ISSN 1538-2834

JOURNAL OF NORTHWEST ANTHROPOLOGY

Spring 2015 **Vol. 49, No. 1**

JOURNAL OF NORTHWEST ANTHROPOLOGY

FORMERLY NORTHWEST ANTHROPOLOGICAL RESEARCH NOTES

Composed by Northwest Anthropology LLC, Richland, WA; Printed by Copy Court, Moscow, ID; Bound by Arts & Crafts, Oakesdale, WA. Missing issue claim limit 18 months. For back issues and catalogue of prices contact Coyote Press, P O Box 3377, Salinas, CA 93912. <http://www.californiaprehistory.com>

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JOURNAL OF NORTHWEST ANTHROPOLOGY

VOLUME 49 Spring 2015 NUMBER 1

EXPERIENCES IN THE UNIVERSITY OF WASHINGTON ANTHROPOLOGY DEPARTMENT, 1955–1991[1]

Simon Ottenberg
with Footnotes by Jay Miller

ABSTRACT

Recurrent commentaries on the history of the University of Washington Anthropology Department have highlighted the Department's decisions from 1955 through the 1970s to expand its international expertise, in keeping with national scholarship trends. Over the years, anthropology faculty with interests in indigenous Northwest groups were systematically forced out of the Department, replaced by scholars with interests in Asia, Africa, and elsewhere, and who had funding unavailable to the Northwest scholars. A retired professor with a lifelong career in the Department provides perspectives and reflections on these events and the unfortunate impact that resulted on Northwest scholarship.

Having developed an interest in Coast Salish culture and history in recent years, I was inspired in 2013 to write a response to the comments made in Bruce Miller's Introduction to his edited book, *Be of Good Mind: Essays on the Coast Salish*, regarding an unnamed major university in the region that failed to continue first peoples' studies (Miller 2007). Miller had written:

> In the 1970s and early 1980s, at least one major university in the region chose simply to dump anthropology faculty member whose area of research was primarily the Coast Salish in favor of those who worked in more exotic and supposedly more intellectually exciting regions of the world, such as Papua New Guinea [and Africa]. But this appears to have been short-sighted and to reflect a lack of concern for the relationship between the local universities and local peoples, along with the old, lingering notion that the Coast Salish lack

[1] This commentary presents the thoughts of a 91-year-old scholar who was involved in both the study of political anthropology and the growth of the University of Washington anthropology department within the scholarly world. Clarifications and additions from other sources and comparative work have been added in footnotes by Jay Miller.

> authenticity and are too assimilated to be of interest. During the 1970s and 1980s, little attention was paid to promoting the education of local Aboriginal people and to attracting them to a university that took their lives and view of the world seriously never mind respecting the fact that the universities themselves are built on Aboriginal traditional lands. (Miller 2007:24).

My comments, however, were never sent to Bruce Miller. After recently reading Jay Miller's history of the University of Washington (UW) Anthropology Department (Miller 2014), I thought that I would revise my history focusing on the Watson leadership period to see whether it was worth publishing, and send a copy to the Anthropology Department archives and another to the University of Washington University Library Special Collections.

I taught social and cultural anthropology at the UW from 1955 to 1991, my areas of focus being West Africa, art, ethnicity and political anthropology. I came to the UW Anthropology Department from graduate anthropology training at Northwestern University in African Studies and a year teaching at the then Washington State College with Richard Daugherty. Erna Gunther, who was then chair, hired me. At Northwestern I was trained under Prof. Melville J. Herskovits, who had studied with Boas. I also studied with Herskovits's former graduate student, William Bascom, also a Boasian in outlook. Though I was considered a Boasian at UW, carrying out research for my Ph.D. in Africa and teaching for six months at the University of Chicago before coming west had turned me partly into a social anthropologist of the British structural kind that existed at the time: Durkheim and Mauss to Radcliffe Brown to Evans-Pritchard, Leach, and Fortes. My first two books were in that style.

The same year I came to UW, James Watson was hired by the dean as the new chairman of anthropology.[2] Watson's hiring came against the wishes of the anthropology faculty, with the exception of Melville Jacobs, who was at odds with most of the Department. Watson was brought in by the Dean of Social Science to reshape the Department and he did so in some good ways, but as far as Coast Salish and Northwest Coast Studies went, it was a disaster.

When I arrived I found the Department faculty to be not very active in research. Erna Gunther was largely tied up in administrative work,[3] having for many years headed both the Washington State Museum (now the Burke Museum) and the Anthropology Department. Viola Garfield was not doing any research, only a little semi-popular writing.[4] Melville Jacobs was finished with research and also only doing a little writing. Verne Ray was through with his Plateau studies, although he was soon to be involved in Native land claims litigation.[5] An archaeologist, Douglas Osborne, was carrying out archeology on the Colombia River before the federal and county dams were built. The physical anthropologist, Fred Hulse, was studying Japanese in the Pacific Northwest.[6] Catherine (Kitty) McClellan was researching with Athabaskans in Canada, but

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[2] Erna Gunther had recruited an Australianist, Daniel Sutherland Davidson, trained at University of Pennsylvania, to lead the department, but he soon died on a visit home to Philadelphia. That left a vacuum that the dean was only too happy to fill with his own man.

[3] Erna earned the goodwill of natives throughout the region by making them feel welcome at the museum, as well as taking students and others (such as the artist Helmi Juvonen) to winter ceremonials and Shaker services.

[4] Viola Garfield wrote slowly, was active in a local writers group and among art collectors, and had begun drafting a Tsimshian ethnography for the famous classroom series edited by the Spindlers.

[5] Verne Ray had also moved up the ranks into UW administration to become an associate dean.

[6] Hulse was also involved in an early study of blood groups among local reservations that introduced graduate students such as Sally Snyder to native peoples who provided her with materials for her own Ph.D.

did not draw students to that interest, as she later did at Wisconsin. There was William Massey, assistant professor, whose field was South America, but who taught courses on South America.[7] He was teaching one third in anthropology, one third in history, and one third in geography; an arrangement which did not last long as no one department wished to grant him tenure.

The only active faculty member who was involved in Coast Salish cultural and social research was Bill Elmendorf, working with the Twana. The Department was training students with Northwest Coast interests including Barbara Lane, Joyce Wike, and Sally Snyder. The entire faculty had produced useful publications in the past, except Osborne, and much of their work was nationally known among anthropologists. Yet, there was an isolated quality to the Department in the context of what was occurring in American anthropology in the 1950s and 1960s. The anthropology faculty had been trained under Boas or with Kroeber and Lowie, except for Verne Ray, who had studied at Yale. It was essentially a pre-World War II Department in outlook when I arrived in 1955. Very good descriptive and ethnohistorical studies and linguistic work, and mythology and folklore studies, as they were then called, had appeared or were in progress.

The general atmosphere of the cultural anthropologists in the Department favored recovery or "memory" anthropology, largely through obtaining cultural and linguistic information from elders, and there were no studies of the current condition of native peoples on or off of reservations, except in terms of the very important area of treaty rights and federal tribal recognition. The pressure, for good reason, was on working with the declining numbers of elders who best knew "the old culture," as it was elsewhere in much of Native American Indian studies research. There was considerable collecting of texts but little analysis of it, presumably left until later (as Jacobs did), but then to be done out of direct context. In the Salish area this was particularly so, since western Washington was becoming more and more urbanized.

Several years after I came to the Department, having finished writing my Ph.D., I toured the state's coast, pausing at La Push where there was a small Coast Guard station and a nearby native reservation.[8] I drove around it and thought that it would be interesting to do a study of it as it was at the time, incorporating memory culture and history into a present-day study.[9] I came back to Seattle and mentioned this to Verne Ray. He said to me, "Simon, there is nothing to do there. Mary died last year." Meaning that no memory cultural studies or linguistic collection were possible—Mary was the last speaker and cultural expert on tradition (Ray turned out to be wrong).[10] Having come from a study of a very active and changing society in Nigeria for my Ph.D., where the vast majority of peoples spoke an African language, I felt discouraged. I saw that with that attitude in the Department I would not be likely to make tenure there if I attempted a different kind of study than the usual type. I abandoned the thought. Elizabeth Colson's 1953 work on modern life at Makah did not appear to be a book that endeared itself to the faculty. She abandoned the Pacific Northwest and became a premier Africanist anthropologist.

When I came to the Department I was given the job of ordering anthropology books for the library. I found the Northwest section to be suspect. The works of Boas's, Kroeber's and Lowie's students were there, but newly emerging post-World War II works from other geographic regions

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[7] Massey worked in Baja California, famously using an old ambulance to transport diggers and supplies.

[8] The Quileute on this reservation spoke a language so unique it is considered an isolate known as Chimakum, Chimakuan (Hoh, Quileute, Chimakum), aboriginal to the Olympic Peninsula, which was a haven during the Ice Age. JONA published "Doc" Daugherty's Hoh ethnography in 2010 (Miller 2010).

[9] While in the Coast Guard, George Albert Pettit did just that for his degree at Berkeley, which also published it.

[10] J.V. Powell, who taught and retired at the University of British Columbia, devoted his career to Chimakuan studies. Clearly, Mary was not the last speaker.

were rarely present. The library budget was very small, fully spent in any single year and insufficient to keep up with the growing field of anthropology (in time, the budget did increase and I was able to purchase more anthropology books, with the assistance of the librarians). The condition of the library collection reinforced my impressions that the Department was out of touch with newer developments in anthropology after World War II. The faculty and students had been producing very good and useful ethnographies, but there was little at the theoretical level except for some of William Elmendorf's papers, and occasionally that of a graduate student such as Joyce Wike. Alas, there was no Margaret Mead or Ruth Benedict, with their very rich (but sometimes faulty) ideas, involved in the Northwest to attract students to the Department.

By 1955, when I began teaching at the university, nepotism rules existed. My wife, Phoebe, who held a Ph. D. in anthropology, was unable to teach in the Department, and worked in the university's community development program. However, major changes were occurring in the field of anthropology. The U.S. had discovered that it was a great power, but one that knew little about the world and its peoples. Foundations started providing grants for research overseas in "exotic" lands. Examples include the Ford Foundation through the Social Science Research Council and the Carnegie Corporation, which funded various projects across the world, including the African Studies Program at Northwestern University (where I had studied). Later there was the government Fulbright Program, and then aid from other government agencies. Unfortunately this wave of research funding for graduate and postgraduate research in anthropology was not available for the study of native peoples in the U.S. Some funding became available after Melville Jacob's death, when a small fund was set up through his estate in Bellingham, WA, to fund Northwest research. However, the funding from the large foundations continued to draw students away from Northwest Coast research; over time more faculty were hired to train them. The unfortunate view came to be that as a student, or even a faculty member, you only studied Native Americans if you could not get a grant to go somewhere overseas. For example, Karen Tranberg Hansen, whose field was Africa, was not eligible for grants in the U.S. because she was a Danish citizen; she conducted a study of an Indian woman's organization in Seattle for her Ph.D.[11]

Coming out of researches overseas, new trends in American anthropology appeared in economic anthropology; political anthropology; and in studies of ritual, social organization, kinship, ethnicity, and the arts—all fields that I was interested in. Older Department members appeared increasingly isolated from this changing American anthropology. The combination of new developments in anthropology being practiced by the newer anthropology faculty and the attractiveness of available funds for foreign research acted against the possibility of Northwest Coast anthropology at UW.

Further, the dean and other university officials, whether persuaded by Watson or on their own, saw the Anthropology Department as being in competition with other anthropology departments for reputation and the ability to attract faculty in the new anthropological world. Watson was of the new order,[12] even though he had himself studied Brazilian Indians for his Ph.D.

Yet, if Watson had been perceptive and interested enough, he could have worked out faculty and programs for the Salish and the rest of the Northwest area; he could have joined the Boasian

[11] Seattle Indian Women's Service League supplied the basic needs to the urban native community at a time when the Bureau of Indian Affairs was denying any help off reservations, while actively encouraging the "relocation" of families to cities.

[12] Watson was at the forefront of the new focus on "acculturation" and had worked at Hopi with the famous "Sun Chief." His wife Virginia was also an anthropology Ph.D. and was hired by Seattle University, the Jesuit school, since spousal hires were forbidden in the 1950s. They had a son and a daughter.

approach to one or more of the newer orientations in anthropology. I certainly, at that time, did not have the sense or the time to suggest that to him, although I was on good terms with him.

Watson was trained in Chicago-style social anthropology, and he went about hiring scholars who had just finished their Ph.D.'s and other young scholars who represented the newer concepts in anthropology. These new hires included Manning Nash, Edgar Winans, Ed Harper, Conrad Kottak, and the more senior anthropologists, Milford Spiro and Kenneth E. Read. There were major Asian area programs at UW, which pressured the departments to hire scholars, sometimes with an attractive salary and travel funds. In addition, there were pressures from UW's Jackson School of International Affairs to hire in key areas of university interests, particularly for programs on China, India and Southeast Asia. These area programs had funds for these scholars to travel to meetings and to their country of interest for short periods. The theoretical interests of the new hires, necessitated by studying fully functioning cultures, often with high population density, were quite different from the approaches in Northwest Coast scholarship.

Watson and the Department did bring in a specialist on southeastern Indians, Raymond Fogelson, who had trained with Alfred Irving Hallowell at the University of Pennsylvania, but he had little interest in the Pacific Northwest.[13] After a few years he left for Chicago, following in the footsteps of the psychological anthropologist, Mel Spiro. Frederick Gearing, a Cherokee specialist, came with a strong interest in educational anthropology, but shortly left for the East Coast and a career at the State University of New York at Buffalo. Watson complained to me and to others that there were no young Northwest specialists familiar with current anthropology to hire, thus the hiring of Fogelson and then Gearing.[14] I do not know whether Watson's complaint was true at the time or not, but Watson's national reputation among Boasians and other anthropologists as being hostile to the "old guard" anthropologists at UW would not have encouraged an aspiring Northwest Coast specialist to show interest in coming to Seattle. Despite this impression, Watson did not see himself as being anti-Indian in research and teaching.

Most of the new faculty left after a few years for various reasons and were replaced by others. Only Read and Winans stayed. The Anthropology Department became a stopping place for younger scholars on their way to a successful career somewhere else. I could have left too, but for personal reasons, I chose to stay. The departmental focus was on Melanesia, Africa, and Asia, with less unity of anthropological orientation and interest than before under Gunther, but with a more cosmopolitan outlook.

Watson felt that the "old guard" faculty's work was largely ethnographic and descriptive. He was bent on getting rid of non-tenured faculty so he could bring in new people. He mistakenly believed that little interesting research could be done on the Northwest Coast, either in recovery studies or in research on present-day Coast Salish. Regardless, there was little funding for Salish Sea research. All the status, all the possibilities for students for research grants and teaching positions was away from Northwest Coast studies. Watson did not, or was not able to, go against the trend.

At one point, Watson turned his attention to Papua-New Guinea, bringing Kenneth E. Read, a British expert in this region, into the department. Read had trained with Raymond Firth at the London School of Economics. A number of students worked with Watson and Read in the region for their Ph.D. This was consistent with UW's general interest following World War II in the peoples of the Pacific Rim, including the Pacific islands as well as Japan, China, Korea, and

[13] Ray Fogelson did fieldwork with Canadian Shuswap, who are in the Plateau, though they have cultural ties to the coast.

[14] Actually, Wayne Suttles, with a UW Ph.D., was developing the emerging field of ecological studies among the Lummi of Washington state.

Southeast Asia. James Nason, of Apache[15] background, did his Ph.D. research on Micronesia, and was later hired by the Department. At one time he led UW's Museum Studies Program and later played important roles in forging the Native American repatriation program.

Watson was largely successful in connecting the Department with what was going on nationally in American anthropology after the war, bringing in interesting scholars and broadening the Department. But he never showed much interest in the Northwest Coast, whether accepting the stereotype of dying cultures or simply seeing no funding in it for students. And he underestimated the value of the work of Bill Elmendorf and others because it was done in a Boasian or Kroeber[16] and Lowie framework.

To make way for the new hires, several existing members of the Department had to be let go. The first to be denied tenure during this period was the archaeologist Douglas Osborne, perhaps because he had not published a book. Osborne had, however, committed to a long-term project on the Columbia River and was overseeing student research throughout the region. One of his students, Alan Bryan,[17] did a Master's thesis on shell middens in the Puget Sound area, and another, B. Robert Butler, developed the concept of an Old Cordilleran Culture in the Pacific Northwest. At his Ph.D. orals examination, as a protest in support of Osborne, Butler refused to answer questions and did not receive a Ph.D.

To replace Osborne, Watson hired Robert Greengo, a Harvard graduate who had done his Ph.D. research in the U.S. mid-west.[18] He knew nothing of Northwest archeology and took over the Columbia River project in midpoint, and in a hurry, with great opposition from the archeology students, who resented Osborne's departure, and from an unusually influential private amateur Washington State Archaeological Association, I think it was called, which made contact with the state governor and tried to have Greengo fired, but without success.[19] Greengo was a failure, whether due to the difficult conditions under which he entered local research, conditions in the Department, or for other reasons. It took him years beyond the deadline to write up his Columbia River research for the U.S. Army Corps of Engineers. It was never professionally published and much of the data appears never to have been used, a loss to prehistory.

A few years later the anthropologist Bill Elmendorf was also denied tenure. I believe he had not published his extensive Twana book by then, though he had written interesting articles. Watson did not want what he considered to be young representatives of the older style of anthropology who would be in the Department for years; this was an unfortunate move from the viewpoint of future Northwest Coast research.[20] Elmendorf left for the University of Wisconsin,[21]

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[15] Nason is enrolled Comanche through his father.

[16] Kroeber annotated the Twana ethnography with Yurok comparisons.

[17] Bryan, by then married to Ruth Gruhn, had a long career at the University of Alberta, while Butler was at the Idaho State University Anthropology Department, founded by UW graduates fleeing Watson's regime.

[18] The Osborne position was offered to a host of regional archaeologists, all of whom pointedly and rudely refused it, so Harvard Ph.D. Greengo, just finishing work along the lower Mississippi, was hired and rushed into the field to take over excavations already in progress, while his wife and daughters moved into Osborne's house on Capitol Hill at his gracious suggestion.

[19] WAS = Washington Archaeological Society was the result of a night class taught by Osborne, whose students organized their families into a competent group of amateurs who recorded and excavated a range of significant sites in the western and central part of the state. Another group for junior scholars who met every Saturday at the state museum (now the Burke) produced a half dozen professional Ph.D.s with long careers in archaeology, anthropology, and geology.

[20] Jacobs in letters attacked Elmendorf for neglecting to do a grammar of Twana, even as he was compiling an extensive vocabulary to illustrate his ethnography.

along with Catherine McClellan, who became well known for her documentation of oral history and storytelling among Athabascan-speaking peoples in the Yukon. We also lost Chester Chard, an expert on Siberian archeology, who was temporarily in the Department and who might have contributed to the interest in Northwest coast prehistory. This meant that whatever scholarship on the Salish would occur, it would be done without a Salish expert. Frederick Hulse, who was tenured and influential on campus, fought hard to prevent Watson from doing his dirty work. Hulse eventually left, totally discouraged, after having received an offer as a full professor at another university [Arizona]; he did not receive a competing offer to raise his status to full professor from Watson, who simply congratulated him.[22] Verne Ray withdrew from being active in the Department after his wife Dorothy failed her Ph.D. examination with the "old guard" faculty, although she went on to a successful career studying Alaskan Eskimo art and culture. William Massey, whose research field was Baja California, taught South American anthropology, history and geography at the university; he also was denied tenure. Other faculty retired or died.

Watson, over his fifteen-year term as chairman of the Department, never came to see the value of a Northwest specialist in the Department. Jay Miller did not receive tenure. He had his own time schedule and was too slow in publishing.[23] Later, as an independent scholar he has turned out very fine work, not only on the Salish but also on other Northwest Coast groups. He is now as a leading Northwest scholar. Pamela Amoss, who took her Ph.D. in the Department in 1972 on her Nooksack research, should have received tenure in the Department as her book came out about the time of the tenure decision. I was away and never fully understood why she did not, except that those dominant in the Department considered her work "old fashioned." I now view her book on the Nooksack and some of her articles to be of value.

A positive event was the arrival of Eugene Hunn—a specialist in environmental studies and native categories of birds, animals and plants—who had worked in Mexico. Once in the Department, he turned his interests to research on the Colville Reservation in eastern Washington, which, of course, includes interior Salish.[24]

A recent check with the UW Department of American Indian Studies Program, and Art History program did not find any graduate students or faculty carrying out Salish research; only anthropology has continued to have some record. The existence of an American Indian Studies Program may have provided an excuse for anthropology not to hire someone in Northwest Native Studies, although the latter has primarily been an undergraduate program.[25] These days the Anthropology Department is heavily involved in applied research overseas, particularly in Asia and Africa and in medical anthropology.

However, there is a small but continuing record of scholarship on the Coast Salish from Watson's time to the present in the Anthropology Department (and other studies carried out further

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[21] Elmendorf was hired for a few years by Washington State University, which published his ethnography, before he moved on to Madison and work with California languages.

[22] When the physical anthropologists met in Seattle for an annual convention, a special session in honor of Hulse was a more than subtle reminder to UW of their past mistakes.

[23] With a field covering all of Native North America, after fieldwork in the Southwest and Northeast, it took time to acquire the Northwest, though Miller had done undergraduate work with Tsimshianic linguistics with Bruce Rigsby.

[24] All of Hunn's Americanist work has been among Sahaptians at Yakama and elsewhere along the Columbian Plateau. He never worked with Salish speakers, though he did testify for Squaxins in the Shellfish Treaty Right case.

[25] Vi Hilbert, a native speaker of Lushootseed, the language of Puget Sound, and a U.S. National Treasure, long taught the language and literature in this program, though she was not always treated as a respected elder.

north on the coast). Much of it lies in unpublished theses and dissertations. The problem was that in most cases following Elmendorf's departure, the chair of the graduate students' work had little or no knowledge of the subject, limiting the quality of otherwise good and useful writings. I know that was true in my case as dissertation chair. I could suggest theory and models, but not evaluate in detail the nature of the data collected except in a general way. If Salish scholarship continued, it was due to the local interest of graduate students rather than of the faculty.

For example, Lewis L. Langness wrote a Master's thesis, "A Case of Post-Contact Reform among the Clallam," (1959) on the Jamestown S'Klallam, chaired by Kenneth E. Read,[26] the British expert on Papua-New Guinea. The thesis drew on Erna Gunther's earlier research and on his own fieldwork,[27] based on Fred W. Voget's idea of reformative movements, and on certain psychological theories. The study describes the founding of Jamestown by off-reservation S'Klallam, who gave up ["shifted"] many of their traditions, eventually becoming Shakers, and then being largely absorbed into American culture. (In recent years there has been a cultural revival, according to the Jamestown weaver, Heather Johnson-Jock.) As an off-reservation community, Jamestown provided a haven for other Native American Shakers when their religion was under an official U.S. ban.

Another early Master's thesis during Watson regime was "The Analysis of Skagit Music" by Vivian Tomlinson Williams in 1961; she was a professional musician, violinist, and "fiddler" of American country music. Filled with complex charts and musical examples, it analyzed songs of doctoring, gambling, love, and the Shakers. She had some guidance from an earlier graduate student, Sally Snyder, for her thesis chair, Watson, knew nothing about the subject.

Bridging the old and the new regime, I joined Melville Jacobs to guide Michael Kew's studies and his 1970 dissertation, since one of his and my fields was political anthropology. I see by looking at the dissertation again that I was its major signer, whereas Jacobs was the major guide. I thought it a very useful Northwest Coast study, one of the few at the time to deal with native groups in relation to white society, although it was also on Musqueam Salish spiritualism.[28]

I was involved in some other Salish work. Karen Tranberg Hansen, whose committee I chaired until I left for Nigerian research in 1979, wrote an anthropological Ph.D. *American Indians at Work in Seattle: Association, Ethnicity and Class*, on the rise of self-help native associations in urban Seattle, which were responding to the needs of urban natives from the Northwest Coast, the Plateau and the Plains. Hansen's study, unfortunately never published, has been neglected in the Northwest Coast literature despite its importance as an early urban study of Native people trying to cope in a major Northwest city. However it is drawn upon in Coll Thrush's 2002 UW history dissertation, *Urban and Indian Histories in Seattle*, later a UW Press book that includes a place name atlas (Thrush 2008).[29]

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[26] Interestingly, Read gave a keynote address at a regional meeting titled "The Squeemish and Squamish" mocking the local–ish ending on Salish tribal names meaning 'people of.'

[27] Ironically, Langness, more famous for his later work in New Guinea, summarized his S'Klallam MA in a chapter in the festschrift for Viola Garfield, who received the first MA ever awarded by UW "Old Guard" Anthropology before she went on to a PhD under Boas at Columbia.

[28] Kew was long at University of British Columbia and married into the Musqueam reserve.

[29] This atlas is a travesty because the authors failed to use the International Phonetic Alphabet system to spell place names, opting for idiosyncratic mixtures of upper and lower case letters that have set back public and tribal efforts to teach and sustain these languages using the letters everyone has been able to read and appreciate for over a century. An unexpected outcome has been a rousing paddling song "We want IPA" among local tribes.

Another Master's study that I chaired was by Jeffrey Lewis Dann. He wrote "A Study of an Indian Tavern on Skid Road" in 1967, a useful analysis of Native alcoholism and social relations. Dann does not identify the Native ethnic groups, writing only of "Indians," but probably some Salish were involved. This was followed the next year by a Master's thesis on "Teen-Age Drinking in Seattle and King County," by Laurence Ivan Beede, under the chairmanship of George Quimby, partially based on earlier publications of Edwin M. Lemert on alcoholism among Northwest Coast Natives and his own research. Beede concluded that juvenile drinking was not an ethnic phenomenon but a general one linked to social strata.

I also chaired a 1974 dissertation, not usually cited in Salish accounts, by Sonja Solland,[30] *A Study of Conflict in a Multi-Ethnic Community,* concerning native women (mostly Salish) married to Filipino men on Bainbridge Island, across from Seattle. That was in the days when Filipinos were not allowed to bring over brides. The very patriarchal Filipino husbands wanted their Native wives to stay at home, cook, take care of them, the house and the children, and to be good Catholics. The women, as other Salish, liked to visit about, sometimes taking their children with them, going to see relatives, visiting and taking part in Spirit Dances, Naming ceremonies, mourning events, and First Salmon rites. Not surprisingly, many of these marriages failed.

An excellent Ph.D. dissertation by Natalie Andrea Roberts: *A History of the Swinomish Tribal Community*, 1975, 472 pages, is noteworthy for its careful analysis of how five different Salish ethnic groups consolidated into a single, more or less self-governing reservation over time. It is one of the few unpublished or published publications on the Salish to employ the ethnicity theories of the time in useful ways. It was guided by Watson, who would have known the ethnicity theories but not much about the Northwest peoples.

Marilyn Bentz, of Atsina first people background, but not from the Northwest, wrote a thoughtful Ph.D. dissertation, *The World View of Young Quinault Indians* in 1984, under the chairmanship of Stevan Harrell, an expert on China.[31] Using a controlled sample of native and non-native youths in an open-ended questionnaire, her results suggested that peer-group influence was greatest among native youths, and that they were people-oriented, focused on native issues and that there was complacency about the future.

Finally, there was Carol A. Hermer's *Representing Our Pasts, Representing History: Representing Self*, an analysis of video interviews of eight faculty members (including myself) who were present at the time of the Watson's leadership, or followed shortly afterwards, as to the changes that occurred in the Department. This was an experimental tool, video interviewing as a method of documenting history. Unfortunately, her interviews were broken up according to certain categories of interest in video production, which meant that there was no single full reading of an interview. There are frank opinions, including Watson's and mine, but none from the "old guard." The dissertation suggests that my interpretation of events are relatively accurate.

A strength, from the days of Erna Gunther, has always been in Northwest Art History through the research and writing of Bill Holm and later the art historian Robin Wright and both their students, now with the support of the Bill Holm Center and the Burke Museum. Unfortunately almost all of the work, until recently, has been done north of the Coast Salish area. Wright has served as chair for at least four art history students in that area. Several of these and other art history students took my course on the anthropology of art. There has not been much cooperation between the Burke and the Anthropology Department for northwest studies, except for

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[30] Solland first earned a Master's degree in archaeology under Greengo. Following her Ph.D. she was employed at North Seattle Community College, where she developed an exchange program with Nepal.

[31] Jay Miller had been her original chair, visited her research site, and developed ties among Quinaults that continue into the present day.

the archeological work of Julie Stein, mainly in the San Juan Islands of the Salish Sea. When George Quimby, a well-known Indian specialist, was director of the Burke Museum (he also had a courtesy appointment in the Anthropology Department although he did not teach there), he, along with Bill Holm and others, repaired and brought to life again Edward Curtis's 1914 famous film, *In the Land of the Head-Hunters* (Holm and Quimby 1980).

On the other hand, Robin Wright, the curator at the Burke for Northwest Art, has more recently shown an increasing enthusiasm for Coast Salish art forms, inviting Salish artists to speak and demonstrate at the Burke on a number of occasions. In 1991 she published *A Time of Gathering: Native Heritage in Washington State*, after an exhibition, which contains a substantial amount of writing on the Salish (Wright 1991). Wright, and her former student Kathyrn Bunn-Marcuse, have recently published *In the Spirit of the Ancestors* (Wright and Bunn-Marcuse 2013) through the University of Washington Press, a press always supportive of Northwest native people's arts and life.[32] This book on contemporary Northwest Coast art has substantial materials on modern Coast Salish arts and artists. No cultural anthropologists are involved in this Salish renaissance at the Burke, other than through donations of art, such as my own.

There has been, in the past fifty years, a florescence of Salish ethnic identity. It is reflected in the arts: in silkscreen prints, painting, wood sculpture, metal and glass work, and photography. It is also reflected in the revival and strengthening of traditional rituals everywhere in Salish territory. Almost every Salish reservation has at least one skilled artist, and there are some who live in Seattle. All this should be studied, as well as the general cultural revival. Why did it occur when it did? What is its nature? It is part of the evolution of Coast Salish identities within the larger society and the growth of a sense of status and pride of Coast Salish people.

One reason I am involved with Coast Salish matters is that, following a productive career in West African anthropology, I am now working on the biography of an urban Salish artist, Ron Hilbert, the son of Vi Hilbert, together with Barbara Brotherton of the Seattle Art Museum and a niece of the late artist, Jill LaPointe. Hilbert (1943–2006) was a friend of mine. It is enjoyable to do interviews in Seattle, scour the Special Collections archives at the University of Washington Library, and try to locate Hilbert's art in time and space. Hilbert is a difficult artist to publish on, since a major portion of his work—drawings, paintings, wood relief with or without acrylic—is based on private Winter Spirit dancing scenes. His images do not make some Salish happy, particularly young spirit dancers, who are more vehement about his art than older Salish.[33]

For the record, my interest in modern Northwest Coast and Salish art began through living in Seattle, starting in the 1980s. I turned from anthropology to art history in my later years, having an exhibition of modern Nigerian art at the Smithsonian in 1997–1998. In the early 1980s, I started to collect silkscreen prints from the Northwest and came to know some of the artists, including Susan Point, whose works I can longer afford to collect. Since then I have donated numerous Northwest Native silkscreen and other prints from the Northwest Coast to the Burke Museum, and a smaller number to the Seattle Art Museum, as I have come to know some of the artists. I have not attempted to analyze these works in depth, lacking the background to do so, but I hope others will. Of late, I have concentrated on the creations of Salish artists in Washington state, though there is now so much being produced by so many artists I cannot keep

[32] But dreadfully inconsistent on native language accuracy.

[33] During his life, Ron also had the defense and protection of his mother Vi to justify his art to all communities, native and others.

track of them all. I continue steadily working on a complex biography of the Coast Salish artist, Ron Hilbert.

I very much regret now that when I was in the Anthropology Department I did nothing to protest the absence of Coast Salish studies, even after Watson was no longer chairman. I should have known better, since my early undergraduate and graduate studies at the University of Wisconsin involved library work on the history of a Wisconsin Native American group. I was simply preoccupied elsewhere. In a turn-about, my respect for the value and usefulness of the Salish literature has recently increased a great deal. I have been reading Collins, Amoss, Barnett, Boas, Hawthorn, Suttles, Bierwert and Elmendorf; Snyder, Lane, Jay, and Bruce Miller and others. Although I did not arrive in the Anthropology Department as part of the new movement under Watson, I became part of it, and I was undoubtedly callous about the existing faculty and their Northwest research. I was, for some years, a bit stuck up about British social anthropology and working in Africa on well funded fellowships and grants. Yet the "old guard" at Washington always treated me with respect and did not seem to see me as a threat, and I was too young and new to have any say in the early days of Watson's regime. However, after Watson was no longer chair and, I was well-established in the Department, I might have pressured for Coast Salish studies and faculty, but I did not.

