
JOURNAL OF NORTHWEST ANTHROPOLOGY

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JOURNAL OF NORTHWEST ANTHROPOLOGY

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USING OUR FIELD EXPERIENCES TO BUILD THEORIES OF APPLIED SOCIAL CHANGE—WHY DO WE NOT DO MORE?

Kevin Preister

ABSTRACT

The dominant narrative in academic applied anthropology is that we conduct research to solve practical human problems. The dominant practice in the field, however, seems to be that we do research but also engage with people to facilitate change to improve local conditions. In professional practice, I work within existing cultural systems of communication and support to facilitate change through Freire's dialectic of reflection and action. In applied settings with many variable conditions that affect outcome, it remains important to generalize from our practice to develop theories of applied social change so that we learn as we go and our profession is advanced. I outline some theoretical features of my own work and issue a call for dialogue on this challenge within our profession.

The Problem

Why do applied and practicing anthropologists not write more about the process of our work? The ways in which we enter a community, develop relationships, and understand how a local community is currently functioning are crucial to our success. We want to know how residents relate to each other and the outside world, who is highly valued by others for their communication and caretaking, how people organize for survival, and the beliefs, traditions, practices, and stories that embody the culture. We want to know these things so that we can facilitate change that makes sense for local residents, whether it is improving health care, dealing with the impacts of a power line, or fostering economic development.

These practical requirements of fieldwork reflect implicit models of social change that anthropologists use to generate successful outcomes on the ground. As a discipline, however, we do not seem to value and display our theories and methods of practice of working within cultural systems of communities to affect change.

I believe this reluctance stems from our adherence to a traditional research paradigm—born, developed, and reinforced in an academic milieu in which research projects are the stock and trade of the discipline. Although the bulk of employment in anthropology is, and has been for at least four decades, situated within applied settings, status within the field, and dominance of our associations, still resides in academically-based settings. Adherence to a research paradigm is consistent with the dominant narrative of our discipline, that we do research to “generate knowledge” (which is often information, not knowledge) and, secondarily, apply the results to a human problem. The primary purpose is knowledge generation while application becomes a secondary process. The research is the action, and reporting out on that is the knowledge generated from the action. The separation of knowledge and action is the critical flaw in the traditional approach, allowing the anthropologist to remain “pure,” but with a cost of limited effectiveness in affecting change.

Rylko-Bauer, Singer, and VanWilligan define a theory of practice as “a set of principles that predict or explain how knowledge generated by applied research is translated into action” (Rylko-Bauer, Singer, and VanWilligan 2006:185). That conception is not adequate to describe the non-research functions that we engage, specifically, working within existing cultural systems of communication and support to facilitate change. Pretending that we operate solely within a research framework limits our effectiveness in the policy arena as well. It harkens to an outdated model of applied anthropology which suggests that if applied research is well-done, persuasively presented, and injected into the right setting, the subsequent decisions and policies will be responsive to local interests. In this conception, knowledge is first “produced” and then marketed, while the social processes by which people manage their own environments remain unelucidated (Preister 2004). We may be in a situation in which the dominant narrative revealed by this definition does not reflect the real-world experience of anthropologists in their everyday work. While research is an important component of effective social change initiatives, it is not sufficient to produce sustainable, empowered change in local communities. Research cannot get us to an effective action methodology. Rather, it is discovery of informal community systems and the existing cultural mechanisms by which absorption and engagement are handled that establishes conditions for sustainable, facilitated action.

It is my observation that this dominant narrative misses much of what is really going on in the field, and the more common ways in which applied anthropologists actually conduct themselves. In addition to the many research operations we may perform, many of us are engaged to facilitate change, improve local conditions, manage impacts, and create resilient institutions and communities. The purpose is to strengthen individual and community life in a manner that does not put other people at a disadvantage. The “knowledge generated” in this context is not then applied as a secondary process, as with a more traditional approach, but it is “process knowledge” of how people function currently and how to work within these existing systems to affect change. It is knowledge born of interaction and attention to process. Descriptive articles in *Practicing Anthropology* are replete with excellent understanding of these basic points, yet the translation of these experiences into theories of applied social change with which to guide our field is not forthcoming. Nolan (2013) reinforces this point that has long been proffered in applied anthropology—the rich vein of applied work, often termed “fugitive literature,” never makes it into the mainstream of our discipline because the exigencies of applied practice do not lend themselves to routine publishing.

The learning curve going on in the field is beautifully expressed in a recent article by Colfer (2008). She describes a fairly familiar trajectory—entering the field with high energy and commitment, carrying assumptions that eventually are checked and modified, and slowly learning

through time how to work through the culture to foster action that is appropriate and effective. In an Indonesian setting related to forest management and indigenous culture over a 15-year period, her assumption that providing better information (not knowledge) to decision-makers about local systems would lead to better decisions gave way to an understanding that decision makers were highly stressed, over-committed, aware of the competing and mutually-exclusive interests with which they had to contend, and were unlikely to read extended ethnographic accounts. She and her team wondered if rural people were “competent to participate in their own development,” a question that later seemed to her “naïve and arrogant” (Colfer 2008:274).

The challenge for Colfer and her team was “how to bring about a set of conditions *we [the anthropologists] had identified* as important for both sustainable forest management and human wellbeing. . . .” (Colfer 2008:276, emphasis added). Here exactly is the legacy of the “applied anthropology as research” approach to our profession and its limitations for policy development. It is an “outside in” approach in which things are done “for” or “to” others and not “with” or “through” them. As applied goals came into focus for Colfer, behavior on the ground began to look different than the research framework. She and her colleagues began to develop “adaptive collaborative management” approaches that reflected their emerging confidence that rural people did, indeed, have the competence to participate in their own development. This understanding was the product of their interaction, not of their research. They began to develop approaches that integrated the issues of local people and the concerns of governments and other organizations.

There is little in the literature that takes learning, such as Colfer’s, and draws the theoretical and methodological implications from it. Instead, it seems to be the case, that each of us is doomed to learn Colfer’s lessons for ourselves in our own locales, without comparing notes or learning from others. For theories of applied social change oriented to empowerment, engagement and participation, Action Anthropology as espoused by Sol Tax in the 1950s, and as still employed by second and third generation practitioners, comes closest to offering a way forward. Stapp’s (2012) edited volume speaks powerfully of the tenets of action anthropology and their continued relevance in today’s settings. However, the need to go beyond the colonial context of Tax’s contribution and to develop theories and methods of a universal professional practice remains.

Social Ecology as One Response

In my applied practice, my colleagues and I have engaged in continuous theory building over the years, as well as methodological refinement, based on our experiences in engaging various social change projects. These projects have ranged from natural resource management, to economic growth, energy development, innovative governance, urban redevelopment, poverty reduction, health care, educational reform, and human service delivery. We have served many people in varied and unique geographical settings. I will treat Social Ecology as a starting point for the conversation I want to stimulate with practitioners. I define applied practice as:

the varied means used by anthropologists to foster social change by working within the existing social systems of a culturally-defined, geographically-based local community. It is a process of facilitating reflection and action within everyday routines through which individuals become conscious of their environment so that they can empower themselves to act upon it for survival, caretaking and maintaining culture. (Preister 2010:25)

While this definition may not capture all the realms in which anthropology is applied, its place-based focus for my work is powerful and useful.

Reflection and action are the dialectic concepts proposed by Paolo Freire (1970) in his theory of education. Education that is colonizing and dehumanizing he called the “banking” theory of education—students are empty and the teacher fills them with knowledge, a process of oppression in Freire’s view. Instead, Freire proposed a praxis theory of education. As people reflect on and become conscious of their conditions, they became aware of possible actions that would improve their situation. They practice such actions, reflect, and the process continues. Years ago, when my teacher, James A. Kent, was interviewed, he said that “Once you can interact with your environment, you can then choose from your culture what you need to keep and what you can safely discard. If you cannot interact with your environment, and it is controlled by outsiders, then you will systematically lose your culture and lose your sense of place” (cited in Larsh 1995:62). While Schön (1983) has offered valuable insights to anthropologists and other professionals about the reflective process of the professional, my interest has been the value of reflection by individuals in their place-based settings about their situation, past changes in their environment, what would make life better, and options for the future.

From my perspective, the central question related to the development of theories of applied social change at the present time is:

In situations of intentional social change, in which a new project, program, or policy is initiated by our government or corporate client, what are the theoretical and methodological means by which practicing anthropologists work to optimize the social, economic, and ecological benefits of the change initiative with individuals in place-based communities?

Notice that this statement narrows the scope of the term “social change” to settings in which a government or corporation initiates a project (e.g., a water development project), a program (e.g., a stewardship contracting program of the U.S. Forest Service), or a policy (e.g., a national policy with a variety of measures designed to limit greenhouse gases). The constraints of the definition allow a focus on social change that is empirical, time-bound, and manageable.

In my organization, the Center for Social Ecology and Public Policy (CSEPP), located in Ashland, Oregon, we have developed a theory and methodology over the years that we call Social Ecology (Preister and Kent 1997). Social Ecology is defined as a reflective process of individuals becoming conscious of their environment to foster actions that optimize benefits of intentional change in order to sustain bio-social ecological systems through the integration of informal and formal cultural systems. Our work is guided by the following five principles, which we believe are the building blocks for creating sustainable, positive programs in applied social change.

- **Principle One—Individual power is essential for maintaining the productivity of the human environment.** Power is the ability of the individual to understand, participate in, predict, and control his or her environment (Kent 1972:100). Individual power, even in communal societies, is essential to maintain a vigorous community and a healthy relationship among citizens, industry, and government. In our work, we identify “citizen issues”—statements an individual makes that can be acted upon—and we encourage our clients to resolve them in order to not only meet their own objectives, but also to strengthen community life. When individuals are able to resolve their issues they are empowered (Preister and Kent 1997).

- Principle Two—People everywhere develop an attachment to a geographic place characterized by a set of natural boundaries created by physical, biological, social, cultural, and economic systems (a *bio-social* ecosystem).** Human-geographic boundaries that reflect this attachment are natural management boundaries. These “natural borders” reflect the ways in which people actually relate with and use their landscape, so their use fosters effective public engagement and greater efficiency and effectiveness in government or corporate programs. In a recent publication, we showed how human geographic mapping can be applied to climate change policy at different geographic scales to mobilize people for change (Kent and Preister 2010). The Bureau of Land Management in eastern Washington, which manages about a half million acres spread out over the eastern two-thirds of the state, used our human geographic units as planning units and to organize its public involvement program (Preister, Malone, Darsow 2010). Fig. 1 shows two scales of human geography, the Social Resource Unit (SRU), a regional unit, and the Human Resource Unit (HRU), a smaller scale unit generally the size of a county. An HRU is derived from the use of seven Cultural Descriptors: settlement patterns, publics, informal networks, work routines, support services, leisure time activities, and geographic features (Kent and Preister 1999). An SRU is the aggregation of HRUs based on river basins or geological province.

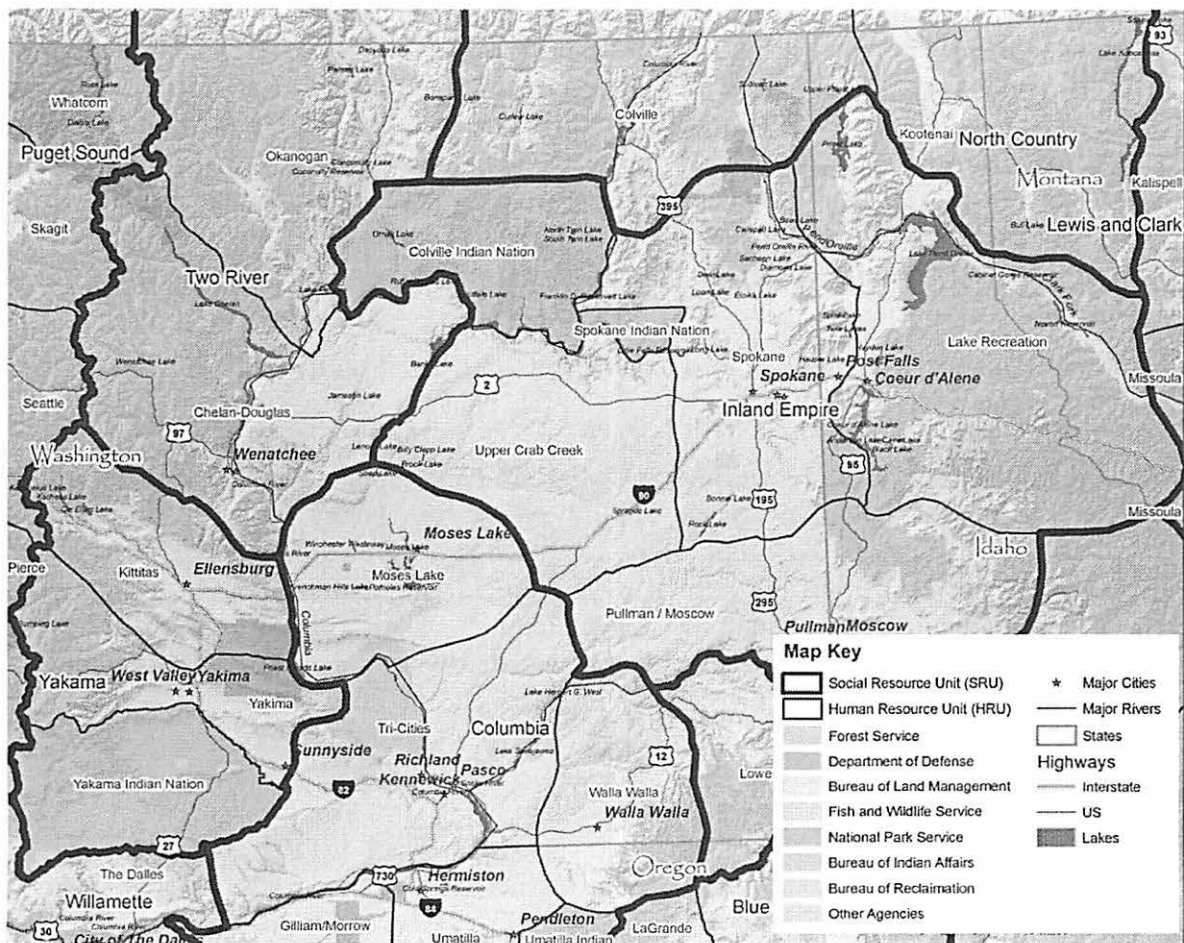


Fig. 1. The Social Resource Units (SRUs, in bold) and the Human Resource Units (HRUs, in black) of Eastern Washington state. ©2014 James Kent Associates.

- **Principle Three—Unique beliefs, traditions, and stories tie people to a specific place, to the land, and to social/kinship networks.** Informal networks and caretaking systems form the social capital by which communities sustain themselves. Once we are grounded in these informal systems, it becomes more difficult for outside interest groups or more extreme voices to dominate the discourse. The incentive for our clients to do “the right thing” in fostering community benefit is that they are less subject to the vagaries of political processes. The formal processes become more routine and less charged if the interests of people in the grass roots have been addressed. For example, large segments in Hawaii have been opposed to development. Local people have been subject to high taxes, high land and housing prices, low wages, and visitor impacts. They have become skilled at fighting development and have formed organizations to lobby for their interests. When we were hired by a developer to identify issues and facilitate their resolution as a means to build public support, had we gone in and announced a series of meetings to get residents’ best ideas for responsive development proposals, we would have been attacked; the situation would have polarized; and it would have been difficult to have normal conversations about the topic. Instead, as anthropologists do, we first operated through participant observation, frequenting the gathering places and getting into the routines of daily life. As we identified ourselves and our purpose, we kept asking, “How would development be done here in a way that would make a difference for you?” Over time, people’s reactions changed from suspicious to skeptical to positive. They knew we worked for the “bad guy” but they saw us every day, they came to know that we were “okay” and they began to see they could influence the process. What began as a private beach club (anathema to Hawaiians) and a high-end development became instead a pedestrian village, with live-work units by which Hawaiians could get their own store front, a range of all housing costs that anyone could buy into, a pedestrian orientation, and practical shops for everyday people, not just the high-end shops. These were all elements that local people had identified for us. As the formal review process began, we watched as opposition people one by one peeled away from the monolithic opposition groups they were a part of; strong support for the project was the outcome.
- **Principle Four—Since humans and nature rely on shared landscapes, the current status of “productive harmony” must be described** (the balance of physical/social environments as called for by the National Environmental Policy Act [NEPA]) (Preister and Kent 2001). A descriptive approach focused simply on “what is” (what John Steinbeck called “is thinking” [Larsh 1995]) is a beginning point of any successful change initiative—“How does this community work?” The best opportunities for adaptive change are through the cultural alignment of the informal and formal systems operating in place-based communities. For example, our firm contracted with Washoe County, Nevada, to develop an Issue Management program in the 1990s. Community fieldwork revealed widespread issues about potholes in the roads, and further, that people thought a gas tax would be all right to fix the potholes. When county planners heard our report, they began making a list of all the things a gas tax could pay for. When we countered and said the “social license to operate” was only for a gas tax for potholes, they ended up agreeing and the action went forward. Had they promoted an aggressive gas tax to pay for other county business, they would not have had support (James Kent Associates 2002). In our experience, initiatives deriving from only the informal or only the formal levels of society do not work very well. It is when informal (horizontal, oriented to caretaking, survival and cultural values) and formal (vertical, oriented to political, economic and ideological control) systems are in alignment that long-term sustainable action is achieved.

- **Principle Five—Social Ecology is not only a scientific enterprise of ethnographic description (which we term for our clients the Discovery Process™—“What’s out there?”) but an action methodology (which we term Human Geographic Issue Management Systems™—“What do I do with it?”) that builds citizen and institutional capacity for creating and enhancing healthy environments.** When change programs work well, both informal and formal systems become more resilient. The ability of local people to care for themselves and their families is enhanced by the action, and formal organizations such as a government or corporate unit have stronger support, lower costs, and more legitimacy.

Broadening the Dialogue

If our shared goal is to “optimize the benefits of change,” then surely ongoing dialogue about what works and does not work in the various contexts of our applied settings is in order. The variable contexts we experience include the length of the project, the nature of our client (government, corporate, community), the legal framework within which decisions are made, auxiliary resources that may be brought to bear, the history of empowerment/disempowerment embedded within the local culture, and the intrusion or absorption of outside forces. The experiential nature of theory building in the context of applied social change projects comes from the heart of reflection and professional dialogue.

The bright spot of the dilemma in our field described in this brief paper is the wide range of settings in which applied anthropologists are working in today. Such extensive and intensive applied work should allow us to practice new ways of understanding and new ways to facilitate responsive action in emerging projects, programs, and policies.

The challenges of the twenty-first century should propel the applied anthropology profession to broaden and deepen its skills set so that we continue to be useful. The megacities developing in the southern hemisphere, the importance of limiting and accommodating climate change, the integration of ecological and economic factors in promoting better human conditions, the ongoing legacies of racism and classism—these all invite our participation and contribution. No matter where one looks on the planet, the commingling of populations, the confrontations of in-groups and out-groups, and the contrasting cultural perspectives brought to bear on any human problem can be observed.

The trends in society that are being manifested in new forms of citizen engagement worldwide has set in motion the need for anthropologists to step forward in a new context to be first-hand participants in this trend. It is essential that we redefine our anthropological profession in terms of the reality that we face in today’s world. People, on a universal scale, are demanding participation in the ecosystems in which they live, prediction of the events that affect their lives and control over their immediate environment to improve their lives.

Conclusion

Our profession of practicing, applied, and action anthropology would benefit from a concerted focus on theories and methods guiding our engagement with place-based communities and with their attendant organizations. Many of our colleagues go beyond research operations to actively engage, facilitate, and encourage needed change by working within these existing cultural systems of adaptation.

We must first recognize that applied anthropology is more than just research for knowledge sake. As professional agents of social change, we first describe and then work within existing cultural systems of adaptation and survival operating in place-based communities. Such recognition does not mean we are social workers, as Gross and Plattner (2002) would have us believe. Our cultural perspective, methods, and desired outcomes go well beyond the social work mission.

We must also be clear about our goals, and then we should be active in developing the abstractions necessary to develop general theories about the process of applied social change. Even for trained professionals, such abstraction does not always come easily, nor is it supported in the marketplace within which we operate. Nevertheless, this is the means by which we can move beyond *ad hoc* “stories from the field,” or approaches tied to specific individuals, and create a truly universal profession that will attract students interested in a defined career track that has meaning and direction. As a profession, we must continue to practice and to teach the next generation in anthropology techniques that serve the trajectory of our society. To survive and prosper in an exciting twenty-first century paradigm is our mission. The arch of civilization consistently moves toward social justice and so must we.

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THE DISTRIBUTION AND MEANING OF LABRETS ON THE SALISH SEA

Kate Shantry

ABSTRACT

The understanding of labrets on the Northwest Coast of North America is mostly attributed to ethnographic and ethnohistoric studies, and a relatively small amount of evidence found in various depositional contexts. Labrets recovered from archaeological sites in Washington state are presented here amidst the existing Canadian data set and analyses, providing a fuller picture of labretifery on the Salish Sea. Results indicate that labret wearing was more popular amongst people in the northern Salish Sea than in the southern Salish Sea, that labrets were used continuously on the San Juan Islands throughout the period of specialization, and that groups may have exchanged materials across the northern and southern Salish Sea as early as 4,200 years ago.

Introduction

Labrets are heterogeneous artifacts in style, form, and material, and have been interpreted by archaeologists as symbols of social differentiation on the Northwest Coast. The majority of labret data for the Northwest Coast has been called out in discussions of status and style (e.g., Duff 1956a, 1956b; Keddie 1981, 1989; Ames 1995, 2005; LaSalle 2008). The main issues pertaining to labrets are their geographic restriction, the chronology of their use, variation in styles, use among both genders, links to other types of body modification, and social and economic implications. The major objectives of this study are to provide southern Salish Sea labret data, compile the existing research pertaining to labrets, and discuss labret frequencies, distributions, and site contexts on the Salish Sea.

The relatively small number of labrets found in southern Salish Sea assemblages may be attributed to the limited number of identified older components due to rising sea levels (Armstrong et al. 1965; Easterbrook 1992; Dethier et al. 1995; Porter and Swanson 1998). The limited study of human skeletal remains is also a factor. The data set for Washington state is limited to the presence of a labret artifact, and does not account for tooth wear such as abrasion or faceting present on human skeletal remains. Labrets were also made of more perishable materials, not leaving any wear on teeth and not preserving in the archaeological record (Matson and Coupland 1995:116). Even with the absence of skeletal analyses and perishable materials, very little labret use has been identified in Puget Sound.

Background

Geographic Restriction—Known Spatial Distribution

The study was initially concerned with the Washington portion of the Salish Sea, or the coastal areas and watershed of Puget Sound and the Washington portion of the Strait of Juan de Fuca and the Strait of Georgia (Fig. 1). The study expanded to include the northern Salish Sea, or coastal areas and watershed of the Canadian portion of the Strait of Juan de Fuca and the Strait of Georgia. It should be noted that the geographic unit of Salish Sea includes more than Salishan speakers (Thompson and Kinkade 1990:30–42). The Salish Sea is part of Matson and Coupland's (1995:2–3) "Central Coast" of the Northwest Coast area, defined as the area between the Columbia River and the north end of Vancouver Island. LaSalle, in turn (2008:15), used "North," "Central," and "South," to divide up the British Columbia coast, based upon the locations of labret data. LaSalle's "South Coast" is mostly equivalent to the northern, or Canadian, portion of the Salish Sea.

