bones identifiable to family. Lastly, Mud Bay (45-SJ-278) is located on Lopez Island had a total of 187 bones identifiable to family level. Members of the Anatidae family were the most common species identified followed by members of Laridae and Alcidae. Overall diversity and equitability will be addressed as well as the ecological information of the species present. A discussion of the regional ethnographic use of birds will also be undertaken.

ALEXANDRA WILLIAMS-LARSON

Archaeological Investigation Northwest, Inc.

Cache and Carry: Examining Site 35wn93's Role in The Northward Trade of Obsidian Cliffs Toolstone

Obsidian artifacts from a small lithic scatter site (35WN93), located in Washington County, Oregon, reflect a lithic technology emphasizing the manufacture and refinement of mid- to late-stage bifaces. Produced from Obsidian Cliffs toolstone from the Cascade Mountains, the artifacts date between 490 and 3,240 years before present. These dates coincide with a regional increase in the use of Obsidian Cliffs toolstone beginning 3,500 years ago. This obsidian has been recorded at sites across the northwest. The Dittman Biface Cache site (35MA375) near Salem, Oregon, provides

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an example of a cache linked to the northward trade of obsidian. Evidence shows that bifaces similar to those identified from the cache were transported to the northern Willamette Valley, where they were reduced further before export. This analysis examines the role of site 35WN93 as an important link in the trade of obsidian bifaces to groups to the north and west.

SCOTT S. WILLIAMS

Washington State Department of Transportation

"It Was Necessary to Destroy the Village in Order to Save It": Winning The Battle but Losing the War with The McMillin Bridge Project.

The McMillin Bridge in Pierce County is a unique concrete through-truss bridge that is literally the only one of its type in the world. The functionally-obsolete but still structurally-sound, the bridge was scheduled for replacement with a new bridge in 2008, but local and national historic bridge preservationists advocated for its preservation and continued use, despite objections from WSDOT. In 2015, WSDOT abandoned plans to demolish the bridge and left it standing, but it is now cut off from vehicle and pedestrian access and lacks any interpretive signage or context to inform the public of its historical and engineering significance. The bridge was saved, but at what cost to future preservation efforts? What happens if the bridge becomes a graffiti-covered eyesore, or even worse, when someone is injured by falling off or through the deteriorated bridge sidewalks?

TERESA WRISTON AND GEOFFREY M. SMITH

Desert Research Institute and Gbpru/University of Nevada, Reno

The History of Lake Warner and the Clovis and Western Stemmed Point Lithic Assemblages Left Along Its Shore

The shore of Lake Warner was a hub of Paleoindian activity before ca. 12,000 cal yr BP. Lake Warner filled Warner Valley, Oregon from ca. 30,000 to 10,300 cal yr BP, but its level fluctuated in response to varied precipitation and evaporation levels during the onset and decline of the last ice age. When people arrived carrying Clovis or Western Stemmed Tradition (WST) projectile points, the lake had receded to one-third of its highstand elevation. After ca. 10,300 cal yr BP the lake shrank onto the valley floor and people using WST points followed. By the time Mazama tephra fell ca. 7,600 cal yr BP, the once large lake was divided into a series of small lakes, ponds, and sloughs that continued to attract people to their abundant resources of endemic fish and marsh plants.

DIANE ZENTGRAF

Oregon State University

A Database Collection Form for Clay Smoking Pipes

Material culture is commonly found by archaeologist in small fragments. The provenience of these artifacts is aided with reference tools and comparative collections. One artifact type frequently found at historic sites are clay smoking pipes. Manufacture of these pipes varies in distinct and subtle ways by date, country and maker. Information assembled from clay pipes can help to date a site, inform on historical use of tobacco, health, trade routes, geo-archaeological context, economic, cultural and social milieu. The analysis of the pipe collections from mid-19th century Fort Yamhill and Fort Hoskins, Oregon, is in progress. A data sheet for cataloging was developed utilizing Bradley's (2000) field guide and Sudbury's (2009) methods for data collection. This data sheet is being used to assemble relevant information as well as to organize and build a database to assist with the final analysis.

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JENNIFER M. ZOVAR

Whatcom Community College

Making a Difference to Our Students: Addressing a Variety of Wants and Needs in the Classroom

One of the challenges of teaching at the community college level is that in a single classroom, you often have declared majors with focused research goals paired with students who had no idea what ‘anthropology’ was when they signed up for the class. Students may have signed up because they needed a writing requirement, because it fit into their schedule, or simply because they signed up alphabetically. A recent student survey at WCC asked students about their expectations and goals for the anthropology class experience as well as how they expected the anthropological concepts they learned would be relevant outside the classroom and in their future careers. Better understanding of student motivations can help instructors craft class activities that are relevant and engaging for all students – and which help students see the value of anthropology in a variety of ‘real world’ contexts!



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-Galileo Galilei

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$\frac{D}{1} \frac{D}{24} \frac{D}{19} \frac{N}{5} \frac{N}{12} \quad \frac{N}{3} \frac{N}{5} \frac{N}{19} \frac{N}{13} \quad \frac{H}{13} \frac{H}{6} \frac{H}{17} \frac{H}{12} \quad \frac{D}{1} \frac{D}{14} \quad \frac{D}{24} \frac{D}{19} \frac{N}{1} \frac{N}{5} \frac{N}{9}$

-Wernher von Braun

Created by Puzzlemaker at DiscoveryEducation.com

Answers:
By denying scientific principles, one may maintain any paradox.
Research is what I'm doing when I don't know what I'm doing.



Our Resources, Our Stories: A Decade of Sharing

The 2017 Cultural Resource Protection Summit marks the tenth anniversary of our gathering. Since its inception, the primary goal in organizing the annual Summit has been to facilitate amongst all affected parties an open, frank discussion about the intersection between cultural resources and land use. The Summit is designed to promote collaborative cultural resource planning as an effective means of finding resolution to issues before they escalate into emotionally-charged, divisive, and expensive stalemates or law suits.

Please join us at the Suquamish Tribe's beautiful and inviting House of Awakened Culture for a two-day gathering that will help you improve your technical skills while deepening your connection to why we do this work. Leave with more tools for protecting cultural resources and sharing the important stories they tell, not to mention new allies and friends.

-Early Bird Registration Now Open - Visit www.theleadershipseries.info for special rates and to register online! (Special Rate Ends April 24, 2017)

-Students: Email Mary Rossi at Mary@eppardvision.org for information about student rates!

-Go to the website and enter to win a free registration!! One award will be made in each of these categories: Tribes, agencies, consultants, students





NATURE PROVIDES, SO IN RETURN, WE GIVE BACK.

stúlix[™] is the Salish word for our land. And for generations, it has been at the heart of our culture as a strong, steady provider of fish, water, wildlife and abundant resources for our people. Today, through our Natural Resources Department, we remain committed to conservation principles so stúlix[™] can continue supporting our people and our neighboring communities for generations to come.

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