I have come to believe that a university, particularly a state university, has a moral obligation to carry out studies on the cultural groups in its midst, especially Anthropology Departments, by the nature of their work, and that the Anthropology Department at UW continues to fail this obligation. The Department does research on social and medical issues in Mozambique and East Africa, but not with the Coast Salish, despite the fact that the university is located in the heart of Salish country. The Coast Salish are peoples with vibrant and changing cultures, which would be very interesting to research, publish on, and teach about, and if the anthropology is to be applied work, as much of it is in the UW Anthropology Department, there are plenty of social, economic and medical issues among the Coast Salish that could be addressed.

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ABOUT THE AUTHORS

An avid scholar and collector, Simon Ottenberg is emeritus professor of Anthropology (1955–1991) at the University of Washington, Seattle. He trained as an Africanist with Melville J. Herskovits, revered founder of the Program of African Studies at Northwestern University and earned his Ph.D in 1957. Early books focused on African (Nigeria, Sierra Leone) double descent, politics, and, increasingly, art. His archive of 35 boxes is at Northwestern, modern African art at Newark, traditional African art at Seattle Art Museum, and Northwest silk screens at the Burke and Seattle Art Museums. He has been honored by a Nigerian chiefly rank, and inaugural fellowship at the Smithsonian African American museum. Befriending the Salish artist Ron Hilbert Coy, his latest project is to publish and display deeply spiritual works.

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Jay Miller is an anthropologist in the old-school Americanist tradition: rescuing, researching, editing, sharing, and writing about cultural contexts, archaeology, ethnohistory, beliefs, kinship, lifeways, and languages of indigenous peoples across North America. He has worked at the four quarters—at the Southwest with Pueblos, Northeast with Lenape Delawares, Northwest with Tsimshian and Salishans, and Southeast with Mvskoki Creeks and Caddoes. His recent concern is analyzing how UW lost its way, cutting itself off from its avowed roots in the region. His four decades of contemporary Mississippian research will appear this fall as *Ancestral Mounds ~ Vitality and Volatility Crossing Native America* (University of Nebraska Press).

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Journal of Northwest Anthropology, 49(1):13–25 2015

THE *UNDERVALUED* BLACK KATY CHITONS (*KATHARINA TUNICATA*) AS A SHELLFISH RESOURCE ON THE NORTHWEST COAST OF NORTH AMERICA

Dale R. Croes, Ph.D.

ABSTRACT

From the earliest movements of people onto the Northwest Coast of North America, black Katy chitons (*Katharina tunicate*) probably provided an important source of animal protein, as well as vitamin A and calcium. Archaeological studies often under-recognize their sometimes substantial contributions to the shellfish diet. A review of the ethnographic literature suggests their importance on the central and north coast; findings include a wide variety of recipes as a special meal, naming of high rank nobility "chiton," and the very creation of women and all humans in some oral histories. This Native importance may reflect the deep-rooted transformation of this basic resource that helped support the First Peoples. Archaeologist may need to expand their bi-valve studies to better include the contribution of this eight valve/plate mollusk.

Introduction

During the summer of 2013, I was part of a team of archaeologists exploring the wet site potential of the Labouchere Bay area, Prince of Wales Island, Southeast Alaska (Fig. 1). The research was led by Dr. E. James Dixon and graduate student Mark Williams of the University of New Mexico, and logistically supported by Pacific Northwest Archaeological Services and wet site specialists from Japan. One of our goals was to excavate waterlogged ancient clam beds, with the hopes of examining the extent of reliance on maritime resources of Alaska's early period peoples, who were potentially associated with the nearby and well-known On-Your-Knees Cave (PET 408; Fig. 1).

One site area in particular exhibited fauna in non-wet shell midden deposits on a raised terrace, approximately 10 m above mean tide today, with a calibrated age (IntCal13) from a depth of 150 cmbd of 6,642–6,496 cal yr B.P. A noticeably common invertebrate shellfish at this raised midden area was the black Katy chiton (*Katharina tunicata*) (Fig. 2).

Only once previously had I worked on a shell midden with an unusually high concentration of black Katy chiton plates; during my 1968 University of Washington (UW) field school we found similar concentrations at the Watmough Bay/Bight site (45-SJ2-80) Lopez Island, Washington State with ^{14}C dates from approximately 3,000 B.P. (Daniels 2009:181–182, Taylor 2012:86–87; Fig. 1).

With these site emphases on black Katy chitons, and their common occurrence in many other Northwest Coast sites, this article examines the black Katy chitons and their economic and cultural value along the ancient Northwest Coast of North America and into the ethnographic period.

The often discussed concept of the *kelp highway*, providing a route for first peoples onto the northwest coast of America and eventual occupation of the continent, recognizes marine peoples' use of abundant chitons on the rocky shores of the kelp beds; chitons would be a major source of shellfish nutrients and part of the original maritime diets (Erlandson et al. 2007:167). This incipient importance may still be reflected in Haida origins stories on the North Coast, where chitons are said to have birthed the first human females and males here (see ethnography section, below).

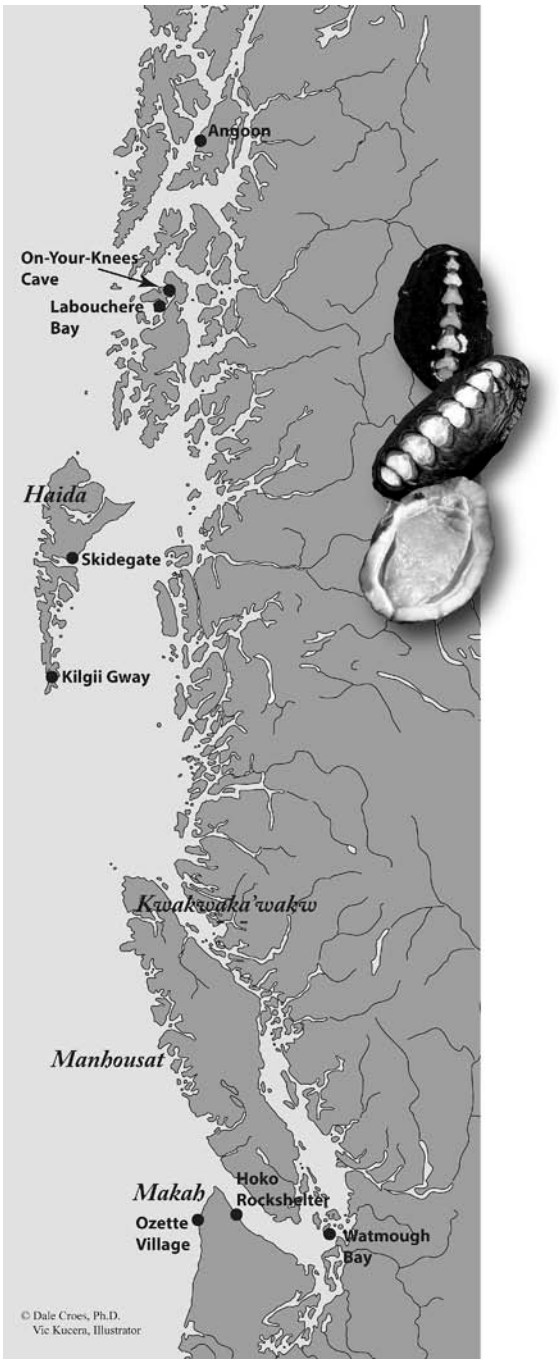

Fig. 1. Location of archaeological and ethnographic areas discussed in study (map courtesy of Vic Kucera).

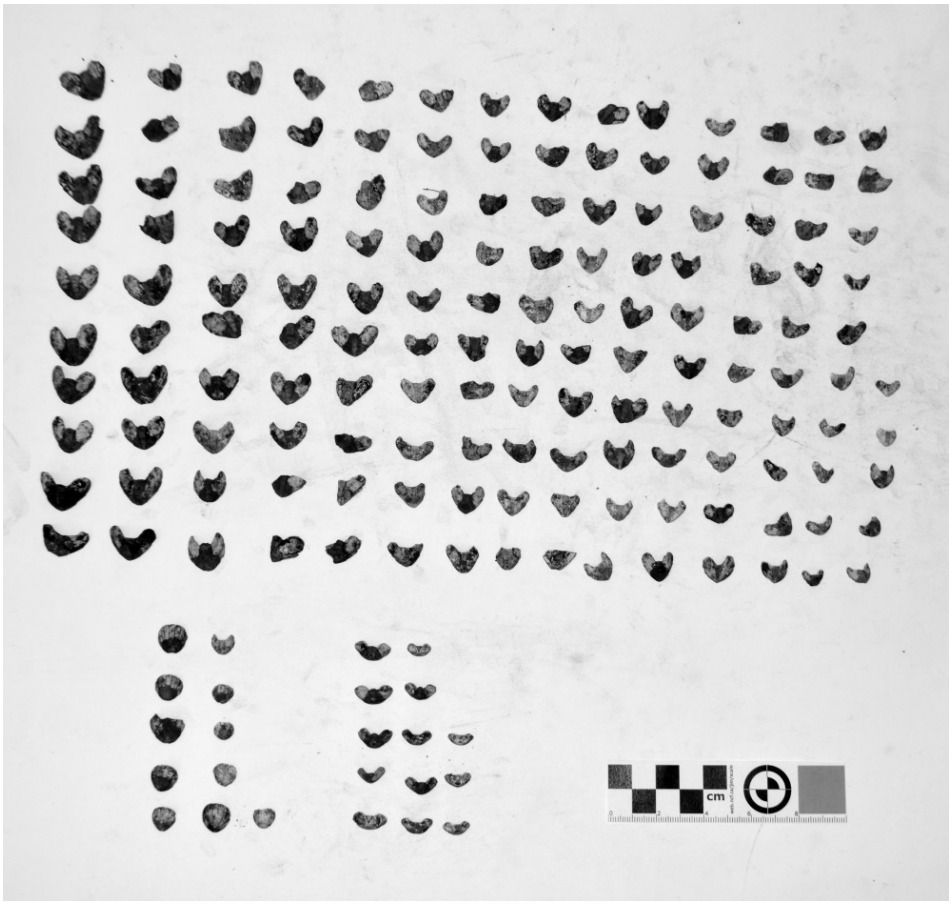

Fig. 2. Photograph showing black Katy chiton (*Katharina tunicata*) plates from Test Unit D, Elderberry midden site, Labouchere Bay, Prince of Wales Island, Alaska. Lower left of photograph shows mostly front anterior "nose" plates (see Fig. 4; photograph by Mark Williams, 2013).

Black Katy Chiton (*Katharina tunicata*) Characterization

This chiton species grows to about three inches (7–8 cm), having six winged insertion plates and a nose anterior and posterior plate along its back (Figs. 2 and 4). They inhabit the mid-intertidal rocky beaches in exposed wave-swept shorelines (Figs. 3 and 4). Black Katy chitons do well in this mid-intertidal zone in steep rocky shores, high energy surf, and large tidal ranges. Today the site area of Labouchere Bay is a low-energy mud-flats tidal beach—perhaps 6,550 years ago a higher sea level would expose vertical bedrock here and provide a high-energy surf habitat for chitons. This chiton, unlike some other species, is not extremely sensitive to light and can be found in the open, often in kelp bed areas, feeding on algae. It has a short life span of about three years, and is an edible size by two years old—so there would be a quick recovery of harvested areas with new generations replacing previous ones.

Live meat weight, after removing plates, was calculated to average 52.4 g in research at the Ozette site (45-CA-24) in Washington State (Wessen 1983:122). A single chiton would provide an estimated 42 kcal (Drury 1985:93). In *Nutrients in Native Foods of Southeast Alaska* Helen M. Drury described the particular value of black Katy chitons as:

> . . . a good source of vitamin A [approx. 248 RE per chiton]. 100 g [2 chitons] contained nearly 1/4th of the RDA for both riboflavin and niacin and more than 1/8th of the RDA of calcium. This nutritious member of the mollusk family, popularly called gumboots, is very well liked by SE Alaska Natives. Chitons can be gathered from the rocks of the rugged coastline during low tides. (Drury 1985:96–97)

Fig. 3. Chitons in mid-tidal area habitat grazing for algae (top photographs); Chitons from Hoko River mouth area, top and mouth views (bottom photographs).

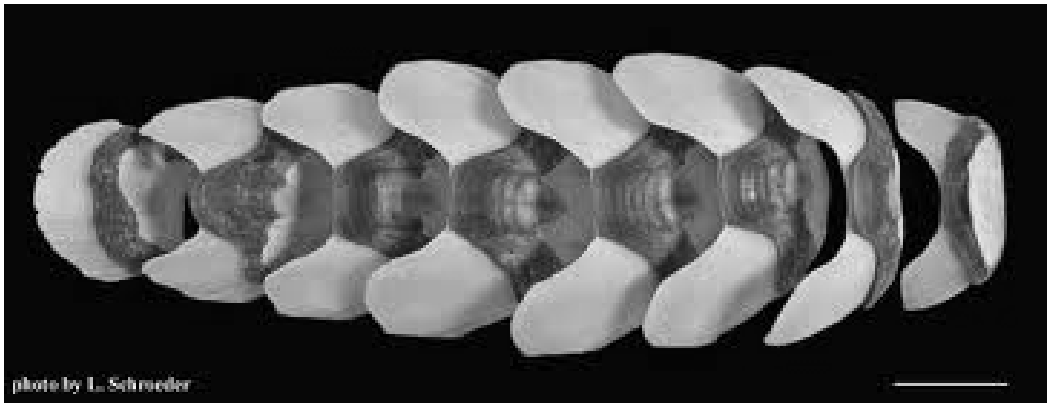

Fig. 4. Plates with anterior plate to left, six insertion plates, and posterior plate to right—MNI is determined by counting anterior and posterior plates and the larger number represents MNI.

Northwest Coast Archaeological Significance of Black Katy Chiton

Exploring overviews of sites in the central and northern Northwest Coast showed that black Katy chitons were a significant shellfish in outer coast archaeological sites near rocky high-energy exposed beaches. In the central Northwest Coast overall fauna from 19 sites were examined in the Salish Sea and the outer coast of Washington as a general synthesis of regional data (Butler and Campbell 2004). Two outer coast sites demonstrated a significant emphasis on black Katy chitons, ranking second at both sites in terms of shellfish meat-weight contribution: the Ozette Village wet site (45-CA-24) and the Hoko Rockshelter (45-CA-21) (Miller 1983; Wessen 1983; Croes 2005; Fig. 1).

At Ozette, Gary Wessen estimated the relative contribution of major shellfish species to live meat weight total, with corrected data, showing all chitons providing 26%, the highest percentage, and California mussels (*Mytilus californianus*) second, providing 24%, with an estimated meat weight contribution of all species of 4,057,889.2 g; over a million grams each of chitons and mussels (Wessen 1983:61–64). Since California mussels can be collected easily in large patches and chitons must be pried off one by one, these results are particularly noteworthy in terms of their dietary intake at this outer-coast site.

Horizontal samples were systematically taken from across the surface of the Hoko Rockshelter, by David Miller, which he used to estimate the raw shelled meat weight (RSMW) contribution of the different shellfish species. California mussels provided by far the most contribution of meat weight at 70%, however black Katy chitons ranked second with 6.2%, followed by butter clams (*Saxidomus giganteus*: 4.3%), crab (3.0%) and then littleneck clams (*Protothaca staminea:* 2.8%) (Miller 1983:98–104; Croes 2005).

Both Ozette and Hoko Rockshelter are outer coast sites that were occupied contemporaneously (Fig. 1). The high rank order abundance of black Katy chitons to dietary intake has not been given appropriate attention, with more focus on use of bivalve mussels and clams.

In Puget Sound, recent excavations of two 1 x 1m excavation units (EXUs) at the Watmough Bay/Bight site (45-SJ-280; Fig. 1) supported my 1968 non-quantitative observations of high black Katy chiton use at this inside coast site; this species ranked second in percent MNI of shellfish abundance in both units: EXU 1: 50% common littleneck clam (*Protothaca staminea*), 16% black Katy chiton; EXU 2: 30% common littleneck clam, 27% black Katy chiton (Daniels 2009:180–182).

On the north coast, the region of Labouchere Bay sites, Madonna Moss provided a synthesis comparing eight sites near Angoon, Alaska (Fig. 1). Six of these sites had butter clams ranked first, indicating an emphasis on gravelly to mud-flat beaches. Black Katy chitons, from rocky exposed shores, ranked second in two sites, third in two other sites, and fourth in another two sites. Therefore, in six of the sites, black Katy chitons ranked second to fourth amongst ten species of shellfish (Moss 1993:636–638).

The oldest known wet site, the 10,700 years B.P. Kilgii Gwaay, Haida Gwaii, with excellent preservation of wood/fiber as well as vertebrate/invertebrate fauna, exhibited a strong dominance of California mussel in column samples (84% of shellfish weight); black Katy chiton plates occur in most of the samples, though less than 1% (Fedje et al. 2005:196; Rebecca Wigen, personal communications 2014; Fig. 1).

Therefore, where archaeological data were detailed enough to summarize in the central and northern Northwest Coast, black Katy chitons ranked high in a number of sites with access to high energy rocky exposed beaches. Their importance showed they have tended to be under-observed

in shellfish studies, where the bivalve species of clams and mussels have been given more attention. Chitons indeed need to be recognized as an important shellfish food resource in ancient Northwest Coast diets, especially since they must be collected one-by-one, versus being pried off in aggregated patches.

Northwest Coast Ethnographic Importance of Black Katy Chiton

In both the central and northern Northwest Coast, black Katy chitons were gathered in areas of rocky exposed beaches and often noted as a desired food. Collecting was mostly in spring when they were said to be the most tender, though winter use offset having mostly dried foods, since chitons needed to be eaten fresh; no record was ever found of drying them for storage (for similar emphasis and use by Chugach Alutiiq, Kenai Peninsula, Alaska, see Salomon, Tanape, Huntington 2007). David Glen Miller (1983), in his Hoko Rockshelter intertidal resources analysis, pointed out that:

> All groups of the central Northwest Coast valued black chiton, many of them considering it a great delicacy. Nootkan groups regarded them to be best in spring when the sea begins to warm up. It was believed that by July their flesh was tougher….
>
> ….Collection of the black chiton usually involved the use of a stick or knife which was used to pry the chiton from the rocks. The Kwakiutl used flat pointed hemlock branches for procuring the chitons and baskets for transporting them to a place where they were prepared for eating….
>
> There is an incredible variety of ways in which the black chiton can be prepared for consumption. Upon occasion they even were eaten raw by certain Nootkan groups (Manhousat, Makah). Also, the Kwakiutl had preliminary preparation methods which were used at times before cooking. The method involved soaking the chitons in a dish of fresh water for four days, after which they were cleaned and soaked for another day (1983:47–48). The common ways to cook chitons include various means of boiling or steaming in pits and then cleaning out the plates and internal organs, and often the black skin, before eating (Boas 1921:481–484; Ellis and Swan 1981:38). Also roasting next to the fire, placing them on hot coals for a few minutes or in cracks in the firewood to cook in own juices—tongs were used for placement and removal (Ellis and Swan 1981:37; Miller 1983:49; Fig. 1).

Eating chitons raw may involve cutting off the foot and chewing it like gum. Also raw whole chitons were pounded with rocks or sticks until softened and then the plates and inside organs removed before eating. Eating raw chitons was said to have medicinal value as a relaxant, though too many can lead to becoming too relaxed and/or dizziness and one would have to lay down for awhile. Makah Elders interviewed by the author referred to this effect of eating raw chiton feet as “having good dreams.” The Manhousat also had a women’s feast/gathering in the spring season where soaked-pounded chitons were eaten raw while enjoying each other’s company and gossip. Men would often come sit outside the circle of women, where they could be passed soaked-pounded raw chitons to eat (Ellis and Swan 1981:36).

In discussing the abundance of chiton in the Hoko Rockshelter site (calculated as second in raw meat weight contribution for shellfish, above), Miller summarized his findings, which contradicted his predictive modeling, with some interesting observations:

> ….This species is represented in the sampled occupation level more than would be expected based on the model. The black chiton seems to have the greatest variety of ways of being prepared for eating. Each of these ways affects a different and unique taste and/or texture of the food. A great preference for this species may have resulted if individuals preferred a particular type of culinary experience rather than a particular species. This does not seem unlikely if one considers the current use of the potato as a common meal supplement that has a great variety of means of preparation. (Miller 1983:174)

Madonna Moss recently analyzed Franz Boas' detailed description of the central coast Kwakwaka'wakw hunting, fishing and food gathering activities in his *Ethnology of the Kwakiutl* (1921). Boas promoted the research approach of *historical particularism*, as reflected in his recording detail. In his discussion of recipes, he listed 155 dishes, with the most for salmon (n = 33). For shellfish recipes Moss noted:

> ….7 for chitons, 6 for "sea eggs' (sea urchins), 2 for barnacles, and 1 for winkles (whether these are periwinkles [*Littorina sitkana*] or dogwinkles [*Nucella*] is unclear). Only one recipe involves clams—a soup that calls for a mere four clams mixed with chopped seaweed. The relative lack of attention to shellfish, especially to clams, is striking. Was it that clams were so common that everyone knew how to cook them for immediate consumption or dry them for storage?
>
> ….Even though clam-digging and shellfish collecting are portrayed as women's work, men are described as the collectors of large chitons (*Cryptochiton*), for example, '…[w]hen a man wants to eat chitons, he launches his small canoe at low water, and goes to a place where he knows there are many chitons' (Boas 1921:484–485). Boas goes on to describe how a man butchers and cooks chitons. This suggests that chitons were desirable, and required specialized knowledge to find. In another chiton recipe, a woman obtains chitons, and in others the term "gathered' is used, suggesting women (Boas 1921 480–483). In yet another recipe (Boas 1921:483–484), the woman prepares chitons while her husband invites his relatives to join them in eating, indicating that chitons were a special food, worthy of serving to guests. (Moss 2013:12–13)

Boas' recipes included varieties of preparing both large (*Cryptochiton)* and smaller chitons (esp. *Katharina tunicata*) raw, through boiling, and roasting in fire, similar to central coast Nuu-chah-nulth accounts above.

On the North Coast, Haida accounts by Solomon Wilson of Skidegate, Haida Gwaii, recorded by David W. Ellis, discussed preparation—including eating raw, roasted in fire, and boiling—and a cooking contest legend involving black Katy chitons:

> In the early days these small chitons were often eaten raw as a snack food…. First the chitons were carefully pried from the rocks with a knife or digging stick. If they were damaged or wounded at this time, they would be too tough to eat raw. After

> they had been soaked for two or three hours, the foot, called t'aagal, or "tongue," would swell. This caused the chiton to straighten out from its defensive ball shape. The soaking killed it, and also tenderized it. The chiton was then bitten at one end to loosen the meat on each side of the plates or skeleton, called gwu'ngwel. The two sides of tough white meat covered with black skin were then torn from the central plates with the fingers. The tiny red gonads, called ts'iika'l, or "inside," were scooped out and eaten. They were considered a great delicacy. The foot, the sweetest part, was also eaten, as were the two sides of white meat.
>
> ….These small chitons were also cooked in an open fire in the early days. They were thrown onto coals and turned continually with a stick. After about one or two minutes, they were taken off and washed. The skin could then be removed with the fingers, and the plates removed from the back with relative ease. Black chitons were especially relished when prepared in this way because "the salt was still in them."
>
> Quick boiling is the only method of cooking black chitons that is still practiced today. The important thing is not to boil them for too long or too short a time, or else they become tough. The fresh, live chitons are first dumped into rapidly boiling water, and are left there for about one minute. They are stirred and pressed with a wooden spoon to loosen their skins. As soon as this occurs the chiton are put into cold water so that they can be handled. The skins are removed, apparently for etiquette reasons alone. At this stage the chitons are curled up into a ball shape. To straighten out the animals and loosen their plates, each end of the chiton is pulled out with the thumbs, while the back is pushed in with the other fingers. A thick white substance often exudes from the chiton when this is done. Many old people eat this secretion and consider it a delicacy. The plates are then individually removed and discarded. After washing, the whole chiton is eaten. (Ellis and Wilson 1981:8–9)

I recently tried the last, quick boiling, method with black Katy chitons collected near Hoko River and soaked in fresh water for four hours. The black skin, plates and internal organs were removed. These were chewy but good, especially with pork and beans (Fig. 5).

The cooking contest mentioned was between the Kitkatla people and Skidegate Inlet people and challenged: "What is the quickest thing you can cook?" The Kitkatla people cooked a fresh deer liver in the fire while the Skidegate people throw black chitons "on the fire, turned it around, and took it out. Before the deer liver was even out of the fire, the Skidegate Inlet people were eating the black chiton" (Ellis and Wilson 1981:9; Fig. 1). Note how liver and chitons are both good sources of vitamin A.

In considering chitons in terms of cultural superstructure and social status on the Northwest Coast, high ranking royal people could and were named after chitons. On the central Northwest Coast Boas discusses a high ranking Kwakwaka'wakw woman "Head-Princess (V 7)" and her ceremonial activities, pointing out:

> Now she also changed her name, and she used her winter-dance name which she used among the L!aL!asiqwala. Now she told her winter-dance name to the chiefs. It was Chiton (V 7). She said 'That is my name which I obtained from my father.' (Boas 1921:914)

Fig. 5. Black Katy chitons from Hoko River vicinity prepared for dinner by author with quick boiling method after soaking in fresh water. The eight plates and internal organs removed for a chewy, healthy meal.

On the northern coast, in accounts of the other most eaten chiton, the giant red chitons or gumboots *Cryptochiton stelleri*, Solomon Wilson pointed out that "Chief Skidegate, after whom Skidegate Village is called, received his name from this chiton" (Ellis and Wilson 1981:10; Fig. 1).

In discussing chiton descent from other species, the central coast Nuu-chah-nulth Manhousat Luke Swan indicated: "To begin with, there is the snail . . . which lives on land. As it grows up, the snail is said to leave its shell or 'cradle' behind, and becomes a slug.… Then, when the slug ages, it crawls down to the sea shore, and, according to Mr. Swan, 'gets stuck there, and becomes a haay'ishtuup. The tummy side is the same" (Ellis and Swan 1981:35; Fig. 1). On the North Coast, Haida Solomon Wilson indicated that "the black chiton was said to have descended from a common ground beetle" (Ellis and Wilson 1981:9; Fig. 1). This descent was said to have occurred in a long forgotten part of the Raven legend (Ellis and Wilson 1981:31).

Black Katy Chitons were also discussed in female gender references. On the central coast Luke Swan, Nuu-chah-nulth Manhousat indicated that "young men were not supposed to eat the mouth region of black chiton, which was apparently taken to be the animal's vagina. (Although Mr. Swan found this rather hard to believe, as *all* of the black chitons that he had seen were endowed with one of these mouths)." (Ellis and Swan 1981:37; Fig. 1).

On the north coast, the Haida creation story gave chitons a very important role in the creation of humans—especially the female, as discussed by Madonna Moss:

> After the flood, Raven dug a clam from Rose Spit and released the Haida from within the shell (MacDonald 1983:8). These new humans were exclusively men, until Raven attached "sticky chiton" to the genitals of some to transform them into women (MacDonald 1983:8). Hymes (1990:594) has presented a slightly different version of the story obtained from Bill Reid: when Raven finds that the emergent humans are all men, "he induces a sexual experience between these creatures and chitons" and subsequently, the chitons give birth to the first Haida women and men [chitons create humans here!]. Paraphrasing the words of George MacDonald (personal communication 1992), "it doesn't take a structuralist to see the male

> nature of a clam's siphon, and the female nature of chitons." That chitons held special meaning or associations for at least some Northwest Coast women is supported by the Manhousat women's feast of chitons celebrating the low tides of June (Ellis and Swan 1981:83). (Moss 1993:644; Fig. 1)

Summary and Conclusion

The abundance of black Katy chiton plates in the Labouchere Bay raised terrace shellmidden sites reflected some of the long-term importance for these shellfish as part of ancient Northwest Coast nutrition and subsistence practices. Their central and north coast archaeological resource importance and value as an ethnographic staple has often been overlooked, whereas salmon and bivalve shellfish have been described in the anthropological/archaeological literature in exhaustive detail—Monks (1987) and others have pointed out that Northwest Coast anthropologists suffer from "salmonopea" and I would add possibly "clamopea." Considering salmonopea one needs to point out that halibut ranked #1 as ancient and ethnographic fisheries among the Makah on the central coast and Haida on the north Coast (Fig. 1). We have shown here that black Katy chiton deserved more attention as a shellfish to resist clamopea—possibly both these "-opea" derived from the Western ranking salmon and clams high in their own culinary diets, certainly above many other fisheries, and mussel, chiton, and univalve shellfisheries?

The fact that (1) both central and north coast royalty derived their inherited names based on chitons; and (2) some Haida stories even show how the creation story involved chitons used to make human females and another where chitons give birth to female and male humans, potentially showed a deep rooted transformation of a basic and ancient subsistence food into the story of how first peoples came to the Northwest Coast of North America.

David Miller had an interesting thought about the wide variety of ways to prepare chitons for consumption when he likened them to potatoes; it was an important part of one's shellfish intake and could be made with several different resulting tastes, including used raw as a medicinal relaxant aid and for community (female) gatherings.

In earlier works at the Hoko River site complex, we have emphasized the importance of shellfish in general to Northwest Coast cultural evolution (Croes and Hackenberger 1988, Croes 1989, 1992). In economic computer simulation modeling of the Hoko River region, and testing with the archaeological data, we were looking for pressure points that might have caused some of the economic shifts in the transition periods between archaeological "phases" of stability. We were surprised to see that one of the pivotal resources that consistently caused cultural pressures through overuse was shellfish, recurrently influencing the human goals for population maintenance (Croes 1992:359).

Other resources could be overused as well, such as deer/elk and round fish/kelp fish, but the salmon and halibut could not be regionally overused. The overuse pressure would require limited population growth, people moving over wider territories, or offsetting the pressures by initiating *storage*, and management practices for fisheries, shellfisheries, and/or deer/elk meats. Resource storage, emphasizing different resources through time, seemed to be the developing practice on the Northwest Coast. We felt these phases (St. Mungo, Locarno Beach, Marpole, and Gulf) were better termed economic stages, and coincided with periods of population expansion. Shellfish was still desired in the computer simulation modeling at a certain level (estimated to be 2 to 14%, and probably more like 2 to 5% of the diet) so needed to be managed to offset overuse (Croes and Hackenberger 1988:68, 70; Croes 1998:12).

Though chitons appear to never be dried or otherwise stored in the ethnographic record, it was still an important staple, and probably the ownership of certain beaches by family (and royalty eventually) was maintained to prevent overuse. Therefore the recruitment of chitons could be watched and harvest managed in these owned, and protected/restricted, areas through time. Since chitons appear to be fast recruiters, becoming edible in their second year, possibly these were collected, as needed; slower recruiters, such as mussels (taking approximately 5–10 years growth to be best harvested) would require stricter management to prevent overharvest (Croes 1992:360).

Hopefully this research has demonstrated the long-term archaeological importance of chitons as a Northwest Coast staple and excellent source for vitamin A and calcium. Ethnographic sources highlighted the infrastructural through super-structural significance of chitons. Too often this invertebrate has been under-recognized in archaeological analyses; clearly it deserves much more attention in future research along the Northwest Coast of North America and throughout the Pacific Basin.

ACKNOWLEDGMENTS

Jean and Ray Auel sponsored our Pacific Northwest Archaeological Society research trip to Labouchere Bay sites, Prince of Wales Island, Southeast Alaska; without their help the incipient idea for this chiton research, from our site testing, would not have been developed or even perceived. *Journal of Northwest Anthropology* Co-Editor Darby C. Stapp greatly helped lead this study into production, always showing patience and providing encouragement during this article's development, recognizing that shellfish analysis was not my usual area of study. Two anonymous outside reviewers gave excellent suggestions, including the need for a map, which I hope were followed successfully. I appreciated colleagues who took the time and reviewed and provided useful comments, and encouragement, including Rebecca Wigen, Bryce Allyn, Iain McKetchnie and Vic Kucera. Vic also came to my aid when it was clear, from outside reviewers, that a map was needed and used his considerable cartographic skills to produce a chiton-endowed graphic. To these people this article owes its existence. The final conclusions, however, remain solely the responsibility of the author.

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Journal of Northwest Anthropology, 49(1):27–42 2015

INCISED STONES FROM IDAHO

Jan Snedden Kee and Mark G. Plew

ABSTRACT

Incised stones have been reported from locations across Idaho, most commonly in the panhandle region. Though relatively rare, they are in some instances associated with Late Archaic (2000–150 B.P.) period sites and in southeastern Idaho with the Fremont pattern (1300–500 B.P.). Four types of incised stones are described. Type 1 items consist of stones characterized by parallel lines located on the face or margins of the stone with lines that may be horizontal, vertical or diagonal, or a combination, though one direction is usually predominant; in some cases, the lines are minimal in length and/or number. Type 2 incised stones are characterized by centrally placed hachure, while Type 3 stones are characterized by etching or by lines that are irregular and multi-directional in placement and without discernible patterning. Type 4 stones are more decorative; these display combinations of motifs, including zig-zags, ladders, parallel lines, and chevrons. The geographic and temporal distributions of incised stones in Idaho are reviewed, accompanied by observations regarding their function.