Sites with evidence of labrets extend north from the Salish Sea, in the inner southeast coast and parts of the northern half of the coast in British Columbia, to Alaska at Baranof Island, Kodiak Island, and the Aleutian Islands, and across the Bering Sea at Kamchatka and the Kuril Islands in Russia, and Northern Hokkaido in Japan (Keddie 1981, 1989; Davis 1989; Lightfoot 1989; Dahm 1994:78; Steffian and Saltonstall 1995). The only inland occurrences of labrets on the Northwest Coast are known from the Milliken Site, DjRi 3, at Yale in the Fraser Canyon, and a surface find at DjRi Y in the Spuzzum-Yale area in the Fraser Canyon (Borden 1961:1; Duff 1956b; LaSalle 2008:79, 111; Mitchell and Pokotylo 1996).

Although labret wear is mostly a marine phenomenon on the Northwest Coast, labrets have not been found in archaeological contexts in some reasonably well-studied southern Salish Sea sub-regions: Hood Canal, the Skagit delta, and the Olympic Peninsula. Bryan (1963) did not note any occurrences of labrets in his survey of North Puget Sound that included the littoral regions of Snohomish, Skagit and Island Counties in Washington. Labrets appear to be conspicuously absent from the large village sites on the outer Washington Coast, and none have been reported from Hood Canal (Samuels 1991; Croes 1995; Dennis Lewarch, personal communication, 2012; Gary Wessen, personal communication 2012; Bill White, Lower Elwha Klallam Tribal Archaeologist, personal communication 2012; Rob Whitlam, personal communication 2012).

Chronology—Known Temporal Distributions

Dates contextualizing labrets have been gathered from a variety of materials (bone, charcoal, shell), and are being adjusted as new methods become available (Cybulski 2010:16–19). Evidence of labrets was first found on the northern Salish Sea about 40 years ago. In the past, labrets were thought to represent the Locarno Beach and Marpole cultural phases, and assigned corresponding contexts without associated dates. Large ranges (>500 years) for sites and/or components are not ideal to apply to labrets, as a finer-grained resolution for these rare artifacts is more desirable when making inferences about their meaning. However, with that type of chronological resolution lacking, ranges provide bracketing dates for the practice.

Labrets do not appear in the archaeological record before 5000 B.P. in Alaska, on the North Coast of British Columbia, or on the Salish Sea. Labrets start to appear in the Strait of Georgia and in Puget Sound about the same time around 4300 B.P. (Fladmark 1982:111; Carlson and

Hobler 1993; Ames and Maschner 1999:103; Larson and Lewarch 1999). Labrets appear to be absent after about 1,500 years ago on the Salish Sea, yet are found historically north of the Salish Sea on the North Coast of British Columbia.

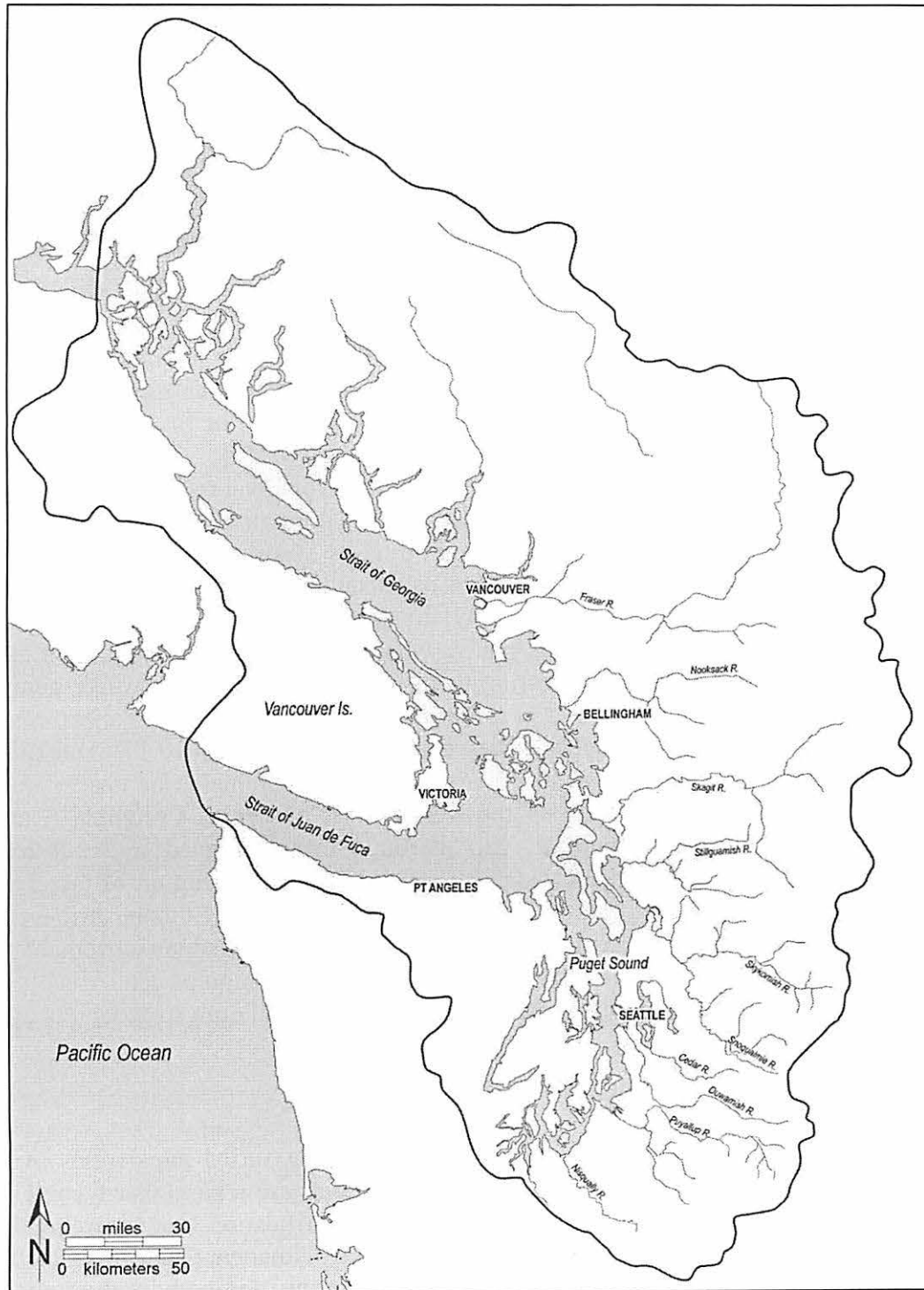


Fig. 1. The Salish Sea and surrounding basin.

Style, Form, and Material Types

Styles such as pendant labrets, hat or button labrets, and peg motifs overlap throughout the Salish Sea, North Coast, and Arctic (Steffian and Saltonstall 1995; Stewart 1996). Archaeological components also contain microblades and Gulf Islands complex artifacts, some of which may be parts of composite labrets or other forms of adornment, like pendants or other various accessories (Carlson 1960; Burley 1980; Ames 1995; LaSalle 2008; Palmer 2012).

Sourcing labret material types has the potential to attribute artifacts to exchange relationships, implying trade networks. Soapstone and nephrite are two labret material types that were mostly available on the lower Fraser delta and were likely traded amongst labret-wearing societies (Carlson 1994; Dahm 1994). In the case of nephrite, mineralogical analysis using a non-destructive technology, such as infrared spectrometry, would be necessary to distinguish it from other silicates for sourcing purposes (Darwent 1996:22–23; LaSalle 2008:13–14; Morin 2010:4–6). Some preliminary source work has been recently conducted (LaSalle 2008; Palmer 2012).

Gender/Evidence of Variation in Use through Time

Data relating to labrets and gender varies among historical accounts and skeletal studies. The historical pattern of women wearing labrets on the North Coast of British Columbia is not applicable to the Salish Sea (Smith 1906:6, 64–65; Donald 2003:206; Cybulski 2010:2, 19;). Keddie (1981:66) stated that labrets disappear from the archaeological record sometime between 2000 and 1500 B.P. on the Salish Sea, which is supported by northern Salish Sea skeletal studies.

Gender had different implications over time in terms of kinship and resource allocation and exchange (Moss 1996, 1999). Ham's (1982:92) skeletal data from five sites (English Bluff, Liquid Air, Marpole, Musquem NE, Point Grey) in the Fraser delta area showed only men wearing labrets in the Charles and Locarno phases where components dated between 5490 and 2200 B.P., and both women and men wearing them in the Marpole phase where components dated between 2630 and 1100 B.P. Labret wear occurred in male and female skeletal remains in the northern Salish Sea at Pender Canal and Crescent Beach (Cybulski 2010:11). Due to skeletal data restraints in Washington state, gender studies through skeletal remains are unavailable.

The historic presence of labrets on the North Coast of British Columbia relates to a matrilineal system of ranking associated with marriage that facilitated trade. It has been suggested that female Native American traders/chiefs employed the tradition of labret wearing during the European fur trade era (Bishop in Keddie 1989:24, 28–30). Ethnohistoric analogy of historic populations to the archaeological record must acknowledge movement among populations as well as the transmission of traditions. While the question of gender is outside the scope of this study, it is important to note that men, women, and children wore labrets over time on the Salish Sea (Cybulski 2010:10, 17).

Other Adornment and Body Modification

Body modification manifested in different forms among varied populations over time, and is related to kinship practices and group identities. Labrets are a particular type of jewelry that requires a physical investment by the wearer. Body modification (e.g., piercing, skeletal modification, tattooing) for the purpose of adornment is more permanent than expression through clothing, painting of the body, donning of masks, or wearing non-body-protruding jewelry (Campbell, Damitio, and Butcher 2013). Labret wearing occurred prior to cranial modification and was significantly less popular (Cybulski 2010:15).

It has been posited that cranial modification replaced labrets sometime after 2000 B.P. on the Salish Sea (Ames 1995:166; Donald 2003:303-304). Recently, it has been shown that morphological variation and cradling practices caused non-intentional cranial modification, which puts in question earlier interpretations in the archaeological record (Cybulski 2010:15; Ham 1982:92). Labrets may be representative of pre-Coast Salish cultures, while cranial modification was a widespread practice among the Coast Salish cultures that pattern historical populations (Donald 2003:307). The association between the two cultural practices continues to be discussed (Cybulski 2010:18–19). For instance, labrets do not appear in the archaeological record on the Peninsula side of the southern Salish Sea where cranial modification was accepted as a cultural trait (Suttles 1990:13).

Social and Economic Implications

The Salish Sea is a unique seascape where rich resources and specialization allowed for stability among diverse populations throughout the Middle and Late Holocene (Ames 2003; Butler and Campbell 2004:346–375). The presence of labrets during this time period may be related to population increases in general and well-established marine trade networks. However, Ames (2003:31) notes that labrets appear several hundred years before the earliest evidence of large corporate groups with accompanying social and economic complexity.

Information about labrets is derived from a small data set, and single artifacts are interpreted as status markers. Regionally connected, stable populations demonstrating mass harvest, specialization, storage, exchange, and evidence of feasting are expected for labret use under social complexity models (Morin 2012:1). Evidence that can extrapolate wealth or status to family and village groups based on labrets is related to resource allocation, ownership, and participation in cooperative efforts that contributed to abundant faunal remains, house size, the extent of territory or camp, and distribution of exotic (or not locally available) materials.

Labrets convey complex social signaling that goes beyond signifying group membership. Labrets represent a stage of body modification on the Salish Sea that was restricted within societies, and varied in style among and within cultures (Keddie 2007:1). Economic relationships signified by labrets could have been intentionally or unintentionally aided by recognizable labret wearing, as travel on the Salish Sea was relatively easy and routine, prior to people investing efforts toward alliances and territoriality by 1000 B.P. (Schaepe 2006:375).

Methods

The occurrences of labrets in British Columbia and Washington state have been gleaned from the academic and gray literature, as well as personal communication with other archaeologists. There is no well-kept record of labret occurrences in Washington state (Rob Whitlam, personal communication 2012). This study reviewed overviews of Northwest Coast literature, previous labret studies (e.g., Keddie 1981, 1989; Dahm 1994; Matson and Coupland 1995; Mitchell 1971; Ames and Maschner 1999; LaSalle 2008), and primary excavation and data recovery reports available in the Northwest Archaeological Associates library, the University of Washington libraries in Seattle, and online. Collections, photographs, and site data were accessed through research requests at the Burke Museum in Seattle and Western Washington University (WWU) in Bellingham.

Labret data was synthesized by compiling locations to understand distribution, dated contexts to establish chronology, and stylistic attributes to pursue shared cultural traits. The drawings of British Columbia labrets by Hillary Stewart (1996:76) and types by LaSalle (2008:22) were used to categorize forms. Keddie's (1981) classification attributes were used for flange and body types. Various attribute measurements (flange and body length, width, thickness, weight) were taken by the author or tabulated from reports if available, but are not exhaustive. Gulf Island complex artifacts that are likely related to adornment were not included here because they lacked a flange.

At the time of this study, a thesis providing a summary of the British Columbia labret data was being completed by LaSalle (2008), who constructed a database of labrets from coastal British Columbia, documenting their age, distribution, stylistic attributes, and any contextual information available, including site location, object provenience, associated dates, and gender data from burials. This is the most extensive reporting of labret data for the Northwest Coast to date. I summarize LaSalle's data here for my purposes, and add the southern Salish Sea data. Dates are reported per the literature, and include calibrated and conventional radiocarbon dates.

Results

A comparison of Salish Sea labrets in British Columbia versus Washington state reveals more than three times the amount of documented sites containing labrets or with evidence of labret wear in British Columbia ($n = 48$) versus Washington state ($n = 14$) (Table 1). Most of the Washington finds are within the Strait of Georgia and not Puget Sound proper. From British Columbia, the distribution of labrets extends from southeastern Vancouver Island to the Fraser River and Gulf Islands, south to the San Juan Islands and into Puget Sound (Fig. 2).

Thirty labrets from 14 locations on the southern Salish Sea were identified by this study (Table 2) (Figs. 3 and 4). Five sites with labrets are on Sucia, Lopez, Decatur, and San Juan Islands; four labret sites are on the mainland between Semiahmoo Bay and Bellingham Bay at Birch Bay, Cherry Point, Padden Creek, and Semiahmoo Spit; three labret sites are at the northern entrance to Puget Sound on Fidalgo Island; and one labret site is in central Puget Sound on the promontory between Elliot and Shilshole Bays. In addition, an isolated labret was found on the surface at Penn Cove on Whidbey Island. Labret forms include bar, button, hat, pendulant, plug, spool, and T-shaped styles. Soapstone, massive talc also known as steatite, and nephrite, are the two most common preliminarily identified material types, and shell and antler are also represented (Chesterman 1979:530; Lynch and Lynch 2012:239).

No labrets have been reported from the Skagit delta, the Renton/Black River sites, the Duwamish delta, the Puyallup delta, the Nisqually delta, Bainbridge and Vashon Islands, Hood Canal, or the Olympic Peninsula (Campbell 1981; Chatters 1981, 1988; URS and BOAS 1986; Blukis Onat 1987; Samuels 1991; Croes 1995; Stein and Phillips 2002; Lewarch 2006; Shantry, Rinck, and Smith 2010; Dennis Lewarch, personal communication 2012; Gary Wessen, personal communication 2012; Rob Whitlam personal communication 2012). South of the Salish Sea, indications of labret wear are obscure, and a limited search did not identify any occurrences (Dall 1884:87; Kenneth M. Ames, personal communication 2013). (A quartz crystal hat labret found at Sauvie's Island in Multnomah County, Oregon, by the amateur archaeologist Ernest Cowles in the 1950s-60s, was found listed on Ebay in 2013).

TABLE 1. SALISH SEA SITES WITH EVIDENCE OF LABRETS

	Site Number	Site Name	Seascape/Location	References
1	DcRs-1	Bruce Bight	Gulf Islands	LaSalle 2008: Appendix G
2**	DcRt-10	Willows Beach	East Vancouver Island	[Kenny 1974] LaSalle 2008: Appendix G Willerton 2009
3*	DcRt-13	Oak Bay Fire Hall	East Vancouver Island	LaSalle 2008: Appendix G Rorabaugh 2009:138
4*	DcRt-15	Snyega	East Vancouver Island	LaSalle 2008: Appendix G Rorabaugh 2009:138
5*	DcRu-12	Maple Bank	East Vancouver Island	LaSalle 2008: Appendix G Rorabaugh 2009:138
6	DcRu-63	View Royal	East Vancouver Island	Diana Cooper, personal communication, 2008 LaSalle 2008: Appendix G
7	DcRu-576	-	East Vancouver Island	LaSalle 2008: Appendix G
8	-	North Saanich	East Vancouver Island	Smith 1907:350, Fig. 138b
9	DdRu-18	Patricia Bay	East Vancouver Island	Diana Cooper, personal communication, 2008
10	DeRst-Y	Saturna Island	Gulf Islands	LaSalle 2008: Appendix G
11	DeRt-y/DeRu-21	Beddis Bay	Gulf Islands	LaSalle 2008: Appendix G
12*	DeRt-Y(1)	Pender Canal	Gulf Islands	[Duff 1956a:53] Grier 2003 LaSalle 2008: Appendix G
13**	DeRt-2	Pender Canal 2	Gulf Islands	[Carlson 1986, 1991] Carlson and Hobler 1993 [Cybulski 1991] Dahm 1994:34–35, 37–38, 68 LaSalle 2008: Appendix G Matson and Coupland 1995:116 [Nelson et al. 1985]
14	DeRt-4	Pender Canal 4	Gulf Islands	LaSalle 2008: Appendix G
15	DeRt-71	-	East Vancouver Island	LaSalle 2008: Appendix G
16	DeRu-26	Unknown	Gulf Islands	LaSalle 2008: Appendix G

17	DeRv-6	Mt. Tzuhalem	East Vancouver Island	LaSalle 2008: Appendix G
18	DeRv-107	-	East Vancouver Island	LaSalle 2008: Appendix G
19	DeRv-Y	-	East Vancouver Island	LaSalle 2008: Appendix G
20	DfRtu-Y	Active Pass	Gulf Islands	LaSalle 2008: Appendix G
21	DfRu-4	Toynbee Beach / Hill Site	Gulf Islands	Hall and Haggerty 1981:95, Fig 6f LaSalle 2008: Appendix G Matson and Coupland 1995:212–214
22*	DfRu-8	Helen Point	Gulf Islands	[Carlson 1970] Fiadmark 1982:111 LaSalle 2008: Appendix G [McMurdo 1974:78, Fig 28a]
23*	DfRu-13	Montague Harbor	Gulf Islands	LaSalle 2008: Appendix G Mitchell 1971
24	DfRu-23	Walker's Hook	Gulf Islands	LaSalle 2008: Appendix G
25	DfRu-24	Tolan's Beach/Georgeson Bay	Gulf Islands	Dahm 1994:36 [Haggerty and Sendey 1976:33, Fig 13i] LaSalle 2008: Appendix G
26	DfRw-3	-	Gulf Islands	LaSalle 2008: Appendix G
27**	DgRr-1	Crescent Beach	Fraser Delta	Dahm 1994:36 LaSalle 2008: Appendix G Matson et al. 1991:24–25, 125, 127, 144 Matson and Coupland 1995:160, 213 [Percy 1974:138–142]
28*	DgRr-6	Glenrose Cannery	Fraser Delta	Dahm 1994:36 LaSalle 2008: Appendix G Matson 1976:115, 127, 157, 291; Matson and Coupland 1995:213–214
29*	DgRs-1	Beach Grove	Fraser Delta	[Abbott 1962:97–99] Dahm 1994:36 LaSalle 2008: Appendix G [Matson et al. 1980]
30*	DgRs-2	Tsawwassen	Fraser Delta	[Arcas 1991 vol. 3:201, 219, 269] [Curtin 1991:269] Dahm 1994:36 Dubeau 2011:21 LaSalle 2008: Appendix G Matson and Coupland 1995:116

31*	-	Whalen Farm	Fraser Delta	Borden 1954:26 Mitchell 1971
32**	DgRv-3	Dionisio Point	Gulf Islands	Grier 2006 LaSalle 2008: Appendix G
33	DgRw-4	Senewelets	Gulf Islands	LaSalle 2008: Appendix G
34	DgRw-204	Gabriola Island	Gulf Islands	Dahm 1994:36
35	DgRx-5	-	East Vancouver Island	LaSalle 2008: Appendix G
36	DgRx-5B	-	East Vancouver Island	LaSalle 2008: Appendix G
37	DgRx-6	Petroglyph Park	East Vancouver Island	LaSalle 2008: Appendix G
38*	DhRq-31	Pitt River	Fraser Delta	LaSalle 2008: Appendix G Patenaude 1985
39	DhRp-17	Port Hammond	Fraser Delta	Duff 1956b:83 Smith 1903:178, Fig. 44
40	DhRs-1	Marpole	Fraser Delta	[Borden 1962, pl. 5, 1, p] Duff 1956:83 LaSalle 2008: Appendix G Mitchell 1971:118
41	DhRs-19	Liquid Air	Fraser Delta	LaSalle 2008: Appendix G
42*	DhRt-4	Musqueam NE	Fraser Delta	Borden and Archer 1974: 10, 11 Hall and Haggerty 1981:100 LaSalle 2008: Appendix G Matson 1974 Matson and Coupland 1995:160
43*	DhRt-6	Locarno Beach	Fraser Delta	Borden 1954:26 Dahm 1994:53 Duff 1956b:83 LaSalle 2008: Appendix G Williams 2013:72
44	DhRx-16	Sti'ilup	East Vancouver Island	LaSalle 2008: Appendix G
45	DiSc-26	Qualicum Golf Course	East Vancouver Island	LaSalle 2008: Appendix G
46	DjRi-Y	-	Fraser Canyon	LaSalle 2008: Appendix G
47*	DjRi-3	Milliken	Fraser Canyon	Borden 1961:1 Duff 1956a:53 LaSalle 2008: Appendix G Mitchell and Pokotylo 1996:65-82

48**	DkSf-26	Mountie Site	East Vancouver Island	LaSalle 2008: Appendix G [Lawhead 1980]
49	45IS50	Penn Cove	Whidbey Island	Kidd 1969:64
50*	45KI428	West Point	Elliot Bay	Larson and Lewarch 1995:11–10 to 11–12 Lewarch and Bangs 1995:6–17
51*	45SJ24	English Camp	San Juan Islands	Larson and Lewarch 1995:11–12 Laura Phillips, personal communication 2008 Stein 2000:53 Stein et al. 2003:302
52**	45SJ105	Fossil Bay	San Juan Islands	Dahm 1994 Kidd 1969: 129-131; 1969:46 Stein et al. 2003:303–304
53*	45SJ165	Reed Bay	San Juan Islands	Bard et al. 2007:6-21, 6–34, 6–39, Appendix B Walker 2003
54	45SJ169	Decatur Tombolo	San Juan Islands	Walker 2003
55**	45SJ280	Watmough Bay	San Juan Islands	Bovy 2005:30–31,61, 72–73 Laura Phillips, personal communication 2008 Stein et al. 2003:304
56	45SK43	Weaverling Spit	Fidalgo Island	Nelson 2006:14
57*	45SK46	Deception Pass	Fidalgo Island	Mather 2009:46-53, 119, 129
58**	45SK155	Anacortes Temporary Ship Harbor #2	Fidalgo Island	Wessen and Waterhouse 1987:46, Photo 3
59**	45WH1	Cherry Point	Fraser-Nooksack Mainland	Blodgett 1976 Dubeau 2011 Grabert 1988 Grabert and Larsen 1975
60*	45WH9	Birch Bay	Fraser-Nooksack Mainland	Grabert and Spear 1976:46, 76
61*	45WH17	Semiahmoo	Fraser-Nooksack Mainland	Grabert et al. 1978:129
62	45WH47	Padden Creek	Fraser-Nooksack Mainland	Reed et al. 2010

Note. [] indicates reference was given in reviewed literature, but not viewed directly by the author for this study.

Note. * indicates dates associated with site. ** indicates dates associated with labret(s).

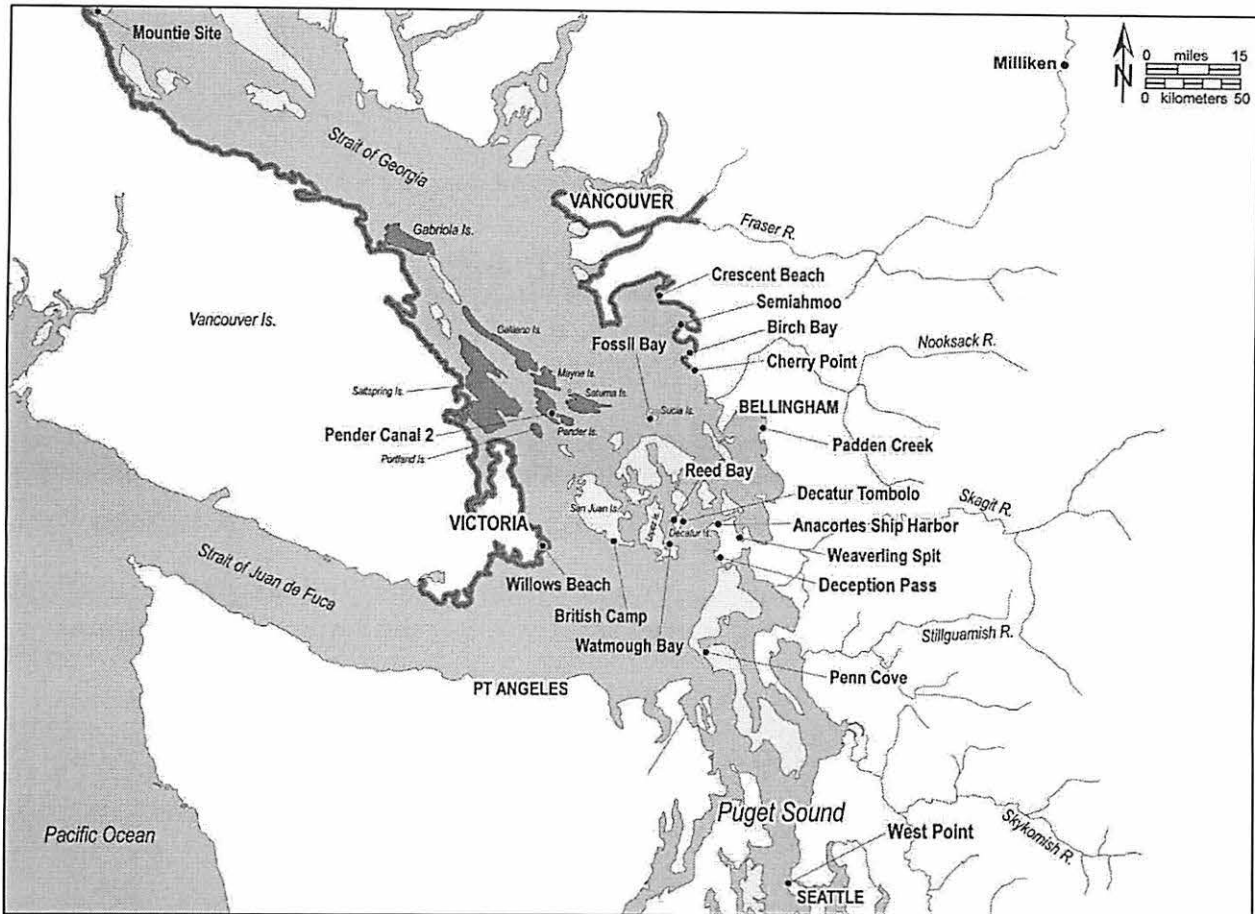


Fig. 2. Selected labret sites and the geographic distribution of labrets on the Salish Sea.

Temporal Range

LaSalle's chronological reporting combines labrets from the North, Central and South Coasts of British Columbia, however 73% of her sample ($N = 160$ labrets) is from the South Coast/northern Salish Sea. LaSalle (2008:18, 71, 79, 87, 135) identified only four of 49 labret sites in the northern Salish Sea with dated components for *in situ* artifacts: Crescent Beach (3590 to 3210 \pm 110 B.P. to after 3210 \pm 110 B.P.), the Mountie Site (3025 \pm 270 to 2330 \pm 173 B.P.), Pender Canal 2 (4320 \pm 220 B.P.), and Willows Beach (2863–2516 cal B.P. and 2720–2466 cal B.P.) (Kenny 1974; Lawhead 1980; Matson 1991:24–27; Willerton 2009:36) (Fig. 2). LaSalle (2008:17) reported 69 *in situ* labrets with no dates associated, and an additional 139 labrets that could not be placed temporally. Despite this, many of the northern Salish Sea sites have well-dated component definition (Carlson and Hobler 1993:32–33; LaSalle 2008:135; Nelson, Vogel, and Southon 1985; Rorabaugh 2009:138–140). Rorabaugh (2009, 2011) provides chronological resolution for many of the labret sites, determining a sample of 124 labrets for the southern Salish Sea, 49 with contextual data. Based on Rorabaugh's (2011) data, labrets are most represented in the northern Salish Sea from the period between 2,500 and 2,000 years ago.

TABLE 2. ATTRIBUTES OF WASHINGTON STATE LABRETS

Site No.	Site Name	Location (North to South)	Artifact No.	Assoc. C14 Dates (BP)	Preliminarily Identified Material Type	Maximum Length (cm)	Maximum Width (cm)	Width of Flange (cm)	Thick- ness of Body (cm)	Weight (g)	Condition	Style	Keddie Category
45WH1	Cherry Point	South of Point Whitehorn	88 ^a	3380- 1110 Cal. ^h	Soapstone	n/a	n/a	n/a	n/a	5.75	Complete	Bar	2A
			403 ^a	3380- 1110 Cal. ^h	Soapstone	n/a	n/a	n/a	n/a	5.72	Complete	Bar	2A
			1019 ^a	3380- 1110 Cal. ^h	Soapstone	n/a	n/a	n/a	n/a	9.81	Broken	Bar pre- form	2A
			1519 ^a	1160 Con ^l -550 Cal. ^j	Soapstone	n/a	n/a	n/a	n/a	4.44	Broken edge	Bar	2A
			2533 ^a	3380- 1110 Cal. ^h	Soapstone	2.4	0.5	n/a	0.25	0.7	Broken edge	Bar	2A
			2842 ^a	2750- 2320 Cal. ^k	n/a	2.14	1.76	n/a	0.24	1.2	n/a	Lateral or buccal	1A
45WH9	Birch Bay	Southern Birch Bay	A45WH9.1.37B ^c	3215-760 Con. ⁱ	Shell	3.79	2.71	n/a	0.72	5.0	Complete	Pendulant	2B
45WH17	Semiahmoo	Semiahmoo Spit	544 ^a	3080- 2765 Con. ^m	Steatite	4.5	1.6	n/a	n/a	27.0	Broken, unfinished	n/a	n/a
			1292 ^a	3080-300 Con. ^m	Soapstone or steatite	1.5	1.3	n/a	0.3	n/a	Partially broken	Spool	2A
45WH47	Padden Creek	Fairhaven	20 ^a	n/a	Metasediment	n/a	n/a	n/a	n/a	5.6	Chipped	T	2B
45SK43	Weaverling Spit	Fidalgo Island	43T-003 ^f	n/a	Nephrite	20.48	4.46	n/a	3.36	0.69	Complete	T	1B
			n/a	n/a	Nephrite	-	-	n/a	-	-	Broken	Hat fragment	2A
			43T-148 ^f	n/a	Dacite	15.61	8.95	n/a	3.36	0.69	Complete	T	n/a

Site No.	Site Name	Location (North to South)	Artifact No.	Assoc. C14 Dates (BP)	Preliminarily Identified Material Type	Maximum Length (cm)	Maximum Width (cm)	Width of Flange (cm)	Thick- ness of Body (cm)	Weight (g)	Condition	Style	Keddie Category
45SK46	Deception Pass	Fidalgo Island	1133 ^a	3290- 2540 Cal. ⁿ	Serpentine	n/a	n/a	n/a	n/a	n/a	Broken	Bar	2A
45SK155	Anacortes Temporary Ship Harbor #2	Fidalgo Island	n/a ⁱ	2040 ± 100 Con. ^o	Argillite	≈3	≈2	n/a	n/a	n/a	Complete	Hat	2A
45SJ105A	Fossil Bay	Sucia Island	45SJ105A/90 ^c	1925- 1705 Cal. ^p	Serpentine	2.6	1.4	n/a	1.4	6.25	Complete	Hat with peg hole motif	2A
			45SJ105A/411 ^c	1925- 1705 Cal. ^p	Treated bone or antler	3.6	n/a	1.8	1.6	21.06	Broken	T	2B
45SJ24	English Camp	San Juan Island	SAJH139273 ^b	n/a	Nephrite	n/a	n/a	n/a	n/a	n/a	Complete	Pendulant	2B
			SAJH139260 ^d	n/a	n/a	n/a	n/a	n/a	0.3	n/a	Complete	Pendulant	2B
			SAJH139272 ^d	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Complete	Pendulant	2B
			SAJH16806 ^d	1850-600 Cal. ^q	n/a	n/a	n/a	n/a	n/a	n/a	Broken	T	1B
45SJ165	Reed Bay	Decatur Island	FS 748 ^g	3570- 3380 Cal. ^r	Nephrite	1.9	0.4	0.7	0.2	1.8	Complete	T	2B
			FS 801 ^g	3600 – 810 Cal. ^s	Nephrite	4.4	2.4	2.4	n/a	18.9	Complete	Hat	2A
			152	2715- 1065 Cal. ^t	Nephrite	3.6	1.2	1.6	0.8	n/a	Broken edge	Pendulant	2B
45SJ169	Decatur Tombolo	Decatur Island	1019	Indetermi nate	Jet	1.96	1.4	n/a	n/a	n/a	Complete	Pendulant	2B
45SJ280	Watmough Bay	Lopez Island	45SJ280/246 ^b	2915- 2715 Cal. ^u	n/a	≈3.7	≈0.3	n/a	n/a	n/a	Broken edge	Bar	2A
			45SJ280/353 ^b	2915- 1200 Cal. ^u	n/a	n/a	n/a	n/a	n/a	n/a	Complete	Bar	2A

Site No.	Site Name	Location (North to South)	Artifact No.	Assoc. C14 Dates (BP)	Preliminarily Identified Material Type	Maximum Length (cm)	Maximum Width (cm)	Width of Flange (cm)	Thick- ness of Body (cm)	Weight (g)	Complete	Style	Keddie Category
45IS50	Penn Cove	Whidbey Island	1995-80/1 ^b	n/a	Basalt	5.2	4.8	2.8	2.4	54.55	Broken edge	Pendant	2B
45KI428	West Point	Elliott Bay	B1-1277.01 ^o	3550- 2700 Cal. ^v	Steatite or Jadeite or Nephrite	n/a	n/a	n/a	n/a	20.0	Complete	Button	2A
			B2-1161.02 ^o	4250- 3550 Cal. ^v	n/a	n/a	n/a	n/a	n/a	0.7	Complete	T	1B

Note. *Italics = measurements from literature.*

Note. Con. = Conventional radiocarbon date; Cal = Calibrated radiocarbon date.

Artifact located at: ^a WWU; ^b Burke Museum; ^c Held in trust at the Burke Museum for Washington State Parks and Recreation Commission; ^d Held in trust at the Burke Museum for the National Park Service; ^e Held in trust at the Burke Museum for King County; ^f Samish Indian Nation; ^g Samish Indian Nation or Swinomish Indian Tribal Community

Dates cited in: ^h Dubeau 2011; ⁱ Grabert and Larsen 1975:20; ^j Beta Analytic 2011a; ^k Beta Analytic 2011b; ^l Grabert and Spear 1976:76, Appendix I; ^m Rorabaugh 2009:144; ⁿ Mather 2009:49–53; ^o Wessen and Waterhouse 1987:45; ^p Stein et al. 2003:303–304; ^q Stein et al. 2003:303; ^r Bard et al. 2007:6–21; ^s Bard et al. 2007:6–34; ^t Walker 2003:49; ^u Bovy 2005:30–31, 72–73; ^v Lewarch and Bangs 1995:6–17.

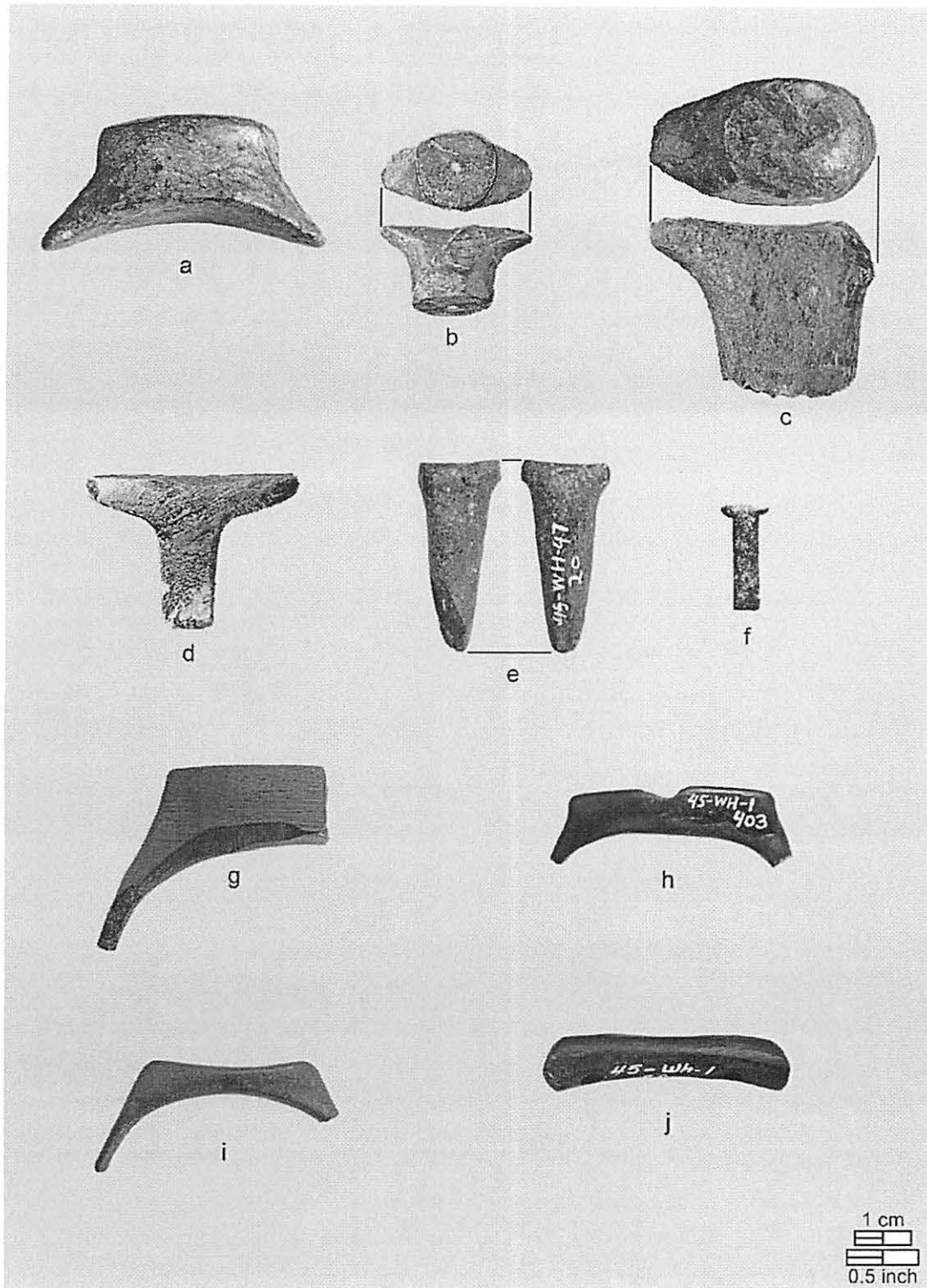


Fig. 3. Southern Salish Sea labrets: *a*, West Point labret no. B1-1277.01; *b*, Fossil Bay labret no. 45SJ105A/90; *c*, Fossil Bay labret no. 45SJ105A/411; *d*, Birch Bay labret no. A45WH9.1.37B; *e*, Padden Creek labret no. 20; *f*, West Point labret no. B2-1161.02; *g*, Cherry Point labret no. 1019; *h*, Cherry Point labret no. 403; *i*, Cherry Point labret no. 1519; *j*, Cherry Point labret no. 88.

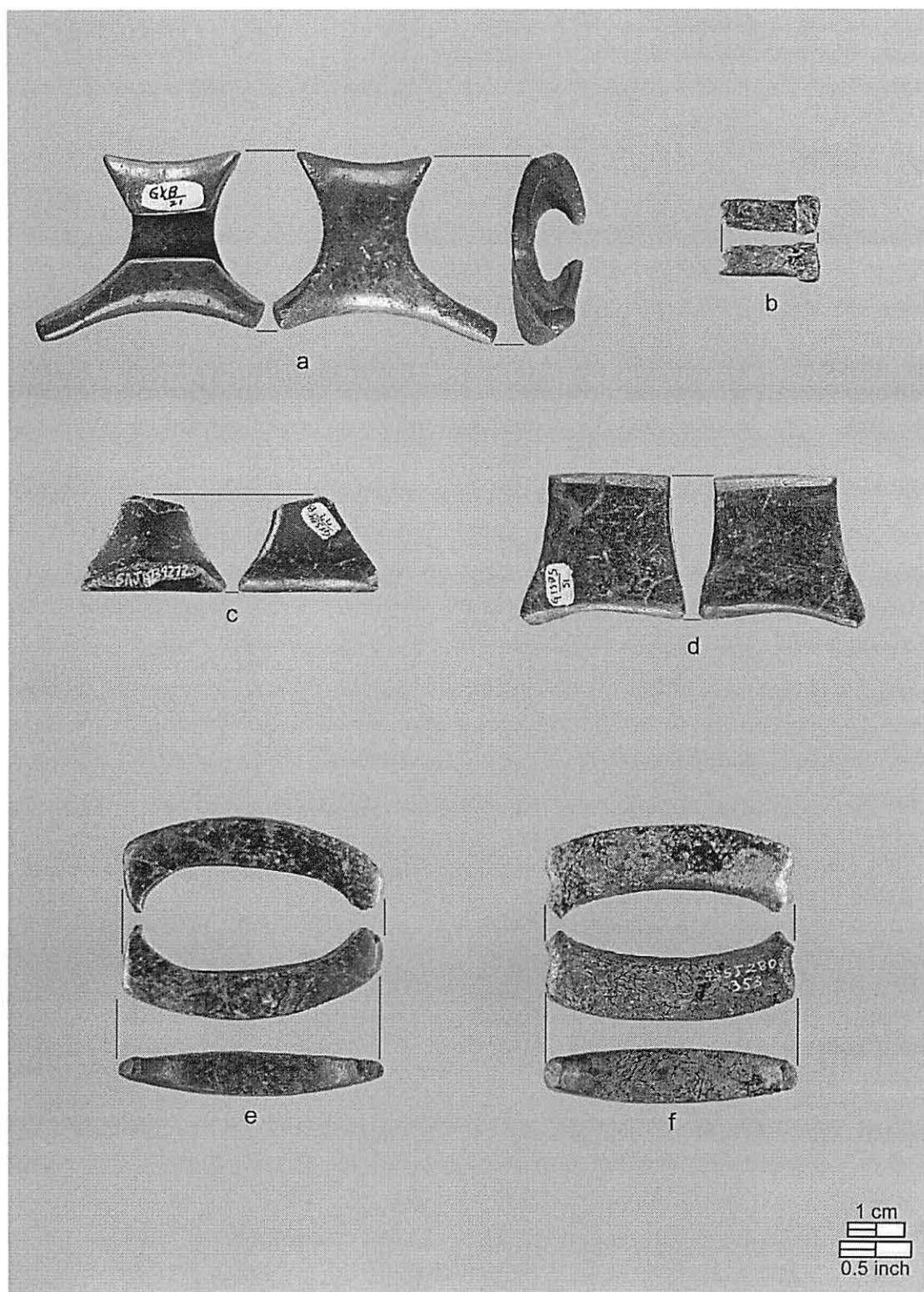


Fig. 4. Southern Salish Sea labrets: *a*, English Camp labret no. SAJH139273; *b*, English Camp labret no. SAJH16806; *c*, English Camp labret no. SAJH139272; *d*, English Camp labret no. SAJH139260; *e*, Watmough Bay labret no. 45SJ280/246; *f*, Watmough Bay labret no. 45SJ280/353.

Ten, or one-third, of southern Salish Sea labrets are from well-dated contexts or have a range of dates less than 1,000 years for sites and/or components (Table 2). Nine labrets are bracketed by too large of date ranges ($> 1,000$ years) for a meaningful context for this sample. No dates are associated with eight of the labrets, and one labret has no context.

Labrets appear at West Point as early as 4250 cal B.P., on Decatur Island as early as 3570 cal B.P., at Deception Pass as early as 3290 cal B.P., followed by 2915 cal B.P. at Watmough Bay, 2750 cal B.P. at Cherry Point, and 1925 cal B.P. at Fossil Bay (Lewarch and Bangs 1995:6–17; Stein, Deo, and Philips 2003:303–304; Bovy 2005:31–31, 72–73; Mather 2009:49–53; Dubeau 2011:20). Two additional conventional dates exist for labret sites, one at Semiahmoo as early as 3080 B.P., and one at Anacortes Ship Harbor at 2040 B.P.

Dubious contexts for two labrets exist at Cherry Point and English Camp that imply later use of the practice. No. 1519 at Cherry Point is a maximum of 40 cm below a shell date range of 550–410 cal. B.P. No. SAJH16806 at English Camp was found near the surface of a later component dating between 800–600 cal. B.P.

Southern Salish Sea (Washington State) Sites with Labrets

Cherry Point. Six labrets were recovered at the Cherry Point site (45-WH-1) north of Lummi Bay and south of Point Whitehorn (Blodgett 1976; Grabert 1988). Eleven dates for Cherry Point provide a range of 3340 \pm 40 to 1140 \pm 30 cal B.P. (Dubeau 2011:20). Five of the labrets are bar form with lateral flanges and made from soapstone (Steffian and Saltonstall 1995:23).

Catalog number (no.) 1019 is a pre-form or blank that was found at a depth of 55–75 cm in S1W4 and shows evidence of labret manufacture (Fig. 3g). No. 403 from a depth of 40 cm in S2W9 has a distinct groove in the center of the distal end (Fig. 3h). No. 88 is a composite bar form that may have had attachments that was found at a depth of 40–60 cm in S3E1 (Fig. 3j).

Labret no. 2842 was found in S10E13 at a depth of 100–120 cm and measured 2.14 cm x 1.76 cm x 0.24 cm and weighed 1.2 grams. The body of no. 2842 is curved and has slight ridges on the outer edges. No. 2842 does not necessarily have a flange, but was included here based on similarity to a lateral or buccal labret depicted by LaSalle (2008:189).

Labret no. 2533 is a ground soapstone fragment that was found in S16E17 from 60–80 cm and measured 2.4 cm x 0.5 cm x 0.25 cm, and weighed 0.7 gram. It is likely a labret bar form with a lateral flange, made of lighter blue or green soapstone, and has a curved edge that looks like a canoe (Blodgett 1976:64). A date range of 2750–2320 cal B.P. is from samples above and below no. 2533 context (Beta Analytic 2011b).