Introduction

Incised stones have been reported from sites across Western North America (Bennyhoff 1957; Holliman 1967; Touhy 1967; Aikens 1970; James 1983; Thomas 1983; Klimowicz 1988; and Chandler 1991, 2000)—in some instances occurring in significant numbers as in southern Nevada (Schuster 1966; Santini 1974) and at the Gault site in Texas (Wernecke and Collins 2010). Though mentioned by Pavesic and Studebaker (1993) in their summary of the ancient art of southern Idaho, no statewide survey exists. A review of the literatures indicates that incised stones in Idaho, while relatively rare, have been reported from locations across Idaho (Fig. 1), most commonly in the northern Panhandle region. They are in some instances associated with Late Holocene (2000–150 B.P.) period sites, and in southeastern Idaho with the Fremont Pattern (1300–500 B.P.). The function of incised stones remains somewhat enigmatic. This article briefly reviews the geographic and temporal distribution of incised stones in Idaho, offering limited observations regarding their function. We describe four basic types, including straight or parallel lines on the face or edges of stones; centrally placed hachure; irregular etchings; and more decorative patterns that include combinations of motifs.

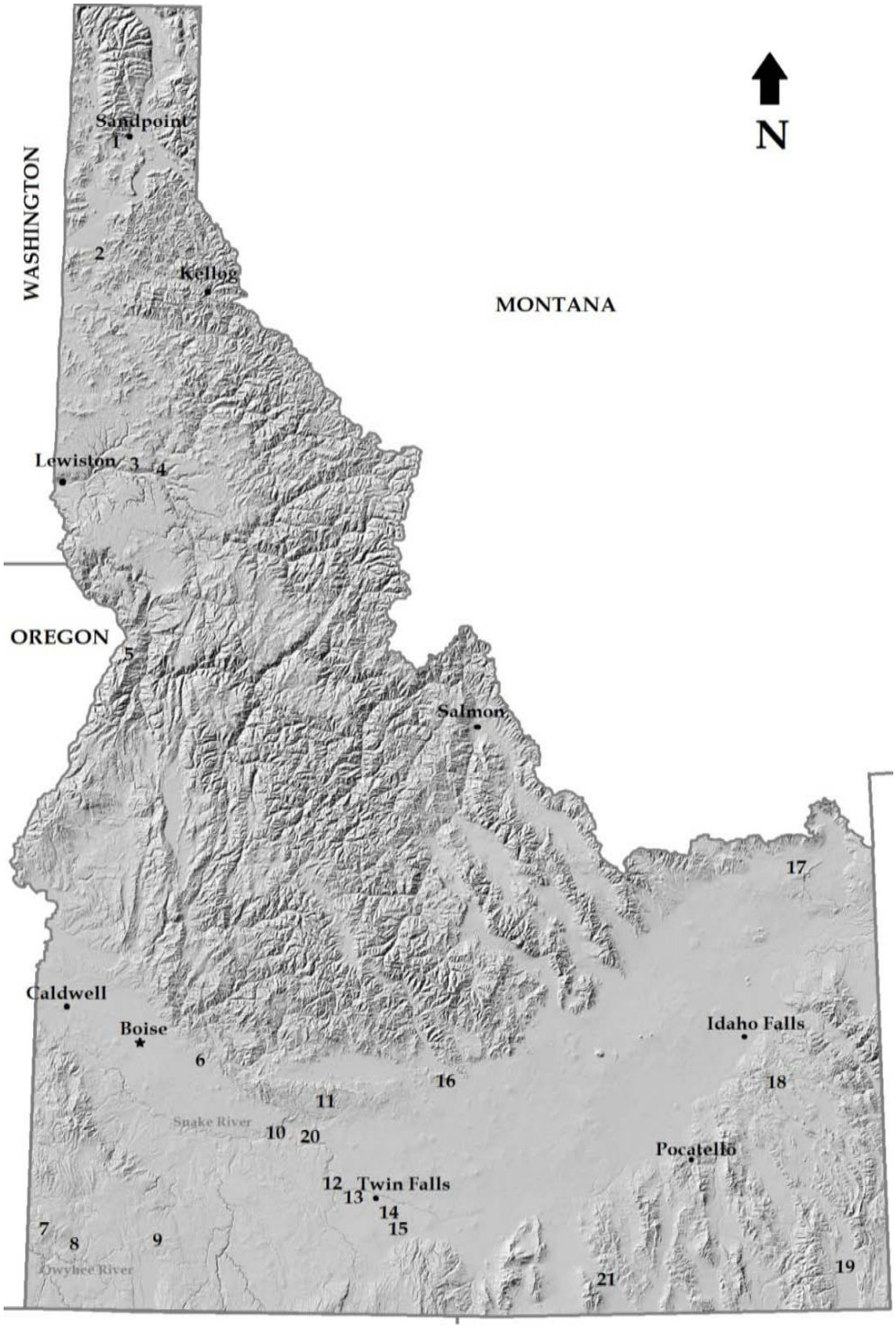

Fig. 1. Map showing general locations of sites containing incised stones. 1. Pend Oreille River; 2. Coeur d'Alene Lake; 3. Clearwater River; 4. Ahsahka; 5. Squaw Creek; 6. Bennett Creek; 7. Washington Gulch; 8. Camas Creek; 9. Crab Creek Basin; 10. Bliss; 11. Turkey Butte; 12. Bancroft Springs; 13. Bell Rapids; 14. Kueney; 15. Rock Creek; 16. Black Ridge/Broken Top Butte; 17. Birch Creek; 18. Blackfoot Reservoir; 19. Hemmert; 20. Gooding; 21. Trapper Creek Rockshelter.

Types and Descriptions

Typically, incision patterns are found on cobbles that are flat or lenticular in shape, ranging in length from 3 to 23 cm. None of the artifacts appear to have been otherwise modified. As noted, we group incised stones based upon the form and degree of decoration. The extent of incising ranges from six short parallel lines near an edge to examples that have intricate geometric patterns across much of the stone face. The four types are defined as follows:

- Type 1 items consist of stones characterized by parallel lines located on the face or margins of the stone (Fig. 2). Lines may be horizontal, vertical or diagonal, or a combination, though one direction is usually predominant. In some cases, the lines are minimal in length and/or number.
- Type 2 incised stones are characterized by centrally placed hachure (Fig. 3).
- Type 3 stones are characterized by etching, or by lines that are irregular and multi-directional in placement and without discernible patterning (Fig. 4).
- Type 4 stones are more decorative. These display combinations of motifs that include zig-zags, ladders, parallel lines, and chevrons (Fig. 5, 6, 7). One Type 4 specimen from south-central Idaho is thought to depict a local landscape (Arkush 2013), whereas a specimen from northern Idaho may have an anthropomorphic design.

Raw Material Types

The frequency distribution of raw material types shows considerable variation. Twelve material types are identified for 42 artifacts; nine in this sample are of unknown type. The most common types are slate (n = 14), welded tuff (n = 8), and argillite (n = 4) (Table 1). Of some interest is the use of relatively "hard" materials, including basalt, granite, argillite, and quartzite. The sample size is sub-regionally too small to determine any specific or common preference for raw material, and we presume that the distribution generally reflects local availability of toolstones, as is likely with slate artifacts in northern Idaho.

Geographic Distribution

Incised stones have been documented from across the state of Idaho (Fig. 1). For purposes of general reference we divide the state into five areas: north, southwest, south-central, east, and southeast. North Idaho includes the area north of the Clearwater River into the Panhandle, southwest Idaho, the edge of Hells Canyon through the Owyhee Country and east to the community of Bliss, Idaho. The south-central area extends north to the Sawtooth Range and east to Twin Falls, Idaho. East Idaho—the area referred to by Butler (1978) as the Upper Snake and Salmon River Country—is the area east of Sun Valley, and north of Pocatello to the Wyoming border. Southeast Idaho includes the area east of Twin Falls to the Wyoming and Utah state borders (Fig. 1).

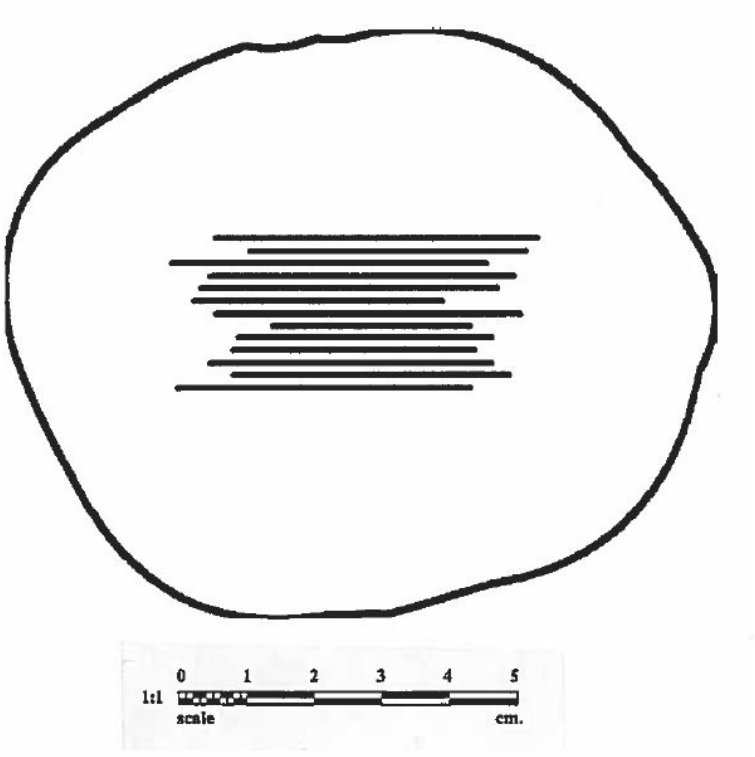

Fig. 2. Type 1 incised stone (from Huntley and Nance 1978).

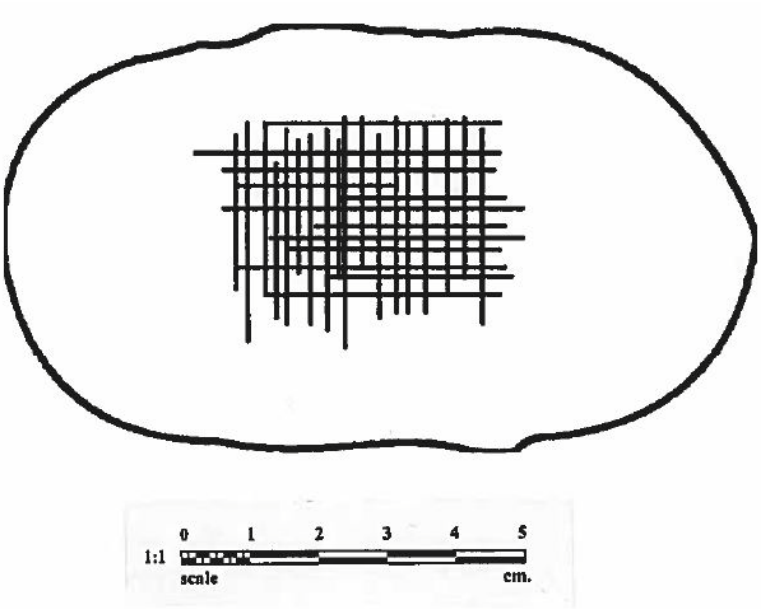

Fig. 3. Type 2 incised stone (Huntley and Nance 1978).

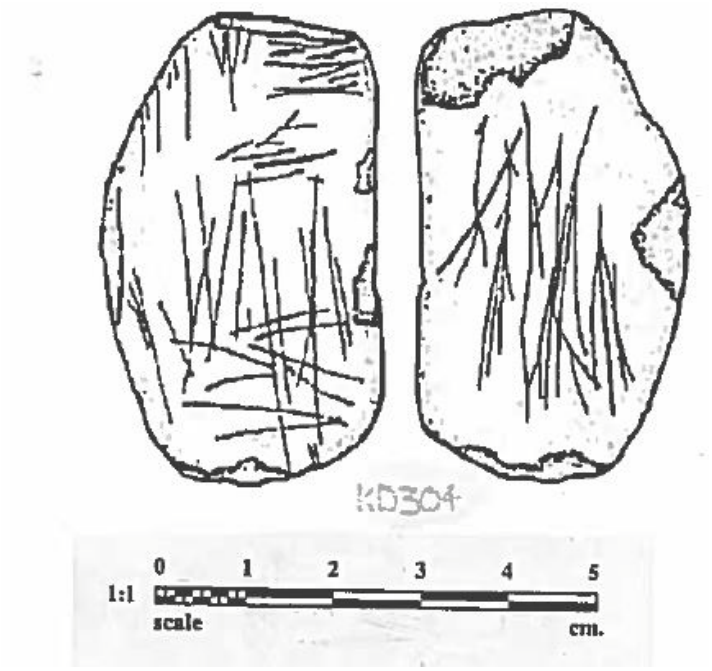

Fig. 4. Type 3 incised stone from Pend Oreille River area, northern Idaho (Kee 2004).

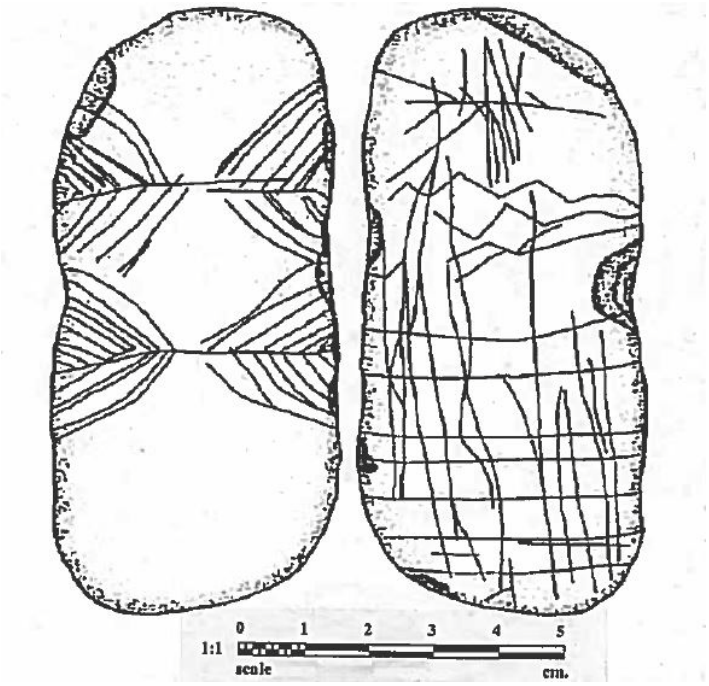

Fig. 5. Type 4 incised stones, Pend Oreille River, northern Idaho. The item measures 5.5 x 2.0 x 0.3 cm (Kee 2004).

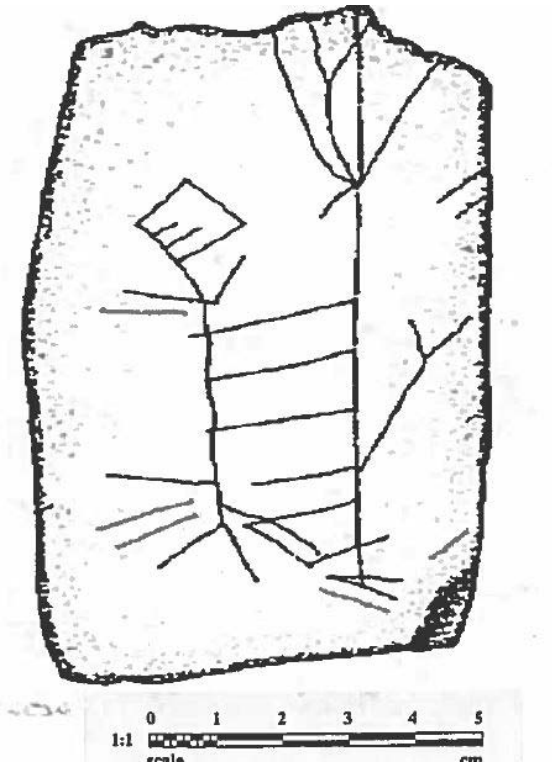

Fig. 6. Type 4 incised stones, Pend Oreille River, northern Idaho (Kee 2004).

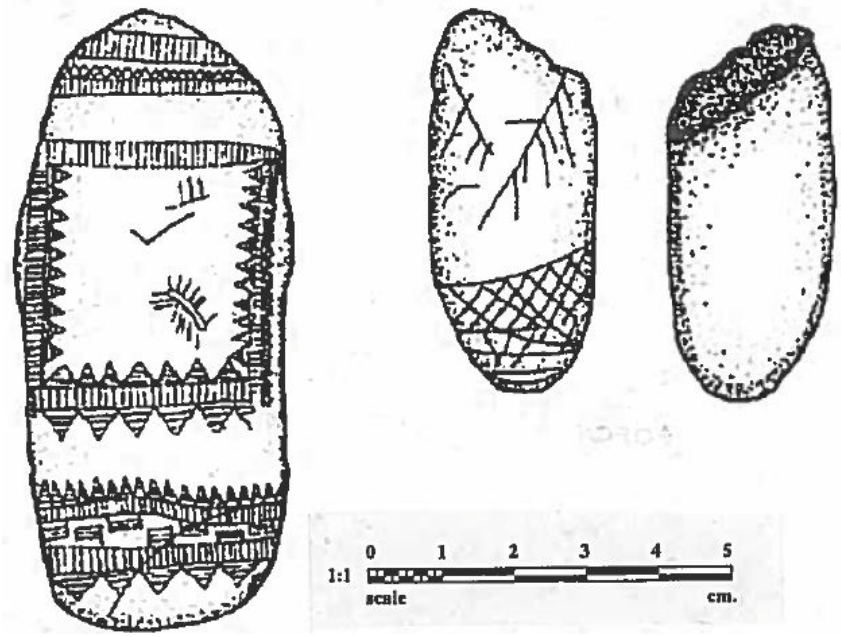

Fig. 7. Type 4 incised stones, Pend Oreille River, northern Idaho (Kee 2004).

TABLE 1. FREQUENCY DISTRIBUTION OF RAW MATERIALS

Material	Quantity
Cryptocrystalline Silicate	1
Granitic	1
Quartzite	1
Sandstone	1
Siltstone	1
Schist	2
Basalt	3
Metasiltstone	3
Volcanic	3
Argillite	4
Unknown	9
Welded Tuft	8
Slate	14
Total	51

Twenty-one incised stones have been reported from the northern Panhandle, specifically the Pend Oreille River area (Plew and Cupan 1981; Kee 2004). Two additional specimens were recovered from excavations along the Clearwater River. One of these was a highly decorated Type 4 specimen that was recovered from the Ahsahka Sportsman's Access Site (Sappington 1990). Toups (1969) recovered one item from a site on the Clearwater River. In southwest Idaho in Hells Canyon along the Oregon border, incised stones have been reported from the Squaw Creek tributary (Warren, Sims, and Pavesic 1968). South of the Snake River in southwest Idaho, Type I specimens have been reported from the Owyhee Uplands (Huntley and Nance 1978; Plew 1979) and from the Bennett Mountain area north of Gooding, Idaho (Huntley and Nance 1978). Along the Snake River near the city of Bliss, in what we refer to as southwest Idaho, a Type 4 (highly decorated) stone was recovered during a test excavation at the so-called Bliss site (Plew 1981b; Fig. 8). In east Idaho, north of Idaho Falls, two items have been reported from surveys in the vicinity of Birch Creek. In southeast Idaho, eight incised stones, including three Type 4 specimens, were recovered during excavations at the Trapper Cliff Shelter located near the Utah border (Arkush 2013). Finally, the Hemmert site near the Idaho/Utah border in southeast Idaho produced two Type 3 specimens. The physiography of locations producing incised stones varies considerably, although all are associated with sites having nearby water sources (Table 2).

Artifact Functions

Assuming that incised stones served a unique function among prehistoric Idahoans, we reviewed the site type/functional assessments of sites and site areas that have produced them. In our sample, most incised stones are associated with what are described as habitation sites—sites exhibiting formal features, wide ranges of material items, extensive faunal remains, and evidence of processing and storage. These include Bliss (Plew 1982); the Kueney site (Plew and Woods 1985); both sites on the Clearwater River (Toups 1969 and Sappington 1990); Rock Creek (Green 1972); and Trapper Cliff Rockshelter (Arkush 2013). This association with habitations is a pattern

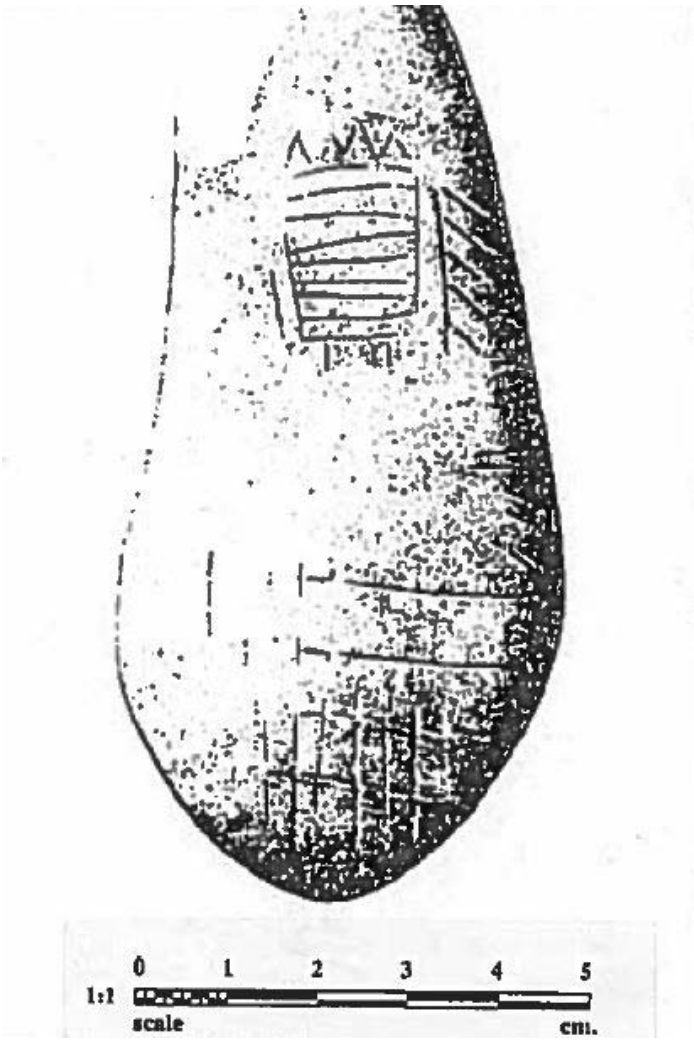

Fig. 8. Type 4 incised stone, Bliss Site, southwest Idaho. Artifact measures 8.5 x 4.1–2.0 x 1.2 cm (Plew 1981a).

consistent with many Great Basin sites that have produced incised stones. Wernecke and Collins (2010) summarize global speculations regarding incised stone functions. They note that incised stones have been viewed as ornamental or representational—perhaps serving sometimes as geographic maps. They further note that incised stones have been considered utilitarian items (e.g., dice), but also as items associated with entopic representations and ritual or rites of passage events. However, in California they have been reported as grave goods and as being associated with ceremonial items (Kilimowicz 1988). Of interest in this regard is the Kueney site, which produced caches of ochre-stained pestles and thermally altered scrapers as well as a Type 2 specimen.

TABLE 2. INCISED STONES BY REGION, TYPE, AND SITE

Region	Type	Number	Site ID or Reference	Locality
North	1	1	Kee (2004)	Pend Oreille River
North	1	2	Plew and Cupan (1982)	Pend Oreille River
North	1	1	Toups (1969)	Clearwater River
North	3	1	Kee (2004)	Pend Oreille River
North	3	3	Plew and Cupan (1982)	Pend Oreille River
North	4	7	Kee (2004)	Pend Oreille River
North	4	6	Plew and Cupan (1982)	Pend Oreille River
North	4	1	Sappington (1990)	Ahsahka Site
North	4	1	Sprague (1995)	Coeur d' Alene Lake
Southwest	1	1	Huntley and Nance (1968)	Washington Gulch
Southwest	1	1	Warren, Sims and Pavesic (1968)	Squaw Creek
Southwest	1	1	Plew (1976)	Owyhee Uplands, Camas Creek
Southwest	2	1	10-OE-6738	Crab Creek Basin
Southwest	2	1	Huntley and Nance (1968)	"Bennett Creek Drainage"
Southwest	3	1	10-TF-1318	Bell Rapids
Southwest	4	1	10-GG-1	Bliss
Southwest	4	2	Warren, Sims and Pavesic (1968)	Squaw Creek
Southwest	Unknown	1	10-EL-44	Bancroft Springs
South-central	3	1	10-LN-0267	Black Ridge
South-central	3	1	10-LN-92	Broken Top Butte
Eastern	1	2	10-BT-0029	Birch Creek
Southeast	1	1	10-CU-17	Blackfoot Reservoir
Southeast	2	1	Plew (1985)	Kueney Site
Southeast	2	1	Green (1972)	Rock Creek
Southeast	3	2	Plew (1984)	Hemmert Site
Southeast	4	3	10-CA-20	Trapper Cliff
Southeast	3	5	10-CA-20	Trapper Cliff
		51		

Temporal Distribution

Most dated contexts containing incised stones appear to date to the Late Holocene (2000–150 B.P.). These include Camas Creek in the Owyhee Country, Bliss, Bancroft Springs, Hemmert, Ahsahka and Trapper Creek Rockshelter. Trapper Cliff shelter dates this period to within the last 500 years (Arkush 2013). Arkush (2013:55) associates incised stones with what he distinguishes as Shoshonean and Fremont occupations. The more decorative items from Trapper Creek do fall

within the Late Period. This is also the case with the highly decorative Type 4 stone recovered from the Bliss site (Plew 1981b). Two sites, Rock Creek (Green 1972) and the Kueney site (Plew and Woods 1985), are in the general vicinity of the Trapper Cliff shelter and have produced incised stones in association with Early and Early-to-Middle Archaic deposits, though the Kueney site contains Late Holocene materials. On the northwest shore of Bear Lake in southeast Idaho, the Hemmert site (Plew 1984) produced two Type 3 irregularly etched stones that were associated with cultural materials of Late Archaic age. Incised stones similar to those common in Fremont and Archaic Utah contexts are known to have been recovered from amateur excavations at Franklin Cave, also in the southeast corner of Idaho (see Plew 1987:8). In northern Idaho, an incised stone recovered from a house floor has been dated c. 2000 B.P., at Ahsahka Sportsman's Access Site on the Clearwater River (Sappington 1990). In the northern Panhandle, incised stones are believed, based on associated projectile point typologies, to span Early to Late Archaic time frames (Miss and Hudson 1987). The earliest reported stones are fragments from Squaw Creek, a tributary to the Snake River in Hell's Canyon, where they are said to date between 4500 and 500 B.C. (Warren, Sims, and Pavesic 1968).

Discussion

In Idaho, incised stones have a broad temporal and spatial distribution. They are reported from the northernmost Panhandle to the borders near Utah, Nevada, and Oregon and have been dated to time frames that include Early, Middle, and, most prominently, Late Holocene periods. Of interest are decorative items that appear to be associated with the Fremont pattern in southeastern Idaho, dating to within the past 500 years (Arkush 2013).

Type 1 items consist of stones characterized by parallel lines located on the face or margins of the stone. Lines may be horizontal, vertical or diagonal, or a combination, though one direction is usually predominant. In some cases, the lines are minimal in length and/or number. Type 2 incised stones are characterized by centrally placed hachure, while Type 3 stones are characterized by etching, or by lines that are irregular and multi-directional in placement and without discernible patterning. Type 4 stones are more decorative. These display noted combinations of motifs that include zig-zags, ladders, parallel lines, and chevrons. Several reported "incised stones" were excluded from this discussion because they appeared to be grooved rather than incised, and they displayed holes rather than lines and were assumed to be pendants. Some in the sample were fragments. A number of reports lacked either a drawing or a photograph. In these instances, the assigned type was based on available descriptions. The authors acknowledge that typing is subjective to some degree, and future researchers may modify the typology.

Incised stones in Idaho are produced from at least twelve different raw materials, with welded tuff and slate the most common. It appears that raw material selection reflects local resource availability.

Notably, the greatest concentration of incised stones occurs in northern Idaho, particularly along the Pend Oreille River in the Panhandle; of 51 incised stones in our sample, 41% (n = 21) came from that locality. Ten were recovered at Trapper Cliff Rockshelter in southeastern Idaho, eight of which were included in our sample (16%). These two locations together account for nearly 60% of the total specimens. These two locations also represent a significant portion of the more elaborate Type 4 incised specimens. Three Trapper Cliff specimens, the Pend Oreille River collections, and the other three from northern Idaho constitute 54% of all the Type 4 artifacts.

The degree of incising and decoration on Type 4 incised stones is highly varied. One item from Trapper Cliff is unique in that it may be representative of a local landscape (Arkush 2013). Another unusual incised stone from the Clearwater River in northern Idaho has been described as an anthropomorphic figure (Sappington 1990; Fig. 9).

Two particularly elaborate stones come from the Pend Oreille River area. One specimen (KD604) has exceptionally fine, closely-spaced incising that forms geometric designs covering much of the stone. The other, significantly larger, specimen—larger than any other in the sample—is heavily incised on both sides (Kee 2004). Stones with incising on both sides are also predominantly from the northern area, although not all are highly decorated. The stone with a purported 'landscape' motif from the Trapper Cliff Rockshelter site is the only two-sided incised stone from the southern Idaho areas (Fig. 10).

The majority of incised stone-producing sites are habitations—a pattern consistent with many sites in the Great Basin. Little is known about their probable function. In northern Idaho, Teit (1930:194) reported that incised stones played a role in ritual practices involving first menses and ritual observations among the Coeur d'Alene Indians.

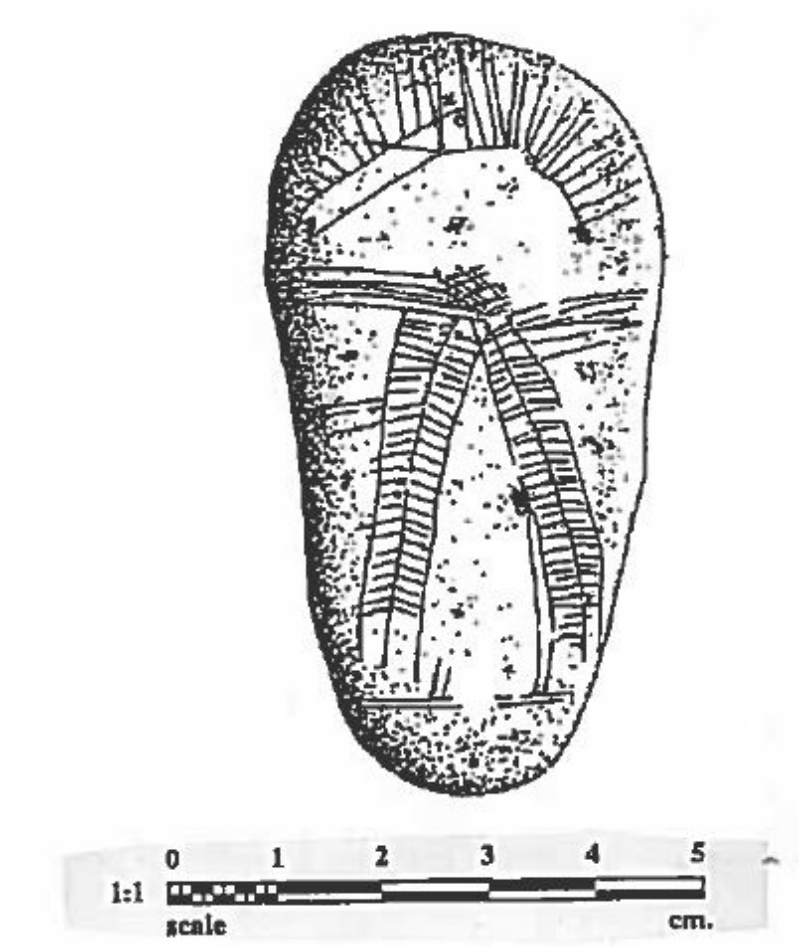

Fig. 9. "Anthropomorphic" figure from the Ahsahka Site, Clearwater River, northern Idaho (Sappington 1990).