Labret no. 1519 is a ground and polished soapstone labret of the same form as pre-form no. 1019, and was found in S8E8 at a depth of 120–140 cm (Fig. 3i). A shell date ranging between 550–410 cal B.P. was obtained from a depth of 80–100 cm in S8E8 above the labret context (Beta Analytic 2011a). A conventional radiocarbon date of 960 ± 200 B.P. is from 140–160 cm in S8E8. Grabert and Larson (1975:20) initially thought this date may be contaminated, but it is stratigraphically consistent with the younger date above it (Sarah Campbell, personal communication 2014). Labret no. 1519 falls in between the two dates stratigraphically, however, without a calibrated date for the lower context, the age of the labret is uncertain. The adjacent unit, S7E8, has an abrupt change from S8E8, and produced a conventional radiocarbon date of 2630 ± 240 B.P. from a depth of 160–175 cm below a distinct shell layer (Blodgett 1976:33–34; Dubeau 2011:54). Field records and site stratigraphy were not reviewed in detail for this study, however, the older date in S7E8 was thought by Grabert and Larsen (1975:20) to represent a

“mid-range date for the earlier horizon,” and the depth of the labret suggests it coincides with the context below the earlier shell layer.

Birch Bay. One labret was recovered from Area C of Site 45-WH-9 at Birch Bay State Park north of Cherry Point (Grabert and Spear 1976:44, 46, 76, Appendix I). The shell labret no. 37B measured 3.79 cm x 2.71 cm x 0.72 cm, weighed 5 grams, and was found in Area C, Test Unit 52, at a depth of 20–40 cm (Fig. 3d). The labret is a pendant form (initially described as T-shaped) with a lateral flange that hangs down from the perforation in the lip rather than protruding outward. Dates associated with the Birch Bay site range between 3125 ± 90 and 848 ± 108 years B.P. The labret is held in trust for Washington State Parks and Recreation Commission at the Burke Museum and has no associated provenience information on file.

Semiahmoo. Two labrets were recovered at site 45-WH-17 at Semiahmoo Spit (Grabert et al. 1978). Dates for Semiahmoo range between 3015 ± 65 and 350 ± 50 years B.P. (Rorabaugh 2009:144). Labret no. 544 is listed under “Cylindrical Objects” in the Grabert, Cressman, and Wolverton 1978 report for 45-WH-17. The labret was described as steatite by Grabert, Cressman, and Wolverton (1978:127-128) and “round in cross-section and flares slightly towards one end, which is ground flat. Several chips appear along this plane’s edge which are smoothed by polishing. The opposite end is broken diagonally so that the original length and shaped is undetermined.” Labret no. 544 measured 4.5 cm long, 1.6 cm in diameter, and weighed 27.0 grams, and was found in S27E1. Fig. 20f on page 129 of Grabert, Cressman, and Wolverton 1978 appears to be labret no. 544, but is mislabeled as no. 882. This is further complicated by the mislabeling of Fig. 20d as no. 544 which could not be the “cylindrical object” based on the size description and scale in the photograph.

Labret no. 1042 is listed under “Perforated Objects” in the report for 45-WH-17. No. 1042 from S18E6 at a depth of 74 cm is described as soapstone or steatite, and measured 1.5 cm x 0.8 cm x 0.15 cm. The artifact is similar to the spool type determined by La Salle (2008:22), and described by Grabert, Cressman, and Wolverton (1978:128) as, “a small rectangular fragment of a steatite bar. Segments of two opposing conically drilled holes can be traced along the broken edges.” Fig. 20e in Grabert, Cressman, and Wolverton 1978 is a photo of artifact no. 1292, but it is mis-labeled no. 1042. The report does not provide a photo of no. 1042. A date of 2715 ± 55 years B.P. was obtained from nearby unit S18E7 in a deeper context of 190–210 cm (Rorabaugh 2009:144).

Padden Creek. One labret was found at Padden Creek site 45-WH-47 near Fairhaven on Bellingham Bay (Reed, Snowden, and Campbell 2010). Labret no. 208 is T-shaped, with a lateral flange and extended body that weighed 5.6 grams (Fig. 3e). No. 208 is triangular and made of metasediment, and has damage on the distal end but is not broken. The labret measured about 3 cm in length and 1.5 cm in maximum width, and is longer and thicker than most T-shaped labrets. The Padden Creek site was found by Garland Grabert in the late 1970s–early 1980s, and the results of the excavations have not been published. No dates are associated with this labret.

Weaverling Spit. Three labrets were recovered at Weaverling Spit, site 45-SK-43, on Fidalgo Bay near Anacortes (Nelson 2006:14, 16). Preliminarily identified as nephrite, labret no. 43T-002 is T-shaped, measured 20.5 cm x 4.5 cm x 3.4 cm, and weighed 0.7 gram. Labret no 43T-148 is also T-shaped, and was preliminarily identified as dacite. No. 43T-148 measured 15.6 cm x 9.0 cm x 3.4 cm, and weighed 0.7 gram. The third labret is a nephrite hat form fragment that was not studied

due to reburial. The Weaverling Spit labrets are similar in form to labrets found at the West Point Site. The labrets were found in EU1 and EU2, but no dates have been obtained for this site.

Deception Pass. One labret is reported from Deception Pass, site 45-SK-56, on Fidalgo Island south of Lighthouse Point (Mather 2009:49–53, 119). Labret no. 1133 is one half of a bar form that was found at a depth of 28–33.5 cm in N4W5, and preliminarily identified as steatite. The labret was assigned to AU4 that ranges between 3290–2540 cal B.P.

Anacortes Temporary Ship Harbor #2. An uncataloged, ground stone, smoothly finished, hat form labret was recovered from site 45-SK-155 on Fidalgo Island. The labret is described as made from a hard, black material type, preliminarily identified by the original investigator as argillite, and measured about 3 cm x 2 cm based on the scale in the photograph. Four test units were excavated at 45-SK-155, and a charcoal sample from Stratum 3b produced a date of 2040 ± 100 B.P. (Wessen and Waterhouse 1987:29, 44–46, Photo 3).

Fossil Bay. Two labrets were recovered at site 45-SJ-105 at Fossil Bay on Sucia Island, north of Orcas Island. Both are hat forms with lateral flanges. Labret no. 411 is treated bone or antler, called patinated whiststone by Kidd (1969), and has a broken flange. No. 411 is from unit and measured 3.6 cm x 1.8 cm x 1.6 cm, and weighed 21 grams (Fig. 3c). Labret no. 90 is identified as serpentine, and has a “peg hole” motif design (Steffian and Saltonstall 1995:25) (Fig. 3b). No. 90 measured 2.6 cm x 1.4 cm x 1.4 cm, and weighed 6.25 grams. The labrets from Fossil Bay are both from Locality A that was dated between 1925 and 305 cal. B.P. (Kidd 1969:46, 48; Stein, Deo, and Phillips 2003:303–304). No. 411 is from a depth of 140–160 cm in unit 2.5 North, 5 East, and is below a date of 1925–1705 cal. B.P. from the same unit at a depth of 100–120 cm (Stein, Deo, and Phillips 2003:303–304). No. 90 is from a depth of 125 cm in unit 0 North, 5 East, and the depth corresponds with the same date range from unit 2.5 N, 5 East, that is the closest date horizontally and vertically to the no. 90 context. The labrets from Fossil Bay are owned by Washington State Parks and Recreation Commission, and an additional labret fragment that was not viewed at the Burke Museum is not listed in Table 2.

English Camp. Four labrets were recovered from the English Camp Site, 45-SJ-24, on San Juan Island that has been dated between 1850–600 cal B.P. (Stein Deo, and Phillips 2003:303). Labret no. SAJH139273 is a modified pendant form with a trapezoidal shape, tapered sides, and resembles a bolo tie (Fig. 4a). No. SAJH139260 is made of tabular ground stone and is very thin with tapered sides (Fig. 4d). No. SAJH139272 is a broken version of the modified pendant form, similar to No. SAJ139273 (Fig. 4c). No chronological information has been reported for these three labrets. A circular flange, T-shaped labret of unknown material was found near the surface of Operation A, a component that dated between 800–600 cal. B.P. (Laura Phillips, personal communication 2008, 2013) (Fig. 4b).

Reed Bay. Three labrets have been recovered from Reed Bay, 45-SJ-165, on Decatur Island (Walker 2003:49; Bard et al. 2007:6–36). Three forms, a T, button, and pendant labret, were preliminarily identified as nephrite. The labrets were found in components dating between 3570 and 810 cal B.P. Labret no. 152 is a pendant form that may have been inlaid, and the extended body or “trunk” portion of the labret is partially broken. No. 152 is from near the base of Stratum 8 in 63N/100E. Dates above and below the labret context in adjacent unit 63N/99E range between 2835 and 1065 cal. B.P. (Walker 2003:49–50, 57, 177). Labret no. FS 748 is T-shaped with a lateral flange that weighed 1.8 grams, and measured 1.9 cm x 0.4 cm x 0.2 cm with a

flange width of 0.7 cm. No. FS 748 was found in level 15 of EU-2004-1 at a depth of 140–150 cm, and has the best context from a component dated between 3570 and 3380 cal. B.P. (Bard et al. 2007:6–21, 6–34). Labret no. FS 801 is a hat or button form with a lateral flange. No. 801 weighed 18.9 grams, measured 4.4 cm x 2.4 cm x 2.4 cm, and does not have reported provenience information (Bard et al. 2007:6–39).

Decatur Tombolo. One labret was found at site 45-SJ-169 on a tombolo landform southwest of Decatur Head (Walker 2003:111, 185). Labret no. 1091 appears to be a modified pendulant form with a lateral flange, and is made of a black, polished stone, possibly jet, and is similar in form to the “bolo tie” labret English Camp. No conclusive dates were associated with this labret, however, it was found in AU4 which likely dates to before 1735 cal. B.P. Radiocarbon dates from AU5 cluster around 2500 cal. B.P. (Walker 2003:76, 113, 133).

Watmough Bay. Two labrets are included here from the Watmough Bay site, 45-SJ-280, on the southeast side of Lopez Island. No. 45SJ280/353 is a grayish colored, bar form with a lateral flange that is arched on the proximal end (Fig. 4f). No. 45SJ280/246 is a thinner, brown version of the same form, and appears unfinished on one end (Fig. 4e). Both labrets are polished and were not identified to material type. No. 45SJ280/246 was found in 9N3W at a depth of 120–140 cm. Two dates from this context provide a range of 2715–1235 cal B.P., however, a bone date of 2915–2715 cal B.P. from this level coincides more with a charcoal date range of 2785–2735 cal. B.P. from 160–180 cm in the same unit (Bovy 2005:31, 73; Stein, Deo, and Phillips 2003:304). No. 45SJ280/353 was found in 33S0E at a depth of 160–180 cm, and the nearest date range is 2650–2335 cal B.P. from a dated shell in 12S0E at a depth of 60–80 cm (Bovy 2005:73). The range of dates for Watmough Bay is between 2915–1200 cal. B.P., where dates cluster in two occupation periods of 2900–2500 cal B.P. and 1650–1250 cal. B.P. (Bovy 2005:30, 72–73).

Penn Cove. A basalt labret (no. 1995-80/1) weighing 54.5 grams was found on the surface near Penn Cove Prairie on Whidbey Island. The labret measures 5.2 cm x 4.8 cm x 2.4 cm with a flange width of 2.8 cm, and one end of the flange is broken. Kidd (1969:65) illustrated the labret and called it “winged,” similar to Stewart’s (1996:76) pendulant form. This is the largest labret in the sample, and the artifact has ridges on the body facing the mouth which is likely a stylistic variation.

West Point. Two labrets were found at the West Point Site, 45-KI-428, between Elliott and Shilshole Bays (Larson and Lewarch 1995:11–10 to 11–12). No. B2-1161.02 is a T-shaped labret with a circular flange that is hollow halfway up the distal portion. No. B2-1161.02 weighed 0.7 gram and is from a component that dated between 4250 and 3500 cal B.P. (Fig. 3f). No. B1-1277.01 is a button labret with striations on the proximal end of a lateral flange that was preliminarily identified as nephrite or jadeite or steatite. No B2-1277.01 weighed 20 grams and is from a component that dated between 3500 and 2700 cal B.P. (Lewarch and Bangs 1995:6–17) (Fig. 3a). Both labrets appear to be well-polished with a high level of finishing.

Discussion

Borden (1954) called attention to economic complexity as a precursor to social complexity, and it is useful to consider antecedent coastal cultures and the development of shoreline connections to pursue the origin of labret wearing (Martindale 1999:40). Mitchell

(1968:14) pointed out early on that earlier coastal cultures may be the important antecedents to the Gulf of Georgia variant of the Northwest culture type. The addition of Washington state data does not do much to increase the understanding of where labrets originated, but it does show that they occurred fairly early in Puget Sound.

As far as the distribution of labret forms, the southern Salish Sea sample is too small and varied for meaningful patterning, however, circular flange, T-shaped and lateral flange, hat or button forms were found together at West Point and Weaverling Spit. The pre-form at Cherry Point and bar forms made of the same material invite further investigation. LaSalle (2008:20) found that deconstruction of a much larger data set to understand typological variability proved ineffectual in developing clearly defined patterns in form and style.

Subsistence Variability and Labret Antiquity

Economic models show the Mid-Fraser River and Salish Sea regions had long histories of interaction (Morin 2012:5–6). Following Prentiss et al. (2012:543), the meaning of labrets might signify material wealth that has geographic connections to systems of food production- i.e. access to shoreline markets, or large corporate groups. Early at Pender Canal and West Point, labrets materialized at two sites with complementary subsistence economies. Specialized fishing economies existed at Crescent Beach and Cherry Point around the time labrets appeared. Labrets at English Camp belonged to people who relied continuously on aquatic and terrestrial resources, and stored food.

At Pender Canal, labret occurrences have been attributed to an expression of social rank along with a marine subsistence economy that evolved typologically over periods of stability, growth, and change between 5000 and 2200 B.P. (Carlson and Hobler 1993:38, 44–45). Labrets at Crescent Beach are not present in earlier components older than about 3500 B.P. A transition from a broadscale to more specialized economy occurred as clam became more important than mussel, and use of flatfish preceded an emphasis on salmon that included storage (Matson, Pratt, and Boyd 1991:150–152).

At West Point, campsites and food processing areas in Analytic Unit (AU) 1 dating between 4250 and 3550 cal B.P. indicated the initial broadscale economy of inhabitants, emphasizing year-round use of a forager strategy. AU 2 between 3550 and 2700 cal B.P. gave evidence of a northward shift in use areas caused by sea level rise and landslide activity. People processed bird, deer, elk, beaver, salt, and freshwater fish and shellfish. Clam drying technology was found as early as 3000 B.P., and dried clams are a noted trade item among the Coast Salish (Larson and Lewarch 1995). Labret significance may relate to inter-marriage and other intertribal exchange based on the labret types, and the likely exotic material for the button labret. Labrets were found in components between 4250 and 2700 cal B.P., and the site was permanently abandoned about 200 cal. B.P.

Cherry Point has been dated between 3380 and 410 cal B.P., a place where intensive fishing activities and minimal use of intertidal resources is inferred until about 2,400 years ago, before the accumulation of a large shell midden developed between about 2400 and 1500 B.P. (Blodgett 1976; Grabert and Larsen 1975:20; Grabert 1988; Dubeau 2011:20). An historical fishing component was also identified at Cherry Point (Miss 1997). Manufacture of soapstone bar labrets at Cherry Point is inferred based on three finished labrets in the same form as a pre-form or “blank.”

Evidence of winter villages at English Camp showed a transition from pit to plank houses, and food storage technology. Components date between 1850 and 150 cal B.P. (Stein Deo, and Phillips 2003:303). People ate herring, salmon, birds, deer, elk, berries and processed camas (Stein 2000:102–105). English Camp has a possible late occurrence of a labret between 800–600 cal B.P. (Stein, Deo, and Phillips 2003:302), however dates contextualizing the artifacts are not conclusive due to provenience. The trapezoidal, modified pendulant, or “bolo tie” form appears to be preferred.

Two labrets at Fossil Bay are near and below a context that dates between 1925 and 1705 cal B.P. The labrets were first reported in 1969, and the dates reported in 2003 (Kidd 1969; Stein Deo, and Phillips 2003). The best contextual date for a later labret is from a house deposit at Dionisio Point on Galiano Island, where a labret was present in a house deposit context during the later part of the Marpole phase/transition (1500–1300 cal B.P.). The variation in labret prevalence over time may be related to patterns of population displacement and the specific social structures in the island sub-region of the Strait of Georgia (Grier 2012).

Multiple Meanings

A successful approach to studying labrets must acknowledge the temptation to “imaginatively abstract” meaning, as Clifford Geertz (1973:17) reminds us in *Thick Description*, “Whatever, or wherever, social systems ‘in their own terms’ may be, we gain empirical access to them by inspecting events, not by arranging abstracted entities into unified patterns.” Thus, a person might have worn a labret for more than one reason at any given time. Keddie (1989) suggests that labrets as status symbols connected cultural groups regionally. Suttles (1990:13) poses that physical modification may indicate participation in social networks. Ames (2005:62–63) states that labrets signify social classes in times of stable populations on the Kodiak Archipelago and the Northwest Coast. LaSalle (2008:42) suggests the meaning of labrets was negotiated between groups at multiple scales.

The geographic, temporal, and stylistic range of labrets on the Salish Sea indicates the likelihood for conveyance of multiple meanings. Table 3 identifies possible scenarios for wearing a labret that are not mutually exclusive, and expectations for archaeological evidence associated with each scenario. By identifying possible categories for labret functions, data related to production, manufacture, maintenance, and disposition of labrets can be organized to test ideas related to individual and group identities.

In the southern Salish Sea, broken labrets were found at Cherry Point, Deception Pass, English Camp, Fossil Bay, Reed Bay, Semiahmoo, and Weaverling Spit. Ames (1995:165) notes the number of broken labrets found outside of burial contexts, and suggests that labrets were perhaps broken prior to discard to maintain ownership. There is also the less likely possibility that labrets were taken during raids and broken, evidencing the “ritual disposition of wealth” that Ames (1995:168) talks about in terms of slavery. In Mesoamerica, labrets are manufactured in lapidary workshops, and during manufacture, labrets can be broken during drilling, flaking or polishing (Santley and Hirth 1993:160). Breakage by manufacture has rarely been considered on the Salish Sea (Keddie 2007), although ritual disposition is not ruled out here.

Regional Aggregations and Social Signaling

Throughout time, the collective meaning of labrets on the Salish Sea may have changed as regional interaction intensified with increased populations, and generalized economies became

more specialized. Smaller groups of people seasonally occupied temporary camps for several days to weeks to harvest various plant and animal resources, and to meet and maintain social ties that enabled resource opportunities outside of the common lands. Mass harvests brought larger groups of people together for cooperative efforts to return high resource yields. Communal ownership of resources would have been available to some groups and restricted among others. Access to resources and control of them required recurrent interaction among economic groups and kinship networks, and may have been facilitated by labret wearing.

TABLE 3. EXPECTATIONS FOR LABRET SCENARIOS.

Purpose	Manufacturing and Raw Material	Size and Style	Associated Context
Display of status / wealth / control of resources / corporate membership	High level of finishing/polish; Inlay; Non-local materials / Exchange items; Repair	Large labrets; Stylistic variation	Grave good context; Feasting feature and food remains, e.g., sea urchin, dried clams, sea mammals, salmon, herring
Puberty ritual / Indication of marriageability	Intact artifacts	Range of sizes; Typological and stylistic variation	House context; Feasting feature and food remains, e.g., sea urchin, dried clams, sea mammals, salmon, herring
Occupation (Artisan)	Evidence of manufacture-workshop, broken labrets, artifacts like perforators and polishers; Material type variation; High level of finishing/polish; Repair	Stylistic variation	Grave good context; House context; Refuse Pits
Indicates subculture or membership in a group	Evidence of manufacture- broken labrets, artifacts like perforators and polishers; Non-local materials; Repair	Homogenous types	Grave good context; House context; Refuse Pit

Conclusion

Labretifery occurred prior to, during, and throughout, the development of specialization on the Salish Sea. Compilation of labrets in the Salish Sea revealed that the northern Salish Sea sample outweighs the southern Salish Sea sample. The distribution of labrets does not extend into southern Puget Sound or west of Fidalgo Island, and appears to be specific to marine cultures. Chronological and artifact data suggests exchange of materials between people at Pender Canal and people from West Point in the Middle Holocene. Temporal data from the San Juan Islands shows a tradition of labret use for almost 2,000 years on the San Juan Islands. Cherry Point has evidence for labret manufacture and a continuity of styles that may spread across temporal components. Implications of labrets in the archaeological record depend on understanding the contexts of their manufacture, transfer, and disposition.

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THE WESTERN STEMMED POINT TRADITION ON THE COLUMBIA PLATEAU

E.S. Lohse and Coral Moser

ABSTRACT

The statistical definition of stone projectile point variants that can be included under the general label Western Stemmed Point Tradition (WSPT) is explored. The WSPT has been described as following Clovis and Folsom in the archaeological record of Western North America. However, recent work by Jenkins et al. (2012) at Paisley Caves shows that this class of shouldered stone projectile points is commensurate in age with Clovis. The authors argue that the different variants of shouldered points commonly classified as WSPT need a clearer, more objective definition in a comprehensive statistical model, such as the neural network SIGGI-AACS, described by Lohse and Schou (2008). Directions for future research into probable use of different propulsive systems are identified.

Problem Context

We posit here that there is a real need to recast the generally accepted Paleoindian sequence to incorporate recent research that has demonstrated contemporaneity of Windust and Clovis occupations. Windust and Clovis, while contemporaneous at c. 13,000 ya on the Columbia Plateau, represent two distinctive cultural traditions (cf. Beck and Jones 2010). Heuristically, Windust should be considered part of the Western Stemmed Point Tradition (WSPT), which consists of series of large shouldered and unshouldered lanceolate points that are now securely dated as overlapping Clovis in the archaeological record. In fact, the WSPT is arguably first onto the North American continent from Siberia (cf. Beck and Jones 2010; Jenkins et al. 2012). Later, Clovis moved west and overlapped with this indigenous tradition (Stanford and Bradley 2010). Further, the associated stone reduction trajectories and projectile point types are distinctive, but require further examination to better understand tool uses and economies

Various large stemmed and shouldered lanceolate stone projectile points in the Pacific Northwest are considered part of the Western variant of the Paleoindian WSPT. These diagnostic types have been defined and discussed in the archaeological literature for decades. Until recently, the WSPT was generally seen to consistently follow Clovis and Folsom as representative of a Late Paleoindian period across North America (cf. Windust Phase, Snake River chronology of Leonhardy and Rice 1970). Recent re-examination of Paisley Caves, Summer Lake Basin, south-central Oregon, however, indicates that the WSPT preceded and was commensurate with the Clovis Tradition (Jenkins et al. 2012). Diagnostic artifact assemblages and DNA analyses have now

defined a new archaeological context, wherein analysts now argue that WSPT represents a pre-Clovis migration into the North American continent.

The idea of a WSPT representing an earlier migration into the New World than Clovis is fascinating but not without problems. The basic interpretive issue is that the WSPT has never been explicitly defined nor have the diagnostic stone projectile points been considered within the larger context of the associated artifact assemblages. Types within the WSPT are defined routinely and described in the literature, but there is obviously significant overlap in basic morphology and diagnostic features. For instance, is there an empirical difference between the WSPT on the Columbia Plateau and the Western Pluvial Lakes Tradition in the Great Basin (cf. Bedwell 1970; Andrefsky 2004)? Both traditions represent Paleoindian adaptations to lake and marshside environments and both are marked by use of large stemmed lanceolate and triangular projectile points (cf. Willig and Aikens 1989). We suggest that two research venues now need to be pursued: analysis of total artifact assemblages rather than selected diagnostics, and standardization of artifact classifications in explicit, rigorous typologies.

Moser (2010) represents the first quantitative analysis of the basic morphology of diagnostic Western Stemmed Points on the Columbia Plateau, including Windust, Lind Coulee and Haskett types. Multivariate statistical analyses clearly defined these diagnostic types based on recognized morphological attributes, in a replicable and explicit classification.

Western Stemmed Point Tradition within the Columbia Plateau Culture-Historical Sequence

Several prehistoric classifications have been suggested for the Southern Columbia Plateau (e.g., Rice 1965; Leonhardy and Rice 1970; Rice 1972; Davis 2001; Lohse and Schou 2008). These chronological sequences are marked by significant changes in stone projectile point types that are held to correlate with temporal and spatial changes in basic socioeconomic organization. These diagnostic markers seem obvious; however, they are typically identified based on variable, implicit definitions of stone projectile point types that do not utilize an explicit, transparent, or statistically sound method to define diagnostic types. The WSPT is particularly egregious in this regard. Recognized individual point types and variants included within this cultural tradition have always remained somewhat vague but recent radiocarbon dates have pushed WSPT points back to a time preceding and commensurate with Clovis, prompting new debates over adequate interpretation of the archaeological record on the Southern Columbia Plateau. This article uses Moser's (2010) thesis to pull the WSPT back into attention. The currently accepted cultural sequences are no longer sufficient given increasingly early Paleoindian occupations, and our culture-historical nomenclature remains somewhat obtuse. It seems opportune to attempt a more explicit typology for WSPT.

Our culture-historical nomenclature is an immediate problem area:

- Is the Western Stemmed stone projectile point commensurate with Lake Mojave-San Dieguito, with Windust Series, with Lind Coulee, with Haskett, or with other shouldered triangular types?
- Is the Western Stemmed stone projectile point confined to the San Dieguito Complex, the Western Pluvial Lakes Tradition, the Intermontane Western Tradition, or the Old Cordilleran Culture?

Previous research on the Plateau has examined the validity of projectile point types and their sequence; however, this research did not focus on the WSPT—either the morphology of the point types within it or its temporal or spatial distribution. For example, Lohse's (1985) discriminant analysis was the first explicit statistical classification to utilize both qualitative and quantitative measures to define projectile point types for the Southern Columbia Plateau but it did not include WSPT types beyond characterization of recognized Windust variants.

Chatters (1995) presents a thought-provoking and widely disseminated overview of the prehistory of the Middle Columbia Region (cf. Ames et al. 1998; Davis 2001). Chatters' paper highlights the complexities encountered in synthesizing the fragmented data resulting from many different mitigation projects from different hydroelectric reservoirs over the past fifty years. Specifically, Chatters dislikes the lack of agreement on phase names from local sequence to local sequence (1995:346), and he notes little agreement between divisions based on stylistic and functional characteristics of artifact assemblages and inferred socioeconomic patterns (cf. Bicchieri 1975; Ames and Marshall 1980; Schalk 1981; Schalk and Cleveland 1983; Chatters 1984, 1986; Ames 1988). The same critique could be applied to use of different type names for diagnostics from different cultural areas (e.g., Windust and Lake Mohave projectile points), when adaptations and socioeconomic organizations seem virtually identical.

Researchers continue to employ different phase names and type names, though they tend to recognize meaningful breaks in artifact sequences that are roughly commensurate in temporal duration. Daugherty (1962) defined a regional sequence that consisted of an Early Stage, a Transitional Stage, a Developmental Stage, and a Late Stage. Schalk and Cleveland (1983) defined an early Broad-Spectrum Foragers stage, followed by a Semisedentary Foragers stage, and an Equestrian stage in the protohistoric and historic periods. Chatters (1995), working with a more limited period of time spanning c.7000–2500 B.P., proposed significant changes in socioeconomic organization with increasing levels of sedentism linked to the construction of housepit settlements, commensurate with Schalk and Cleveland's earlier notion of a change from broad-spectrum to semi-sedentary foragers. Chatters (1995:346) states that at least five periods are present in the middle Columbia drainage that have region-wide expression, and correlates these with the earlier work of Ames and Marshall (1980), Leonhardy and Rice (1970), and others. Leonhardy and Rice's (1970) sequence certainly stands as the most influential, and is the standard employed on the Middle Columbia, the lower Snake River, and the Clearwater River drainage, and is the one illustrated in this article. Researchers in all three areas build chronologies based on artifact types defined by Nelson (1969), Leonhardy and Rice (1970), and Lohse (1985) (cf. Lohse 1994 for detailed treatment of the types and type sites defined).

Whatever our specific preference, the basic cultural sequence building block is the archaeological site component (cf. Willey and Phillips 1958; Chang 1967). This is an important distinction to remember because in practice archaeologists tend to separate phase from the diagnostic assemblage and simply substitute obvious diagnostic artifacts such as projectile point types. Further, a phase is defined formally as a synchronic stylistic macrostructure which articulates as a polythetic set of similar components found within the region, and following Chang (1967:23–26), the phase is a unit commensurate with a cultural type or characterization within a defined time span. The earmarks of these characterizations are most often distinctive projectile point types. Functional equivalents of assemblages are typically cited in publications but in simplest outline form. Provisos were, 25 years ago, that phases might be suitable for synthesizing information but that the scheme would surely change as work progressed. To date, surprisingly little modification has occurred in this basic chronological framework or in type definitions, although more

interpretations have begun to address aspects of socioeconomic changes correlated with the stylistic divisions. As an example, the Leonhardy and Rice (1970) sequence is summarized briefly below and phases, types, and traits are presented as idealizations only (Fig. 1). In brief, we focus on the WSPT as spanning the Paleoindian stage coeval with a Clovis Tradition that was intrusive onto the Columbia Plateau. Following Paleoindian is an Archaic Stage, which might profitably be divided into Early-Middle-Late. Leonhardy and Rice's phases are listed but not emphasized, except for the Windust Phase.

The earliest archaeological well-documented components for the Lower Snake River region were found at Windust Caves (45-FR-46) (Rice 1965), Marmes Rockshelter (45-FR-50) (Rice 1969, 1972), and at Granite Point Locality 1 (Leonhardy 1970). Windust Phase assemblages are marked by Windust projectile point types, with short blades, weak shoulders, and straight to contracting squat stems. Other distinctive tools include lanceolate and ovate knives, large end scrapers, burins, and various cobble implements. Tools were typically made on tabular flakes and from prismatic blades struck off polyhedral cores. Stone used is mostly cryptocrystallines, with some fine-grained basalt. Societies hunted elk, deer, antelope, and various smaller game. There is no evidence of plant processing. Later, phases in the sequence multiply and there is clear evidence of generalizing, foraging Archaic economies emphasizing plant consumption and fishing.



Calendar Years	Stage	Phase	Diagnostic Artifact Types
150	Archaic	Numipu	
700		Piquin	
		Harder	
2500		Tucannon	
5000		Cascade	
			 Haskett
10,000	Late Paleoindian	Windust	 Lind Coulee Windust Western Stemmed Point Tradition Unnamed lanceolate sections, pre-Clovis, Paisley Caves
13,000	Paleoindian	Clovis	
14,000		Pre-Clovis	
Pre-15,000			

Fig. 1. Columbia Plateau chronology.

Culture-Historical Sequences and Explanations

The Columbia-Snake River Plateau cultural area encompasses a number of accepted culture-historical syntheses that use artifact types with discrete temporal distributions to construct site sequences and local and regional sequences (e.g., Leonhardy and Rice 1970; Lohse 1985; Chatters 1995; Ames et al. 1998; Davis 2001). Many researchers correlate changes in these cultural sequences with shifting prehistoric socioeconomic organization, subsistence patterns, or technological innovations (cf. Ames 1988), often coincident with inferred environmental or climatic shifts. In this context, the WSPT is seen to represent the initial migration of Siberian populations into western North America prior to and contemporaneous with the different intrusions of Clovis populations (cf. Jenkins et al. 2012 on stemmed points at Paisley Caves).

Problems of adequate temporal and areal coverage in archaeological samples are rarely addressed in these complex historical narratives. Chatters (1995:346) noted that the bewildering character of the culture historical sequence for the Southern Columbia Plateau is the direct result of biased sampling predicated on reservoir development on the Columbia River drainage (cf. Lohse and Sprague 1998). Axiomatically, Chatters also notes that the stylistic and functional characteristics of artifact assemblages do not coincide closely with evidence of changing prehistoric adaptive strategies indicated in reconstructed community patterns, settlement patterns, subsistence assemblages, and technologies.

Diagnostic Associations

With the relatively secure temporal placement of the WSPT as contemporaneous with Clovis, the next questions address the projectile point types that define the WSPT on the Columbia Plateau: what are they, what are the distinctive characteristics, and are they related to each other morphologically? As shown in Fig. 2, the overriding diagnostic of WSPT is an ill-defined but distinctive stone projectile point type: large lanceolate points with variable shoulders. These range from flat lenticular forms to thicker versions with diamond-shape cross-sections. Different type names (e.g., Windust, Lind Coulee, Haskett, Hell Gap) have been applied to these points. Typically, these show use as projectile points but were also used as butchering knives and scraping tools. It is important to note that point types recognized in the archaeological record are often found together in levels, surfaces, or features of archaeological sites. Fig. 1, showing Lind Coulee points, is an example of the range of forms that will become obvious when total site assemblages are considered rather than simply selecting archetypal specimens illustrated in published reports.

Only when this basic descriptive analysis is completed for the WSPT can the sequence of distinctive diagnostic forms be related to postulated cultures in the past, and changes in forms suggest changes in cultures or changes in lifestyle or adaptive strategies of those cultures. The very first basic step is to establish an explicit, consistent method for discrimination (cf. Lohse 1985; Lohse and Schou 2008).

The WSPT provisionally can be defined as a temporal continuity represented by large shouldered and unshouldered lanceolate projective points, perhaps coupled with distinctive reduction or technological systems (cf. Western Pluvial Lakes Tradition). The Windust Phase might be postulated as the climax of that tradition on the Columbia Plateau.

This article provides a quantitative analysis of selected projectile point types within the WSPT (Haskett, Lind Coulee, and Windust), as a first step in better defining that cultural tradition.

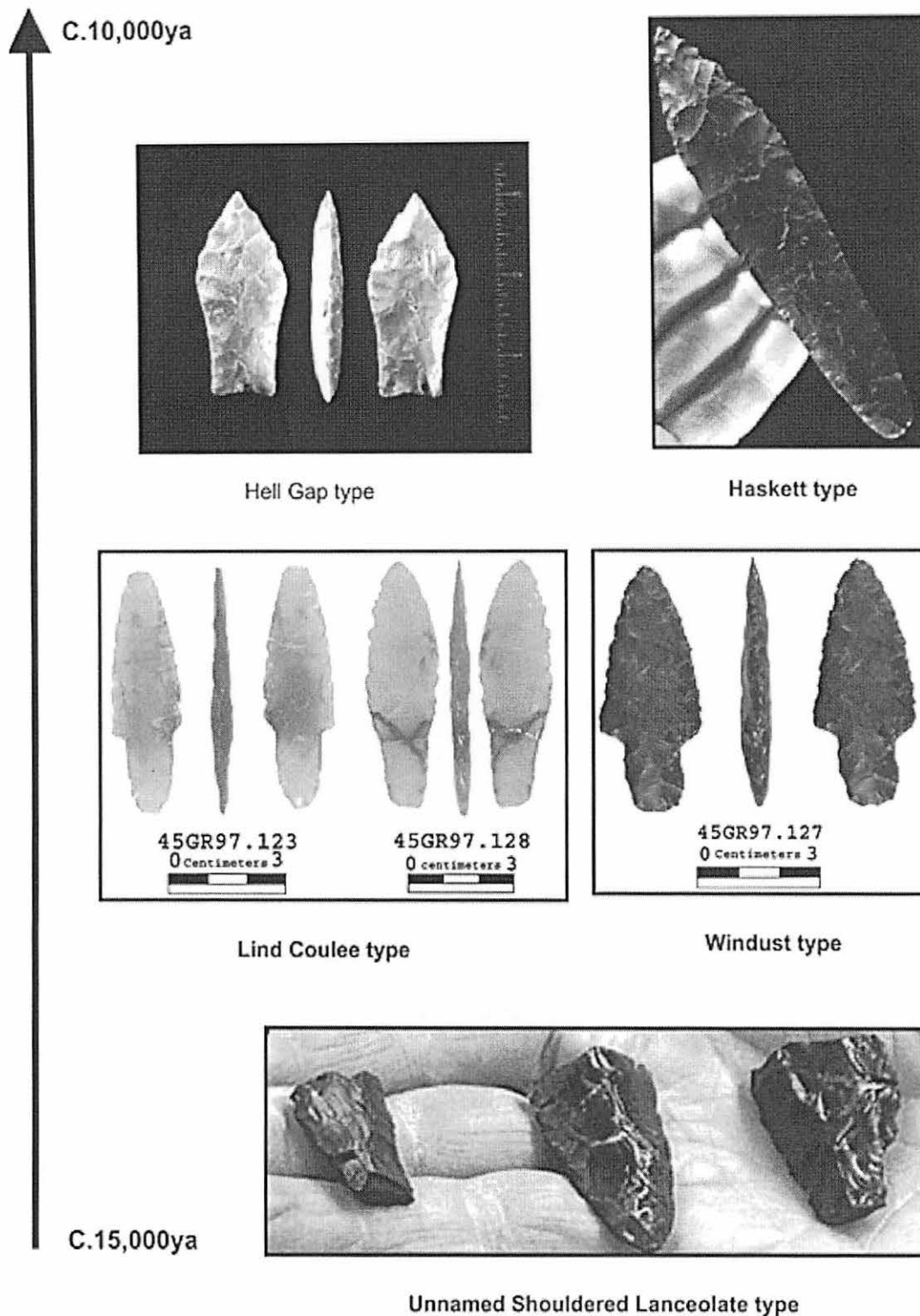


Fig. 2. Western Stemmed Point Tradition types: upper, Hell Gap and Haskett types; middle, Lind Coulee and Windust types, <http://www.archaeology.wsu.edu/lindcoulee/index2.htm>; bottom, western stemmed fragments from Paisley Caves, <http://uonews.uoregon.edu/archive/news-release/2012/7/paisley-caves-yield-13000-year-old-western-stemmed-points-more-human-dna>.

The Archaeological Record

As stated earlier, a key concern for clarifying the WSPT typology is selection of site assemblages for inclusion in our samples. Moser (2010) used projectile point samples from six well-dated assemblages in her analysis. All are from archaeological sites securely dated c. 13,000–9,000 years. Table 1 displays calibrated dates for these types from sites where datable materials were recovered: Granite Point Locality 1, Haskett Site, Lind Coulee Site, Marmes Rockshelter, Sentinel Gap, and Windust Caves (Sargeant 1973; Rice 1965; Leonhardy 1970; Sheppard et al. 1987; Huckleberry et al. 2003; Hicks 2004). These sites, with the exception of the Haskett Site, are located on the Southern Columbia Plateau as defined by Ames et al. (1998).

TABLE 1. CALIBRATED DATES FOR SITES USED IN THIS ANALYSIS.

Site	Lab Number	14C Age Uncorrected	2 Sigma Calibrated Age Range	Source
Marmes	WSU-363	10810±300	11,946–13,315 B.P.	Sheppard et al. 1987
Marmes	WSU-211	10750±300	11,750–13,283 B.P.	Sheppard et al. 1987
Lind				
Coulee	CAMS-94857	10,250±40	11,818–12,132 B.P.	Craven 2003
Lind				
Coulee	CAMS-95524	9,810±40	11,178–11,267 B.P.	Craven 2003
Sentinel				Huckleberry et al.
Gap	Beta 124167	10,160±60	11,601–12,072 B.P.	2003
Sentinel				Huckleberry et al.
Gap	Beta 133663	10,180±40	11,712–12,043 B.P.	2003

Windust Type Series

The Windust type (Lohse 1985) was represented by point samples taken from Windust Caves (Rice 1965), Marmes Rockshelter (Rice 1969, 1972), and the Granite Point Locality 1 (Leonhardy 1970). Windust Caves and Marmes Rockshelter are recognized as type localities for the Windust type (Leonhardy and Rice 1970), and Rice (1972) uses examples from these sites and Granite Point to define the Windust Phase in Lower Snake River prehistory. The sample of points from Windust Caves (45-FR-46) is drawn from the oldest cultural units reported at the site (Rice 1965). Rice (1965) describes these cultural assemblages as Tradition 1 and Tradition 2, attributing them to Period I, which was later defined as Period 1B or “Post-Clovis” by Ames et al. (1998). The sample of points used in this analysis are lanceolate and shouldered lanceolate forms, with straight to contracting basal margins, and straight to concave bases.

Northeast of Windust Caves, excavations at Marmes Rockshelter (45-FR-50) resulted in evidence of human occupation for over 10,000 years (Hicks 2004). The Windust component at Marmes Rockshelter was recovered from Stratum Units I and II located inside the rockshelter and the floodplain outside of the shelter (Hicks 2004). The Windust point sample from Marmes in this research includes lanceolate and shouldered lanceolate forms, with straight to contracting basal margins, and convex to concave bases.

The Granite Point Locality 1 (45-WT-41) is located near the eastern border of Washington. The earliest assemblage, designated as Component 1, was described as containing a large variety of lanceolate and stemmed points which were similar to the early material recovered at Windust Caves and Marmes Rockshelter (Leonhardy 1970). The point sample used in this analysis is entirely from Component 1, and is made up of shouldered and lanceolate points, with straight to contracting basal margins, and straight to concave bases.

Lind Coulee Type

The Lind Coulee type was represented by samples taken from the Lind Coulee Site (45-GR-97) and Marmes Rockshelter. The Lind Coulee site is unique due to its upland location in the Columbia Basin (Ames et al. 1998). The points included in the Lind Coulee sample are stemmed forms and shouldered forms with straight to contracting basal margins, and convex bases. Daugherty (1956) speculated that these points might reflect a local variant of stemmed and non-stemmed points.

Haskett Type

Although the Haskett type is sometimes lumped into the larger Plano series of the Plains, it is included in this analysis because of its loose contemporaneity with Windust and Lind Coulee on the Southern Columbia Plateau. The Haskett sample was initially composed of points from Sentinel Gap on the Middle Columbia River; however, in order to evaluate the range of variability within this type, a sample of points from the Haskett type site was included in the analyses.

Located along the Columbia River near the U.S. Military Reservation Yakima Training Center, the Sentinel Gap Site (45-KT-1362) contained an eight centimeter thick Paleoindian occupation (Galm and Gough 2001; Galm, Gough, and Nials 2002). Projectile points and bifaces recovered during excavation of this cultural layer exhibited strong morphological similarities to the Haskett projectile points recovered at the Haskett Site (Butler 1965, 1967; Huckleberry et al. 2003). The points selected for this analysis are large lanceolates with contracting stems and convex bases.

The Haskett Site (10-PR-37) is recognized as the type site for the Haskett point. Projectile points and point fragments were recovered from an eroding dune and the site lacked materials suitable for dating (Butler 1965, 1978). Dates for the Haskett type are based on morphologically similar points from other dated assemblages. For the purposes of this research only whole projectile points were included and these exhibited a form similar to the projectile points sampled from the Sentinel Gap site: large lanceolate points with long contracting stems and slightly convex bases.

Methodology Employed

Moser (2010), following Lohse (1985), analyzed projectile point shape to investigate historically defined types within the WSPT on the Columbia Plateau. Her quantitative analysis resulted in an objective and replicable method for defining projectile point variability. Metric data

recovered from two-dimensional outlines to create explicit point typologies has been used in the past with varying degrees of success (e.g., Gunn and Prewitt 1975; Holmer 1978; Thomas 1981; Lohse 1985). Hierarchical clustering was used to explore “natural” classes based solely on these measurements. Discriminant analysis was then used to test the validity of the type assignments generated from the hierarchical cluster.

Acquiring Data from Two-dimensional Outlines

The object of this analysis is to identify gross morphological differences between historical projectile point types. For this reason it was imperative to capture the two-dimensional outline of the type specimen. Techniques similar to this have been employed with varying levels of success (Thomas 1970, 1981; Lohse 1985; Holmer 1986). By using the point outline, the process of data collection is simplified and the amount of data recorded for each specimen is greatly decreased. This was not intended to decrease the importance of the variability in flake scar patterns, projectile point thickness, cross-section, or edge-modification in sorting points into types or establishing a basis for all of the variability within a particular type. However, it may be argued that these attributes may be more subjective and may be reported differently from analyst to analyst. In order to decrease the influence of the author’s own opinions and past experiences, only the simplest measurements taken from two dimensional outlines of each specimen are used. This will hopefully ensure that this process and the results will be easily replicable by others in the archaeological community.

Outlines were created by placing nodes at changes of direction around the edge of each point and then connecting each node with a straight line. An example of this approach can be seen in Fig. 2. Then by employing a vector-based method, distances and angles capturing the general shape of each outline were taken by hand and each measurement was recorded in an Excel spreadsheet (Henton and Durand 1991). Measurements were taken for both sides of the specimen (the left side and the right side of the photographed artifact) and were kept recorded in the spreadsheet by a designation of maximum and minimum. Table 2 lists the measurements recovered from the point outlines. Fig. 3 illustrates the variables measured for each specimen’s outline.

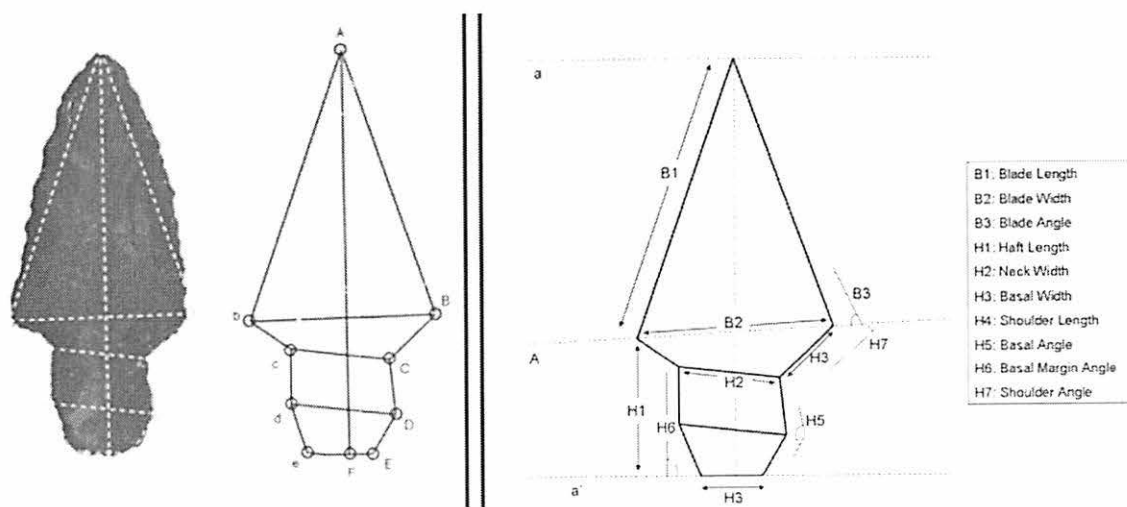


Fig. 3. Definition of projectile point form and placement of landmarks and measurement computations (Lohse 1985:Figs. 11–2, 11–4).

Haskett and Windust C, a variant of the Windust type defined by Lohse (1985), are lanceolate forms which lack shoulder length, shoulder angle, and neck width measurements. Initially a zero was entered into the spreadsheet for these measurements. If the zero was left and used as an actual value or designated as a “missing value” in the statistical analysis, results of any run would be adversely effected. In order to analyze the presence of a shoulder, but not experience any loss of data, a “presence of shoulder” variable was added to the data set for each specimen. This was a binary code; specimens with shoulders were identified with a “1,” and those without shoulders were identified with a “0.” In the following statistical analysis, the measurements of shoulder length, shoulder angle, and neck width were not used.