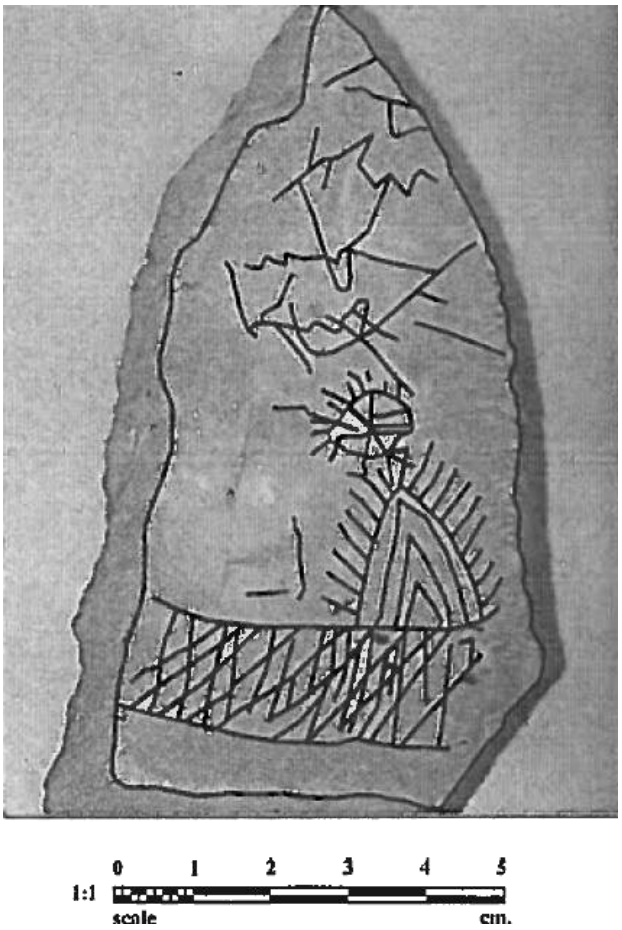

Fig. 10. Landscape design from Trapper Creek Rockshelter (Arkush 2013).

ACKNOWLEDGMENTS

A version of this paper was presented in the symposium "Rare, Intriguing and Poorly Understood: Incised Stones from Western North America," Bonnie Pitblado, Chair, 79th Annual Meeting of the Society for American Archaeology, 27 April 2014, Austin, Texas. We would like to thank staff of the Idaho State Historical Society and the Idaho State Museum of Natural History for providing locational information. Boise State University provided technical support. Jon Dugmore produced the map showing the location of documented incised stone finds. Brooke Arkush kindly allowed us to use illustrations from his Trapper Cliff Shelter report. Polly Schafsma provided useful commentary on an earlier version of this paper. Lee Sappington kindly provided information on the incised stone from the Ahsahka site. We thank two anonymous reviewers for providing comments that have strengthened the paper.

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Journal of Northwest Anthropology, 49(1):43–60 2015

A PARTIAL STRATIGRAPHY OF THE SNAKELUM POINT SITE, 45-IS-13, ISLAND COUNTY, WASHINGTON, AND COMMENT ON THE SAMPLING OF SHELL MIDDEN SITES USING SMALL EXCAVATION UNITS

Lance K. Wollwage, Guy L. Tasa, and Stephenie Kramer

ABSTRACT

Prehistoric and recent disturbance in coastal shell midden sites of the Puget Sound region can produce a complex depositional mosaic over very short distances. Archaeological test units of differing size and shape may reveal different views below ground. At the Snakelum Point site (45-IS-13), the excavation of two closely spaced (~1 m) shovel probes exposed what was interpreted as re-deposited shell midden above human skeletal remains. Placement of a 1 x 2 m excavation unit, spanning both of the shovel probes, revealed stratified natural and cultural deposits, an intact interment, pit and fill, midden sediments and human skeletal material re-deposited during cut-and-fill events in early historic and modern times. Ramifications of such arrangements when using small test units and the interpretation of archaeological work at Snakelum Point and similar sites in the region are considered.

Introduction

Around much of Penn Cove in the crook of Whidbey Island, Washington, extensive shell middens and mounds remain from pre- and early historic settlements (Fig. 1). Snakelum Point marks the end of the cove on the southern shore where it meets the Saratoga Passage, which separates Whidbey Island from Camano Island (Fig. 2). Here, concentrated Native American occupation and modern development have produced a complex and compact mosaic of natural and anthropogenic soils and sediments.

Over the years, archaeological surveys and test excavations have shown that patches of shell midden sediment and soil can be found under houses and throughout many yards along the waterfront near Snakelum Point. Archaeological work continues as homeowners redevelop their lots and utilities are repaired or amended, triggering compliance review under state and/or federal environmental and cultural resource laws. Few of these projects have the financial scope to support adequate excavation and analysis. Expeditious augers, shovel probes, and other small excavations provide target windows into the sites where ground disturbing construction is planned.

During a recent redevelopment project at Snakelum Point, homeowners, along with affected Indian Tribes, the Washington State Department of Archaeology and Historic Preservation (DAHP staff), and consulting archaeologists negotiated an archaeological permit

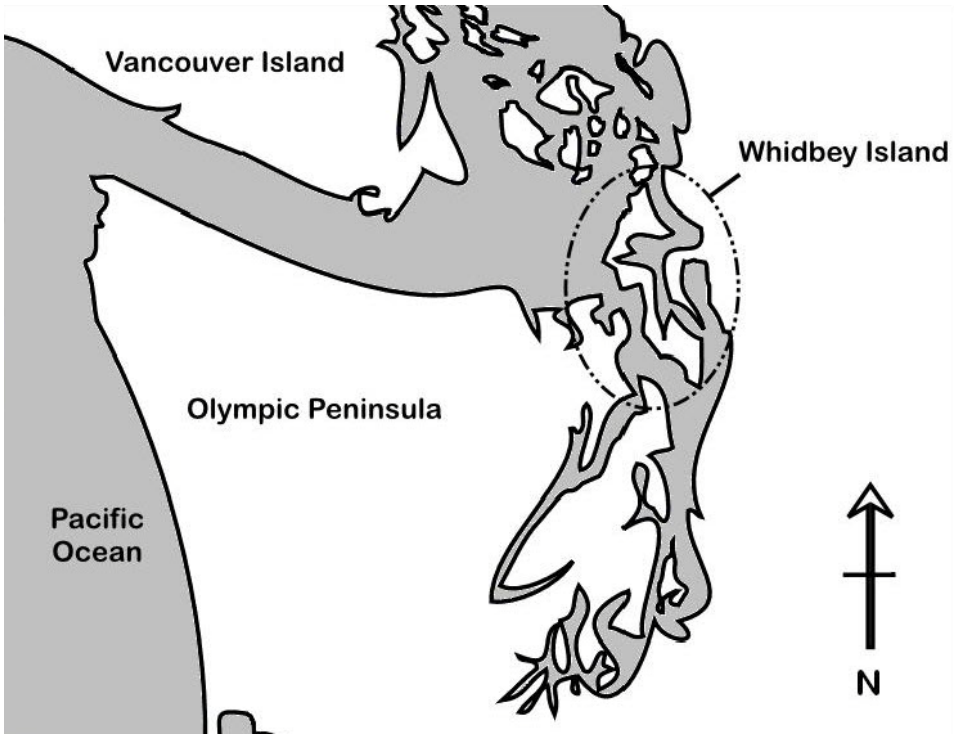


Fig. 1. Olympic Peninsula and Puget Sound region of Washington state.

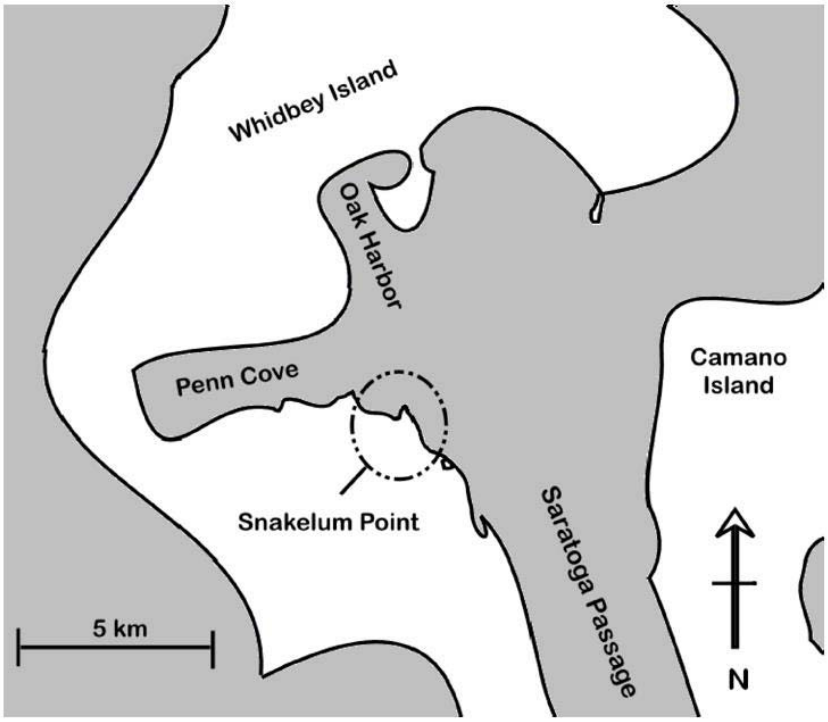


Fig. 2. Map of central Whidbey Island showing Penn Cove and Snakelum Point.

allowing the demolition of an existing home and the construction of a new house foundation over shell midden deposits with human skeletal remains. The permit called for covering the site with filter fabric and clean imported fill before pouring a new slab foundation, anchored through the shell midden with long steel pins (pin piles). Archaeological deposits at pin locations were excavated in shovel probe fashion (~50 cm diameter) to insure that no human skeletal remains were at risk, while minimizing exposure of the site and excavation costs. In two closely spaced probes, archaeologists (Trost 2014) found human skeletal remains below ~½ m of re-deposited shell midden pedosediment containing rusted iron, broken window glass, splintered wood, and concrete fragments, a mere ½ m away from the rusty hatch of the house's defunct septic tank (Fig. 3).

At the request of interested affected Tribes, the Washington State Physical Anthropologist and staff from DAHP, along with tribal representatives, excavated a 1 x 2 m excavation unit encompassing both probes to recover the remains. This article presents what was learned about the site during this limited excavation. We document a close arrangement of cuts and fill among stratified archaeological and natural soils and sediments that were not apparent in prior exposures.

Fig. 3. Small test unit at pin location revealed human skeletal remains (obscured) beneath re-deposited shell midden sediments, December 2012.

The Snakelum Point Site

Toward the end of the last glacial period, northward retreat of the Puget Ice Lobe stalled at Penn Cove, proximate to present-day Snakelum Point. Melt water laden with gravel and sand poured into seawater along the ice front creating a marine kame-delta complex, whose remnant sediments on Whidbey Island are called the Partridge Gravel (Easterbrook 1968; Carlstad 1992). Sixty vertical meters above and just south of Snakelum Point, Smith Prairie spans the delta's kettle-pocked top-set gravels, which graded to sea level at the time of their deposition. To the west of Snakelum Point and Smith Prairie along one of the relict delta fronts, the land drops ~30 m onto Ebeys Prairie, where fine bottom-set clays and silts settled over the ice-depressed sea bottom. Sometime before ca. 14,000 cal B.C., Penn Cove became ice-free and deposition of the Partridge Gravel ceased (Dethier et al. 1995).

Today, Snakelum Point is a sandy barrier beach at the entrance to Penn Cove where northward long shore currents along the Saratoga Passage meet eastward flows along the south shore of the cove. To the south and west, sand and pebble beach strewn with driftwood extends from the eroding toe of the hill slope along a curving ~2–3 m high wave-cut bank. The hill slope above the bank climbs moderately to Smith Prairie, roughly 60 m above sea level.

The glaciomarine sediments on this slope differ from other expressions of the Partridge Gravel (Polenz et al. 2005; Wessen 2012), which generally present steep faces of bedded sediments to the sea. Occasionally, large blocks cleave from these 60-meter-high bluffs pushing down and out into the waters of the Puget Sound, leaving behind mixed gravels and topographic scars like those above Snakelum Point (Fig. 4). It may be that mass movement(s) at Snakelum Point in the distant past thrust gravels into the cove and laid the foreland's foundation, while creating the traversable slope that connected the aboriginal sea ways of the cove with trails to Smith Prairie and southern Whidbey Island.

Fig. 4. Associated Press aerial photograph of landslide near Bush Point, Whidbey Island, March 2013 (KOMO News 2013).

Accounts of the mid-1800s note four prominent Indian villages around Penn Cove: near present day San De Fuca, Coupeville, Long Point/Mineral Springs, and Snakelum Point (Smith 1941). These villages were the last surviving centers of a settlement system that ringed the cove. Today, over 40 mapped shell midden sites extend over 6,000 meters of shoreline.

Snakelum Point has the longest mapped stretch of midden on the cove. T. T.Waterman (1973) reported two Skagit place names for Snakelum Point: *TuxtoubEa'ltc d,* "where one goes into the woods," and *tcū'ba* "to go inland." He noted that the site served as a port and trailhead, where cargo from heavily laden canoes was carried up the slope and through the woods to Smith Prairie and points south.

Skagit tradition affords the site special standing as a place where descendants of the first man built a sprawling longhouse, and thenceforth resided until Europeans arrived (see Deur 2009:73–74). Although accounts of the site's history in the 18th and early 19th century differ, they agree that the village was attacked and razed by marauders and then rebuilt by Chief George Snakelum, ca. 1850–1860 (see Bryan 1963:41–42; Deur 2009:77–80). Chief Snakelum's longhouse was located near the end of the sandy spit between two long, protective embankments (Bryan 1963:48), and used through the opening years of the 20th century. A photograph of the site, ca. 1903, shows two massive frameworks still standing (Fig. 5).

Fig. 5. Long house posts and beams on Snakelum Point, ca. 1903. Note person at post for scale (center). (University of Washington Libraries, Special Collections, Negative No. NA696.)

History of Research

Over the past sixty years several archaeologists have worked at Snakelum Point. University researchers first surveyed and synthesized the archaeology of the region in the 1940s and 1950s (e.g., King 1950; Carlson 1960; Bryan 1963; Kidd 1964; Mitchell 1971). Alan Bryan undertook the archaeological reconnaissance of Penn Cove as a graduate student while at the University of Washington working towards his Master's degree (Bryan 1952, 1955). At the time of his visit he noted, "Two parallel ridges of midden, 720 feet long northeast-southwest and 200 feet wide, extend the length of the spit, which encloses a lagoon" (Bryan 1963:47). He also observed midden deposits up to four feet deep curving along the shore towards a large (27 x 18 x 3 ft.) mound near the western end of the bay.

Ground disturbance from residential development around the site was already extensive, limiting Bryan's testing to "only a few undisturbed spots" on the sandy point (Bryan 1963:48). The complex, stratified sections of midden he exposed held rusty iron square nails, brass, glass, wooden stakes, china fragments, and "other artifacts of the recent period." He also found abundant animal remains and human bones and burials amid the layers and lenses of mussel and clam shell, charcoal, sand, and gravel (Bryan 1963:48–50).

Gary Wessen (1988a, b) was the first to report on the site after Bryan, and his observations established the site's western extent and general contours of the current boundary. Wessen noted that in the years since Bryan's visit, much of the point had been developed with homes and a lagoon described by Bryan and early surveyors had been filled. At the base of the slope behind the beach he observed lenses of shell midden up to 1.2 m thick in the wave-cut bank. Near the point, he described these exposures as intermittent and disturbed. Westward he noted fewer disturbances (Wessen 1988b).

In subsequent years, several archaeological investigators have worked at the site, some repeatedly, on behalf of local governments and various landowners needing state or local permits to replace water mains, repair septic systems, and remodel homes. Together, their reports describe a huge patchwork of autochthonous and re-deposited midden across the site (Blukis Onat 2000; Dugas and Robbins 2002; Robinson 2002; Bush and Ferry 2004; Bush and Elder 2006; Boersema and Trost 2012; Wessen 2012). Of all the probes and tests units where midden was found by these researchers, roughly half (19 of 39) showed a stratum of re-deposited midden above autochthonous midden deposits (see Blukis Onat 2000; Bush and Elder 2006; Wessen 2012).

Study Methods

The work reported here was conducted in the context of re-exposing and removing human skeletal remains, first found during excavation of two adjacent foundation-pin locations (Trost 2014). Our excavation occurred during a clear January cold snap when temperatures at the site stayed well below freezing throughout the day, and heavy frost lingered on the ground for the three-day duration of our activities on site.

Within the 1 x 2 m test block spanning both of Trost's (2014) shovel probes where human skeletal remains were found, the ground surface sloped downward from the southeast corner of the block to the northwest, where our chaining pin touched the rusty steel manhole cover of the mid-century house's defunct septic tank (Fig. 6). The surface of the block was brought to level using a shovel in two 10 cm-thick arbitrary levels. Five additional 10 cm levels were excavated using a trowel to reach and recover the human skeletal remains. One-eighth-inch (6.52 mm) dry screens

were used to sift excavated material. A field-drawn profile and digital color photographs recorded unit/level floors, in situ objects, and exposed stratigraphic sections.

Results

The southeast part of our excavation held stratified midden sediments above soil in glacial till. Figure 7 illustrates the south-wall profile exposed in our excavation. At the base of the profile, the sediments of Stratigraphic Unit I consisted of glaciofluvial gravel supported by silty sand. Gravel clasts were rounded to sub-angular. Some of the clasts retained remnant carbonate accretions left by barnacles. Stratigraphic Unit I appeared dark yellowish brown with moderate granular to blocky structure, few pores, and brown to black mottles.

An abrupt and wavy contact separated Stratigraphic Unit I and II, along which grew many rootlets. Units II and IV were very dark brown to black, layered shell midden deposits with fragments of fire cracked rock, few large roots, and few cobbles up to 10 cm in diameter. These midden deposits were divided by a distinct, 5 cm-thick layer of brown sand (Stratigraphic Unit III).

Fig. 6. View of shovel probe (white dashed ellipses) and excavation unit (white trapezoid) placement looking west, January 2013. Note rusted septic tank cover near northwest corner of excavation block (upper right).

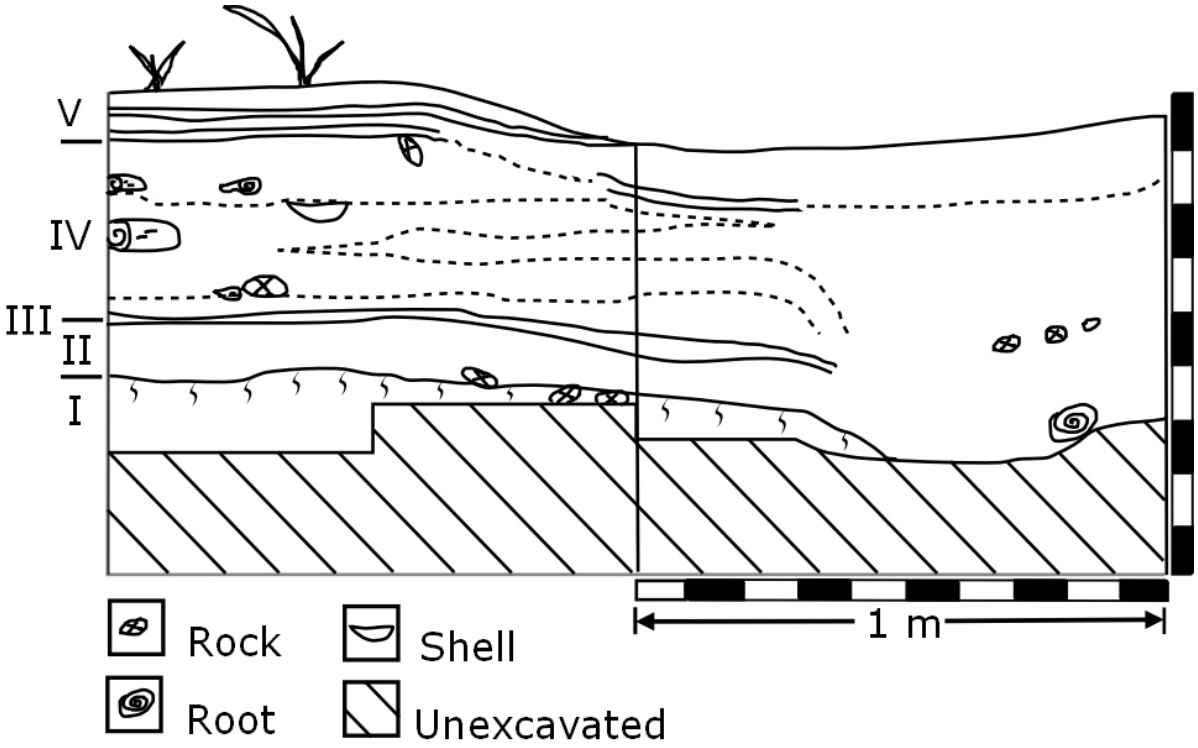


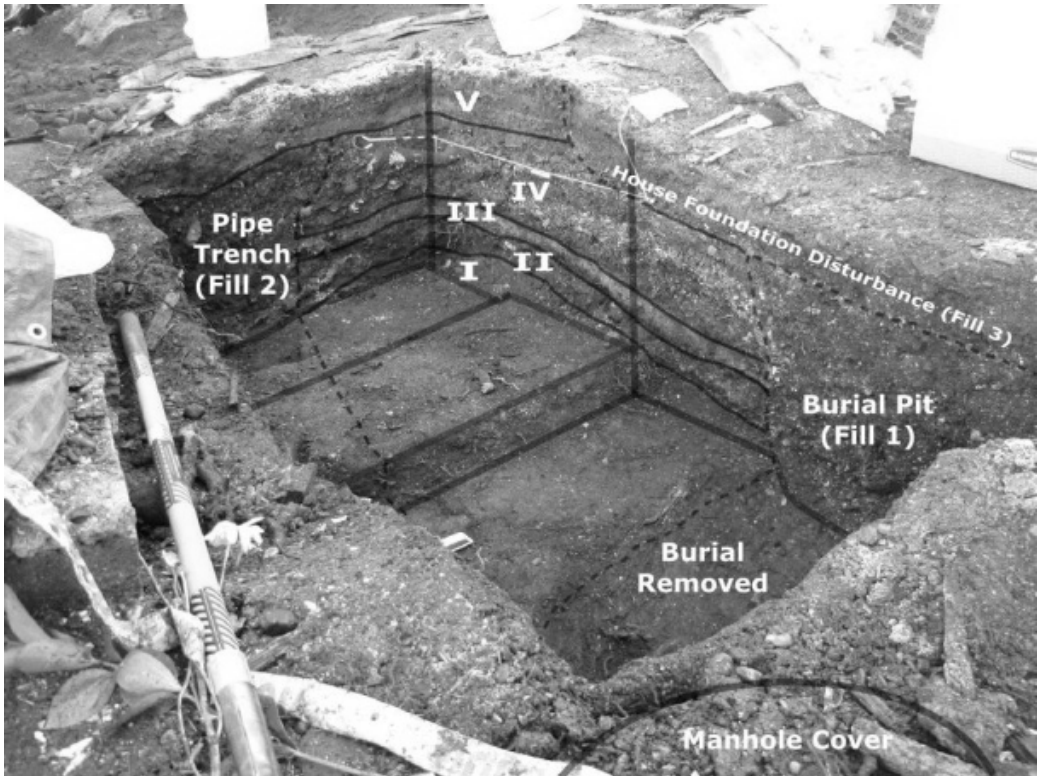
Fig. 7. Profile of Excavation Unit 1, south wall.

Surface sediments (Stratigraphic Unit V) included alternating strata of very dark brown to black re-deposited midden over thin brown layers and lenses of pine needle duff. In the eastern portion of the excavation unit, pine needle duff sat atop Stratigraphic Unit IV along a smooth, abrupt contact. This contact (IV/V) and the overlying duff dip into the western test unit discontinuously, where Stratigraphic Unit IV and the burial pit fill were truncated when the foundation of the beach cottage was first laid ca. 1941 (see below).

Including the most recent shovel probes and backfill, four distinct cut-and-fill events penetrated these strata. The oldest relates to an early historic tightly flexed burial of an adult male individual within a cedar box or plank-lined pit (Tasa 2012). In profile, the burial pit (Fill 1) truncated the midden deposits and uppermost few centimeters of Stratigraphic Unit I (Fig. 8 a and b). We observed many roots and rootlets along the contact between Stratigraphic Unit I, the burial and burial fill. Roots and rootlets also preferentially penetrated the cedar boards surrounding the remains.

Two other cut-and-fill events occurred during construction of the house in 1941. The northern third of our excavation unit held re-deposited midden sediments (Fill 2) above and around an Orangeburg pipe connected to the home's septic tank (Fig. 9). The pipe and tank bracket the northern and eastern margins of the test unit, respectively. The eastern end of the backfilled pipe trench held jumbled skeletal elements from at least five people. One set of vertebral and rib elements were still articulated, and were very closely associated with three faceted trade beads, one small stone bead, and one copper ball button dating from the mid-1800s (Fig. 10).

a.



b.

Fig. 8 (a and b). View of test unit facing southeast, showing stratigraphic relationships between autochthonous and cut-fill deposits.

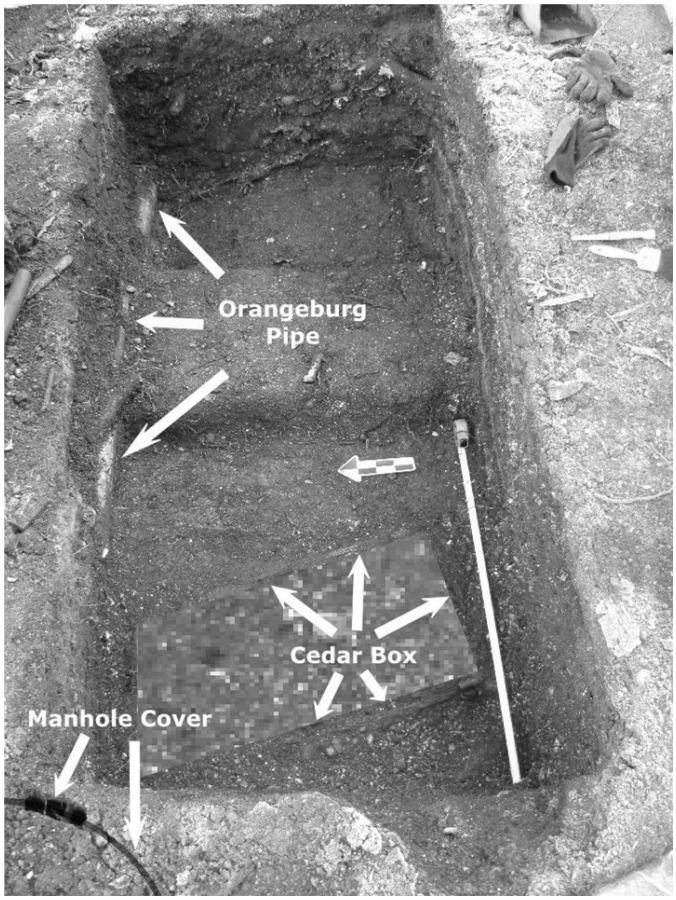


Fig. 9. Overview of test unit facing east, before burial (obscured) removal.

Fig. 10. From left to right: oblique (top) and end view of copper ball button, black, blue and white faceted glass beads, and stone bead.

Lastly, an approximately 10-cm-thick layer of re-deposited midden (Fill 3) is found where the house foundations cut into the midden, and were recently removed. All of the fills overlap in the northwest corner of the excavation, where the pipe trench fill (2) inclines over the burial fill (1), and the foundation fill (3) overlies both. Figure 11 presents a schematic sequence showing the site's stratigraphic development over the last ~300 years, based on the findings above.

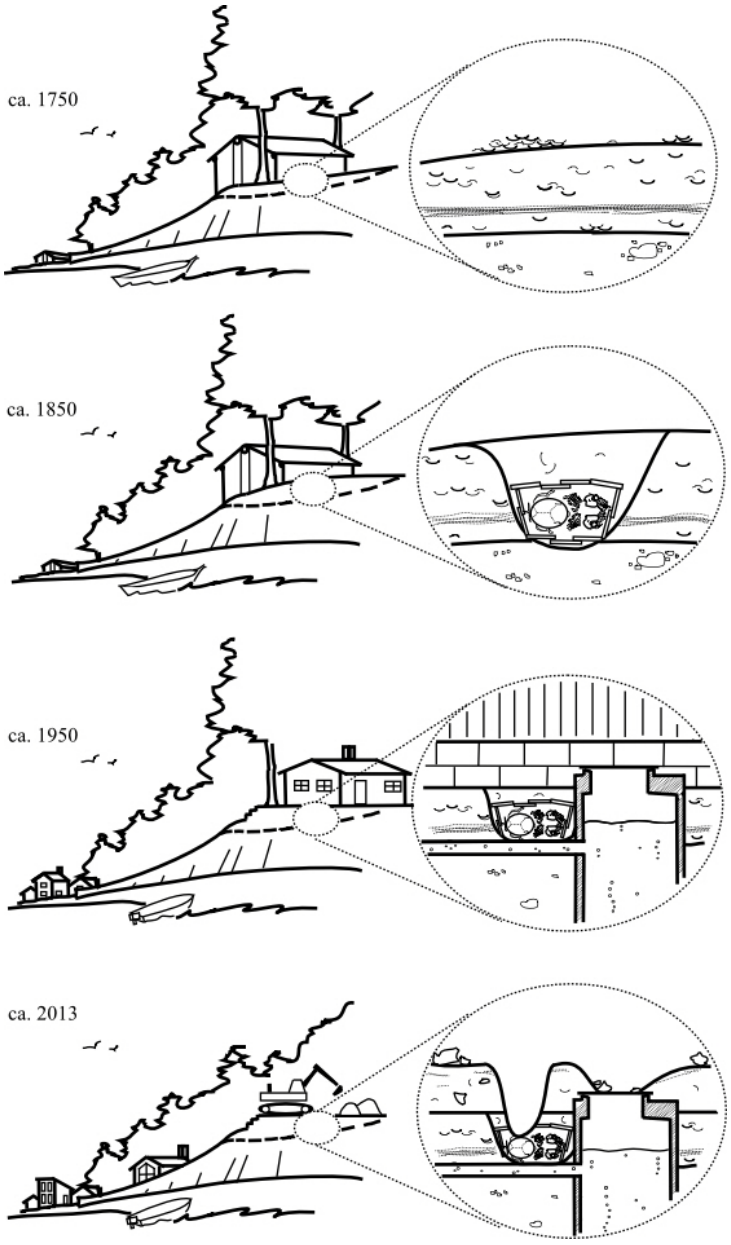


Fig. 11. Evolution of a Snakelum Point shell midden, from recent prehistoric to modern times. From top to bottom: ca. 1750 shell midden accrues near Indian structures; ca. 1850 burial emplaced within shell midden; and ca. 1950 house construction and septic system emplacement truncate and redistribute shell midden and burial constituents; and ca. 2013 shovel probe reveals human skeletal remains.

Discussion

Diagnostic artifacts from across the site and a single radiocarbon date from the site on marine shell, calibrated between ca. AD 1520 and 1820 (640 ± 60 ^{14}C years B.P. [Beta 193003], Bush and Ferry 2004; Reimer et al. 2009) indicate the Snakelum Point middens accrued during early historic times, in keeping with accounts that Chief Snakelum first occupied the site in the mid-19th century. Bryan (1963) found iron, brass, and porcelain artifacts of that time at considerable depth in the midden he excavated. The trade beads and military copper ball button reported here are also artifacts of early historic manufacture and occurrence in regional sites. Yet, the single shell date likely underestimates the true age of the sample (see Deo et al. 2004), and the sheer volume of midden at the site and place in Skagit lore as a point of origin and enduring residence argue for older components.

The short stratigraphic profile we present here contains at least two midden deposits separated by a distinct sandy stratum. Wessen (2012) and Trost (2014) also identified potentially intact midden deposits associated with a noteworthy stratum of yellowish brown sand and silt. Wessen found the layer above midden in one test unit (4) and found it, or another like it, below midden in another two (11 and 12). In addition to pockets and lenses in seven of her shovel probes, one of Trost's test units contained a stratum of tan silty sand between shell midden strata, which she interprets as the byproduct of roasting bay mussel and other clams (Trost 2014:27).

These distinct layers could remain from surfaces associated with structures or activities, or could be sheets of sediment that flowed, slid, or were otherwise carried into the site, or both. It is possible that they are parts of the same widespread stratum. If so, it extends at least 20 meters inland from the base of the slope in the area we investigated, and could provide a basis to correlate midden deposits throughout its range at the site.