Multivariate statistical analyses were used in this analysis as they have been shown to be robust in analyzing small datasets (cf. Aldenderfer 1998). All statistical analyses were completed in IBM SPSS Statistics 18 software. Projectile point specimens were divided into subgroups based on a hierarchical cluster analysis. Discriminant analyses were then used to confirm the validity of these point groups (Baxter 1994).

Cluster analysis can be used when the classes or number of “grouping” types is unknown (Aldenderfer 1998). This type of analysis makes no assumptions about the nature of the data, only on the premise that the members of the group will be more similar to one another than non-group members (Baxter 1994:140–141; Shennan 1997:221–222). The goal of this technique is to discover the underlying pattern within the data while making very few assumptions about the outcome. In order to understand the “natural” types that may exist solely on the measurements recorded in this study, the specimens were hierarchical cluster was created using Ward’s method.

The initial hierarchical cluster was performed using all of the measurements for each specimen and the cases were labeled with type determinations established by technical or descriptive reports, previous cultural chronologies, or those established by Lohse and Schou (2008). This cluster revealed some inherent confusion especially within the Windust type, Fig. 4 is a schematic of the hierarchical cluster dendrogram.

The measurements for each “misclassified” specimen were verified to ensure that no glaring mistakes were made. If measurements did appear to be incorrect, the specimen was measured again. The specimen’s type designation was also verified by looking at the original technical and descriptive reports. Once the classification errors were identified and corrected, a second cluster was developed based on the natural groups created using only the outline measurements with cases labeled with new type designations (Fig. 4).

Stepwise discriminant analysis was run using point clusters created through hierarchical clustering. Discriminant analysis allows the researcher to test the differences and emphasize the distinction between groups while looking at several variables at once (Klecka 1980:7; Read 1989:14; Baxter 1994:181). Wilkes lambda method was employed for selecting group predictors as it is the most economical method. A total of three discriminant runs were completed for this dataset; the first included all specimens, and the last two runs focused on specimens designated as the Windust type (Fig. 5).

The first discriminant analysis included all specimens. All measurements were selected as dependent variables with the exception of neck width, shoulder length, and shoulder angle as these variables are not applicable for all specimens. In order to include presence of shoulder as a weighted variable, the binary variable for shoulders was included. The final discriminant analyses were used to test the appropriateness of separation of the Windust type into three variants, Windust A, Windust B, and Windust C (Lohse 1985). It has been suggested that the blades and shoulders of Windust points vary dramatically in size and shape (Ames 1998; Ames et al. 1998). This is

attributed to continuous reworking and sharpening that occurs throughout the useful life of the point. These analyses were run in order to test the hypothesis that Windust variants might actually represent the process of rework, reuse and reduction of a Windust point.

TABLE 2: MEASUREMENTS RECORDED FOR PROJECTILE POINTS (AFTER LOHSE 1985:TABLE 11-3).

Blade Measurements			
B1.	Blade Length (.1mm)	The distance from the blade-haft juncture to the tip of the point. The length of the line segment AB.	BLL
B2.	Blade Width (.1mm)	The distance from the widest point on the right lateral margin of the blade to the widest point on the left lateral margin of the blade. The length of line segment Bb.	BLW
B3.	Blade Angle (degrees)	The outside angle between the blade-haft juncture and the margin of the blade (line segment AB and Line segment Bb).	BLA
Haft Measurements			
H1.	Haft Length	The distance from the blade-haft juncture and the end of the point. A perpendicular line from point B to axis a'.	HAL
H2.	Neck Width	The distance from the point defining the highest point on the right lateral margin to the point defining the highest point on the left lateral margin. The distance between points C and c.	NEW
H3.	Basal Width	The distance from the lowest point of the right lateral basal margin to the lowest point of the left lateral margin. The distance between points E to e.	BAW
H4.	Shoulder Length	The distance from the point marking the blade-haft juncture to the highest point of the lateral basal margin of the haft. The distance between point B and C.	SHL
H5.	Basal Angle	The inside angle created by the line between points D and E and the line extended through the points representing the basal lateral margin (points C and D).	BAA
H6.	Basal Margin Angle	The angle between the a' axis and the lateral margin of the haft. The line is drawn from point C through point D to line a'.	BMA
H7.	Shoulder Angle	The angle between the shoulder (line segment BC) and line segment Bb.	SHA

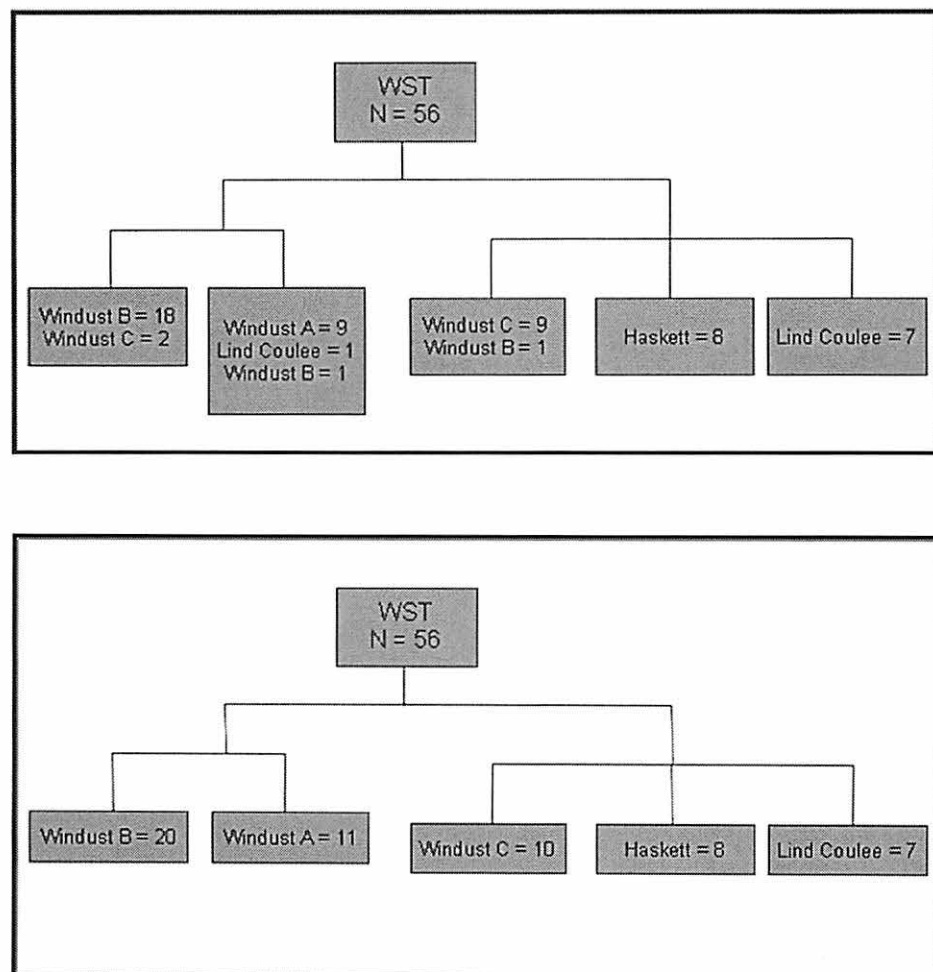


Fig. 4. Conceptual map of results from hierarchical cluster runs.

Fig. 4 demonstrates the separation of the three main typological classes, as well as the separation of the three Windust variants. This initial run resulted in over 98% of cases being correctly assigned, and over 94% of cross-validated grouped cases being correctly classified (Table 3). These results reflect a strong autonomy of historical type groups. The discriminant functions are displayed in Table 4, listing the standardized coefficients for discriminating variables by function. The first two discriminant functions are basal angles and the presence of shoulders, followed by haft length and basal margin angle. These results are exciting as they reflect the features of the haft portion of the point that have been used to qualitatively define the historical types used in this analysis.

The stepwise function also reveals the relative importance of each of the variables. The eigenvalues and the variance accounted for by the function (or combination of variables). Discriminant functions are ranked by their eigenvalue; the higher eigenvalue represents the more discriminating function. Close attention should be given to only those functions with eigenvalues greater than 1.0. In an eigenvalue is less than 1.0 that function or component actually accounts for less of the variation with the data than any one of the original variables (Shennan 1997).

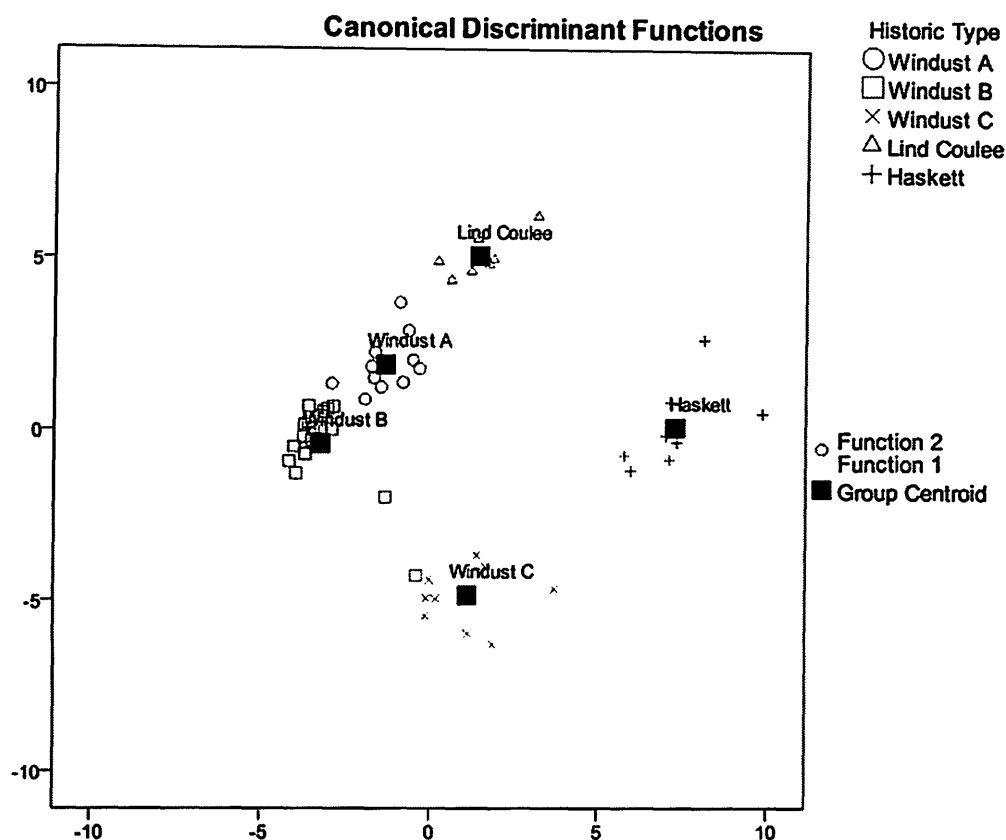


Fig. 5. Discriminant plot of types based on similarity.

Results

Fig. 6 is a basic scatterplot with haft length and basal angle measurements, identified as the two of the most discriminating variables, plotted against each other. This scatterplot displays the grouping of the three different historical types: Windust, Lind Coulee, and Haskett; however, there is some overlap of the Windust variants. Further analyses were completed to see if it was possible to sort these variants any further.

Points classified as Windust often show evidence of extensive resharpening and reworking. Even some specimens used for this research show reworking. The second portion of the discriminant analysis was used to see if the Windust type variants could be classified correctly using only the measurements recorded in this research for each specimen. In order to do this only Windust specimen were selected for the analysis and a stepwise discriminant analysis was run using all of the measurement variables, then a second stepwise discriminant analysis was running using only those measurements that characterized the basal portion of the base. Blade measurements, including blade length, blade width, and blade angle, and shoulder measurements, shoulder length and shoulder angle were removed from the analysis under the assumption that these attributes if the point outline would be most affected by reworking.

The combined groups plot indicates strong separation for Windust variants (Fig. 5). Whereas the resulting combine groups plot for the run using only haft and basal measurements revealed some confusion within the variants (Fig. 6). Relatively close groups are created for Windust A and Windust B, but the Windust C group is only loosely defined and overlaps significantly with Windust B. The first run resulted in over 97% of the specimens being classified (Table 7), and the second returned a total of 87.8% of the specimen being correctly classified (Table 8). Although the second run resulted in a classification that is far better than random chance, it is lower than the first run, suggesting that Windust C may be results of the Windust B variant being reworked to the extent that no shoulders remain but haft and basal proportions are being maintained. The presence of shoulder variable accounts for much of the separation between the Windust variants. After reviewing the discriminant function coefficients and eigenvalues, it is important to note that only Function 1 in the second Windust run meets exceeds the 1.0 requirement for discriminating functions as previously discussed.

This statistical analysis strongly supports the historically defined types. It does reveal a distinct difference in general morphologies of Lind Coulee and Haskett types, and the Windust type variants. The differences in simple outlines are discriminating enough.

Analyses suggest that Haskett is distinct when compared to forms traditionally identified as part of the Western Stemmed Point Tradition. The Haskett type is distinct based on overall length, absence of shoulders, and haft length. These differences may suggest a different hafting technique.

Lind Coulee has been held as a regional variant of a much larger regional technological tradition. However, through these analyses it has been shown to be statistically distinct from Windust. The hierarchical cluster even reveals a possible relationship between the Haskett type and Lind Coulee.

The results of the Windust analysis were very interesting. Windust A and Windust B variants were easily discriminated from each other. Windust C does not separate out as cleanly, and it may represent a stage or stages of reworking and resharpenering of a point that was initially made in the form of a Windust B. However, dropping measurements that would be effected by reworking does not necessarily result in a strong grouping of Windust B and Windust C points. At this point there is not enough evidence supporting the collapse of Windust C into Windust B. Defining Windust C as a separate variant within the Windust type might actually be a more powerful analytical statement when studying an entire Windust assemblage.

Conclusions and Directions for Future Research

This statistical analysis quantitatively supports previously, qualitatively defined projectile point types from the Columbia Plateau that date to the earliest cultural phases and stages, including Lind Coulee, Haskett, and Windust variants. The differences in simple outlines are discriminating enough to identify historically defined types through vector scoring. It does document the distinct differences in general morphologies of Lind Coulee and Haskett types, and the Windust Series. The differences in simple outlines are discriminating enough for this sample to recreate historical types through a statistical vector-based analysis. Although the Haskett type is found on the Southern Columbia Plateau, these statistical analyses suggest that it is distinct when compared to forms traditionally identified as part of the Western Stemmed Point Tradition. The Haskett type is distinct based on overall length, absence of shoulders, and haft length. These differences may suggest a different hafting technique.

TABLE 3. CLASSIFICATION RESULTS: CASES CORRECTLY CLASSIFIED.

Historic Type			Predicted Group Membership					Total
			Windust A	Windust B	Windust C	Lind Coulee	Haskett	
Original	Count	Windust A	11	0	0	0	0	11
		Windust B	0	19	1	0	0	20
		Windust C	0	0	10	0	0	10
		Lind Coulee	0	0	0	7	0	7
		Haskett	0	0	0	0	8	8
	%	Windust A	100.0	.0	.0	.0	.0	100.0
		Windust B	.0	95.0	5.0	.0	.0	100.0
		Windust C	.0	.0	100.0	.0	.0	100.0
		Lind Coulee	.0	.0	.0	100.0	.0	100.0
		Haskett	.0	.0	.0	.0	100.0	100.0
Cross-validated ^a	Count	Windust A	10	1	0	0	0	11
		Windust B	0	18	2	0	0	20
		Windust C	0	0	10	0	0	10
		Lind Coulee	0	0	0	7	0	7
		Haskett	0	0	0	0	8	8
	%	Windust A	90.9	9.1	.0	.0	.0	100.0
		Windust B	.0	90.0	10.0	.0	.0	100.0
		Windust C	.0	.0	100.0	.0	.0	100.0
		Lind Coulee	.0	.0	.0	100.0	.0	100.0
		Haskett	.0	.0	.0	.0	100.0	100.0

a. Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case.

b. 98.2% of original grouped cases correctly classified.

c. 94.6% of cross-validated grouped cases correctly classified.

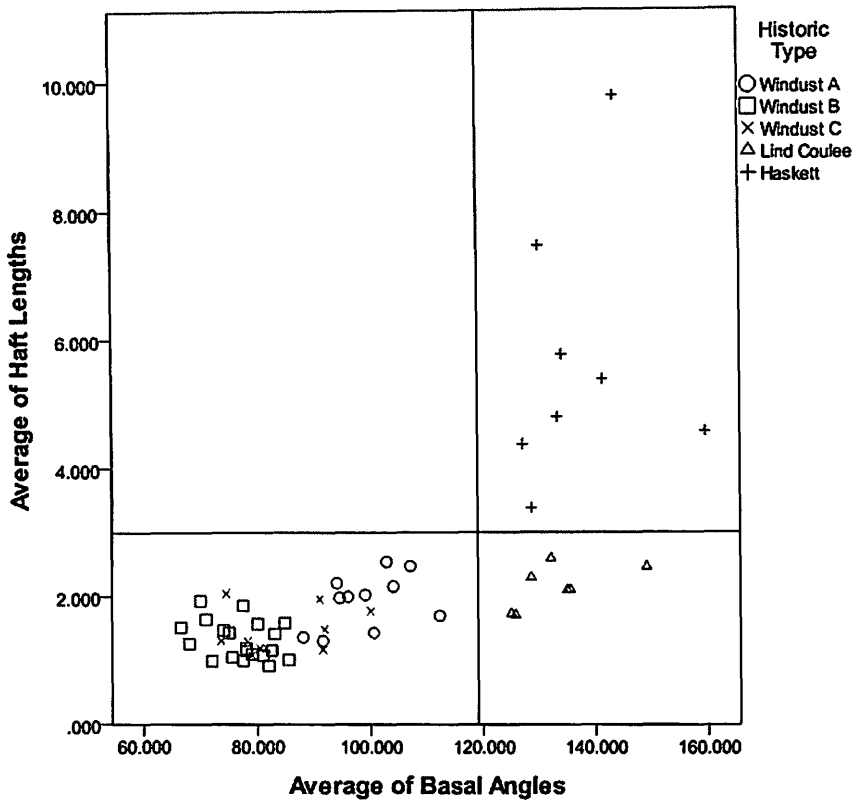


Fig. 6. Discriminant plot of haft length and basal angle.

This analysis set out to statistically define the Southern Columbia Plateau point types that have been subsumed under the WSPT. The results of this research generally supported the historically defined types. The morphological differences between Lind Coulee, Windust, and Haskett types can be defined statistically. The most discriminating factors in every analysis were haft and basal measurements. This highlights a need for archaeologists to view projectile points not only as temporal markers, but as a piece of a compound tool designed for a particular propulsive system: spear, atlatl and dart, bow and arrow. Arguably, the prehistoric knapper was overwhelming concerned with producing the most correct haft and base that would be fitted into a shaft or foreshaft. The knapper's process was not innately tied to the point itself. The point was worked from nodule to flake to form to hafting to use, and then of course, to rework and reuse until the use-life of the point was complete. Each step was building upon the last in this reductive process. Analysts need to be prepared to seek out this entire process and not be limited to the simple form of a point.

These statistically defined types reveal a pattern of craftsmanship, representing an accepted or preferred way of making and hafting projectile points. These point types cannot be used to define an entire technological tradition. These points are archetypes by which archaeologists can identify the temporal position of site assemblages but we need to also understand the underlying chaîne opératoire. Identification of three variants of the Windust type, for instance reveals a strong need for use-wear and lithic reduction analysis of the specimens within the behavioral contexts of specific site assemblages. It may be that the three Windust variants reflect re-working or sharpening of points that, in their pristine form, may have had much stronger resemblance. This type of research may offer a simple and replicable way for analyzing general projectile point morphology beyond simply naming and organizing diagnostic types popular over limited spans of time.

The earliest Paleoindian stone projectile points may have been designed for use on hand thrown spears. Identified stemmed points at Fort Rock Caves are long and thick with quadrilateral cross-sections. These dates are commensurate with or before Clovis and are designed for a very different type of haft (cf. Buchanan et al. 2012 who argue that there is a need to test hafting design constraints on a range of Paleoindian point types).

Clovis and Folsom points are beautifully lanceolate and have symmetrical cross-sections with pronounced thinning flakes or flutes up from the concave base. These typically show scratches and smoothing within the flutes attesting to tight insertion into a slotted haft. This is very reminiscent of harpoon points on spears, which are expected to take considerable stress and strain in the taking of large animals. Pronounced basal lateral margin grinding attests to use of organic lashings to hold the point in the haft even with such significant lateral strain (Lahren and Bonnicksen 1974; Lyman and O'Brien 1998).

Points in the Western Stemmed Tradition (large shouldered stemmed from Fort Rock Caves, and large lanceolates with light shouldering like the Haskett type) represent a very different hafting tradition perhaps like the replicas made by Tony Baker and Bob Patten using hollowed antler sections fitting the thick point base to the projectile (Baker 2009). These types of experimental studies, while not conclusive are certainly intriguing. What is obvious is that Clovis and Western Stemmed types represent very different hafting patterns within the general developmental trajectory of propulsive systems.

Breakage patterns reinforce the idea of hafting differences. Amick (2002) concluded that Folsom points were only hafted to a depth of 20 mm based on lengths of proximal fragments in the archaeological record. Hunzicker's (2005) experiments supported this conclusion. Frison and Stanford (1982) conducted similar analyses of breakage patterns in smaller lanceolate Agate Basin type points in the Baker collection and from the Agate Basin site. All were hafted less than 25 mm from the base. These results are in line with the obvious observation that, assuming no flaws in the stone, the projectile point will break at the location of maximum bending stress at the tip of the haft to the projectile shaft. The point is only designed to penetrate the body of the target animal, so the haft itself only has to hold long enough to allow penetration of the shaft. Clovis and Folsom points were hafted differently than shouldered points, reflecting differences in design relative to task. Unfortunately, no elements of Clovis or Folsom projectile systems other than the points have been found in the record.

Fig. 7 indicates that the earliest projectiles may have been spears, but this is clearly a weak proposition based on largely negative evidence. Breakage and use-wear do indicate that the earlier points, Western Stemmed and Clovis, were securely hafted to survive heavy bending stresses associated with a range of projectile and cutting and dismembering tasks. Arguably, as points became smaller and more symmetrically lenticular over time they became more specialized, designed primarily for penetration at the end of dart shafts. In this vein, the best direct evidence for use of atlatls occurs at the Hell Gap site bone bed where an elk antler tine tip was recovered that was identified as an atlatl spur (Frison and Craig 1982). There is, of course, no necessary reason that Clovis could not have used the atlatl and dart system since that system was known on the European continent much earlier in the Paleolithic (cf. Garrod 1955). Frison (1989), experimenting on African elephants, clearly showed that Clovis points on dart shafts administered crippling and lethal wounds (cf. Butler 1980; Frison 1998). Atlatl darts are far faster than a hand-thrown spear, and we know that penetration and knock-down power are constrained by a number of design variables. No Clovis atlatls or darts have been found. The Murray Springs mammoth bone shaft wrench is our best but indirect evidence of possible dart use. Haynes and Hemmings (1968) report

that the wrench (25–30 mm beveled hole) was used to straighten shafts ranging from 14–17 mm in diameter, a reasonable size for relatively large diameter darts.

As shown in Table 4, performance of projectile systems is subject to control of a number of significant variables: game size/mass, effective killing distance, point and projectile mass (cf. Cotterell and Kamminga 1990; Knecht 1997; Shea 2006). In theory a Clovis point could be shot on an arrow with sufficient velocity over a short distance. In practice, you do not need large points to kill large animals. The point only serves to open the hide for penetration of the projectile. That is why over time, projectile points and shafts get smaller to maximize velocity and penetration. An atlatl dart has more knockdown power than an arrow, with enough momentum to knock a 40 lb animal off its feet and to inflict lethal wounds in game like elephants and bison.

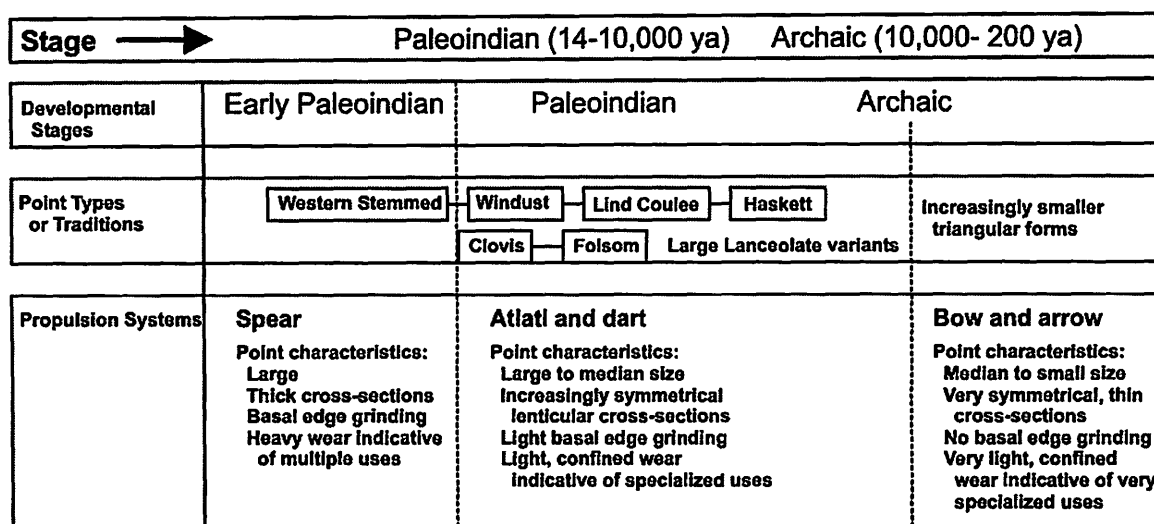


Fig. 7. Conceptual chart suggesting evolving propulsive systems over time correlated with distinctive point types.

TABLE 4. COMPARISON OF DIFFERENT PROJECTILE SYSTEMS (FROM HRDLICKA 2004).

Projectile	Weight	Velocity	Momentum	Kinetic energy
Spear-light	2 lbs	73.5fps	4.57	167ft. lbs
Spear-heavy	5 lbs	37fps	5.75	106ft. lbs
Dart-light	3oz	125fps	125	45ft. lbs
Dart-heavy	6oz	103fps	103	62ft. lbs
Arrow	500gr	165fps	165	29ft. lbs

Where:

Kinetic energy = gravity X velocity in feet per second

For hunting:

<25ft. lbs = small game

25–41ft lbs = medium game (deer)

42–65ft. lbs = large game (elk)

>66ft. lbs = tough game (buffalo)

Momentum = mass X velocity

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A GLIMPSE AT THE BEGINNING OF LANGUAGE STUDIES ON THE NORTHWEST COAST: JOHANN CHRISTOPH ADELUNG'S *MITHRIDATES ODER ALLGEMEINE SPRACHENKUNDE*

Richard L. Bland

ABSTRACT

In the late eighteenth century, the German scholar Johann Christoph Adelung published numerous works, including dictionaries, grammars, German style guides, and works on linguistics. His linguistic publications included many on native languages, the most notable of which was a three-volume work entitled *Mithridates oder allgemeine Sprachenkunde*, published between 1806 and 1817. Included in Volume III was an examination of the languages along the Northwest Coast of North America, based primarily on word lists collected by explorers and traders who had visited the Northwest Coast. A translation of the Northwest Coast material is provided in recognition of its place as one of the initial studies of Northwest Coast languages. Included is the first publication of the Lord's Prayer in the Tlingit language.

Introduction

One of the earliest studies of Northwest Coast languages was produced in Germany in the early nineteenth century by Johann Christoph Adelung (1732–1806). The Northwest Coast material is found within Adelung's major work *Mithridates oder allgemeine Sprachenkunde* [translated as *Mithridates or General Linguistics*], published in Germany between 1806 and 1817. This three-volume work is best known for demonstrating the relationship between the ancient Sanskrit language to the modern European languages, but it also documented the state of knowledge for worldwide indigenous languages. In using the name Mithridates, Adelung was referring to the first century B.C. king of Pontus—the area in northeastern present-day Turkey—who is said to have traveled about his kingdom, where “he understood more than a score of languages” (Duggan 1959:26–27).

Using native word lists found in the journals and books of explorers and others who had visited the Northwest Coast of North America, Adelung compiled numerous word lists to compare the languages found in different areas. Adelung evaluated the claim that the Northwest languages originated in Mexico, and he sought to draw connections between Eskimo populations of the north and the coastal peoples farther south. In recognition of this pioneering work, a translation of the Northwest material is provided here to supplement the history of Northwest anthropological research.

Johann Christoph Adelung

Johann Christoph Adelung (1732–1806) was born at Spantekow in Western Pomerania (present-day Germany) to Johann Paul Adelung (1703–1759), a parish priest, and Regina Sophie (née Loeper) Adelung (1702–1782). Young Johann was educated in schools at Anklam and Berge Monastery, Magdeburg, and the University of Halle. In 1759, he took a professorship at the gymnasium in Erfurt, where he remained only two years (Fig. 1). From Erfurt, he went to Leipzig and there devoted himself to philosophical studies. In 1787, he became head librarian to the Elector of Saxony in Dresden, where he remained until his death on 10 September 1806.

During his life, Adelung published numerous works including dictionaries, grammars, German style guides, and works on linguistics. His linguistic publications included many on native languages, the most notable of which is a three-volume work entitled *Mithridates oder allgemeine Sprachkunde* [Mithridates or General Linguistics], published between 1806 and 1817. Adelung died before the last two volumes could be published; however, Johann Severin Vater (1771–1826) brought them to light after Adelung's death.¹ One of the many works that Adelung is noted for is the first publication of the Lord's Prayer in the Tlingit and Kodiak (Alutiiq) languages.

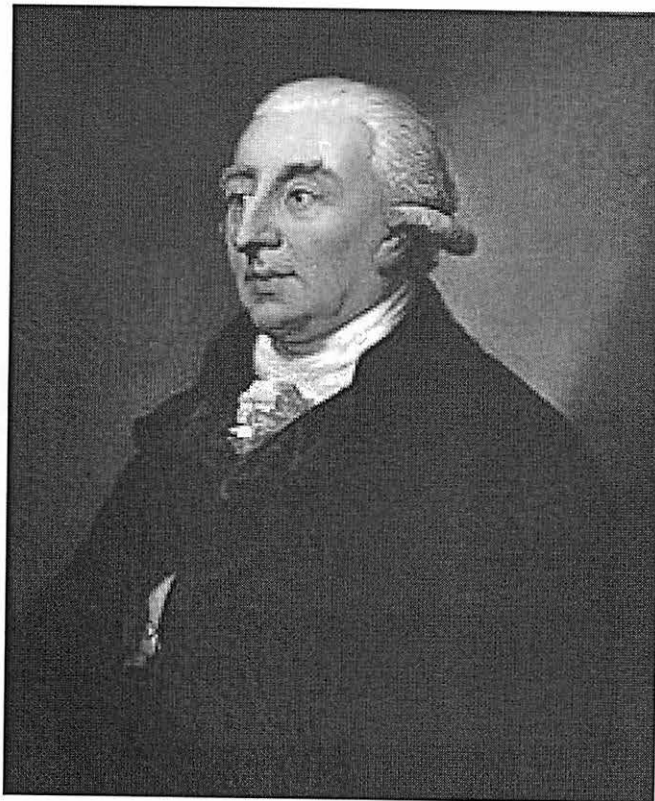


Fig. 1. Johann Christoph Adelung. Portrait by Anton Graff (from Wikipedia).

¹ Johan Severin Vater (1771–1826) was a German theologian, Biblical scholar, and linguist.

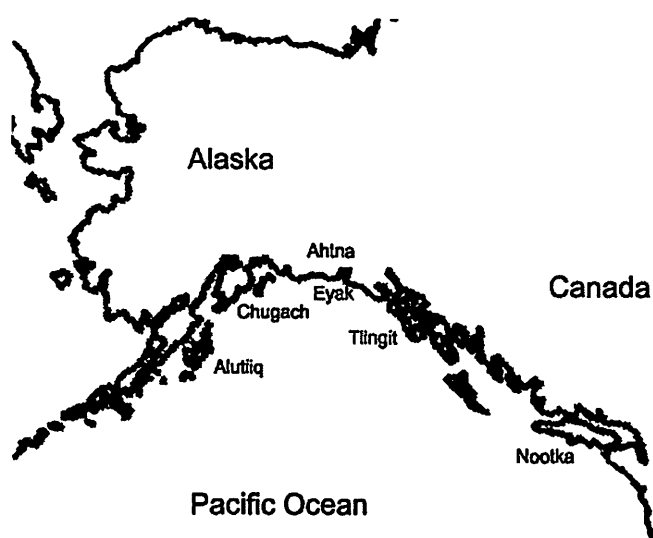


Fig. 2. Map of the Northwest Coast showing the relative location of native groups mentioned in the text.

Other Linguistic Scholars of the Northwest Coast

During Adelung's lifetime the Empress Catherine II (1729–1796) was the ruler of all Russia. One of her interests was linguistic studies. Mary Ritchie Key (1980:ix) states: "Catherine the Great initiated and compiled the first comparative listing of related vocabulary of languages of the world." Language study at the end of the 18th century was not new. Catherine drew on the works of such scholars as Antoine Court de Gébelin (ca. 1719–1784) and Gottfried Wilhelm von Leibniz (1646–1716), whose interests were in language universals. Peter Simon Pallas (1741–1811), a German zoologist and botanist who worked in Russia, also tried to aid Catherine in demonstrating that all languages came from a single language. Catherine had Pallas produce *Linguarum Totius Orbis Vocabularia Comparativa* [A Comparative Vocabulary of the World], which was published in 1786. Catherine's work "formed the basis" of Adelung's *Mithridates* (Key 1980:139).

In 1824, about a decade after the publication of *Mithridates*, Bishop Ivan Veniaminov (1797–1879) arrived in Alaska. Veniaminov not only made studies of the languages of the natives but also created an alphabet for the languages and taught the natives to read. Veniaminov's linguistic work in the Aleutian Islands and on the southeast coast of Alaska was important.

In 1885, Franz Boas (1858–1942) began his studies on the Northwest Coast. These studies were intensified with the Jesup North Pacific Expedition, which Boas led. Numerous language studies were produced as a result of this expedition including important linguistic research published in the *Handbook of American Indian Languages*, edited by Boas.

Work on the languages of the Northwest Coast continued throughout the twentieth century and is ongoing today. For example, Nora Marks and Richard Dauenhauer published voluminous works on the Tlingit between 1981 and 2008 (see, for example, Marks et al. 2008), and Michael Krauss, a linguist at the Alaska Native Languages Center in Fairbanks, has published many works on Alaskan native languages (see, for example, Krauss 1982). These are but a few of the modern scholars who have studied or continue to study the languages of the Northwest Coast.

Adelung's Sources for Word Lists

The basis for Adelung's *Mithridates* consisted of the word collections of explorers, traveling merchants, and others who had been to the Northwest Coast of North America and published diaries and books on their travels. Among the word lists Adelung mentioned are those published in the journals of Captain James Cook (1728–1799), Jean François de Galoup de la Pérouse (1741–1788), Alexander Mackenzie (1764–1820), Nikolai Petrovich Rezanov (1764–1807), Gavriil Ivanovich Davydov (1874–1809), George Vancouver (1757–1798), Nathaniel Portlock (1748–1817), and George Dixon (d. ca. 1800).

Captain Cook traveled the Northwest Coast in 1789 and 1790, visiting Haida villages along the present-day Canadian Coast. During his last two voyages Cook collected samples of the languages of the local residents (Pierce 1990:100; Grinëv 2009:278).

Count Jean François de la Pérouse made word collections during his 1786 expedition along the Northwest Coast collecting geographical information for the French government (Pierce 1990:292; Grinëv 2009:291).

Though Alexander Mackenzie was not a mariner, he collected word lists that Adelung used in his *Mithridates*. Mackenzie traveled throughout the Canadian Northwest, including across what is now British Columbia to the Northwest Coast from the interior of Canada, during which time he collected samples of native languages (Mackenzie 1931; Grinëv 2009:322). Among the Russians who made word lists was Nikolai Rezanov—court chamberlain, ambassador to Japan, and founder of the Russian-American Company (Pierce 1990:418–421; Grinëv 2009:449–450).

Rezanov was the son-in-law of Grigorii Shelikhov, nominal founder of the Russian-American Company, and thus had relatively easy access to the Northwest Coast. Also with easy access to the Northwest Coast was Gavriil Davydov, a young naval officer who spent two winters in Russian America. Davydov often visited with the natives, collecting much valuable linguistic data (Pierce 1990:112–115; Grinëv 2009:145, 567–579).

George Vancouver (1757–1798) was a British naval officer who spent time as an able seaman on Captain Cook's ship during the latter's second and third voyages. In 1790, Vancouver was given command of an expedition that was sent to Nootka Sound to receive from the Spanish the English possessions they had seized in Nootka Sound in 1789. In 1793 and 1794 Vancouver explored the coasts of Southeast Alaska and British Columbia (Pierce 1990:516; Grinëv 2009:89).

Nathaniel Portlock was an English mariner who commanded a merchant ship that sailed along the coast of Alaska in 1786 with the object of both exploration and trading. During this time he collected word lists (Pierce 1990:410; Grinëv 2009:436–437).

Conclusions

Johann Christoph Adelung was a devoted student of languages who made an attempt to collect and compare all the languages in the world. In order to do this he used the lists of mariners, travelers, explorers, bureaucrats—anyone who made word lists of native peoples. Based on the works promoted by Russia's Empress Catherine the Great, Adelung created the three-volume work entitled *Mithridates*, which contained as many languages as he could find. By comparing the languages of the Northwest Coast of North America, Adelung believed there were connections between some of the languages in the Vancouver Island area and some in Mexico. He also concluded that there were connections between the Indian languages of the northern Northwest

Coast and Eskimo languages. At present these languages (Vancouver Island—Mexico and Indian—Eskimo) are strictly separated. However, if one follows Greenberg's (1987) notion of three basic language stocks entering the New World, these languages might not be that far apart.

Adelung attempted, with the aid of the word lists he was able to obtain, to compare the various languages of the Northwest Coast. Some languages were assigned to specific tribes, such as Tlingit, Eyak, Ahtna, Nootka, Chugach, and Koniag, and some to localities, such as Kenai, King George's Sound, and Mexico. Regardless of the success of his work in this area, he laid the groundwork for the research of future scholars.

Translating Adelung's work was a difficult task. If we remember that Samuel Johnson's *Dictionary of the English Language*, a standardizing force in English, was published in 1755, during Adelung's lifetime, we can understand that the German language of 1806 was approximately equally only on the cusp of regularization. Therefore, many of the terms used by Adelung occur in variations, particularly tribal names (e.g., Koluschen—Koljuschen). Nevertheless, the work is a brilliant attempt by a perceptive scholar to bring organization into the languages of the Northwest Coast of North America. As R. H. Robins (1979:169) stated: "Adelung's exposition stands typically on the borders between the older unsystematic periods of speculation and collection and the later epoch of the organization of genetically related families."

The Text

There are a number of difficulties regarding precise translation of the text taken from Volume III of *Mithridates*. There are typos (e.g., page 403 for 430), some of which can be overlooked. Others are not so easily dealt with (e.g., "Schon aus Cook's zweyter Reise sind Wörter des Nootka-Sundes bekannt, deren Zusammenhang mit Wörtern des Nootka-Sundes deutlich ist"—which seems to translate as "From Cook's second voyage words are known from Nootka Sound, whose connection with words of Nootka Sound is clear," and as such, does not make much sense. There is inconsistent formatting, missing punctuation, inconsistencies in spelling (e.g., Alaksa, Aljaksa for Alaska) and so on. Also, at least one page referred to does not seem to exist. For group names, the author randomly interchanged a German plural ending (e.g., Tschugazzen [Chugach]) with a Russian plural ending (e.g., Tschugazzi). In the translation Adelung's spellings of the native groups have been directly transliterated in order to retain the flavor of Adelung's time and study (Tschugazzen or Tschugazzi for Chugach). Finally, the transcriptions of the native sounds are based on English, Russian, German, and French pronunciation—and possibly others.

Given these constraints, the reader should not take Adelung's work as a linguistic treatise of Northwest Coast language. This translation is simply a glimpse into the history of how the study of languages of the Northwest Coast began. Despite the difficulties, Adelung's work was a very important step in the development of comparative language studies.

Unless otherwise noted, all remarks in the translated text that are enclosed within brackets [] are the translator's.

*Mithridates*²

Translation by Richard Bland

The Northwest Coast up to about 60° North Latitude and Prince William Sound

At the thus determined boundary of this zone we already find tribes that belong to the Eskimo nation.³ And at a certain yet not precisely determinable point of this Northwest Coast, we start seeing the influences of this extended nation of the American north, the Eskimo. They become conspicuous first in Nutka [Nootka] Sound in the prevailing language there, the vocabulary of which, as we have known since Cook's final trip,⁴ contains words that show an unmistakable correspondence with the language of the northernmost part of the American West and East. We are very familiar with the language of the Eskimo and the almost identical one from Greenland:⁵ Cook and others have already recorded words of the peoples in several places of the northernmost parts of the American Northwest that make it very likely that the language of these peoples is identical with that of the former [Greenlanders]. This has become certain upon the closer acquaintance of the Russians with the more northern Northwest Coast of America, as has been stated in part in the Introduction on p. 341 [of the original], but will be discussed more precisely in the Vth section of this part [see below].

Even on far more southerly points of this Northwest Coast, the use of words that belong to the Eskimo tribe and contact with their language have been observed. Already from Cook's second voyage⁶ words are known from Nootka Sound; their connection with words of Nootka Sound is clear.⁷ Contact of that kind seems even less peculiar from the Queen Charlotte Islands onwards. They leap out even in the appendices to *Mithridates*, which Herr Privy Councilor von Adelung promises in the introduction;⁸ others are mentioned in part above or will be at the end of this section with the Koluschen [Tlingit]. It might be possible, upon closer acquaintance with these peoples, to ascertain an even closer relationship among them, and then to connect these residents of the Northwest Coast themselves with the Eskimo tribe. Only the assurance of such a reliable observer as La Pérouse proves to us that at 58° 39' north latitude he found no Eskimos, not their distinguishing facial structure or way of life but, as he says, savages "that have a common origin with all natives of the inner regions of Canada and North America."⁹ The coincidence of the words at Nutka Sound and Norfolk [Sitka] Sound with words of the Eskimo tribe cannot be deduced from

² The following translation was taken from pages 207 to 238 of the 3rd volume of Johann Christoph Adelung's *Mithridates oder allgemeine Sprachkunde* [Mithridates or General Linguistics] (Berlin: Die Vossische Buchhandlung, 1816). Mithridates (132 to 63 B.C.) was king of Pontus (northeastern present-day Turkey) who is said to have traveled about his kingdom, where "he understood more than a score of languages" (Duggan 1959:26–27). According to Pliny the Elder (1954:XXIV) "Mithridates who was king of twenty-two races gave judgements in as many languages, in an assembly addressing each race in turn without an interpreter."—*Trans.*

³ The boundary in question is Nootka Sound.—*Trans.*

⁴ Captain James Cook (1728–1779) was a renowned British mariner who made three voyages of discovery in the Pacific. Many later figures in Northwest exploration had been members of his crews (Pierce 1990:100–101).

⁵ Adelung distinguishes the natives of Greenland from other Eskimos.—*Trans.*

⁶ See the comparative philology of the description of the same in Pt. IV. a. E.

⁷ The German is unclear here.—*Trans.*

⁸ Johann Severin Vater (1771–1826) was a professor of theology and librarian and a knight of St. Vladimir Order who had Adelung's second and third volumes published after the latter's death in 1806.—*Trans.*

⁹ La Pérouse's *Entdeckungsreise*, translated [into German from French] by Forster und Sprengel, vol. 1, p. 334.

the influence of the residents of that region on these Eskimos, because words similar to these prevail all the way to Labrador and Greenland and thus quite certainly belong to this Eskimo tribe. The fact that they are now also present, however, in Norfolk Sound and Nutka Sound cannot be derived in such a population from communication through trade, since it is not of the kind that would explain such influence. But, to have such influence on the languages that are now in those regions of the Northwest Coast, it can be most naturally explained from the fact that either people from the Eskimo tribe penetrated in part to those southern points of the Northwest Coast and became mixed with the people there, or that this tribe once lived on the Northwest Coast much farther to the south but was displaced, so that some of them remained and mixed with the people who took possession of their homeland. The latter is the most probable because we know from observers in the Polar regions that there too the Eskimos were pushed back. The coasts of Prince William Sound and farther to the northwest are also inhabited by the Eskimo tribe as well as others, so that at present we can observe

People of the Northwest Coast who
are already visibly influenced by and mixed with
the Eskimo tribe

Even if we cannot exactly determine the boundary between these peoples, who apparently once mixed with Eskimos and the Eskimo tribe itself, then partly through the quoted statement by La Pérouse and partly through Vancouver's assurance, the language of Unalaska is also the language of Prince William Sound (i.e., both of them are Eskimo languages), and thus the boundary is between these two places that are not very distant from each other. We therefore have to examine the distinctive languages of these peoples but must not lose sight of their relationship to the language of the Eskimo tribe.

A new, most interesting consideration among the peoples of this part of the Northwest Coast is their relation to the Mexican language. Herr von Humboldt¹⁰ says about this: "When carefully comparing the word collections recorded in Nutka Sound and in Monterey, he was astonished to see the concurrence of the sounds and the similarity of several word endings to those of the Mexican language. For example, in the Nutka language there is *apquixitl*: to embrace, *temextixitl*: to kiss, *hitltziitl*: to sigh, *tzitzimitz*: earth, *ini-coatzimitl*: the name of a month. But on the whole these languages are fundamentally different, as is illustrated by the comparison of numerals that is to be adduced later on."¹¹ Special consideration should be given to the fact that the ending *itl* in Mexican is used only as a suffix for substantives. The above-mentioned examples for this ending in Nutka words are, however, for the most part verbs. In contrast *ag-coatl* (young woman), as quoted already in Bourgoing,¹² shows a somewhat closer similarity to the Mexican *çou-atl*: woman, women in general. Still, this similarity of recurring sounds in itself, especially that of the *tl*, which do not concur that frequently in other languages, is a proof of sorts. According to the short word lists of

¹⁰ Baron Alexander von Humboldt (1769–1859) was a German explorer, scientist, and natural philosopher whose attention was focused primarily on Central and South America (Bridgwater 1953:450).—*Trans.*

¹¹ [Humboldt] *Essai polit. d. l. N. E. S.* 322—*aemitl*: dog, occurs in Bourgoing, as well as *nec-tzitl*: to drink, *tzi-chitl*: to pour.

¹² Baron Jean-François de Bourgoing was a French diplomat and writer charged with numerous foreign missions. He helped negotiate relations between France and Spain. *Biografías y Vidas*, 2004–13.