Exploring the nature and extent of these sandy strata, their relationship to the middens, and the larger project to construct a broader site stratigraphy and chronology will require careful exposure, analysis, correlating and dating of site deposits. But, a long history of residential ownership and development means that much of the site lies beneath houses and landscaped yards, and projects that trigger archaeological work are small and occur in piece-meal fashion. With the exception of the early work by Bryan (1963) and the review and construction monitoring of a waterline replacement project (Dugas and Robbins 2002; Bush and Ferry 2004), archaeologists come to the site to help individual homeowners through relatively small ground disturbing renovations. Archaeological work for such projects is expedient, since the potential archaeological costs may quickly approach or exceed those of the proposed renovations.

For such projects, the DAHP currently permits the use of shovel probes or other small excavation units. They provide a quick and reliable means of determining whether artifacts or human skeletal remains reside in the soil at a particular place. In series, they can be used to quickly locate and determine the vertical and horizontal spread of midden sediments and major paleotopographic surfaces (Stein 1986).

However, the usefulness of excavation units for examining the stratigraphic and distributional relationships of natural and archaeological deposits is proportional to their size and shape. In his synthesis of Oregon coast prehistory, Lee Lyman (1991) amply documented that within shell middens,". . . the pernicious effects of the size of an excavation and the size of the recorded artifact assemblage have come to the fore as thwarting explanation and understanding" (Lyman 1991:308), and speculates that excavated examples of cut/fill features like pits and post molds are exceedingly rare because we simply have not excavated enough to find them (Lyman 1991:286).

In Washington, contemporary work at English Camp on San Juan Island (Taylor and Stein 2011) validates Lyman's suspicions. Excavators noted that the size of their excavation units affected their ability to differentiate facies within midden strata in the field (Stein et al. 2011:32), and despite meticulous sampling and detailed macro-and microscopic examination of a large midden exposure, the contents of pit features, discernable as midden-filled pockets in the underlying glacial drift, were indistinguishable from overlying midden deposits (Stein et. al 2011:42–43, Fig. 4.23). In her closing remarks, Taylor (2011:170) echoes Lyman, and attributes an observed absence of archaeological features to inadequate exposure.

In short, at sites where the stratigraphy is complex and crowded or where the importance of stratigraphic considerations is otherwise increased, small test units, even at close intervals, are limited in their ability to reveal the true picture of a midden's constituents and organization. This is troublesome at sites like Snakelum Point where human burials should be expected, but ground disturbing work is planned and permitted on the premise that archaeological deposits, tested using small units, are disturbed.

Near Snakelum Point, the City of Oak Harbor recently paid a large price for this kind of misjudgment. Despite over 150 years of extensive and highly disruptive town development and redevelopment, recent road work along the City waterfront uncovered expansive stratified archaeological deposits and intact human burials (Earley et al. 2013). In Oak Harbor, city officials thought that archaeological material had been wholly displaced or otherwise destroyed, and dismissed warnings to the contrary (see Schmidt 2011).

The Oak Harbor case illustrates a common misconception among government agents and contractors tasked with developing land and infrastructure—that previous development precludes meaningful archaeology. Project planners and engineers most often deal with, and come to understand, cultural and archaeological resources through their experiences completing project review and consultation as required by the National Environmental Policy Act and the National Historic Preservation Act, (as well as analogous state law or local ordinance).

Under these rules, archaeological sites are considered valuable mostly for their information content. Guidance on the evaluation of archaeological sites for regulatory purposes (National Park Service 2002) devalues sites that have in some way lost "integrity" of material, association, and location. While integrity is not synonymous with the intactness (e.g. retention of stratigraphic superposition) of an archaeological site, it is related insofar as that physical feature is necessary to address important questions about the site and its significance under the National Register criteria. As such, a basic goal of archaeological testing for regulatory compliance is determining the integrity of a site's deposits, where evidence of mixing or other "disturbance" weighs negatively against the site's information value.

Complications develop when the methods chosen to survey and test sites do not allow for the recognition of fills within archaeological sites that are themselves archaeologically meaningful. Burials within shell middens rest beneath contemporaneous fills. The same holds for other significant archaeological features to be expected in and around Puget Sound shell midden sites (e.g., post and plank molds, floors, storage pits). If a fill's relationship to the feature beneath it and midden or other deposits around it is not identified, integrity (or, rather, lack of) may be mistaken. Identifying these relationships requires exposing them through the excavation of larger sampling units.

Conclusion

The Snakelum Point site encompasses enormous patches of shell midden, much of which has been displaced and re-deposited over time. As our small excavation revealed, re-deposited fills at the Snakelum Point site are of different ages and result from different events. In this case, shovel probe excavations worked as intended, and human skeletal materials were saved from degradation and damage by piercing foundation pin piles. But they also provided few clues about the nature of the midden and the burial they exposed. Similarly, stratigraphic indications of other significant archaeological features associated with re-deposited sediment (e.g. pits, floors) may be easily missed or mistaken when small excavation units are used in midden sites. For regulatory purposes, the misjudgment of such deposits decreases the utility and value of archaeological data from the site, and perhaps more importantly, creates a false sense among laymen project proponents about the likelihood of finding artifacts, features and burials in place.

Unfortunately, the economics of contract archaeology put a strong downward pressure on excavation and analyses. Shell middens in particular are expensive to excavate and analyze. Through the scoping and bidding process, budget conscious homeowners and local governments put competitive pressure on archaeological contractors to limit their work.

Recognizing the strong relationship between our understanding of midden stratigraphy and the size of our excavations, alleviating some of this pressure should be a goal of Federal, State and Tribal government agencies with regulatory and project review and consultation responsibilities. Site testing and excavation standards that describe necessary and sufficient archaeological efforts would provide a basis for the adoption of realistic expectations and budgets by project proponents.

The establishment of grants or reimbursement funds that help cover the costs of increased excavation would also help. Currently, the DAHP administers a modest assistance account, established by the Washington State legislature, for ameliorating the costs of recovering and reburying archaeological human skeletal remains. Federal, State and Tribal agencies, nonprofit organizations, and professional archaeological societies should look for ways to develop accounts that provide reimbursement of archaeological excavation costs as well.

In the meanwhile, professional archaeologists tasked with evaluating such sites must make efforts to maximize the size and control of excavated units—as we found here, even modest increases may substantially change findings and interpretations. Alternatively, where scoping and financial constraints limit opportunities to excavate extensive stratigraphic sections, we must strongly temper statements regarding the nature of “disturbed” midden deposits that may affect planning and development decisions.

ACKNOWLEDGMENTS

We would like to thank the interested affected Tribes for reviewing and allowing us to share this work. We would also like to thank those who helped that frigid week to ensure that all went well, especially Richard Young and Gene Enick of The Tulalip Tribes, Jackie Ferry of the Samish Indian Nation, Larry Campbell of the Swinomish Indian Tribal Community, and Kerry Lyste of the Stillaguamish Tribe.

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Journal of Northwest Anthropology, 49(1):61–70 2015

BIG DOG/LITTLE HORSE—ETHNOHISTORICAL AND LINGUISTIC EVIDENCE FOR THE CHANGING ROLE OF DOGS ON THE MIDDLE AND LOWER COLUMBIA IN THE NINETEENTH CENTURY

Cheryl A. Mack

ABSTRACT

A review of ethnohistorical sources from the middle and lower Columbia River in the early nineteenth century reveals ample evidence of the use of Native dogs as food by early explorers and fur traders. At the same time, there is little indication that dogs were used as a regular source of food by either the Chinookan or Sahaptin-speaking residents of the area. The role of dogs is examined through a variety of sources, and the question of why there were so many apparently surplus dogs among the Indians of the lower Columbia at this time period is considered. Possible explanations as to why dogs were not being used by the Native population as a dependable food source are also discusssed.

Introduction

The presence of domestic dogs in Native communities in the middle and lower Columbia River region during the contact period has been well established in the historical record, but the role and relative importance of dogs within these cultures remains a question. Both the journals of the Lewis and Clark expedition and others of the early fur trade contain numerous references to the purchase of dogs from Native people for use as food. This article looks at a variety of historical evidence for the role of dogs within Native communities during this time period, and considers the question of why dogs were sold as food to early explorers and fur traders.

The 1805–1806 journals of the Lewis and Clark expedition for the middle and lower Columbia River area (Moulton 1988, 1991, 1995) contain numerous references to the purchase of presumably surplus dogs from the Native inhabitants for use as food. Between Celilo Falls and the Cascade Rapids (22–29 October 1805 and 9–20 April 1806) the 32-member expedition recorded the purchase of at least 63 dogs for food (Moulton 1988:320–353; 1991:96–149; 1995:243–247, 288–295). In a single day, on 29 October 1805, they purchased 19 dogs at three villages along the Columbia River, between the Klickitat River and Little White Salmon River confluences (Moulton 1988:348–353; 1995:247).

The willingness of Native people to sell dogs raises two questions: why did they have surplus dogs; and, if the dogs were truly surplus, why did they not eat them? There is no indication in the Lewis and Clark journals that Native people were consuming dogs as food. In fact, Lewis and Clark record an instance (Moulton 1991:210) among the Nez Perce: “While at dinner an Indian fellow very impertinently threw a poor half-starved puppy nearly into my plait by way of derision for our eating dogs . . .”

Dogs as Beasts of Burden

The field of linguistics may provide clues relative to the role of dogs at the time of historic contact. The linguist Cecil Brown (1996, 1999) has described how, when an item is newly introduced into a culture, it is often named for what it is thought to most closely resemble, but it is "marked" to distinguish how it is different from that item. If, however, the introduced item becomes more culturally important over time, then the "mark" reverses, and the new item gets the unmarked version of the term and the original item is marked. He refers to this as a marking reversal, and states that "marking reversals were motivated . . . by a radical change in the relative cultural importance of the two referents. . ." (Brown 1996:439). To illustrate, he uses the example of native plums and introduced peaches in the southeastern United States. Peaches were initially called "fuzzy plums" by the native people in the southeast. But over time, as peaches exceeded plums in economic importance, the original word for "plum" came to mean "peach," and native plums were called "smooth peaches."

In *Ichishkiin,* or Northwest Sahaptin, the language spoken by a number of groups living along the middle Columbia in the early 1800s, the modern word for horse is *K'usi*. The word for dog is *K'usik'usi*, which is a diminutive or "marked" form, meaning literally "little horse." Dogs have probably been present in the New World as long as people, while horses were introduced into this area in the late 1700s. If the word *K'usi* originally meant dog in *Ichishkiin* (see Kuykendall 1889:73), horses were probably initially called something like "big dogs," which is what they were called in a number of Native languages throughout the American West (e.g. Thompson 1962:330; Weltfish 1965:143). While dogs and horses both have four legs, there are many four-legged creatures that more closely resemble the horse than the dog. It seems likely that horses were named for dogs because they functioned like the dog within the native economy—as a beast of burden. Most Native groups living along the middle Columbia ca. 1800 practiced a subsistence system requiring seasonal movements across the landscape and the ability to transport food. Dogs were likely an important part of this system. In a very short time period, coinciding with the visit of the Lewis and Clark expedition, horses became far more important than dogs as a means of transporting goods, and the mark reversed. The word *k'usi* came to mean horse, and dogs became "little horses." This transition from dogs to horses as the primary beast of burden may explain the surplus of dogs noted along the middle Columbia in 1805 and 1806.

Although this argument does seem to address the question of why there were surplus dogs among mobile, horse-owning people along the middle Columbia in 1805, it does not fully address the role of dogs. Lewis and Clark did not just purchase dogs from mobile, horse-owning people. They continued to purchase dogs all the way to the mouth of the Columbia River, from people who lived a much more sedentary lifestyle, who lived in large, semi-permanent villages, and who never developed a reliance on the horse for transportation. Yet they too maintained large numbers of dogs.

Fur Traders' Reliance on Dogs for Food

The fur trade journals from the lower Columbia River region shed some light on the role of dogs in this area. These are the journals of employees of the Pacific Fur Company and the North West Company, based at Astoria/Fort George in the period from 1811 through the early 1820s. These include the journals of Gabriel Franchere (1854), Alexander Henry (1992), David Thompson (1994), Duncan McDougall (Jones 1999), Robert Stuart (1995), Alexander Ross (1956,

1986), Ross Cox (1957), and Alfred Seton (1993). These fur traders (like the explorers Lewis and Clark a few years before them) repeatedly purchased dogs for food from Chinookan-speaking people on the lower Columbia River.

The following is one interesting and well-documented example (Henry 1992:639–656, Franchere 1854:160–164). In January of 1814, a party of North West Company traders was ambushed by Cascade Indians at the portage on the Cascade rapids. A large quantity of goods intended for Interior posts, including guns and ammunition, were abandoned by the traders as they escaped, and these items were quickly appropriated by the Cascade Indians. Upon their return to Fort George, the fur traders decided that they must demand the return of the goods, since they feared both the potential precedence of the act, as well as the acquisition of guns by Indians controlling the critical Cascades portage. A group of 62 fur traders from Fort George, accompanied by several Indian leaders from the lower river, headed upstream in six canoes on January 10th. They ran out of food after three days, with little potential for procuring food on their own at that time of year. When they reached the village at the lower end of the Cascade rapids, the Indians had anticipated their arrival and were waiting, wearing elkskin armor and with bows and arrows drawn. The fur traders, forced to land their canoes, sent Gabriel Franchere up to the village to bargain for food; he purchased 15 dogs at this village. Over the course of nine days, while negotiating for the return of their goods, the fur traders purchased 67 dogs for immediate consumption from three villages at the Cascade rapids (Henry 1992:667).

The fact that the fur traders consumed dogs for food was not in itself unusual. In the Interior, where they used dogs extensively as both pack animals and to pull sleds, they were sometimes forced by necessity to eat their dogs or feed them to their other dogs. David Thompson describes an instance in 1807 (Thompson 1994:47) when he is in need of food for his voyageurs: "Gave the men a large Dog of which they made a hearty meal." Thompson is referring to one of their sled dogs. Ross Cox described in November of 1813:

> As our provisions were nearly consumed, we were obliged to purchase 20 dogs . . . It was the first time I had eaten any of the flesh of this animal, and nothing but stern necessity could have induced me to partake of it. The president of our mess called it "mutton," which it somewhat resembles in taste. We generally had it roasted, but the Canadians preferred it boiled, and the majority of them seemed to think it superior to horse-flesh. In this, however, I entirely differ from them, for the latter is a cleaner animal . . . (1957:127)

On the lower Columbia River, the fur traders at Astoria/Fort George faced a number of serious challenges with respect to their own subsistence, particularly due to the difficulties of storing food for winter consumption. In the Interior they were accustomed to hunting extensively to produce a supply of meat which was kept frozen throughout the winter, but they found that winter temperatures at Astoria were too mild to freeze meat. Hunting with guns (such as muskets and flintlocks) was a constant challenge in the wet weather (Stuart 1995:5). They attempted to dry meat (and salmon), but were usually unsuccessful, even when they attempted to replicate Indian drying sheds (Jones 1999:202). When salt was available they would use it to cure meat and fish, but salt was always in short supply. They were forced to rely heavily on Native people to provide them with food, which worked well when seasonally abundant items such as salmon, sturgeon and smelt were being harvested. But the fur traders quickly realized that at certain times of the year the Native people did not have surplus food to sell them. As a result, when the Astorians and North Wester's traveled in the winter and early spring, they often relied on buying dogs for food, and the local Indians were usually willing to sell them.

The winter of 1813 was a low point at Astoria/Fort George, a time when the fur traders actually turned a number of their employees out of the fort to forage for themselves, since they could not feed them. They had hired several native hunters to procure food for the Fort, and one of these men was a Clatsop Indian named Watatkum. On 27 January 1813, Duncan McDougall writes (Jones 1999:149–150) "Watatkum came in in the afternoon with two swans, the only game he was able to procure for us. He saw some of our people above, they had not killed anything, and they were living on dogs, that they had purchased from the Indians."

In spite of numerous references in the fur trade journals to purchasing dogs from the Indians for food, there are no references to the Indians eating dog. The fur traders noted a wide variety of foods that the Indians ate (and traded with them in season at the fort)—fish, berries, roots, waterfowl, meat; they do not mention them eating dogs. Alexander Ross does describe a hypothetical feast at the Cascade rapids in 1817 (Ross 1956:79–80) in which dog's flesh is listed as one of the items served to guests. However, since the account is clearly intended to shock the reader, its accuracy is suspect.

There is ample anecdotal evidence in both the Lewis and Clark journals and the fur trade journals for food scarcity among the Indians, particularly in late winter/early spring. Whether this represents actual food scarcity or a misunderstanding of the subsistence cycle of the native inhabitants is difficult to determine. There are, however, numerous mythological references to the subject of hunger in Franz Boas' *Chinook Texts* (1894) and *Kathlamat Texts* (1901). Boas' source for these myths was Charles Cultee, a man of mixed Clatsop and Kathlamat descent, interviewed between 1890 and 1894. Cultee recounted several myths relating to the subject of hunger, and in one (Boas 1901:207–215), Hunger is depicted as a supernatural being that must be defeated in order for the people to be saved from starvation. After a young man defeats the Hunger, and the food returns, people go hunting with their dogs (which they apparently did not eat, even while they were starving).

Native Dogs: Guardians, Hunting Companions, and Sanitation Specialists

What we have is an apparent abundance of domestic dogs at the turn of the nineteenth century along the middle and lower Columbia, as indicated by fur trade journals, the lack of evidence for their use as food by Native people, and yet the apparent willingness of Native people to sell fairly large numbers of these dogs to early explorers and fur traders for food. What role did these dogs play in native society? A review of ethnohistorical sources reveals a number of possibilities.

Two specific types of indigenous dogs were noted in the late 1700s by early explorers in the Puget Sound and Olympic Peninsula region, which Crockford refers to as the "Village dog" and the "Wool dog" (Crockford 1997:2). The village dog corresponds to the medium-sized, short-haired indigenous dog found along the Columbia River and throughout western North America, while the wool dog was a smaller, spitz-type dog with a very restricted geographic distribution on the Northwest Coast (Crockford 2000:202, Koop et al. 2000:272). The wool dog had thick white fur which was reportedly shorn like sheep's wool and woven into blankets. These dogs were highly prized, and were often sequestered to prevent them from interbreeding with the more common village dog. There is no indication in fur trade journals that wool dogs were present along the Columbia River.

Along the lower Columbia, it appears that dogs served as sentinels, alerting villagers to the presence of intruders. John Kirk Townsend describes visiting Chinamus' village at Chinook in

1836. He said there were about 30 dogs at the village, and in describing them he wrote: "These, although very useful animals in their place, are here a great nuisance. They are of no possible service to the Indians, except to eat their provisions, and fill their houses with fleas, and a stranger approaching the lodges, is in constant danger of being throttled by a legion of fierce brutes, who are not half as hospitable as their masters" (1999:190). In the early 1800s the fur traders made several references to inter-village raiding and stylized "warfare" amongst Natives of the lower Columbia River, and dogs would have been valuable as a means of warning of the approach of strangers.

Robert Stuart (Stuart 1995) and Duncan McDougall (Jones 1999), both with the Pacific Fur Company, refer to dogs being used by Indians to assist in hunting large game. Robert Stuart described this manner of hunting in detail in 1812:

> Their general mode of hunting elk and deer is with the bow and arrow, very few possessing or knowing the use of Fire Arms; they frequently go in large parties, surround the game while grazing in a favorable place, such as a small prairie or meadow environed by wood; they plant themselves in the different avenues, or paths leading to this spot, then set in their dogs, which throws the affrighted animals in such confusion as to scatter in every direction, thereby giving the most or all a chance of exercising their skill, for let the consternation of these poor creatures be ever so great, they can only escape by those leading paths. (Stuart 1995:14)

McDougall described this scene on June 22, 1813 at Astoria: "Toward evening the hunters returned by land without success, the men with the Canoe arrived at near the same time. The Indians are now about the woods hunting with their dogs. No hunter need therefore hope for success near where they may be" (Jones 1999:196).

Although this role is not generally discussed in the fur trade journals (except with respect to the fur traders' own dogs), the picture of dogs that emerges upon reading Boas' *Kathlamat Texts* and *Chinook Texts* is that dogs served as companions to humans. Unlike other animals in the mythological world, which operated independently of humans, dogs are portrayed in these stories as helpful to people. As an example, one myth describes five brothers being chased by a malevolent being (Boas 1894:32), and as they try to escape they instruct their dog to basically tell the creature that they went the other way. The dog complies, thus helping the brothers to escape.

There is also evidence that dogs played a role in village sanitation. In December of 1813, while describing two houses of Clatsop Indians, Alexander Henry wrote "these people are uncommonly filthy about their houses, and it requires the greatest precaution in walking to avoid treading in their numerous heaps of excrements and they have no Dogs among them to diminish these piles of dirt" (Henry 1992:624). Disposing of garbage and human waste is a role that dogs have performed throughout the world (Guiry 2012:352). Some have even hypothesized that the dog's attraction to garbage and human waste is what led to its domestication. Several fur traders made references to dogs as an "unclean" animal (see Cox 1957), which could be a euphemism for acknowledging that dogs consumed (and consume) human waste.

Was the consumption of human waste an important role of dogs on the Columbia River? George Kuykendall recorded a series of myths in central Washington, published in 1889, one of which includes the dog as a character in the Myth Age (referred to as "Koosi"). This myth concerns the origins of fire. In the Myth Age the animals on earth have no fire, but they know that the people that live up in the sky have it. They make a plan to climb up to the sky country and

bring fire back to earth. The first animal to volunteer is Koosi, the dog. His instructions are clear: use your nose, find fire and bring it back to earth:

> So the dog went climbing up for a long time. On reaching the sky, he cut a hole through it and crawled up into the sky country. Here he found that the people lived as those on the earth, with the exception that their surroundings were of a vastly superior quality; and everything was more beautiful. Being hungered after his long climb, he began a hunt for food. The only thing in the way of eatables to be found was some filth, which he devoured. Contrary to what might be expected, he found it not only palatable, but much suited to his tastes; and this, together with the cheerfulness of his surroundings, induced him to forego the object for which he came and determine to remain permanently in the sky country. (Kuykendall 1889:73)

One could argue that this myth describes the domestication of the dog.

Melville Jacobs interviewed Victoria Howard in 1929 and 1930 for *Clackamas Chinook Texts* (Jacobs 1958). Jacobs recorded the following story, which he noted that Mrs. Howard said she had been told by her grandmother. The story was called "She fooled him with her dog," and is the story of a young woman who was courted by a man she did not want to marry, and so she transformed her dog into a replica of herself and sent it to marry the man instead. After the man married the dog/woman, he noticed that she would often get up and go out at night. The man did not realize that his wife turned back into a dog at night. "And as for him that is the way his (dog) wife was doing. Some nights he would be thinking "Where could she have gone?" She would have gone outside, she would not return for a long time (because she had changed into a dog and was eating excrements)" (1958:242). One night the man killed the dog, and the people of his village told him that this had been his wife. He replied: "She was like that for a long, long time, she would go outside, when she came back inside she would lie down. I would smell her stinking of feces" (1958:244).

On the basis of the ethnohistorical record, it seems clear that disposal of human waste was one of the roles that dogs performed, particularly amongst the more sedentary people on the lower Columbia. It is possible that Indians on the lower Columbia did not eat dog because dogs ate human waste, and were therefore considered unsuitable for human consumption.

Discussion

As domestic animals, dogs must be fed, whether directly or indirectly. Several researchers have considered the possibility that dogs (or more specifically, their bones in archaeological contexts) could serve as analogs for analysis of the prehistoric human diet (Guiry 2012; Tankersley and Koster 2009), since dogs likely either consumed what humans ate or the garbage and human waste that result from it.

This raises a corollary question—did Native dogs eat what people ate on the lower Columbia? If they ate what people ate, then they must have been resistant to *Neorickettsia helminthoeca*, the source of Salmon Poisoning Disease (SPD). The fur traders' dogs were apparently not resistant, and Alexander Henry's account of their dogs becoming sick after eating salmon is often cited as the earliest historical documentation of SPD. Henry wrote in April of 1814 that they were bringing their dogs back to Fort George after having them spend the winter on the

Willamette "to prevent their death, as living on the raw salmon here last summer and fall causes them to die" (Henry 1992:707). This is an interesting question, since salmon was a major component of the diet of people living along the Columbia River in the 1800s, and discarded salmon parts must have been plentiful at fishing and processing locations. Henry complains on 16 November 1813 that one Chinookan village was surrounded by "fish offals and excrements" (1992:610), and at yet another village he describes "These houses are extremely dirty and filthy, sturgeon and salmon laying about in every direction" (1992:613). It seems from these descriptions that it would have been difficult if not impossible for Indians to keep their dogs from eating discarded salmon parts. Isotope analysis of dog bones from archaeological contexts along the Columbia River could provide data to address this question.

The question of whether dogs were consumed as food by Native people could be addressed by a search for evidence of butchery in domestic dog bones from archaeological collections. Establishing a chronology of sites containing domestic dog bones would be helpful in assessing whether changes in economic strategies over time influenced the potential consumption of dogs.

Conclusion

Given the antiquity of domestic dogs in the Pacific Northwest, their role within Native cultures has likely been complex and has changed through time. Linguistic evidence suggests that dogs served as beasts of burden prior to the introduction of the horse, and it is possible that dogs and the ability that they conferred to transport goods were an integral part of the shift from mobile hunter-gathering to resource intensification in the Plateau. For people who ultimately developed an equestrian adaptation however, the introduction of the horse resulted in a radical decrease in the importance of dogs.

It is apparent from fur trade accounts that another historical role of dogs on the lower Columbia River was the removal of human waste through coprophagia. The fact that dogs consumed human waste could explain why dogs were not considered suitable for use as food, since eating things that eat us can be considered a form of cannibalism, and taboos against it are common. Since coprophagia by dogs might be construed as more useful under conditions of higher population density and a higher degree of sedentism, there may even be a correlation between the degree of sedentism and the unwillingness of people to consume dog even as a famine food.

ACKNOWLEDGMENTS

The author would like to thank Bruce Rigsby and Madonna Moss for their constructive comments.

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Journal of Northwest Anthropology, 49(1):71–86 2015

SMALLPOX, ALEUTS, AND KAYAKS: A TRANSLATION OF EDUARD BLASHKE'S ARTICLE ON HIS TRIP THROUGH THE ALEUTIAN ISLANDS IN 1838

Richard L. Bland

ABSTRACT

In response to a smallpox epidemic that spread through the Aleutian Islands in the late 1830s, Dr. Eduard Blashke, a Baltic German physician in the employ of the Russian-American Company, traveled to the Alaska Peninsula in 1838 to vaccinate the local populations against the foreign disease. Traveling by baidarka, a native seagoing vessel resembling a kayak, Blashke traveled from Unalaska Island to Unga Island. In 1848, Blashke published his account of the journey in the Russian journal *Morskoi sbornik* (Maritime Journal). The original article is translated from Russian to English in its entirety. Included with the translation is background concerning Russian expansion into the region, the smallpox epidemic, and Dr. Blashke.

Introduction

An article published in 1848 in the Russian journal *Morskoi sbornik* (Maritime Journal) provides an account of his travels combating the spread of smallpox to the region and insight into the indigenous populations. The article was written by Dr. Eduard Blashke, a Baltic German physician in the employ of the Russian-American Fur Company, who was sent to the region to vaccinate the local people. Traveling by baidarka (kayak), the most common form of travel for Aleut at that time, Blashke vaccinated thousands of natives from Unalaska Island to Unga Island (Fig. 1 and 2). Following background material on smallpox in the region, the baidarka, and Dr. Blashke, a complete translation of the 1848 article is provided, with explanatory footnotes for the reader.

Russian Expansion into Aleut Territory

For centuries, Russian fur hunters gradually moved across Siberia, trapping animal furs out of one area and moving farther east to the next. By the mid-seventeenth century, under orders from Peter I, Russians and people under the authority of Russia began looking for a connection between extreme northeast Asia and northwestern North America. One of the first to record circumnavigating the western side of Bering Strait was Semën Ivanovich Dezhnëv (Pierce 1990:120–121; Grinëv 2009:149), who in 1648 sailed through the strait. In a subsequent attempt to find the land to the east, Vitus Bering and Aleksei Chirikov set off in 1741 and were successful.

Bering was successful in reaching North America but did not reach home when his ship, the *Sv. Pëtr*, was wrecked on an island. This island was subsequently named Bering Island in the Commander Island group (named after Commander Bering). After the remnants of his crew, which spent about a year on the island, had rebuilt the ship and arrived back in Kamchatka, the news of the quantity and quality of furs they had acquired during their stay on the island became known. Much like the gold rush of a century later, a "fur rush" began (Steller 1993; Solovjova and Vovnyanko 2002). Since Siberia had essentially been cleaned out of fur-bearing animals, *promyshlenniki* set off the following year into the North Pacific to acquire the valuable sea otter and fur seal furs.[1] The hunters followed the Aleutian Islands to the Alaska Peninsula and Kodiak Island, with the first permanent settlement being formed on Kodiak Island in 1784 by Grigorii Shelikhov (Pierce 1990:454–459; Grinëv 2009:604–605). This movement became increasingly supported by the government in its attempt to claim land for the empire (the Russian government apparently had not realized that all the lands surrounding the Pacific Ocean had long ago—in 1493—been given to Spain by Pope Alexander VI) (Delaney 2010).

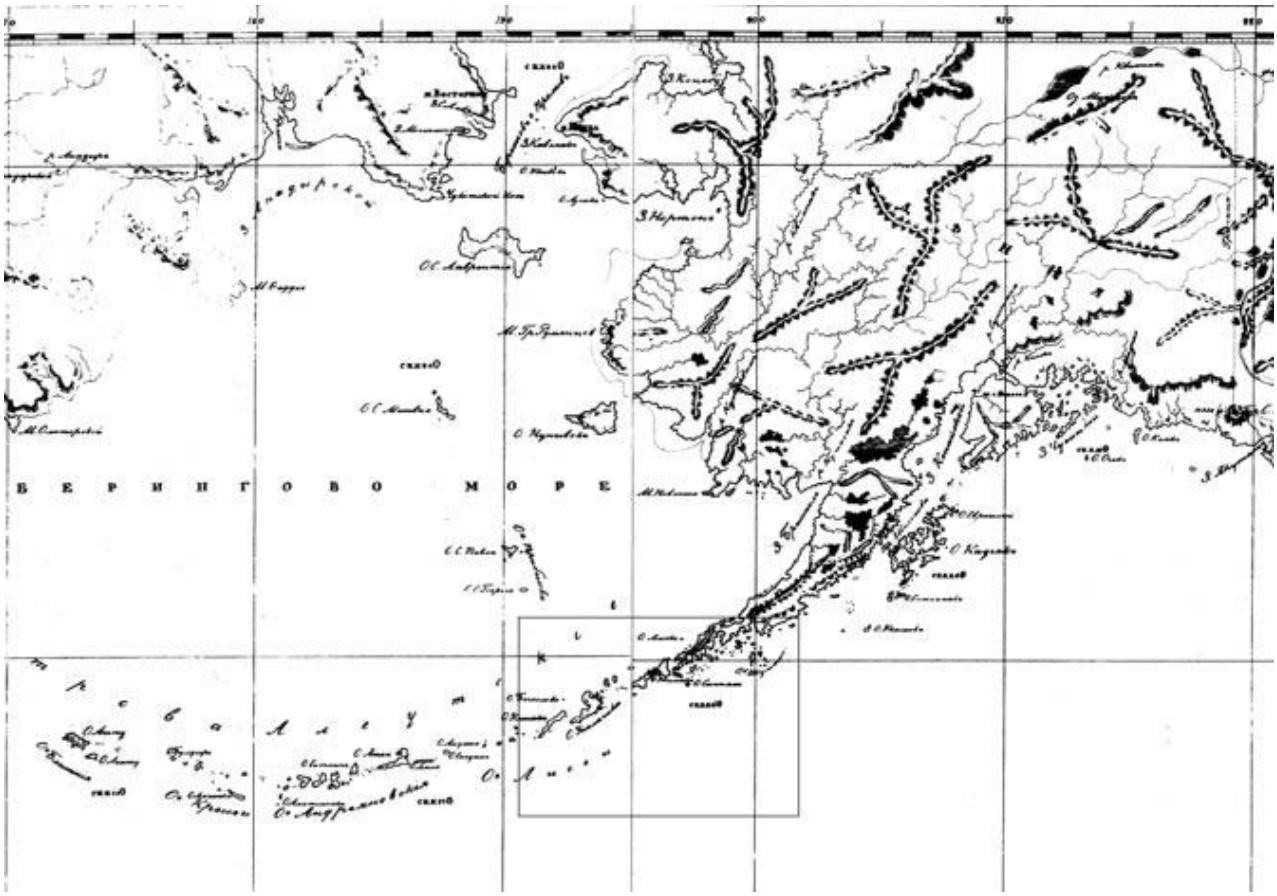

Fig. 1. Map of Alaska, created at the order of MiKhail Teben'kov, governor of Russian America, published in 1852, showing the location of Blashke's travels (inset).

[1] *Promyshlenniki* were Russian hunter/trapper/traders.

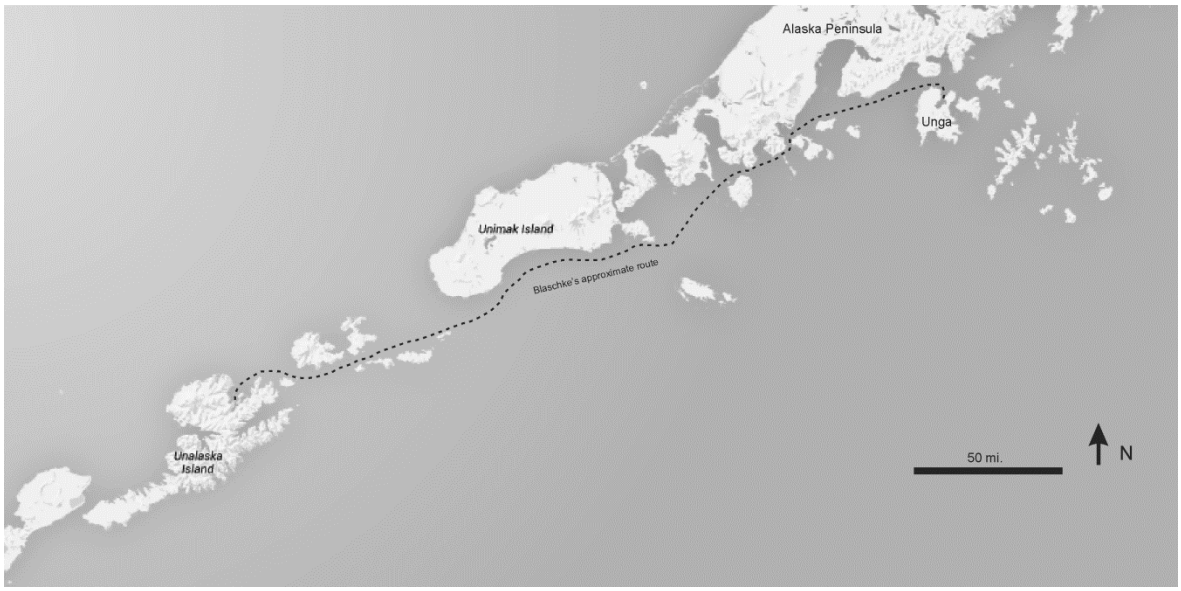

Fig. 2. Map of the Alaskan Peninsula, showing the reconstructed route of Dr. Bkashke from Unalaska Island to Unga Island in 1838.

For a number of years after Shelikhov established a permanent settlement on Kodiak Island (in 1784), until the founding of Novo-Arkhangel'sk (now Sitka) on Sitkha (now Baranof) Island in 1804, the managers of the Shelikhov-Golikov Company sent squadrons of "Aleuts" from Kodiak Island and vicinity, southeast along the coast of Alaska and into the Alexander Archipelago. Traveling that distance (over 600 miles) was dangerous, not only because of the turbulent North Pacific waters but because of the added danger of Indian attack, especially by the Tlingit Indians, who ultimately never fell completely under the power of the Russian throne.

Despite the coercive nature of Russian-Aleut relations, the Russians did all that was possible to keep the "Aleuts" in working form in order to keep the furs coming in. When epidemics occurred, all measures were taken to protect the natives from illnesses so they could continue hunting. Thus, the administration made a fairly serious effort to provide health care for the employees of the company. Despite these efforts, many misfortunes affected the native population: disasters, such as the consumption of tainted shellfish that killed 115 "Kodiak and Chugach" in 1799; falling accidents, such as those associated with collecting birds' eggs along steep cliffs; starvation resulting from the able-bodied men hunting and trapping furs rather than providing food for the women, young, old, and sick as they had done traditionally; and, of course, illnesses acquired from the Eurasians who arrived on the North American shores: (possibly) syphilis, tuberculosis, measles, smallpox, and others.

Native populations were especially vulnerable to sickness because they had no biological resistance to new forms of disease. Dr. Meyer Ahrens stated:[2] "Also on the coast of Russian America has the smallpox made great ravages; and so destructive was it in 1770 that only one or two individuals were left alive in each family" (Ahrens 1858:543). Smallpox struck again in the late 1830s. Although measures had been taken to prevent it, up to 3,000 individuals died before the disease could be stopped by vaccination (Gibson 1982–83:76).

[2] Dr. Ahrens uses data from F. P. Litke, F Boyé, A. Postels, K. H. Mertens, and F. H. Kittlitz published in *Voyage autour du monde exécuté par ordre de Sa Majesté l'empereur Nicolas 1er, sur la corvette le Séniavine, dans les années 1826, 1827, 1828 et 1829* (Paris: Typ. de F. Didot frères, 1835–1836), 217.

In May of 1838, Dr. Eduard Blashke arrived on Unalaska with directions from the governor of Russian America, Captain of 1st Rank Ivan Antonovich Kupreyanov, to vaccinate the natives of the Russian colonies. Later that year, after vaccinating the residents around Unalaska Island, Dr. Blashke set off doing the same on a trip eastward from Unalaska, through the eastern Fox Islands, and along the Alaska Peninsula to Unga Island in the Shumagin Islands in a three-hole *baidarka*[3]—a trip that Alphonse Louis Pinart would make about 30 years later (Pinart 1873:561–580).

Smallpox

Smallpox was not new to the New World. The Florentine Codex, dating 1540–1585, in chronicling the conquest of Mexico, documents the presence of smallpox among natives of central Mexico during that time (Fenn 2003). A couple of centuries later, in the late 1700s, various mariners would note in their ships' logs, abandoned or almost abandoned native villages containing a few pockmarked individuals (Fenn 2003). In the Alaska area the disease appears to have come to Sitka from the south and moved north to Kodiak Island, then west into the Aleutian Islands. Gibson indicates that smallpox may have been carried to the Northwest Coast by Spanish explorers on the ship *Santiago* under Juan Pérez (Gibson 1982–83:63).

Another possibility for the occurrence of smallpox on the Northwest Coast has been proposed by Don E. Dumond (1996:117–129). Dumond points out that three regions of Alaska struck by smallpox in the late 1830s (Sitka, Kodiak, and the Alexandrovsky Redoubt, not far from present-day Dillingham) suffered the occurrence soon after vaccinations began. The most telling of these three events occurred at the Alexandrovsky Redoubt, where on 20 February 1838, the party arrived and began vaccination. Nine days later, on 1 March, the first case of smallpox appeared, that is, at the end of the usual incubation period for smallpox.

The smallpox epidemic that affected the Alaskan region in 1835–1838 is considered by some to have been the most severe. However, the Russians had relatively greater immunity to the disease than the native inhabitants of the region, who suffered greatly. The Russian-American Company (RAC) took steps to halt the epidemic in order to protect its work force, the natives. Immediately at the outbreak in 1835, Dr. Volynskii was assigned by Ivan Antonovich Kupreyanov,[4] chief manager of the Russian-American Company and governor of Russian America, to vaccinate the population at Novo-Arkhangel'sk. Because of the distance from St. Petersburg, it was difficult to obtain serum that was effective. Dr. Eduard Blashke had arrived in Novo-Arkhangel'sk from St. Petersburg in 1835, bringing a shipment of serum for smallpox vaccination. He and Dr. Volynskii vaccinated as many of the population as they were able. This was inhibited somewhat by inadequate supplies of serum, the distance from the source of the serum, the fact that when the serum did arrive it was not always usable, and many natives felt the vaccinations were an attempt by the Russians to poison them. By 1838, after realizing that those who received vaccinations avoided infection more often, many of the natives concluded that vaccination was to their benefit. Thus, when Dr. Blashke set out on his trip to vaccinate the residents of the Unalaska District, he did not encounter as much resistance as earlier in the Novo-Arkhangel'sk and Kodiak departments. Perhaps the greatest difficulty was accessing the villages, which were far apart and approachable only by water.

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[3] The *baidarka* is for the Aleuts what the kayak is for the Eskimos, a boat constructed of a wooden frame covered with sea mammal skin.

[4] One source (Pierce, *Russian America*, 532) identifies the doctor as Vladimir Volynskii; another source (Grinëv, *Kto est' kto*, 106) identifies him as Nikolai Pavlovich Volynskii.

The Baidarka

When the Russians arrived in the Aleutian Islands in the early nineteenth century, they found the local indigenous people, the Aleuts, deftly maneuvering the cold stormy waters of the North Pacific in kayaks, which they called baidarkas. The Aleut baidarka is a small watercraft constructed of a light wooden frame covered with sealskins (Dyson 1990). The most common form was designed for one person. A person inserts the lower part of the body into the center hole, or hatch, and sits with legs stretched forward. A seal- or sea lion-gut splashguard is attached to the occupant and the rim of the hatch to keep water from splashing into the vessel. Paddles, weapons for hunting, and other necessary items could be attached to the top of the boat. The occupant most often wears a kamleika, a seal- or sea lion-gut "raincoat," which was attached to the hatch. A baidarki (or baidarka) could have two hatches, one for a paddler in back and one in front for a second person, often a hunter. The vessels could also have three hatches, with the paddlers in front and back and a passenger in the middle hatch. An example of the three-person baidarka, which is the type of boat Dr. Blashke used, is shown in Fig. 3.

Fig. 3. A three-hatch baidarka similar to the one Dr. Blashke used.

Dr. Eduard Blashke

Eduard Leonidovich Blashke (1810–1878) was a Baltic German who, after completing medical school, went into the service of the Russian-American Company. In 1834 he was sent across Siberia, vaccinating the population as he went. In Okhotsk he boarded the sloop *Sitkha* and arrived in Novo-Arkhangel'sk in 1835. In that year smallpox, which seemed to have come from the south, broke out in the Alexander Archipelago. Many Tlingit, who viewed vaccination as an attempt by Europeans to annihilate them, refused to be vaccinated. As a result, about 400 Tlingit

in a settlement near Novo-Arkhangel'sk died, as did about half the Native village at Novo-Arkhangel'sk. The Russians by contrast suffered only one death at Sitka (Gibson 1982–83:61–81).

Dr. Blashke believed that diseases arose from local factors, that is, the geography, weather, plants, soil, and so on. Therefore, he made a study of the area around Novo-Arkhangel'sk in an attempt to determine the cause of diseases of that area. For example, in his book he provides the first ethnographic use of devil's club (Blashke 1842), the ash of which the Tlingit used to treat sores (Lantz et al. 2004:33–48). Despite Blashke's beliefs regarding the origin of diseases, he was well aware that vaccines could prevent them. With this knowledge, between 1835 and 1838 he tried to vaccinate as many of the Tlingit as he could. By comparing the number of deaths, which would have been available to the Tlingit, between those who had been vaccinated and those who had not, one might wonder why the Tlingit generally remained so set against vaccination. However, we have only to look at our present-day American society.

In order to protect the RAC workforce in the other two major departments of the Russian-American Company (Kodiak and Unalaska), Governor Kupreyanov sent Dr. Volynskii to Kodiak Island to try to stem the spread of smallpox. Nevertheless, smallpox took a heavy toll on Kodiak Island, where, due also to native resistance, at least 736 people died by the end of 1837. Dr. Blashke, sent to the Unalaska District to vaccinate the Aleuts, was delivered to Illiuliuk in 1838 on the RAC vessel *Polifem*, commanded by Dmitri Fëdorovich Chernov. There he vaccinated the residents in the region of Unalaska Island, who were apparently not as resistant to the idea of vaccination as the Tlingit and Kodiak people had been. In addition, the Aleuts lived under the rather remote conditions of an island world that inhibited the transmission of smallpox, and thus they suffered much less. Dr. Blashke vaccinated over 1,000 natives around Unalaska Island. After he had traveled to the villages and settlements around the island and vaccinated the residents, he returned to the village of Illiuliuk, where he prepared to travel to the villages of the eastern Fox Islands and along the Alaska Peninsula to Unga Island. This he did in a three-hatch baidarka, an Aleut kayak, vaccinating the Natives in the villages along the way (Pierce 1990:62–63; Grinëv 2009:65–66). On this trip Dr. Blashke was accompanied by the *fel'dsher* Grobov (see Gibson 1982–83:68).[5]

Dr. Blashke published two works during his lifetime. His major contribution was *Topographia Medica Portus Novi-Archangelscensis* [The Topography of Medicine at the Port of Novo-Arkhangel'sk] in 1842. In 1848, he published his article about his Aleutian travels in the Russian journal *Morskoi sbornik* (Maritime Journal) (Fig. 3). Here follows Dr. Blashke's account of his journey in a baidarka.

[5] A *fel'dsher* is a doctor's assistant/medical assistant/paramedic.

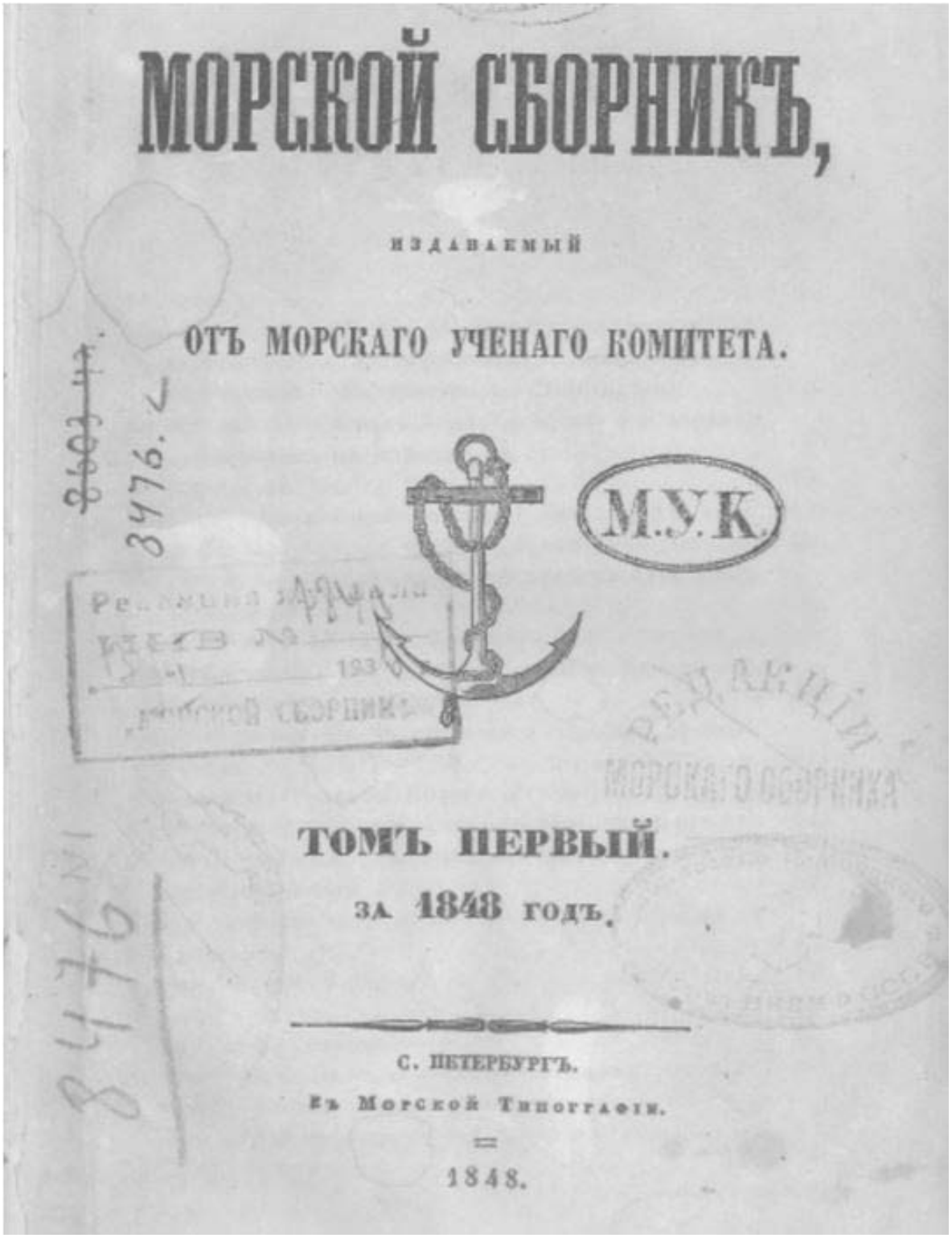

Fig. 3. Cover of the 1848 Russian journal *Morskoi sbornik* (Maritime Journal) containing the article by Dr. Eduard Blashke.

A Few Notes about a Voyage in Baidarkas and about the Fox Island Aleuts[6]

Eduard Blashke[7]

Part I

During my time in service on the Northwest Coast of America (from 1835 to 1840), full-blown smallpox raged in the Russian colonies. In spite of every precaution the illness spread more and more and became more malignant, as is usual with its first appearance. About 3,000 Natives died before the cowpox vaccination was introduced. The reasons for the slowness with which smallpox vaccinations came in general use here were essentially the following: 1) Difficulty in receiving fresh smallpox material because of the remoteness of this region from Europe. 2) The great loss of time, in case the smallpox [vaccine] turned out to be ineffective, in receiving another, since communication is only once a year. 3) The aversion of the Natives to a process incomprehensible to them, and, according to the shamans, issued as a means by which the Europeans want to eradicate them. And finally, 4) the difficult communication between the departments of the colony,[8] which also takes place only once a year. Fortunately, the smallpox [vaccine] I brought from Europe and Siberia had its effect, and with this a multitude of victims was saved.

I encountered all of the above-cited obstacles in full range, and only in May 1838 was it possible for the Manager of the colonies, Captain of 1st Rank I. A. Kupreyanov (today Rear Admiral), to send me to the Unalaska Department to undertake the necessary measures toward reducing the effects of the epidemic.

The Russian-American Company brig *Polifem* [Polyphemus], under the command of Ensign of the Corps of Navigators D. F. Chernov, brought me from Novo-Arkhangel'sk [now Sitka] to Illiuliuk, the main village of the Unalaska Department, lying on the north shore of Unalaska Island. The department extends to the west from Unga Island through part of the Alaska Peninsula to Umnak Island, over an extent of about 150 geographic miles. It is divided into the eastern and western parts and has up to 1,400 residents who live here and there in villages of greater or lesser significance. The eastern part has: on Unalaska Island 4 villages, on Unalga Island 1, on Akun Island 2, on Avatanak Island 1, on Tigalda Island 1, on Unimak Island 1, on the Alaska Peninsula 3, and on Unga Island 1. The western part has: on Unalaska Island 5 villages and on Umnak Island 2. Consequently, in all the villages, counting the main one as well, there are 22. Moreover, to this department belong the islands of St. George and St. Paul, with a village on each of them.

The distribution of the population, depending on the means of acquiring food, is quite unequal; in some places no more than 15 to 20 Aleuts live; in others, for example at Unga, in Belkofski on the Alaska Peninsula, at *Recheshnoi* on Akun Island, at Nikolaevskii [Nikolski?] on Umnak Island, from 80 to 100 and up to 150; in the main village are up to 200 people.

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[6] This work was originally published as "Neskol'ko zamechanii o plavanii v baidarkakh" in *Morskoi sbornik* [Naval Collection] 1 (1848), 115–124. A version of Dr. Blashke's voyage was translated by Jack McIntosh (see Dyson 1984:36–39). The translation of Blashke's article presented here has not been previously published.

[7] All notes are those of the translator, Richard Bland, unless otherwise specified. Throughout the text Bland used brackets [] or footnotes to insert points of clarification. All illustrations have been added by Bland.

[8] The Russian-American colonies are divided for convenience of management into six departments: 1) Novo-Arkhangel'sk, 2) Kodiak, 3) Unalaska, 4) Atka, 5) the Northern, and finally 6) the Kuril.—*Blashke*.

The instructions gave me freedom either to visit the department myself or, having supplied the medical assistant who was at the Illiuliuk hospital with the smallpox material, to send him. I decided on the first.

Having inoculated for smallpox all the residents of the main village and stocked up on a sufficient quantity of material [vaccine], I began to occupy myself with preparation for my trip. This preparation included, by the director of the office (who, together with the priest, makes this trip annually), the selection of three new three-hatch baidarkas and the assignment of six skilled Aleut paddlers acquainted with the currents and places where it was possible to land. One baidarka was assigned to me, another to my man, the third for the cargo. The cargo consisted of a small tent, a kettle for heating water and for cooking food (if there was something to cook), a small quantity of crackers, a sack of flour for the Aleuts (if there was no other food for them), a large quantity of tobacco, tea, and sugar for gifts and trade for other supplies in the settlements, and finally a few bottles of rum. When these preparations and my wealth, especially the tobacco, were made known, then all began to envy the Aleuts who were fortunate to accompany me.

It was necessary to dress in the custom there. Needed were long impermeable boots, made from the lower part of a sea lion's throat and a kamleika, a kind of shirt that comes to the calves, with a *kul'* (hood) made from bear gut (this is the best) or from seal lion gut. The kul' is drawn tight with a cord under the chin and the hands at the wrists. All this is soaked beforehand in sea water, because in dry form it is too stiff and breaks easily. The Aleuts also wear a wooden hat ornamented and decorated with sea lion whiskers to protect themselves from the sun and sea water.

The construction of baidarkas is quite skillful. The frame is made of round poles, from 4 to 5 *liniya* in diameter;[9] from the wood of *chaga* (*Taxodium sempervirens*).[10] These poles are joined together and attached to a keel, which is thicker and composed for flexibility of several pieces connected with baleen. This wood is collected along the shores, where it is washed ashore by the current from California, because the whole chain and a large part of the Alaska Peninsula are entirely unforested: so it is rarely possible to find even low gnarled alder brush (*Alnus rubra* Bong.), and there are no trees at all. Depending on the length, from 10 to 14 feet, and its assignment for two or three people, as many hatches or openings are left in the baidarka and all is stretched over with *laftak* (seal or sea lion skins sewn with sinew). The traveler sits in the middle hatch. The paddles used are double, that is, both ends are equipped with blades. The Aleut baidarkas of the Fox Islands are all easier to paddle, but they are also more dangerous. The slightest lateral movement, if the paddlers are not prepared for it, overturns them; if one turns over it is not easy to get out of the narrow hatch, which, without practice, is also difficult to get into. On the hatch is stretched a cover, also sewn from gut, which the passenger ties up under his armpits so that if a wave rolls over him, except his face and hands, all the rest of the body will remain entirely dry. The painting of the face by the Aleuts, which is now going out of use, served without doubt as a protective shield from sea water, which has a very unfavorable effect on the skin. During this trip the skin came completely off my face twice.

The dexterity and patience of these amphibious people surpasses all that the most vivid imagination can envision. You should see them in the small single-hatch baidarkas during storms and big waves.

They gave me as a guide from village to village an Aleut in a single-hatch baidarka who, knowing the locality in more detail, served also as a pilot. For hours at a time I watched with amazement how he, now covered by a wave, now emerging from it, avoided with astonishing

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[9] One *liniya* in old Russian measurement equaled 2.54 mm or 0.254 cm.

[10] *Taxodium sempervirens* is now *Sequoia sempervirens* (California or coast redwood).

dexterity the crest of waves that could have easily upset his baidarka. The most difficult thing, incidentally, is to land on an open shore and push off from it, because here the surf on the shores is quite substantial, even under calm sea conditions. In order to land it is necessary to await the largest wave: and then on it one must be carried onto the shore, and in one moment, before the second swell arrives, to jump out and pull the baidarka onto the shore. It is even more difficult to launch. It is hardly possible to understand how the Aleuts, with a receding wave, have time in one instant to get in, tie up the splash cover, and work the paddle, since with the smallest delay the baidarka will either fill with water or capsize. If the sea is calm they skillfully compete with one another in throwing arrows [darts] at sea birds; for lack of birds they will select as their targets the fired arrows, which also surprises the traveler due to their precision and accuracy. Like all children of nature, attentively observing occurrences that surround them, they paddle directly to their destination, even if the shore is concealed from the eyes by a thick fog or it is necessary to paddle through broad straits. I often ascertained this, looking at my compass. In these cases they only follow the direction of the waves and the change of their forms produced by changes in the wind. They pay less attention to the position of the sun and the constellations. The Aleuts know precisely the time of the tides and use them when traveling. Such knowledge is particularly important for crossing straits when, with conflicting currents the sea, up to then entirely calm, suddenly over the extent of some 5 or 10 minutes begins to boil from the force of these currents, and short waves rise up so steeply and high that it is impossible to cross without capsizing or breaking up the baidarka. In the morning the old men sit in a high place and observe the rising sun. There they do not lose sight of a single little cloud, not one small streak on the horizon, and based on the clouds' form and direction, and also on the flow of light from the dawn, they determine with great reliability their meteorological conclusions for the whole day. If the sky is cloudy, then they refer to the movement of the sea and the direction of the waves. One needs to rely completely on their prognostications, and if an Aleut, shaking his head, laconically says: "*Odnako khudo*," which means, "I think, today is not good to travel," then it is good to quietly remain where you are. If you show distrust in his words or reproach him for laziness, he will prepare the baidarka with the greatest equanimity, invite you to get in, and maybe says only: "I am not guilty of this." In the beginning, when I had been told much exaggerated slander about Aleut laziness and insisted on departure when it seemed to me the sea was calm, through this I subjected both myself as well as them to great danger.

During long and unbroken trips a baidarka can make seven *versts* [~7 km] in an hour; for a short distance, when there is no need for the paddlers to save their energy, up to ten or more.

The strength of the Aleuts is amazing; they paddle nonstop from 10 to 12 hours, interrupting work only for a few minutes in order to drink water. Twice I happened to go 16 hours running. I hardly had the patience to remain entirely in one and the same prolonged, uncomfortable position that was necessary to avoid any movement. During this my Aleuts, as usual, were happy, cheerful, and fresh. After every long trip they readily steam themselves in a bath, wherever they can.

The places where it is possible to obtain fresh water and wood for building a fire are not numerous, though all are known to the Aleuts. On long trips there is often no possibility of landing because of the steepness of the shores. To this number belong the north shore of Unimak and the island of Unga, where it is possible to land almost only at the villages. On 12- or 16-hour trips meteorological forecasts are quite important because with the frequent storms that occur on these seas, in spite of the skills of the Aleuts that I witnessed, salvation is possible only by some miracle. On one such trip the laftak split at the very keel of my man's baidarka and water, though being held out by air resistance in the tightly closed baidarka, flowed in rather strongly. My man, who was located not much behind us, raised a terrible cry, for quite valid reasons. When we had

gotten to him he had to sit in a rather awkward position on top of my baidarka, between me and the front paddler. They immediately turned his baidarka over, drew out the water with the wooden water pump (which is an indispensable accessory for a baidarka, like a pump on a ship), and stopped a two *dyuim* [~2 inch] hole with a piece of raw fish, which the Aleuts always have with them for such cases. Having done this and laughed over the fearfulness of my man, they continued to row in the most joyful spirit. In order to be able to pull through such misfortune, they made it a rule never to go to sea with fewer than two or usually three baidarkas together, especially where there were few landing places.

My whole trip from Unalaska, in the eastern and western parts of this department, lasted from 19 June to 25 August. If I stopped in villages I was occupied with the sick and smallpox vaccinations; but in areas that were not settled, where strong winds held me sometimes for 4 or 5 days with bad weather, the trip was made painful, especially when in addition there was insufficient food. The Aleuts were contented with a small quantity of flour, called *burduk*; from it they cooked a kind of porridge and flavored it with oil, which they always carried with them. Beyond this they received tea and tobacco, the two things that give them the greatest pleasure and for which they gladly reject everything else, in particular for tobacco. I confess that tea, biscuits, and sago palled to me so much that when we succeeded in getting a young seal, [11] the soup from it was more pleasing to me than any dainty dish of the most discerning gastronome. Having arrived in whatever village, I was supplied with a large quantity of fish and raw and salted whale and sea lion meat, sometimes even chickens. Concerning chickens, which, like everyone else in the colonies, the ichthyophages (fish-eaters) have, as well as eggs, because of the smell of this food from so much fish oil, those unaccustomed to this taste cannot eat them at all.

The most difficult and most tiresome is the trip itself. With a lively imagination one can see in the variety of cliff formations similarity to the most unusual figures and objects: the view of the smoking hills, the animated sea with hundreds of whales, sea lions, and porpoises sometimes surrounding the baidarka and looking at it with amazement or indifferently swimming by; all this, of course, creates a majestic, beautiful picture and arouses a variety of thoughts and feelings; but the uncomfortable position and numbed limbs do not permit admiring long.[12]

When I went to shore they set up a small tent for me and laid down a bear skin, which played the role of bed, divan, etc. The Aleuts constructed for themselves something of a kind of tent from skins, which had served as flooring within the baidarka. Soon they kindled a cheerful fire, and when the Aleuts began to drink tea and each had had a swallow of rum, their faces reflected the greatest pleasure and happiness. When we approached a village, all the residents came out onto the shore and bowed to us. Each brought me some gift: the men—arrows, things carved of walrus tusk, minerals, and so on; the women—laces of whale sinew, things woven of grass, gut coverings for caps, and so on. In turn it was necessary to give each tea, sugar, and tobacco. Rejection of their gifts they consider contempt and resent this.

Soon after my return from the trip the brig *Baikal* arrived, under the command of Fleet Lieutenant S. V. Voevodskii, who was supposed to take me to Novo-Arkhangel'sk. I took leave of these good-natured people with the confidence that if I had not entirely rid them of the terrible smallpox epidemic, I had at least substantially reduced its severity, since in many villages, especially in the western part, before this there had been fatal cases of smallpox and varioloid.[13]

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[11] Sago is a tapioca-like starchy food extract from tropical palm trees.

[12] In this case it is noticeable that whales do not raise a massive column of water, like a fountain, but only small sprays in the form of steam, which has a very bad smell, but from afar they seem like a true fountain.—*Blashke*.

[13] Varioloid is a mild form of smallpox usually affecting those who have been vaccinated or who have previously had smallpox.

Part II[14]

The Aleuts of the Fox Islands originate from the Mongolian tribes. Whether they crossed from Asia, and how, this question probably will remain forever unresolved. They are strong, well formed, tall rather than of medium height and, not rarely, perhaps due to mixing with Europeans, with quite white faces, especially the women. The hair is dark, sleek, and very stiff. They are extremely friendly, helpful, hospitable, and honest, quite adept and patient in mechanical work, inquisitive and very imitative. Very many are able to read, some even to write fairly well. Very often I saw old Aleuts learning to read and write from the young, and patiently enduring the strict and sometimes too strong reprimands of their teachers. They are all baptized and carry out Christian obligations with exemplary zeal, not only in external rites but also in life itself; they share with those in need and are even ready to give them everything.

Every village is under the leadership of a chief called a *Toyon* whom they select from their midst.[15] In addition, the whole department is subject to two head Toyons: of the western and eastern regions. For this title they always select the richest, most experienced, and most skilled at hunting and all kinds of affairs, and who is outstanding in philanthropy. The Toyons govern patriarchally and serve as intermediaries between the Aleuts and the head of the office of the Russian-American Company in Unalaska. Knowing the needs of the Aleuts, they try in this regard to ensure that each obtains for his hunt the most necessary goods, assign a time and place for hunting, catching birds for clothing, equipping himself with food supplies for winter, and so on. Besides, in large villages there are *baidarshchiki*, who are predominantly Russians.[16] They manage the economic part and maintain a supply of the necessary wares, which they trade to the Aleuts for furs based on a price set by the [Russian-] American Company on all these items, or on account against a future hunt. Many do not require quick payment for their hunt and have more or less substantial credit from the Company.

Dwellings—with the exception of the richest Aleuts, the Toyons, and the small number of Russians—are all the same. They are from 18 to 20 feet long, 12 feet wide, and from 7 to 8 feet high. All are constructed of various kinds of wood that is thrown up by the current, part from the American shore, part from the Asian, and is collected along the shores (frequently palm and camphor wood are found). These huts are covered on the outside with sod, which gives the whole village a peculiar appearance. If you do not know in which direction it lies, then based on heavy growth of grass and uneven ground, it is easy to mistake a house for a mound overgrown with high grass. Each hut is divided into two sections by a plank partition. The first serves as a kitchen, storeroom, and so on, with an opening in the top for the passage of smoke, and is not outstanding in cleanliness. The second dwelling room is always kept clean and dry; the floor, walls, and benches are covered with *tserel'* (straw matting). Light penetrates through a hole in the ceiling, which is covered only during bad weather with a bladder stretched on a frame. Doors are extremely narrow and low so that it is almost impossible to crawl through. In other houses they even enter through the smoke hole or window, call it what you like; for Europeans such an entrance is quite inconvenient. Rich Aleuts build their dwellings more spaciously and larger in the Russian way, and the chief Toyon of the eastern region lives even luxuriously. In each village there is at least one Russian bath and in others several. The Aleuts visit them quite often and like to sit in the steam.

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[14] Here follows an additional part of the article published in *Morskoi sbornik* [Marine Collection] 1 (1848), 160–165.
[15] The term "toyon" is a Yakut word designating something like "prince" (Grinëv 2008:330).
[16] The leader of the baidarkas: a title that has remained since long ago when only Russians were given leadership of a party of baidarkas for hunting.—*Blashke*.

The dress of the Aleuts consists of so-called *parki* [parkas] (long, closed on all sides, clothing of bird skins of the family Alcae,[17] which they put on over their heads). A large part of them wear burlap or some other shirt beneath. This clothing is very warm and is washed rather often. The women wear on their heads paper or silk scarves that they tie up in the Russian fashion. The Aleuts either go barefoot or wear boots, as I described above. Many also wear a jacket and pants of frieze, or even of woolen cloth, while the women wear a cotton print dress or the like.

The food of the Aleuts consists chiefly of fish, whales, seals, and sea lions with the necessary condiment, that is, with oil, without which they are not able to eat anything, without which they cannot live. In summer, on Unalaska and the nearby islands, they catch more whales than it is possible, for lack of people and dishes, to dry, salt, render the oil, and in general preserve. There are many seals everywhere; sea lions are found in some places. On Unimak Island, on the Alaska Peninsula, and on Unga Island deer are often encountered, which are also used as food. Sea birds, which are in innumerable multitude here, are used only with the complete lack of other edible supplies, just like the meat of sea beavers [sea otters] during the hunts. In spring birds' eggs are collected by the thousands. They raise chickens, but only for the eggs. They make the food supply for winter predominantly of a kind of salmon that periodically appears in the rivers. At a certain time, this fish strives in such a multitude to go up the river that every seine catches up to a thousand of them, each weighing from 5 to 8 and even 10 pounds. In the rivers there is literally little room for them, and fish force one another out of the water. Then they [the fish] need only to be thrown along the bank and cleaned. Catching other species (Gadus [cod], Pleuronectes [flounder], and so on) with fishing tackle is considered a waste of time and not so profitable. Beyond this, the Aleuts eat all kinds of crustaceans and some wild plants: *Conioselinum*,[18] the roots of *Lilium Martagon* L. [Turk's cap lily], and others: also berries of the species *Vaccinium* [blueberry] and *Rubus* [raspberry]; but all this is only eaten with oil. Flour and bread do not constitute their daily food but will sometimes fall to them as a most rare delicacy; the passion for tobacco, both among the men and among the women, has no bounds; if there is some, they chew it all day; if there is not, then they are ready to give everything they have for one leaf. They are not entirely partial to strong drink, perhaps because vodka and rum are extremely rare and they obtain them in small quantity, and consequently, they still, so to speak, have not yet fully savored the harmful sweetness of these drinks.

Despite the abundance of food, every spring in former times they suffered a great shortage of food. This occurred for two reasons: first, non-economical administration of winter food supplies, carelessness about preserving them from spoiling, and consuming in the first months that which they could have eaten until summer; second, from the fact that the supplies in some villages, where the fish run along the banks and in the rivers only a short time, are quite inadequate, and with continued rains the fish cannot be caught at all. Since they live with complete lack of concern for the future, in winter, with insufficient occupation, they often gather for *igrushki* (for singing and dancing); even whole villages visit one another, and at these festivals they eat the whole day and consume an unbelievable quantity of oil and dried fish. Therefore at the present time, measures have been undertaken to save half of all supplies collected by the baidarshchiki in storehouses specially constructed for this purpose. With the onset of hunger, edible supplies are issued weekly from these storehouses. Villages that have more help the poorest.

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[17] The suborder Alcae includes birds such as the puffin, auk, and murres.

[18] *Conioselinum* is a genus of the Apiaceae family, which includes *Heracleum maximum* (cow parsnip or Indian celery), and which Blashke is probably referring to.

All summer the Aleuts spend in hard work. The men and women are burdened with it. In spring they mend the baidarkas and construct new ones. In the month of May all the young and healthy men, the number of whom the Toyon beforehand agrees on with the office manager, are sent to hunt sea beavers, and they carry out their mission with special affection. One party is sent to catch birds, because about 40,000 skins are required annually for clothing; another party goes out whale, walrus,[19] and seal hunting, so that in the villages only the old and sick remain, who, together with the women, prepare supplies for winter: they catch fish, clean and dry them, and so on. In winter, when they are less occupied, they set traps for foxes and the like. The hunt for sea beavers at this time of year is difficult and dangerous and only ardent hunters go out. The women prepare clothing from the bird skins and gut, the men make weapons, and so on. Free time passes in singing and dancing. The singing, uniform to the highest degree, is accompanied by the sound of large tambourines, which consist of large hoops covered with the membrane from the tongue or liver of a whale. Their dancing consists of jumps and strange body movements while remaining in one place.[20]

ACKNOWLEDGEMENTS FROM THE TRANSLATOR

I would like to thank Anna Gokhman for proofreading the translation and Nan Coppock, Associate Director of the Office of Publications (ret.) at the University of Oregon, for her patient responses to my numerous editorial questions.

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[19] Good whalers are rare. Since the hunt for this species requires great skill and courage and consists of the most important item of food, the best whalers hold great honor among their comrades.—*Blashke*.

[20] This article was previously published in the Berlin journal: *Monatsberichte über die Verhandlungen der Gesellschaft für Erdkunde zu Berlin* [Monthly Reports on the Proceedings of the Geographical Society of Berlin]. On the assumption that it would remain unknown for a large part of our readers, the editorial staff requested consent of the author to publish it in this Collection.—*Blashke*.

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ABOUT THE TRANSLATOR

Richard Bland has a Ph.D. in anthropology from the University of Oregon with a focus in Arctic archaeology. His professional interests have directed him toward Northeast Asia. He "is now retired" and translates books and articles on that area as well as on Russian America and other nineteenth-century history of Alaska and the Northwest Coast.

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Journal of Northwest Anthropology, 49(1):87–113 2015

66TH ANNUAL NORTHWEST ANTHROPOLOGICAL CONFERENCE
27–30 March 2013

Hosted by the Anthropology Department, Portland State University

Portland, Oregon

Anthropology, Because it Matters

According to its Governor, Florida doesn't need any more Anthropologists; Anthropology is reported in the press to be the worst BA major, the Government of Canada has gutted the Archaeology/Heritage program in Parks Canada and changed the mission of what was the National Museum of Civilization to the National Museum of History, abandoning a strong commitment to Canada's First Nations. We and our professional organizations have all written letters, but we need to show how the practice of Anthropology matters. We know it matters. The conference welcomes symposia and papers on this topic as well as papers and symposia on any Anthropological topic in all four subfields.

Symposia, Roundtable, Workshop, General Sessions, and Posters[1]

Symposia

Paleozoology of the Willamette Valley

Over the last thirty years, researchers have made some headway in understanding the zooarchaeological and paleontological record of the Willamette Valley, with recent research broadly expanding the scope and time depth of these data. This session's goal is to present and discuss our current data, as well as identify further lines of inquiry. We hope to create a collegial atmosphere to share information and to further refine our research directions. The session is organized into a series of papers and a panel discussion. The papers cover the history of research, Pleistocene and Holocene faunal datasets, geoarchaeological considerations, and traditional ecological knowledge. The panel includes discussants with a deep knowledge of the region to further highlight areas of need in understanding the regions paleoecology.

Organizers: Daniel M. Gilmour, Alexander E. Stevenson, and J. Tait Elder

Session Introduction and Pleistocene Studies in the Willamette Valley, Daniel M. Gilmour and Paul S. Solimano

An Overview of the Willamette Valley Zooarchaeological Record: Patterns, Sampling, and Interpretive Considerations, J. Tait Elder

[1] Abstracts of individual papers can be found at http://northwestanthropology.com

Bugs! Bugs! Bugs! – Suggesting a New Approach to Pacific Northwest Archaeology, Martin E. Adams

Freshwater Mollusc (Paleo)ecology in the Willamette Valley and Implications for Conservation, Alexander E. Stevenson

Panel Discussion: Thomas J. Connolly, Robert Kentta, Eirik Thorsgard, Jim O'Connor, and Henry Zenk

Cultural Practice and Translation at Grand Ronde (Elowah Falls)

One of the most fundamental tasks of anthropology is to translate between cultures. These papers highlight the usefulness of translation in efforts to increase awareness of the history and culture of Grand Ronde. The Confederated Tribes of Grand Ronde represents tribes forcibly removed from traditional territories in western Oregon. After building a reservation community over nearly a century, Grand Ronde's government-to-government relationship with the United States was terminated in 1954. This act of ethnocide did not mark the end of the community. In 1983, after decades of dedicated work, Grand Ronde regained its status as a federally recognized tribe. Restoration marked a turning point in a process of cultural revitalization that continues to this day. Translation is essential to this process. This panel represents efforts to translate, not only between cultures, but also within cultures, and across time, as meanings and cultures transform through practice in and around Grand Ronde.

Organizer and Chair: Nora Pederson

Creating Dialogue in Environmental Ethnohistory, Nora Pederson

From Eden to Hell, David Lewis

Treaty or Non-Treaty? Identity and the Heirs of Succession to the Western Oregon Treaties, Daniel Boxberger

Cultural Translation on Late Nineteenth- century Grand Ronde Reservation: a Participant's View, Henry Zenk and Jedd Schrock

Discussant, Cheryle Kennedy

Applied Anthropology at Portland State University: Applying Research to Solve Real World Problems (Willamette Falls)

Anthropology is becoming an essential tool in many applied contexts. To coincide with the theme of the Northwest Anthropological Conference (NWAC), this symposium highlights applied anthropology at Portland State University. The Anthropology Department is dedicated to addressing real world problems through applied research. Our work contributes to public policy and answering questions about significant cultural, social and environmental issues. We not only train students to engage many of the issues affecting the world's population, but also to actively contribute to ethical projects with applied outcomes in academic and professional settings. Our Department is proud to announce the establishment of the Office of Applied Anthropology Research (OAAR). OAAR is a

research and pedagogical entity that ethically operationalizes anthropological theory and method in applied contexts in the United States and abroad. Our Department thus exemplifies the blending of academic rigor with practical application in order to train the next generation of anthropologists.

Organizers: Jeremy Spoon and Doug Deur
Chair: Jeremy Spoon

Environment: Archaeology and Climate Change in Northwest Alaska, Shelby Anderson

Environment: Wayfinding in the Contested Wilderness: Applied Environmental Anthropology in the National Parks, Doug Deur

Environment: Indigenous Peoples and Protected Areas: A Model for Co-Learning, Jeremy Spoon

Environment: Working towards Collaborative Stewardship: Nuwuvi (Southern Paiute) and Federal Agency Perceptions of Hydrological Restoration in Two Great Basin Protected Areas, Kendra Wendel

Environment: Whistling at Night with Twisted Lips: The Role of Nuwuvi (Southern Paiute) Taboos in Natural and Cultural Resource Conservation in Pinyon-Juniper Ecosystems, Brian J. Lefler

Human Health: Medical Anthropology in Action: Creating Community-based Sexual Health Programs, Charles H. Klein

Human Health: Mental Health in Post- Conflict Libya: Program and Policy Recommendations, Amanda Lubit

Education/Interpretation: Creating an Innovative K-8 Bilingual Curricular Framework, Sharon Carstens

Education/Interpretation: Friends as Resources: Critical Mentoring Strategies for Postsecondary Preparation, Hillary Montuori

Education/Interpretation: Interpretation in Southern Great Basin Protected Areas: Assessing Representations of Indigenous Peoples and Place, Rachel Lahoff and Cerinda Survant

Education/Interpretation: A Marriage of Two Applications: Anthropology and Improvisation, Brad Fortier

At the Water's Edge: Cultural Adaptation and Site Preservation along Puget Sound's Rivers and Coastline (Multnomah Falls)

Ranging from the prehistoric through modern times, the richness and complexity of Washington's rivers and coastline has been a focus of human activity. This interrelationship between people and water in this very dynamic space has led to a concentration of archaeological sites containing invaluable data about early settlements, resource utilization, and industry. Preservation of these sites

is often threatened by forces such as development, erosion, sea level rise, and environmental shifts. The papers in this symposium examine some of these at-risk resources and offer some thoughts and recommendations for the best way forward.

Organizer and Chair: Danielle Storey

The Management and Regulation of Nature: An Examination of How Cultural Resource Management Fits into the Larger Picture of Flood Control and Ecosystem Restoration, Danielle Storey

Charred, Uncharred, or Absent: the Likelihood of Botanical Preservation and What to Do About It, Melanie Diedrich

Archaeological Investigations at Eagle Gorge, Washington, Jason Cooper

Aquaculture and Archaeology, Katherine M. Kelly

Levees on the Landscape, Kara Kanaby

The Cyrus Jacobs- Uberuaga House Public Archaeology Project (Multnomah Falls)

This session will explore the Cyrus Jacobs- Uberuaga House Public Archaeology Project, which involved the excavation of an historic well associated with Boise, Idaho's oldest standing brick house. A collaborative project between Boise's Basque Museum and Cultural Center, the Idaho Archaeological Society, and the University of Idaho, excavations took place in the summer of 2013.

Organizers: Stacey L. Camp, Jessica Goodwin, and Tracy Schwartz
Chair: Stacey L. Camp

Collaboration and Outreach at Boise, Idaho's Cyrus Jacobs-Uberuaga House Public Archaeology Project, Stacey L. Camp

Drawing from the Well: The Cyrus Jacobs-Uberuaga House Public Archaeology Project, Jessica Goodwin

"Fantastic!" "Wonderful!" "Excellent!": Education and Public Perception of Archaeology at the Cyrus Jacobs-Uberuaga Boarding House Well Excavation, Tracy Schwartz

Chemical Analysis of Artifacts Recovered from the Cyrus Jacobs-Uberuaga House, Sarah Harman, Tara Garcia, Ray von Wandruszka, and Mark Warner

Site 45CH791: A Specialized Food Processing Station near the Stemilt Creek Village (Elowah Falls)

Data recovery excavations at site 45CH791 on the Columbia River near Wenatchee, Washington have provided new insights into the subsistence practices of this area. This site represents a

specialized resource processing area likely associated with the nearby Stemilt Creek Village site (45CH302). Previous data recovery excavations at the Stemilt Creek Village site show that this ethnographically documented village represents a late prehistoric site with large residential structures that reflect unique socioeconomic complexity. This symposium will present the results from recent excavations and analyses of site 45CH791 and show the relationship between site 45CH791 and the Stemilt Creek Village site. The papers in this session include discussions of stratigraphy, shell midden deposits, bone tools, lithic technology, blood residue analysis, and faunal remains.

Organizers: Sara J. Davis and Terry L. Ozbun
Chair: Sara J. Davis

Introduction to the Cultural Deposits at a Food Processing station - 45CH791, Sara J. Davis and Michele L. Punke

Shellfish and Bone Grease from a Food Processing Station – 45CH791, Sarah Jenkins

Bone and Antler Tools from a Food Processing Station - 45CH791, Kristen A. Fuld

Lithic Industry at a Food Processing Station – 45CH791, Terry L. Ozbun

Blood Residues at a Food Processing Station – 45CH791, Cameron Walker

Putting it into Context: Shell Middens, Villages, and Complexity on the Plateau, Ron Adams, Terry L. Ozbun, and Sara J. Davis

Discussant, Sara J. Davis

Preliminary Results from the Tse-whit-zen Project: Zooarchaeology and Geoarchaeology of a 2000 yr old Lower Elwha Klallam Village on the Strait of Juan de Fuca, Washington State (Willamette Falls)

Tse-whit-zen, a large ancestral village of the Lower Elwha Klallam Tribe, located on the southern shore of the Strait of Juan de Fuca, Port Angeles, WA, was extensively excavated in 2004 as part of a transportation project. Multiple houses spanning the last 2,000 years were documented with exceptionally fine geo- stratigraphic control, and faunal samples were collected that allow for detailed reconstruction of animal use over this period. In 2012, our team began a project to study a large sample of Tse- whit-zen's faunal remains and synthesize its geo- stratigraphic records to address several goals: 1) evaluate the effects of abrupt and gradual environmental events (earthquakes, climate change, and shoreline development) on local animal populations during the past 2,000 years; 2) study sequences of faunal records from three different households of varying social rank to understand how social factors influenced response to environmental change; 3) train students in zooarchaeological and geoarchaeological analysis; 4) work with the Lower Elwha Klallam Tribe as they develop a museum and educational programs related to this important site. This symposium will provide an overview of the project and preliminary results.

Organizer and Chair: Virginia L. Butler

Tribal Perspectives on Tse-whit-zen, Frances G. Charles

Tribal Perspectives on Tse-whit-zen, Arlene Wheeler

Overview of the Tse-whit-zen Village Site and Current Zooarchaeological and Geoarchaeological Research, Virginia L. Butler and Sarah Sterling

Dates as Data: Paleotsunamis and the Occupational Record at Tse-whit-zen, Ian Hutchinson, Sarah Sterling, and Curt Peterson

Potential Uses for GIS in the Analysis of Deposits at Tse-whit-zen, Sarah Sterling, Adam Freeburg, and Christopher Milton

Dealing with Abundance: Redundancy Approaches to Sampling Archaeofauna, Laura Syvertson and Sarah K. Campbell

Preliminary Thoughts about the Tse-whit- zen Invertebrate Remains, Sarah K. Campbell

Tracking Fish Response to Abrupt Environmental Change at Tse-whit-zen, a Large Native American Village on the Olympic Peninsula of Northwest Washington State, Kathryn A. Wojcik and Virginia L. Butler

Don't Forget the Birds!: Bird Remains from the Tse-whit-zen Village Site, Kristine M. Bovy and Morgan L. Breene

Tse-Whit-Zen: Preliminary Mammal Identifications and a Comparison of Mammalian and Avian Taphonomy, Michael A. Etnier and Kristine M. Bovy

Discussants, Frances G. Charles Arlene Wheeler

The How, Where, and Why of Traditional Cultural Properties (Crater Lake)

Since it was first published over 20 years ago, National Register Bulletin 38 has been used with greater or lesser success to record and evaluate the traditional significance tied to communities' long-term relationships with historic places. With the proposed update of this bulletin, it is an appropriate time to explore how "Traditional Cultural Properties" are defined, evaluated, and protected in the Pacific Northwest, and to illuminate some of the issues that are faced in addressing them during implementation of the National Historic Preservation Act. Panelists representing a cross-section of heritage professionals will briefly provide examples of how TCPs have been defined, evaluated, and protected, and raise issues pertinent to their use as a category of historic property.

Organizer and Moderator: Doug Wilson

The How, Where and Why of Traditional Cultural Properties, Panel Discussion, Doug Wilson, Paul Loether, Eirik Thorsgard, Rick McClure, John Pouley, Eric Oosahwee- Voss, Scott S. Williams, Catherine Dickson, and Doug Deur

Discussants, Paul Loether Eirik Thorsgard Rick McClure, John Pouley Eric Oosahwee-Voss Scott S. Williams Catherine Dickson Doug Deur

Salmagundi/Mélange/Pastiche (Crater Lake)

Salmagundi, mélange, pastiche—a mixture—words that define and bind this session's papers. Research, field work, and analysis often produce data and generate questions that are worth sharing and sometimes do not reach reports. This session attempts to address this by providing a venue for short presentations (10 minutes each) on a variety of historic and archaeological topics.

Organizer and Chair: Lorelea Hudson

The Lazy Husband Law of 1913, Erik Anderson

Historic Glass and Ceramic Gastroliths at 35GM137, Dan Martin

Slated for More: An Examination of Historic Writing Slate in the Archaeological Record, Molly Swords

A Brief Talk on a Deep Subject, Eric Gleason

Where is the Steamer Idaho?, Sharon Boswell

Archaeological Evidence of Modoc Firearms during the Modoc War, Jacqueline Cheung

It's Time to See the Frozen Fish Aquarium, Johonna Shea

Chinese Olives and Dracontomelon: Exploring the Merchandise of the Pon Yam Store in Idaho City, Susie Osgood and Mary Anne Davis

Anthropology in Practice: Examples from the Confederated Tribes of the Colville Reservation (Elowah Falls)

For the Confederated Tribes of the Colville Reservation, Anthropology is a substantial contributor in promoting the tribal mission. The Colville Tribes use Anthropological methods to help protect tribal sovereignty, preserve culture and traditions, and reestablish lost rights. In this symposium, we present examples where Anthropology is used to expound the interests of the Colville Tribes. In doing so, we show that not only does Anthropology matter, but it is vital for our cultural preservation.

Organizer and Chair: Jon Meyer

Introduction to the Confederated Tribes of the Colville Reservation, Jon Meyer

Life along the Nespelem River, Lucy Luevano

Sinkayuse and the Rocky Ford Area: The Multi-Leveled Resource Use by Chief Moses and His People and the Importance of Traditional Cultural Properties in Section 106 Consultation, Eric Oosahwee-Voss

Reports of the Sinixt Extinction are an Exaggeration, Jon Meyer

Fishing on the Colville Reservation: Adapting to the Dams, Brian Monoghan

Case Study: A Holistic Approach to Breathing Life into the Drowned Town of Keller, a Community on the Sanpoil River, Arrow Coyote

Through the Smoke of Fire 198, Amelia Marchand

How Collaboration and Shared Responsibilities Result in Resource Protection: A Case Study from the Chief Joseph Dam Reservoir Project Area, Aaron Naumann

Applying Anthropology through Service-Learning, Citizen Science and Peer Mentoring

The Learn and Serve Environmental Anthropology Field (LEAF) School at Edmonds and Everett Community Colleges offers field- based opportunities for students to apply anthropology to service-learning projects in field-based settings. One day and term-long service-learning and citizen science projects draw students from introductory anthropology courses, often through projects integrated across disciplines. Intensive field-based courses in human ecology and archaeology provide hands-on opportunities for students to work on projects that further the sustainability of local communities in partnership with local tribes, government agencies, cultural resource management firms and non-profit organizations. More advanced students serve as mentors to introductory students in anthropology and developmental education as a national pilot project under Connect 2 Complete, a Campus Compact program with funding from the Bill and Melinda Gates Foundation.

Organizer: Thomas Murphy
Chair: Erin M. Ryan-Peñuela

Unlikely Bedfellows: A College, Consultant, and City use Mitigation for Education, Thomas Murphy and Emily Scott

"Cheat Death, Return to Life": Cultural Anthropology Matters in the Archaeological Excavation of a Japanese Milltown, Marshall Kramer

"Gaman": Stories of Endurance from the Japanese Internment in the Pacific Northwest, Crys Donovan and Janelle Kono

Wildlife Matters: An Environmental Anthropology Report on Granite Falls Alternative Route, Jane Hutchinson

Discussant, Thomas Murphy

Encounters with High School Teachers: The Dreams of Boas (Crater Lake)

Three high school teachers share their collective experiences teaching anthropology in Portland and Woodburn, Oregon. Michael Sweeney is retired from teaching in Portland Public Schools yet continues to teach Anthropology as an adjunct instructor at Lewis and Clark College. Lynne Gardner-Allers is currently on a leave of absence from Portland Public Schools and a doctoral student in the Critical and Socio- Cultural Studies in Education program at the University of Oregon. Heide Goertzen is currently a teacher at Woodburn High School in Woodburn, Oregon, where she teaches IB Anthropology as well as US History and Dance. Our papers define the ways in which an anthropological curriculum informs our praxis and pedagogical foundations. One paper illustrates why anthropology matters through the development of an interpretive and applied approach. Another compares two teachers' pedagogical interpretations of how they teach culture and the methods they deploy when teaching about cultures. Finally, student field work examines two school cultures from Woodburn High School and Roosevelt High School in Portland, OR.

Organizer and Chair: Michael Sweeney

Teaching Anthropology in High School: Ruminations from a Public School Teacher, Michael Sweeney

Teaching "Culture", Lynne Gardner-Allers

The Woodburn Experience: "Marginal" Insights, Heide Goertzen

Mining in Central Washington: Management of Eligible Properties through Cooperative Partnerships (Astoria)

Often Cultural Resources Management requirements pit archaeologists and preservationists "against" clients and developers, particularly when resources are discovered. This state of affairs has been changing in recent years, as clients are being brought into the preservation discussions, and are being made partners in protection measures. To illustrate these partnerships, using cooperative, collaborative, and creative measures to help protect resources, we are presenting five north-central Washington Mines, their problems, and their resolutions. Management solutions must be found, and they must satisfy regulatory requirements, but they can in many cases include the landowners and localities using creative mitigation, and a sense of "historical responsibility".

Organizers: William Schroeder and Christopher Landreau
Chair: William Schroeder

Saddle Rock Park, Wenatchee, WA— Managing a Gold Mine for Recreational Use, Lauren Walton

Cooperative Management of the Northwestern Improvement Company's #5 Mine, Christopher Landreau

Destination Resort Planning with Coal Mining Themes, Shane J. Scott

The Number 4 Mine and its Place in the History of the Roslyn-Cle Elum Coal Field, Mark Steinkraus and Steven Hackenberger

Our Five Year Mission To Boldly Go Where No One Has Gone Before: The Fifth Anniversary Symposium on Transportation and Cultural Resources Management (Astoria)

This is the 5th Anniversary of the WSDOT/ODOT Transportation Symposium at the NWAC! Over the years we have been fortunate to host presentations on new and emerging methodologies for archaeological field work related to transportation projects, lessons learned, and best management practices. We have shared stories of discovery, partnerships and education. This year's symposium will look closer at historical archaeological discoveries in Oregon and Washington, partnerships to benefit science as well as transportation projects, and the value of historic bridges and the built environment.

Organizers and Co-Chairs: Scott Williams and Carolyn Holthoff

Threading the Needle: Planning a New Roadway through a Resource-Rich Landscape, Garth Baldwin and Trent De Boer

Tale of Two Historic Mill and Railroad Towns along State Route 6 in Lewis County, Washington, Jason B. Cooper

Japanese Immigrants in the Early 20th Century Lumber Industry of Western Washington, Roger Kiers

Geotechnical Core Drilling at the Sheep Mountain Clovis Site: A Case Study in Transportation Agency, Land Agency and University Collaboration, Patrick O'Grady

Restoring Connections in Oregon's Salmon River Estuary, Thomas J. Connolly and Robert Kentta

Central Washington Archaeological Legacy Project: Conclave 2012 (Elowah Falls)

Emeritus Professors James M. Alexander and William C. Smith conducted archaeological projects within the central Columbia River Basin. Since 2006 faculty and students have collaborated with both these scholars. Collection inventory and analyses are in progress for the Grissom Site, Sanders Site, Rosa Rockshelter, Umptanum Creek, Manastash Ridge, and the Mesa sites. Holly Shea completed the first full documentation project for one of these sites, the Grissom Site, and renewed landowner relationships. Her initiatives led to a series of meetings and field trips which we call "Conclave 2012." Alumni and new students eagerly joined the conclave. In Part 1 posters report progress on archaeological collections and studies. In Part 2 students present reports and share personal perspectives. Faculty and guest panelists will answer questions about the Legacy Project.

Our purpose is to share the excitement of working across four generations to revitalize our understanding of Middle Columbia River heritage.

Organizers and Co-Chairs: Steven Hackenberger and Holly A. Shea

The Grissom Site: The Research Potential of a Rehabilitated Archaeological Collection, Kittitas Valley, WA., Holly A. Shea

Grissom Site (45KT301) Inter- and Intra- Site Comparisons of Stone Tool Technology and Function through Time, Anne Vassar

A Comparative Analysis of Ground Stone Tool Industry at the Grissom Site (45KT301), Kittitas County, Washington, Nicholas A. Finley and Patrick T. McCutcheon

Investigating Yakima Fold Belt Upland Land Use: Distributional Methods and GIS- based Spatial Analysis on the Yakima Training Center, Washington, Wilbur Barrick

Cordage from the Rosa Rockshelter, Yakima River Canyon, Washington State, Whitney Matthes

Discussants, James M. Alexander Lisa Euster Steven Hackenberger Patrick T. McCutcheon Shane Scott Holly A. Shea William C. Smith Larry Lockard David G. Rice

Why Salish Sea Archaeology Matters: Current Perspectives from Washington State University (Willamette Falls)

Research in the Salish Sea has been critical to the historical development of Northwest Coast archaeology and furthering "big-picture" questions about long-term human history. The papers in this session build on the significant developments in theoretical and methodological approaches since the work of the mid 20th century, covering a diverse array of topics, including: subsistence, strategies of resource access, feasting, warfare, regional interaction, and social identity. These projects draw upon a number of recent technological developments that permit the collecting of increasingly detailed understandings from less destructive methods and the re-analysis of existing data sets under the light of new research questions. Through such research, archaeology in the Salish Sea maintains its relevance for understanding human- environment interaction and the development of social complexity in small-scale societies worldwide. Additionally, by integrating the interests of multiple communities into our research, Northwest Coast archaeology can matter to academics, the public and descendant communities.

Organizers: Adam N. Rorabaugh, Erin M. Smith, and Patrick Dolan
Chair: Adam N. Rorabaugh

A Gravity Model of Lithic Material Quality and Implications for Toolstone Access and Ownership in the Salish Sea, Adam N. Rorabaugh and Caitlyn Y. McNabb

Evaluating Site Connectivity and Marine Travel through Time among Settlements of the Salish Sea, Kristin N. Safi and Patrick Dolan

Why Landscapes Matter: Inferring Defensiveness around the Salish Sea, R. Kyle Bocinsky
Comparing Canoes: Parallels in Watercraft use and Social Organization in Southern California and the Northwest Coast, Erin M. Smith and Mikael Fauvelle

Continuity and Change in Two Northwest Coast Plankhouse Villages at the Dionisio Point Locality in Coastal Southwestern British Columbia, Colin Grier, Justin Hopt, Doug Beyers, Adam Sackman, and Gwen Bakke

An Evaluation of the Spatial Structure of Tool Manufacture and Refuse Disposal at the Dionisio Point Site, Galiano Island, Patrick Dolan and Colin Grier

Preliminary Analysis of Dog Remains in Proximity With Human Burials at DgRv-006, Dionisio Point Locality, Matthew Marino, Eric McLay, Adam Sackman, Robby Sellers, and Colin Grier

Indigenous and Community Archaeology: Implementing Hul'qumi'num Customary Law in Archaeological Practice on Galiano Island, British Columbia, Canada, Annette Ruzicka and Colin Grier

Discussant, Bill Anglebeck

Our Five Year Mission to Boldly Go Where No One Has Gone Before: The Fifth Anniversary Symposium on Transportation and Cultural Resources Management *Continued* (Astoria)

Do Historic Bridges Matter? A Panel Discussion on Bridge Preservation Issues, Scott S. Williams Craig Holstine Robert Hadlow Christopher Bell

Failures and Frauds on 'the Big Sticky': The Archaeology of Two Homesteads in the ODOT Vernal Pools Restoration Bank, Jackson County, Oregon, Chelsea Rose

Center to Periphery to Center to Periphery: The South Fork Coquille River from Prehistory to the Twentieth Century, Mark Tveskov, Chelsea Rose and Katie Johnson

Washington State Roads: Integrity and Context GIS Analysis, Spencer Howard

Efficient Monitoring: Honoring Commitments Using Landform Analysis on SR 520 Eastside, Cassandra Manetas

Archaeology along the River of No Return; Excavations at site 10IH368 in the Salmon River Canyon, Dana Komen

Because "Where the Collections Go" Matters: Developing a Draft Statewide Curation Policy for the Washington State Department of Transportation, Paula Johnson, Katherine Wilson, Scott Williams

SR99 Alaskan Way Viaduct Replacement Project: An Archaeological Monitoring Update on the Bored Tunnel Launch Pit and Cut and Cover Tunnel Access, J. Lauran Riser

Paleoindian/Paleoarchaic Research in the Northwest (Willamette Falls)

Recent research has demonstrated that the geographic Northwest played an integral role in the peopling of North America. Archaeological sites in this region are particularly germane to conversations about Paleoindian landscapes and settlement either because they pre-date Clovis, or because they provide paleoecological evidence for past environments and the unique adaptation of the earliest inhabitants. This symposium will highlight recent archaeological and paleoecological advances for understanding the archaeology of the late Pleistocene/early Holocene Northwest.

Organizers and Co-Chairs: Jaime Dexter and Dennis L. Jenkins

A New Stemmed Projectile Point Cache from the Cooper's Ferry Site, Idaho, Loren G. Davis

Palynological Perspectives on Late Pleistocene to Early Holocene Human Ecology at Paisley Caves (35LK3400), Cave 2, Chantel V. Saban

Younger Dryas Human Experience at the Paisley Caves, Dennis L. Jenkins, Loren G. Davis, Thomas W. Stafford Jr., Thomas J. Connolly, Vaughn M. Bryant Jr., George T. Jones, Michael Rondeau, Linda Scott Cummings, Bryan Hockett, Katelyn McDonough, Ian Luthe, Patrick W. O'Grady, Karl J. Reinhard, Mark E. Swisher, Frances White, Robert M. Yohe II, Chad Yost, and Eske Willerslev

A Changing Valley: Diachronic Shifts in Mobility and Toolstone Procurement in Oregon's Warner Valley, Donald Pattee, Geoffrey M. Smith, and Danielle C. Felling

Paleoindian Rock Art? Great Basin Carved Abstract Rock Art in the Northern Great Basin, Emily M. Middleton

Least-Cost-Path Networks between Obsidian Sources: Toward Predictive Modeling of Site Locations on the Landscape Using Geographic Information Systems, Katrina L. Lancaster and JD L. Lancaster

Pleistocene and Holocene Paleoclimate Reconstruction at Rimrock Draw Rockshelter (35HA3855) in the Far Northern Great Basin, Scott Thomas, Patrick W. O'Grady, Marge Helzer, and Jaime Dexter

A Use-wear Analysis of Clovis Beveled Rods from the East Wenatchee Site, Douglas County, Washington, USA, Daniel Meatte

Mammoth Hunting in the Desert West? Recent Analyses of Fluted Points from Owl Cave (10BV30), Idaho, L. Suzann Henrikson and Robert M. Yohe II

Maritime Archaeology and History in the Pacific Northwest (Multnomah Falls)

The goals of this session are to raise the profile of maritime archaeology and history in the Pacific Northwest, highlighting the contributions that avocational groups, CRM professionals, and private

organizations are currently making towards documenting and preserving the coastal, submerged and extant maritime history of the region and to encourage future research efforts by providing a forum for interested parties to share information and expertise. This symposium features a range of current research regarding pre-contact and historic cultural resources found in coastal and submerged settings throughout the Pacific Northwest. In the course of the presentations we will explore: analysis of previously submerged bifaces recovered from a variety of different aquatic environments; the archaeology of submerged cultural resources, shoreline geomorphology, and maritime history along the Oregon Coast; nautical archaeology and the restoration of historic vessels; and maritime archaeological methodologies, including underwater coring and dredging.

Organizers and Co-Chairs: Jacqueline Marcotte and Ross Smith

Early Bifaces from Underwater Environments: A New Perspective on Tool Use, Alison T. Stenger

New Light on Drake's Landing, Melissa Darby

Francis Drake's Summer 1579 Visit to Oregon, Katherine Haramundanis and E. M. Gaposchkin

A Tide in the Affairs of Men... or Bound in Shallows and Miseries, Melanie Diedrich

Geoarchaeological and Historical Research on the Redistribution of the Beeswax Galleon Wreck Debris by the Cascadia Earthquake and Tsunami (A.D. 1700), Oregon, USA, Scott S. Williams, Curt Peterson, and Mitch Marken

Not Dead Yet: the Surviving Voice of Wooden Shipbuilding, Nathaniel Howe

Maritime Archaeology Methodology – Coring and Dredging, Jacqueline Marcotte

Tangible Pieces of Our Past: Exploring and Connecting to our Heritage through Multiple Disciplines at the Northwest Cultural Resources Institute (Wahkeena Falls)

The Northwest Cultural Resources Institute (NCRI) is a cooperative partnership based at Fort Vancouver National Historic Site in Vancouver, Washington. Dedicated to facilitating research and educational activities related to cultural resources throughout the Pacific Northwest, the NCRI performs archaeological investigations, analysis of collections and archives, recording of oral histories, development of digital educational tools, publication of research papers, lectures and demonstrations, and public outreach. Through this work tangible pieces of our past are available in the Fort Vancouver Museum Collection. These resources provide information on the historical trajectory of the region, assisting inquiries into topics including ecological change, culture, class, social interactions, and identity. The papers in this symposium demonstrate the advantages of multiple disciplines working together to protect and interpret cultural resources. Our partnerships aid the public in creating a sense of place by making connections between past and present with knowledge that is relevant to modern issues.

Organizers: Katie A. Wynia and Elizabeth A. Horton
Chair: Katie A. Wynia

The Ceramics of Early-19th Century Fur Trade British Fort Sites along the Columbia River, Robert J. Cromwell

Towards a Critical Archaeology: A Marxist Analysis of Material Culture from Fort Vancouver and Kanaka Village, Dana L. Holschuh

More than their Contents: The Recontexualization of Vessel Glass into Tools by Chinookan Peoples and Fur Traders, Stephanie Simmons

A Home Away From Home: Pollen Analysis Provides Insight into Working Class Life at Fort Vancouver, a 19th Century Fur Trade Post, Elaine Dorset

Looking for Patterns in the Pipes: Using Spatial Analysis of Tobacco Pipe Fragments to Examine Behaviors on the Fort Vancouver Village Landscape, Katie A. Wynia

19th Century Dog Burials at Fort Vancouver National Historic Site, Vancouver, Washington, Flynn Renard and Elizabeth A. Horton

Status, Interaction, and Space: Mid-19th century Military Lifeways at Fort Vancouver, Fort Vancouver National Historic Site, Washington, Elizabeth A. Horton

Fear No Weevil: Botanical and Entomological Analyses of a Late-Nineteenth Century U.S. Army Privy, Vancouver Barracks, Washington, Martin E. Adams and Elizabeth A. Horton

Making Collections Matter: Using Artifacts to Connect Our Community to Archaeology and History, Meagan Huff

Discussant, Doug Wilson

Stones and Societies: Using Technology to Investigate Precontact Social Change on the Central Northwest Coast (Crater Lake)

This symposium presents a collection of papers that draw on the analysis of ground and chipped stone artifacts to investigate larger cultural shifts. Environmental data, culture histories, ethnohistoric data, and other forms of evidence reveal social and cultural changes in precontact Northwest Coast societies. Technological data provide important insights about how these shifts affected people in their daily lives, mobility strategies, expressions of social hierarchy, and intergroup interactions. Technological clues can be a challenge to interpret, and these papers come together as a discussion about how we both justify and question our interpretations of Central Northwest Coast societies and neighboring regions.

Organizer and Chair: Amanda Taylor

A Small Tool with a Big Impact: A Fresh Approach to Quartz Crystal Microblade Analysis, Rachael Kannegaard

The Roots of Early Kachemak Technological Change in the Kodiak Archipelago, Molly Odell and Patrick Saltonstall

A Typological Debitage Analysis of DgRv- 6, a Late Gulf Island Plankhouse: How the Byproducts of Production Reflect Continuity in Daily Practices, Adam N. Rorabaugh

Using Lithic Data to Explore Territoriality in the San Juan Islands, Amanda Taylor

Prehistoric Collecting: Using Lithics to Examine Subsistence Strategies at the Berkeley and Fryingpan Rockshelters, Alison Tecca

Meeting New Challenges in Archaeological Monitoring (Crater Lake)

Rapidly evolving construction methods pose new challenges for archaeological monitoring. In this session of brief (3–5 minute) presentations, regional cultural resource professionals discuss approaches for cultural resources training and monitoring of construction crews working with newer construction techniques.

Organizers: Paula Johnson and Chris Lockwood
Chair: Chris Lockwood

Construction training video, Jason Cooper

Deep pier shaft monitoring, Patrick Reed

Vac-truck monitoring, Jenny Dellert

Monitoring with a Mud Puppy, Paula Johnson

Borehole monitoring, Brandy Rinck

Micropile monitoring, Chris Lockwood

Lessons learned, Michael Shong

Roundtable

Columbia Plateau Culture Area: What Do We Know Now? (Pyramid)

We intend to build a secure, peer-reviewed, website entitled “The Columbia Plateau Culture Area.” The explicit intent is to build a highly interactive website that seeks to present the latest research findings in this cultural area. Highlights include postings of peer-reviewed summaries of recognized topics, listings of recent theses and dissertations, and links to resources for research and education. This roundtable will present initial ideas for design of this website and will seek ideas and opinions from participating anthropologists and tribal members. Volunteers will be recruited to review subsequent designs and prototyping efforts.

E. S. Lohse, Corey Schou, Dorothy Sammons-Lohse, Deward Walker

AWA Workshop

CRM and the State Environmental Policy Act (SEPA): What's the Connection, What's Changing, and Why It Matters (Elowah Falls)

In 2012, the Washington State Legislature passed Senate Bill 6406 which includes a directive to the Department of Ecology to modernize the rules guiding state/local agency SEPA reviews; the purpose of the modernization is to bring SEPA in line with current land-use
planning and development regulations. The first round of updates was filed in December 2012 and was focused on two specific topics: 1) increasing the thresholds for SEPA review of minor construction projects, and 2) improving the efficiency of the SEPA environmental checklist. A second and more comprehensive update will be completed by December 31, 2013.The Association for Washington Archaeology (AWA) invites you to participate in a workshop to better understand: 1) the connection between CRM and SEPA, 2) recent rule changes, both adopted and under consideration, and 3) how the changes will affect CRM in Washington State. Learn why it matters and how you can get involved.

Presenters: Mary Rossi Gretchen Kaehler David Powell

General Sessions

Sociocultural Anthropology (Crater Lake)
Chair: Julia Smith

The Anthropology of #Occupy# Art and Literature, Jodie Ficca

Identity and Icons: Conflict and Consequences Surrounding the University of North Dakota's "Fighting Sioux", JoRelle Grover

Poetry and Post-Modern Communities, Kelly Mathews

"Women's Wisdom": Menarche Narratives and Body Politics, Caroline L. McNabb

The Music Ring, Justin Poole

Medical Pluralism in a Rural Moroccan Village, Roxanna King

The Role of Culture in Addiction Treatment, Tabria Lee-Noonan

Informal Agendas: Social Control, Oppression, and Ideological Transmission in United States Biomedicine, Kirk Packwood

Adapt and Adopt: Apsáalooke (Crow) Beadwork and Regalia from the 19th Century to Today, Kiley E. Molinari

Concerning The Black Truffle Market in Aups, France: A Closer Look at the Impacts of Climate Change and Global Market Demands on Cultural Heritage, Lauren Morency

Amazonian Communities and Sense of Place, Rozsika D. Steele

Historic Archaeology (Wahkeena Falls)
Chair: Rick McClure

The Life and Archaeology of the Fisher Family, Jamie R. Aslett

So What's Ailing You, Sandpoint?, James C. Bard and Robert M. Weaver

The House that Sheridan Built: Recovery of an 1856 Officer's House and New Perspectives in Historical Archaeology, David Brauner

Ghosts of the Great Depression on the Carbon River: The Disappearing History of the Civilian Conservation Corps, Theodore Charles

"Delicious Fathers of Abiding Friendship and Fertile Reveries": Tobacco and Alcohol Consumption at Fort Yamhill Company Kitchen, 1856–1866, Justin E. Eichelberger

Exclusion Act Case Files and the Archaeology of Chinatown, The Dalles, Oregon (35WS453), Rick McClure

CSI Vancouver: A Forensic Archaeological Study of Site 45CL927, Aimee Finley

'We Can Do It': The Results of the Archaeological Material Collected at the Kaiser Vancouver Shipyard at Site 45CL927, Jessica Hale

'Life in Wartime': An Examination of the Master Narrative Regarding America's Participation in WWII As Seen in the Archaeological Evidence from the Vancouver Kaiser Shipyard landfill, 45CL927, Bill Roulette

Handkerchiefs, Dress Goods, and Spoons: Heiltsuk Use of European Material Culture at Old Bella Bella, BC, 1833–1899, Michelle Lynch

Where Have All the Women and Children Gone? Using Demography as a Baseline for Analysis in Historical Archaeology, Mollie Manion

Applied Anthropology (Multnomah Falls)
Chair: Charles Norred

Decolonization as Holistic Sustainability: A Case Study from NE Portland, Oregon, Ridhi D'Cruz, Judy Bluehorse-Skelton, and Shawna Zierdt

Use of Ethnographic Techniques to Ground Official Aggregate Data for an Economic Development Strategy in Clackamas County, L. Davis Clements

Helping Solve Contemporary Human Problems through Applied Anthropology: The Rainwater Basin Project, Nebraska, Emilia González-Clements

"Not Suitable for Human Habitation"—Western Perceptions of Wetlands vs. Indigenous Evidence, Genevieve Hill

Farming the Margins: Early 20th Century Farming Risks along Middle Crab Creek, Grant County, Washington, Charles Norred, Nancy Kenmotsu, and Tabitha Burgess

The Ghanaian Cocoa Industry: Finding Environmental, Social, and Economic Sustainability, Chelsea E. Hunter

Case Study: Potential of Anthropological Aid for Economic Growth in Chijnaya Peru, Margaret McCarty

Will This Be on the Test? Making Our Students Understand How Anthropology Matters in Their Daily Lives, Alex A. G. Taub

Cultural Relativism, Human Rights, and Globalization: Anthropology and the Future of International Development, Margaret McCarty and Douglas Beyers

Losing the Hacienda: the Agrarian Reform's Affect on Landowners in the Peruvian Andes, Susana Farjado

Spirit Mountain Casino from a Mexican-American Point of View, Peter Wogan

Bridge No. 737, Juneau: Just Another 1960s Concrete and Steel Bridge?, Ann Sharley

Columbia Plateau (Wahkeena Falls)
Chair: E. S. Lohse

Rediscovering Granite Point: Bringing Past Excavations into the Digital Age, Kendall A. McGill

The Consequences of Valued Archaeology: The Absence of Documented Historic Indigenous Sites on the Columbia Plateau and What We Can Do About It, Hannah Russell

The 1939–1940 Columbia Basin Archaeological Survey: A Retrospective, Christopher M. Casserino

Vitrophyre of the Clearwater River Region: Determining Trade and Movement Patterns Through the Use of XRF, Shannon Glinski

The Western Stemmed Point Tradition on the Columbia Plateau, E. S. Lohse and Coral Moser

Results of Investigations at the Kelly Forks Work Center Site: 12,000 Years of Human Occupation at the Interface between the Columbia Plateau and the Northwestern Plains, Robert Lee Sappington and Laura Longstaff

Don't Believe Everything You Read About Northwest Tribes: The Need for Continued Ethnographic Work in the Northwest, Donald Shannon

Versions and Variations of the Storied Wallula Stone, 1897–2012, Douglas Beauchamp

An Analysis of Charmstones and Incised Stones from the Marial Site (35CU84), Jorden Peery

Applied and Environmental Archaeology (Multnomah Falls)
Chair: Alexander Gall

Island Retreat or Accidental Residence—It's All a Matter of Perspective: Early Land Use History of Islands in the Bering Sea Wildlife Refuge, Alaska, Dennis Griffin

Enhancing Habitat and Protecting Cultural Resources through Collaborative Planning Efforts: A Case Study of the Middle Crab Creek Corridor, Columbia Basin Project, Washington, Charity Davidson and Warren Hurley

A GIS Approach to Modeling Native American Influence on Camas Distribution: Humans as Environmental Variable, Braden Elliot

The Spirit of Section 106: An In-Depth Look at the Adoption of the National Historic Preservation Act of 1966 and the Conversation Surrounding Section 106, Tracy Schwartz

Archaeology of Shea Butter (Vitallaria paradoxa Gaertn. f.)Daphne Gallagher and Stephen Dueppen
Dendrochronology: The Past and Future of Culturally Modified Trees on Washington State Lands, Maurice Major

Comet Lodge Cemetery, Seattle: Debunking Local Mythology or: Sorry, There Are No Bodies under the Houses, Erik Anderson

A Brief Graphic History of the Growth of The Dalles, Oregon, and Implications for the Development of Chinatown (35WS453), Eric Gleason

Pollen Analysis of Archaeological Samples Collected from Magdalena de Cao Viejo, Peru, Sarah Williams

Balancing Act in the Côa Valley: Politics, Development, and the Côa Valley Rock Art, Alexander Gall

Northwest Coast Archaeology (Willamette Falls)
Chair: Jon Daehnke

Kilgii Gwaay—A 10,700 year old Wet Site Revisited in Late Spring 2012 on Southern Haida Gwaii, B.C., Canada, Dale R. Croes

Early Holocene Maritime Resource Specialization on Prince of Wales Island, AK, Mark R. Williams

Get to the Point Already! Building a Chronology of the Adoption of Ground Slate Points on the Northwest Coast, Joshua D. Dinwiddie

A Late Prehistoric Camas Oven on Northern Whidbey Island, Jana Boersema

The Distribution and Meaning of Labrets on the Salish Sea, Kate Shantry

Identifying Ancient Nets from the Salish Seas and Possible Trade Patterns, Michael Thomas
45SJ540—A Mayne Phase Occupation on Orcas Island, Washington, Gary Wessen

A Study of Social Rank and Resource Control Using Ichthyofaunal Remains from the Cathlapotle Plankhouse Village Site on the Lower Columbia River, J. Shoshana Rosenberg and Virginia L. Butler

Quantifying Labor Involved in Plankhouse Construction and Maintenance on the Southern Northwest Coast, Emily Shepard

Public Archaeology on the Ridgefield National Wildlife Refuge: Integrating the Current Landscape Archaeology Approach with the Cathlapotle Plankhouse, Cameron M. Smith

"We Honor the House": Heritage, Public History and Protocol on the Ridgefield National Wildlife Refuge, Jon Daehnke

Oregon Archaeology (Mulnomah Falls)
Chair: Michele Punke

Obsidian Studies of Pre- and Post- Mazama Artifacts from the Upper Umpqua Basin Medicine Creek Site, Brian L. O'Neill

11,000 Years on the Rogue River: Prehistoric Occupation of the Stratton Creek Site (35JO21), Josephine County, Oregon, Catherin Bialas

The Place of Cascadia Cave (35LIN11) in Western Oregon Prehistory, Paul W. Baxter

Archaeological Testing at the Big Springs Site (35GR1575), Grant County, OR, Guadalupe P. Cadena

Implied Narrative: Rock Art, Landscape and Myth at Picture Gorge, Oregon, Don Hann

A Summary of the 2012 University of Oregon Archaeological Field School Excavation at Rimrock Draw Rockshelter, Jordan Pratt

Possible Function of Rock Pits within Talus Slopes of the Southern Cascades, Joanne M. Mack

History beneath the Streets: The Archaeology of the Portland-Milwaukie Light Rail Transit Project, Michele Punke

CRM Floodplain Geoarchaeology in the 21st Century: LiDAR topograhy, GPR profiling, Trench Pole-Cam Imaging, and AMS Morpho- stratigraphic Dating: Orleans Terrace Unit, Corvallis, Middle Willamette River Valley, Oregon, Curt Peterson, Rick Minor, Galen Peterson

Coastal Bone Effigy: Sacred Artifact or Personal Totem, Dennis Griffin

Demonstration of Oregon SHPO GIS Database, Matthew Diederich

General Anthropology (Crater Lake)
Chair: Sarah Keller

Shifting Campus Food Systems: Add Anthropology and Stir?, Amanda Green and Robert Asinjo

Licorice Whips, Fennel and Ouzo, A Love/Hate Relationship, Sarah A.C. Keller

Risk & Relational Ecologies in the Historic Food System of Puget Salish Territory, Joyce LeCompte-Mastenbrook

Exploring Perceptions and Intentions of Code-Switching Among Bilingual Spanish-English Speakers, Grace Cooper

Japanese Phonetics, Tiffani Kittilstved

Death, Decomposition, and Dismemberment: Black-Billed Magpies as Facultative Scavengers on Carrion, Teresa 'Lilly' White

Countering the "CSI Effect" Using Forensic Entomology, Teresa 'Lilly' White

Traditional Life and the Survival of Transylvanian Village CulturesWayne B. Kraft
New Landscapes of Coffee in Costa Rica: Appellations and Traceability, Julia Smith

"Goons are a Cancer on the Internet": Identity and Social Capital on the Something Awful Forums, Drew Brutzman

Sign Dialects in Chimpanzees, Susan Ann Keenan and Mary Lee Jensvold

Archaeological Methods (Elowah Falls)
Chair: Stephen Todd Jankowski

Identifying Ancient Basketry Trade, Danielle Cone

Adding One More to the Basket: Using Market Basket Analysis for Free List Data, Rhonda Crate

Historical Research in the Digital Age: Examining and Adapting Conventional Research to Incorporate Expanding Online Resources, Brenden Kelly

Gifts from the Pueblo Valley: A Donated Collection Contributes to Oregon Archaeology, Katelyn McDonough

Medical Anthropological Approaches in Archaeology, Examining Health and Human Responses to Sickness in the Past, Ashley M. Morton

One Gun Phase Points: A Statistical Reassessment of the Late Side-Notched Projectile Point System in Alberta using 2D Digital Scanning, Tyler Murchie

Artifact Conservation: Restoring Corroded Ferrous Artifacts, Colin Skinner

D*istinguishing Lithic Geofacts and Artifacts at the Individual Level*, Tyler Retherford, William Andrefsky, and Jacob Adams

Testing the Pointing Cairn Hypothesis: Analysis of Stacked Rock Features at 35LK1483, Stephen Todd Jankowski

Poster Symposium

Central Washington Archaeological Legacy Project: Conclave 2012 (Wahkeena Falls)

Emeritus Professors James M. Alexander and William C. Smith conducted archaeological projects within the central Columbia River Basin. Since 2006 faculty and students have collaborated with both these scholars. Collection inventory and analyses are in progress for the Grissom Site, Sanders Site, Rosa Rockshelter, Umtanum Creek, Manastash Ridge, and the Mesa sites. Holly Shea completed the first full documentation project for one of these sites, the Grissom Site, and renewed landowner relationships. Her initiatives led to a series of meetings and field trips which we call "Conclave 2012." Alumni and new students eagerly joined the conclave. In Part 1 posters report progress on archaeological collections and studies. In Part 2 students present reports and share personal perspectives. Faculty and guest panelists will answer questions about the Legacy Project. Our purpose is to share the excitement of working across four generations to revitalize our understanding of Middle Columbia River heritage.

Organizers: Steven Hackenberger and Holly A. Shea

Regenerating Archaeological Collections: Manastash Pines (45KT346), Kittitas County, Washington, Christopher Moose (14)

Textiles from the Rosa and Tekison Rockshelters, Yakima River Canyon, Washington State, Whitney Matthes, Shane Scott, and Robert Loewen (15)

Zooarchaeology of the Rosa Rockshelter: Patterns in Animal and Human Habitation, Lisa Euster and Ayla Aymond (16)

Medium and Small-Sized Mammals from the Sanders Site, Yakima County, WA, Neal Endacott, Madison K Dion, and Jamy McLean (17)

Salmon Remains in the French Rapids and Hole-In-The-Wall Archaeological Site Collections, Columbia River, Vantage, WA, Shaun Dinubilo, Steven Hackenberger, Stacey L. Camp, and James Chatters (18)

Pediocactus nigrispinus in the Tekison Rockshelter Site, Kittitas County, WA, Christian Blanchard, William, C. Smith, JD L. Lancaster, Joseph Lorenz, Cameron Walker, and Ian Wooller (19)

Poster Session 1 (Wahkeena Falls) (Stand number)

Re-Collection: Connecting Objects and Records from an Early 20th Century Museum Collection, Kirrin Peart (1)

Reexamining the Howard Buswell Collection, Marietta WA, Molly L. Bredeson and Taylor A. Sayward (2)

Japanese Culture Change in Oregon: An Archaeological Perspective, Renae Campbell and Kanani Paraso (3)

Through the Eyes of the Jewel Eyed Dragon: A Look at Traditional Décor in Western Japanese Internment Camps, Olivia McDaniel (4)

Union or Strike? The Chronology of Pocket Tobacco Tins, Lindsey Stallard and Cayla Hill (5)

Marketing Ben Hur, Lawrence Shaw (6)

Approaching the Efficacy of Archaeological Teaching Kits, Mary Petrich-Guy (7)

Investigations of Pend d'Oreille Hotel, Amy Johnson, Rachel Schiell, Cristina Loughmiller, and Mallory Triplett (8)

Camel Cigarette Tins in Historical Archaeology Sites, Shannah Rhynard-Geil (9)

It's Closing Time—Artifacts of the Drinking Culture of Sandpoint, Breanne Kisling, Molly Swords, and Mary Petrich-Guy (10)

A Visual Sample of Overseas Chinese Ceramics, Jamieson-Lee Scott (11)

"Keep Me Posted: A Look at Historic Social Networking and Postcard Use in Washington State (1905–1927)", Julia M. Rowland (12)

Made Locally?: Trade Ties Between Sandpoint, ID and Spokane, WA, Bailey M Cavender (13)

Aurora Neighborhoods Project: Archaeological Investigations of a Mining Boomtown, Katee Withee and Ashlee Younie (14)

Huntsmen, Frontiersmen, Militia, Oh My! An Investigation of Historic Firearm use in Oak Harbor, WA, Ian Lewis and Rebekah Kniefel (15)

The Cyrus Jacobs Children: Place and Play in Early Boise, Jessica Goodwin and Ashley Hart (16)

Poster Session 2 (Wahkeena Falls) (Stand number)

Anthropology Matters at Snoqualmie: Combining Traditional Knowledge with Science, Kyle Dewey, Kyli Rhynalds, Laurie Ross, Thomas Murphy, Erin Ryan, and Marshall Kramer (1)

Sinkayuse and the Rocky Ford Area: The Multi-Leveled Resource Use by Chief Moses and His People, Eric Oosahwee-Voss (2)

Projectile Point Distribution in Klickitat County, Washington, Matt Goodwin, Andy Pfandler, Andrew J. Huff, Daniel M. Gilmour, and Paul S. Solimano (3)

Pieces Esquilles as a Bone Reduction Tool, Erin Fincher and Katie Wiggins (4)

Charles/St. Mungo Bone and Tooth Pendants from the Gulf of Georgia: Personal Adornment before Labrets, Sarah K. Campbell, Kayla Butcher, and Will Damitio (5)

Evaluating Lithic Technology and Function over the last 5,000 years at the Sunrise Ridge Borrow Pit Site, Mount Rainier, Washington, Heather Hansen and Patrick T. McCutcheon (6)

Production of Ground Slate Knives in a Fraser River Valley Seasonal Occupation Site, Andrea Gover (7)

Contemporary Issues with the Archaeological Record for Canids in the Pacific Northwest, Daniel M. Gilmour, Paul S. Solimano, Andrew J. Huff, Andy Pfandler, and Stacy Smith (8)
Archaeological Investigations at the Fisher's Landing Site (45CL6), a Unique Site Type in the Portland Basin, Thomas Becker (9)

Early Resource Intensification and Collector Strategies: The Bray Site, Pierce County, WA, David Sheldon, James Chatters, Marc Fairbanks, Bruce Gustafson, and David Brauner (10)

A Preliminary Geoarchaeological Model of the Devils Kitchen Site, Coos County, Oregon, Jessica A. Ainslie (11)

The Spatial Relationship of Community in Mesa Verde Proper: Preliminary Results, Kelsey M. Reese (12)

Poster Session 3 (Wahkeena Falls) (Stand number)

Personal Grooming in Historic Sandpoint, Idaho, Timothy Mace (1)

Office Hours: Cultural Resources on Washington State Lands, Maurice Major (2)

Late Pre-Contact Maize on the Columbia Plateau: Evidence of Long-Distance Exchange, or a Case of Mistaken Identify?, Michael Shong (3)

Macro-Botanical Recovery Rates Using Flotation of Sediments from the Sunrise Ridge Borrow Pit Site, Patrick W. Rennaker and Patrick T. McCutcheon (4)

Prehistoric Human-Bear Interactions in the Greater Yellowstone Ecosystem, Michael Ciani and Doug MacDonald (5)

Climate Change at the Pleistocene-Holocene Boundary in the Pacific Northwest: A Comparison of Proxy Datasets and the Archaeological Record, Tiffany J. Fulkerson (6)

Tsunamis as Site Formation Processes, Melissa Lehman (7)

An Archaeological and Geoarchaeological View of the Middle Chehalis River Valley from the WSDOT I-5 Mellen-to-Blakeslee Junction Project, Robert Kopperl, Brandy Rinck, and Ross Smith (8)

Dollars for Data: Selecting the Appropriate Geological Sampling Method to Get the Data You Need While Saving Money down the Road, Patrick Elliott and J. Tait Elder (9)

Digital Recordation, Analysis, Distribution, and Replication of Archaeological Artifacts, Alex Nyers and Justin Holcomb (10)

Application of Multispectral Imagery to Monitoring Site Stabilization, Ansel S. DeLeon and Mark DeLeon (11)

Clay and Ceramic Technologies of the Pacific Northwest: A Pilot Study, Shelby Anderson and Dianna Woolsey (12)

Ceramic Evidence for Distinct Mogollon and Pueblo Cultural Traditions at Largo Gap in New Mexico, Jordan Jarrett (13)

Nighttime Enrichment Preferences of 3 Captive Chimpanzees (Pan troglodytes), Amanda Carner, Kaeley Sullins, Lisa Wilding, Bonita Hendrickson, and Mary Lee Jensvold (14)

Variability of Locomotion in Mantled Howling Monkeys (Alouatta palliata) in Costa Rica and Nicaragua, Erika J. Price (15)

Measuring Personality Traits in Provisioned Tibetan Macaques (Macaca thibetana), Mt. Huangshan, China, Alexander Jonathan Pritchard, Lori K. Sheeran, Mary Lee Jensvold, Kara I. Gabriel, Jinhua Li, and S. Ronald Wagner (16)

Captive Chimpanzee Preference for Environmental Enrichment: Naturalistic vs. Artificial, Savannah M. Schulze, Jessica M. Mas, RyAnn Stafford, and Mary Lee Jensvold (17)

Maternal Investment in Free-ranging Tibetan macaques (Macaca thibetana), Jessa Link, Ashley Murphy, Jinhua Li, and Lori K. Sheeran (18)

DNA from Chewed Vegetation: a Non-invasive Collection Strategy for Arboreal Primates, Jennifer E. Humphreys, Joseph G. Lorenz, Marilyn M. Norconk, Lori K. Sheeran, R. Steven Wagner. (19)

JOURNAL OF NORTHWEST ANTHROPOLOGY

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To ensure publication of high quality, timely information in a clear and concise format, it is important that we have a wide range of professionals to conduct manuscript reviews. To volunteer to serve as an occasional peer reviewer or to obtain more information, please contact Darby Stapp at dstapp@pocketinet.com. The commitment is only two to four hours a year, assuming an article gets submitted on a topic for which you have expertise.

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- **Comments should be constructive and courteous—**Authors put a lot of effort into preparing their research for publication and the review process should be a positive experience.

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Tribal Trio of the Northwest Coast

by Kenneth D. Tollefson
edited by Jay Miller and Darby C. Stapp

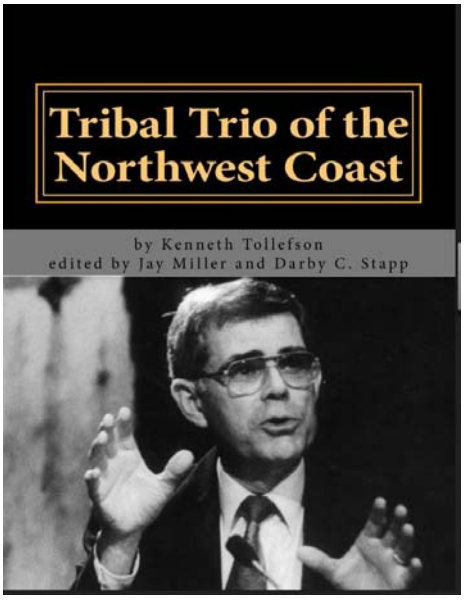
The *Journal of Northwest Anthropology* is pleased to present this life-long collection of work from anthropologist Kenneth D. Tollefson, who came to the Pacific Northwest in 1965 to teach at Seattle Pacific University. Over the years, Dr. Tollefson found time to assist several Pacific Northwest tribes in their struggles to perpetuate and retain tribal autonomy. In this Memoir, Dr. Tollefson presents his work with three Northwest groups: the Tlingit on the coast of present-day Alaska; the Snoqualmie, who live on the western slope of the Cascades east of Seattle; and the Duwamish, who live at and around Seattle on the western shores of Puget sound in the south Salish Sea.

Dr. Tollefson's generosity, skill, substantial, and most useful testimony are a tribute to the wonderful traditions of university scholarship.
Durwood Zaelke, DC Staff Attorney, Sierra Club, Wilderness Society

Ken's work is engaging reading, and a big help to our cause. Bravo!
Cecile Hansen, Chair, Duwamish Tribe

Ken's work is like listening to our elders, with added graphic illustrations to help us appreciate what is culturally important.
Thomas Dalton, Tlingit, Hoonah Raven, son of George, head Eagle Chief

Ken has been an academic fighter for the Snoqualmi, through right, wrong, and justice.
Harriet Turner, Snoqualmi researcher and elder



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