<http://www.biografiasyvidas.com/biografia/b/bourgoing.htm>. Accessed 3/31/2013.—*Trans.*

local languages in Dixon, La Pérouse,¹³ and Vancouver,¹⁴ the two connected sounds are also in evidence in Norfolk Sound as far as Behring Bay [Yakutat Bay] and in Nutka Sound. Thanks to the word lists of the languages from Russian settlements on this coast, we can be certain that there is a remarkable frequency of the ending *tl* not just in the above-mentioned related language of the Koluschen, but also in the language of the Ugaljachmutzi [Eyak] living in Behring Bay around Mt. St. Elias. There this frequency is so striking that among the nearly 1,200 words collected by Herr von Resanoff [Rezanov]¹⁵—words of all kinds, not just substantives—nearly a twelfth end in *tl*, sometimes *tli* or *tle*.

	Mexican	Ugaljachmutzi (Eyak)	Koluschen (Tlingit)
Mutter (mother)	<i>nantli</i>	....	<i>attli</i>
Bruder (brother)	<i>teachcauh</i>	<i>kachaoch</i>	<i>achaik, achonoik</i>
Weib (woman)	<i>ciuatl</i>	<i>süot</i>	
Mädchen (girl)	<i>ocuel</i>	<i>keël</i>	
Gesicht (face)	<i>xayacatl</i>	....	<i>kaga</i>
Stirn (forehead)	<i>yxquatl*</i>	<i>kaintschit</i>	<i>kakak</i>
Mund (mouth)	<i>camatl</i>	<i>kasatll</i>	
Kehle (throat)	<i>cocotl</i>	<i>katkaki</i>	
Schulter (shoulder)	<i>acoli</i>	<i>kakaljachatag</i>	
Nahme (name)	<i>tetocayotiloni</i>	<i>kedetude-ë</i>	
kraftvoll (powerful)	<i>velitilizcotl</i>	....	<i>itlzin</i>
kalt (cold)	<i>cecuitzli</i>	<i>kateitle</i>	
Länge (length)	<i>quauhticayotl</i>	<i>kuaua</i>	
Tiefe (depth)	<i>vecatliyotl</i>	....	<i>kattljan</i>
Stein (stone)	<i>tell</i>	....	<i>te</i>
Erde (Earth)	<i>tlalli</i>	....	<i>tljaknak, tlatka</i>
Ente (duck)	<i>canaulüli</i>	<i>kach**</i>	<i>kauchu</i>

* The Mexican words are pronounced as in Spanish, thus *x* as *j*, *ch* as *tsch*: the others as in German. Thus, for example, the words for: "to see" are very similar, as *utsch* is the prefix of the infinitive in several Ugaljachmutzi words, and *lia*, a Mexican verb suffix, in *uxquatl qua* is the main syllable, when compared to the Cora language.

¹³ French explorer Jean François de Galoup La Pérouse (1741–1788), born in southern France, was appointed midshipman in 1756 and in 1782 was with the French fleet that assisted the Americans during the American Revolution. In 1786, he commanded an expedition that sailed along the Northwest Coast collecting information for the French government. Fortunately for history, when La Pérouse visited the Russian port of Petropavlovsk, he sent Jean Baptiste de Lesseps overland to France with the La Pérouse journals—in 1788 La Pérouse sailed from Botany Bay, Australia, with two vessels never to be heard from again (Pierce 1990:292; Grinëv 2009:291).—*Trans.*

¹⁴ George Vancouver (1757–1798) was a British naval officer who spent time as an able seaman on Captain Cook's ship during the latter's second and third voyages. In 1790, Vancouver was given command of an expedition that was sent to Nootka Sound to receive from the Spanish the English possessions that the Spanish had seized in Nootka Sound. In 1793 and 1794, Vancouver explored the coasts of Southeast Alaska and British Columbia (Pierce 1990:516; Grinëv 2009:89).—*Trans.*

¹⁵ Nikolai Petrovich Rezanov (1764–1807) was court chamberlain, ambassador to Japan, founder of the Russian-American Company, and Grigorii Shelikhov's son-in-law; it is most likely at Shelikhov's behest that Rezanov encouraged Empress Catherine II (1729–1796) to permit establishment of the Russian-American Company (Pierce 1990:81–83, 418–421, 454–459; Grinëv 2009:167–168, 449–450, 604–605).—*Trans.*

	Mexican	Ugaljachmutzi	Koluschen
roth (red)	<i>quacocoztic</i>	<i>takakuete</i>	
Holzaxt (axe)	<i>quauhllateconi</i>	<i>ljakatakatl</i>	
Stern (star)	<i>cillati</i>	....	<i>tlaachzel</i>
Nacht (night)	<i>youalli</i>	<i>sülchatl</i>	
leben (to live)	<i>yali</i>	<i>salljaal</i>	
sehen (to see)	<i>chia</i>	<i>utschtschiilia</i>	
schlafen (to sleep)	<i>uetztoc</i>	<i>azut</i>	
tragen (to carry)	<i>itqui</i>	<i>itta</i>	
kochen (to cook)	<i>coxitia</i>	<i>coatk</i>	

The obvious temptation was to compare the Ugaljachmutzi and Koluschen words with the available Mexican ones (those for the most established concepts in the Pallas glossary).¹⁶ And one can hardly deny that many of the above-mentioned similarities could have a common stem vowel. This is reason enough to encourage a more detailed investigation using a greater word stock of the Mexican language in comparison [with Ugaljachmutzi and Koluschen], since such similarities are found in fewer than 200 words, as well as for assuming that it is not improbable that we might discover linguistic and tribal relationships with the Mexicans in these still little-known northern parts.

Nutka Sound

In Nutka Sound, the large Quadro and Vancouver Island is now a more established place than the less certain Nutka. Since it has been visited more often, several people have recorded words that when listed reveal the same differences that are noticeable when recording the words of savages of often somewhat different tribal divisions elsewhere, and abbreviations, elongations, or other permutations of sound. In languages that are connected and governed by nothing firm, and whose members often separate from one another, it cannot be otherwise. The most detailed word lists from Nutka Sound are in Cook's third voyage and from Anderson's reports.¹⁷ Next are several in Bourgoing's *Relation d'un voyage recent des Espagnols sur les côtes nord-ouest de l'Amerique septentrionale* [Account of a Recent Voyage of the Spanish on the Northwest Coast of North America], and from that listed in the Archives litteraires de l'Europe (1789. N. IV. pp. 78, 79). The numerals are in Dixon and in Herr von Humboldt's *Essai politique* (1811, p. 322), in the latter publication drawn from a reliable manuscript of the Spaniard Moziño.¹⁸

In King George's Sound [Nootka Sound] at least the numerals, which we find quoted in Portlock's and Dixon's voyages, are taken almost entirely from Nutka Sound, and the language common here consequently appears to have spread there.

Even south of Nutka Sound, in Port Discovery [Discovery Bay, Washington] at 48° 7', Vancouver found a similar language among the nomadic people there, and they understood Nutka

¹⁶ Peter Simon Pallas (1741–1811) was a child prodigy born in Berlin. At 19 he received his degree in medicine but became a naturalist. In 1767, he moved to St. Petersburg, participated in expeditions, and published many works, including the first volume of a comparative dictionary supposed to contain all languages and dialects (1781) (Masterson and Brower 1948; Pierce 1990:390–391; Grinčev 2009:403).—*Trans.*

¹⁷ This may have been William Anderson (c. 1748–1778), the surgeon on Captain Cook's ship during his third voyage, that is, when he visited Alaska in 1778 (Pierce 1990:7).—*Trans.*

¹⁸ This is José Mariano Moziño (1757–1820), naturalist on the expedition of Juan Francisco de la Bodega y Quadra to Nootka Sound in 1792 (Moziño 1991).—*Trans.*

Word Samples			
Nutka Words, after Cook			
Himmel (sky)	<i>nes, inaihl nas</i>	Ohr (ear)	<i>papai</i>
Wasser (water)	<i>chauk</i>	Nase (nose)	<i>neets</i>
Feuer (fire)	<i>eeneek, eleek</i>	Zunge (tongue)	<i>choop</i>
Sonne (sun)	<i>opulszthl</i>	Haar (hair)	<i>apsoon</i>
Mond (moon)	<i>onulszthl</i>	Hand (hand)	<i>kookelixo</i>
Mann (man)	<i>tanafs</i>	bey Bourgoing: (with Bourgoing)	<i>coucou-mitzou</i>
Kopf (head)	<i>oooomitz</i>	Fuss (foot)	<i>klatimme</i>
Auge (eye)	<i>kussee</i>	böse, schlecht (bad)	<i>takho</i>

Numerals				
Nutka				King George's Sound
	after Cook	Dixon	Humboldt	
1	<i>tsawak</i>	<i>sorwock</i>	<i>sahuac</i>	<i>sorwock</i>
2	<i>akkla</i>	<i>athlac</i>	<i>atla</i>	<i>athlac</i>
3	<i>katsitsa</i>	<i>catsa</i>	<i>catza</i>	<i>catsa</i>

words, just as they were understood 32 sea miles from Cape Mudge [B.C.], although there they appeared not to be in general use. (*Cheslaki* was the name of a chief of the savages there.)

Atnah [Ahtna]—Fitzhugh Sound

First of all, we have to consider a people at 52° north latitude who did not live directly on the coast, with whom Mackenzie spent time and of whose peculiar language he gives examples.¹⁹ They are the *Atnah*,²⁰ or Kinn Indians, directly north above which, according to Mackenzie, is Nagailer or Träger [Carrier] Indian land, where the language is nearly the same as the (so-called by Mackenzie) Chipewyan, and whom we will save until the end of the IVth section; next we will note the friendly residents of one of the villages nearer the sea coast, whose stature and way of life he describes, amongst others, their custom of enclosing the heads of the children between leather-covered boards to give them a wedge-shaped form, and from whose language he also imparts some examples. Similarities with other languages known to us can be found in neither of these languages.²¹

In the village just mentioned, Mackenzie found the entire salmon fishing and all other fishing to be in the arbitrary hands of a chief, whose inherited autocracy was established in ways not currently encountered anywhere else among the savage peoples of North America.

¹⁹ Alexander Mackenzie (1764–1820), British explorer, arrived on the Northwest Coast from the interior of Canada, being the first known European to cross Canada to the Pacific Ocean. He published his journals in 1801 (Mackenzie 1931; Grinëv 2009:322).—*Trans.*

²⁰ On the Russian maps of the Russian possessions I find on the Northwest Coast living to the north of the Ugaljachmutzi around Mt. St. Elias, somewhat inland, an indication for *Atnah* Indians: it would be interesting to investigate whether they have something in common with the more southern *Atnah*.

²¹ Mackenzie's *Reisen* [Trips] (Hamburg translation), 1931, p. 540.

Word Samples

	Ahtna	Friendly Village
Wasser (water)	<i>shaweliquoih</i>	<i>ulkan</i>
Feuer (fire)	<i>teuch*</i>	<i>neach</i>
Mann (man)	<i>scuynoloach</i>	
Frau (woman)	<i>smosledgensk</i>	
Kopf (head)	<i>scapacay</i>	
Auge (eye)	<i>thloustin</i>	<i>clougus</i>
Ohr (ear)	<i>ichlinah</i>	
Nase (nose)	<i>pisax</i>	<i>ma - acza</i>
Zunge (tongue)	<i>dewhasjask</i>	
Haar (hair)	<i>cahowdin</i>	<i>sepnas</i> (head hair)
Hand (hand)	<i>calietha</i>	<i>shous - shey</i>

* The similarity of this word with that of the Pima is at least intimated.

We find ourselves here in the vicinity of Fitzhugh Sound, on which, opposite the sea arm that leads to Menzie's Point, Vancouver also noted a language entirely different from Nutka, and robust people, more similar to North Europeans than are the southern residents of the Northwest Coast. This description does not fit with that of Mackenzie; they are not speaking of the same tribe. Mackenzie calls the coastal residents there the people most receptive to civilization among all whom he observed; they do not live by hunting in the forests but from catching fish and other sea animals and a kind of trade. Also, Mackenzie noted a woman with an incised lower lip and a wooden ornament in this incision. Dixon and Vancouver often found these lip incisions in women on the neighboring points of the coast, and the stranger is the custom of such an incision with inserted wooden ornament—which at least in Port des Français [Lituya Bay] is called *kentaga*—the more it is reminiscent of the very similar “barbot” [labret] on la Plata and on the Paraguay River in South America.²² Yet there it is a custom used exclusively by the men; here it belongs to the women.

On Queen Charlotte Island, whose descriptions Dixon and especially Et. Marchand *Voyage autour du monde* [Voyage around the World] (1801, vol. I, p. 288) has given,²³ exists a distinctive language; the latter asserts a unified language throughout the whole island, against the opinion of Dixon, and gives the numerals and also a couple of other words (p. 284) as examples:

Feuer (fire)	<i>tesch</i>	2.	<i>stonk</i>
1.	<i>souchou</i>	3.	<i>stōonis</i>

One notes no similarity with other numerals there.

²² A barbot is “a piece of wood in the lower lip, perforated for the purpose; a custom in which most of the nations of Paraguay, as well as some of those in North America, participate” (Pritchard 1826:2:495–496).—*Trans.*

²³ Étienne Marchand (1755–1793) was a French sea captain born in the Antilles. He made a number of commercial voyages; eventually (in 1791) he sailed to the Northwest Coast (Pierce 1990:341–342; Grinčev 2009:334–335).—*Trans.*

Koluschen

The peoples of a great part of the Northwest Coast of America, where the Russians have settlements, are called by them Koluschen (Koljuschen) [Tlingit]. Several tribes are subsumed under this, and their real and main center is not yet known.²⁴ An important settlement for them was the coast of *Sitka* [now Baranof] Island on its opposite side, the tribes of which called themselves *S-chit-cha-chon* (or *S-chinkit* or *G-tinkit*), that is, inhabitants of Sitka. The Russians had a settlement there that was attacked and destroyed by the Koluschen in 1801. In 1804, however, Herr v. Baranoff,²⁵ director of the Russian possessions in America, took Sitka [Island.—*Trans.*] again,²⁶ (which is now Baranoff Island, with an erected fort called Neu-Archangel [Novo-Arkhangel'sk]), made peace with the Koluschen, who withdrew and who fortified a high rocky point of land on the northeastern part of Sitka [Sitka] Island at 57° 46' north latitude, 134° 40' west longitude, but incidentally they now have friendly relations with the Russians. They are for the most part of medium height and strong body build, have black hair, large fiery eyes, and without showing features of the Mongoloid race, a flat broad nose, broad cheek bones, and very pronounced, coarse facial features. The color of their skin is dirty from earth and ocher, with which they smear themselves; but when the women and girls were cleaned of all the dirt, their skin was found to be as white as among any European women. In the manner just mentioned, the female sex wears flat wooden spoons in the lower lip, which are larger with increasing status and age, for example, 5 inches long, 3 inches wide, but one was noticed that could almost cover the entire face.²⁷

Sitka Gulf is what the English call Norfolk Sound.²⁸

Herr v. Resanoff had this to say about the Koluschen:²⁹ "They extend from Iakutat south to the Charlotte Islands with many gradations and nuances of their language, and this entire archipelago is occupied by their settlements. Their language is a completely distinct one."

Portlock, Dixon, Marchand, La Pérouse, and Vancouver had already visited individual places on this coast, and the similarity shown between the words recorded there and those of the Koluschen is great enough to convince us that at all those points there live or lived tribal kin of the Koluschen, even if branches of other tribes might also be found among them—such as, for example in George's Sound, people who according to their language are related to the Nutkas, and in this regard have already been mentioned.

²⁴ V. Langsdorf's *Reise*, 1812, vol. II, p. 110. v. Adelung and v. Krusenstern's *Wörter Sammlungen aus den Sprachen einiger Völker des östlichen Asiens und der Nordwest Küste von Amerika* (1813) [Word Collections from the Languages of Some Peoples of Eastern Asia and the Northwest Coast of America]. Prologue, p. IX. [Georg Heinrich von Langsdorf (1774–1852) was a naturalist and physician who spent time in the Russian colonies. Adam Johann von Krusenstern (1770–1846) was an admiral and circumnavigator who sailed in the North Pacific (Pierce 271–273, 288–292; Grinëv 2009:270, 290).—*Trans.*]

²⁵ Aleksandr Andreevich Baranov (1746–1819) was the governor of Russian America from 1790 to 1818 with his capital at Novo-Arkhangel'sk (present-day Sitka) (Pierce 1990:20–23; Grinëv 2009:44).—*Trans.*

²⁶ Chwostoff's and Dawidoff's [Khvostov and Davydov] (the latter is the author) *Reise nach Amerika* [Trip to America], 1810, pt. II, p. 109; v. Langsdorff, *loc. cit.*, p. 73.

²⁷ V. Langsdorff, *loc. cit.*, pp. 96, 99. Compare with p. 78.

²⁸ Dawidoff, *loc. cit.*, p. 111.

²⁹ Preliminary report on the manuscript, passed to me through the generosity of Herr v. Adelung, from the *Wörterbuch der Sprachen von Unalaschka, Kadjak, Kinai, Tschugaschi, Ugajlaschmutzi, Koluschi* [Dictionary of the Languages of Unalaska, Kodiak, Kenai, Chugach, Eyak, and Tlingit].

Marchand calls the residents of Norfolk Bay, whom he described, *Tschinkitani*, which corresponds precisely to the previously mentioned name of *S-chinkit*. Marchand states expressly that their language is entirely different from that of Nutka Sound as well as from that of Charlotte Island, that the people are extremely crude and savage, and most sounds require strong aspiration from the nose and throat, especially *t* and *g*. Only with difficulty can these people enunciate *d* and *n*, and *f* and *v* not at all. Most words begin with a strong *k* originating in the throat. The words of this language were recorded by two of Marchand's companions, Captain Chanal and surgeon Roblet,³⁰ in both cases based on French pronunciation. The difference is not very considerable, but it is once more proof that with such unregulated languages the mouths of two speakers and the ears of two listeners do not easily lead to exactly the same results.³¹

Dixon, too, has recorded numerals from Norfolk Sound; Portlock has recorded these and a couple of words from Portlock's Harbor not far from Cape Edgecumbe and thereby noted that the language deviated somewhat. Dixon discovered and named Port Musgrave at 59° 32' north latitude [Yakutat Bay]; he found the language different from that in Prince William Sound and thought it likely that it is identical with that of Norfolk Sound.³²

On an intermediate point at 58° 39', La Pérouse found what he called Port des François. La Pérouse also distinguishes the natives there quite explicitly from the Eskimo; they are taller, leaner, and weaker than the latter, and not as skilled in making seagoing vessels. Incidentally they understand how to forge iron, to process copper, to spin the hair of various animals and to use a sewing needle to make fabric from this wool, to carve tolerable figures of people and animals in wood and stone, and to make delicate boxes with inlaid shells. And nowhere are hats and baskets woven from rushes with more skill.

La Pérouse's companion Lamanon unfortunately provided from the language of the natives there only a couple of words and numerals,³³ whose correspondence with the numerals of other Koluschen attests to the kinship of the latter, as well as the following remarks, which highlight the fact that at least the French organ could not express many sounds of the language of this people. One sound especially could not be imitated that is pronounced as a syllable in part through the letters *k, h, l, r, t*, for example, in the word *khrlieies*, that is, hair. On the other hand, all effort and skill in imitation notwithstanding, the natives could not pronounce the sounds, *d, f, l, x, j*, and *g* of the French language, and they never use *p* and *v* next to the previous letters. They pronounce the *r* doubled and strongly burred, and the *chr* just as hard as in some regions of Switzerland. Their initial consonants are *k, t, n, s*, and *m*, of which the first ones are the most frequently used; no word begins with *r*. The burring, the most frequent use of the *k*, and the doubled consonants make this language very difficult. The men speak less through the throat than the women, who, on the other hand, because of the wooden disk in the lower lip cannot produce the labial letters. With singing the language loses some of its roughness.³⁴

From what we know about the Koluschen through Russian observers, much of this information does not fit them. In their words we find *n*, in some words, according to Dawidoff, also

³⁰ Prosper Chanal was first mate on the circumnavigation voyage of Étienne Marchand in 1790–1792 which visited Sitka. Claude Roblet was Marchand's surgeon on the same voyage (Grin'ev 2009:456, 597).—*Trans.*

³¹ See Et. Marchand *Voyage autour du monde*, 1801, vol. I, p. 209, ff. 251 ff. 282. 284. 285 and the word list p. 587.

³² See Nath. Portlock's *Reise* in Ge. Forsters *Reise an der Northwest-Küste von Amerika*, 1791, pt. III, pp. 142 and 145 and Portlock's and Dixon's *Reise*, pp. 155, 169, 175, 216.

³³ Robert de Lamanon (1752–1787) was a scientist aboard La Pérouse's 1785–1787 voyage (La Pérouse 2004).—*Trans.*

³⁴ La Pérouse, *Reise*, translated by R. Forster and Sprengel, 2004, vol. I, p. 339.

p and frequently *l*, which, if Lamanon should not be contradicted, occurs only in the previously mentioned composite sounds according to him. Only the Koluschen have *tl* also as initial and final letters of a word. By contrast they have no *r* at all. But frequently and namely among American languages, it is the case that one branch of the same tribe distinguishes itself through clustering the *r*, whereas others do not do that at all and instead have especially the *l*. That the frequent occurrence of *rk* or *rh* at the end—which is stated by both Marchand's companions and Lamanon at the end of the subsequently cited numerals 1 and 2—might be a dialectical differentiation of such an unregulated language, is more clearly illuminated by the fact that the two companions of Marchand themselves have diverging opinions in the matter, in reverse relation, for example, in the two words:

	Chanal	Roblet
1.	<i>clërrg</i>	<i>kaïke</i>
Teeth	<i>kūhou</i>	<i>kā hoürg</i>

		Tschinkitani [?]		Koluschen [Tlingit]	
	Port des François	Chanal	Roblet	Dawidoff	Resanoff
4.	<i>taakhun</i>	<i>tācoun</i>	<i>tacoūng</i>	<i>taakun</i>	<i>tach-un</i>
5.	<i>keitschine</i>	<i>ketchin</i>	<i>keūt tchīnē</i>	<i>kejetschin</i>	<i>ketschtsin</i>
6.	<i>kleituchu</i>	<i>klétoūschou</i>	<i>keī toū choū</i>	<i>tleuussiu</i>	<i>tle-tuschu</i>
7.	<i>takatuchu</i>	<i>tākratoūschou</i>	<i>trā toū choū</i>	<i>tachatuussiu</i>	<i>tackate-uschu</i>
8.	<i>netskatuchu</i>	<i>netskatoūschou</i>	<i>nēcx cā toū choū</i>	<i>nezkütüissju</i>	<i>nesket-uschu</i>
9.	<i>kouchok</i>	<i>koūschok</i>	<i>koū chāc koū</i>	<i>kuussjok</i>	<i>kuschok</i>
10.	<i>tschine-kate</i>	<i>tschinkat</i>	<i>tschīne kâte</i>	<i>stchinkat</i>	<i>tschinkat</i>
20.	<i>theirha</i>	<i>clërr-kat</i>		<i>tlejeka*</i>	<i>tech tschinkat</i>
30.	<i>neiskrah</i>	. . . .		<i>tackha</i>	<i>nezke tschinkat</i>

* After the statement of a young Koluschen. *klejeh-ka*.

The Port des François [Lituya Bay] word *kaurre* has the same meaning and follows the last of these words, as does *kāuch* and *kaoch* in the remaining Koluschan dialects. At Port des François *kaaga* means head; a comparison of the remaining Koluschan words for this meaning in the following word lists will make it even more likely that this language is identical with the remaining Koluschan dialects, even if one would not want to give that much weight to the fact that the numerals by themselves are identical, which of course could have passed from one neighboring nation to another.

Some Notes on this Our Father

Among the words of the Koluschen collected by Herr v. Resanoff the following are listed:

wir (we)	<i>ugan</i>	unser (our)	<i>aage</i>
Wolke (cloud)	<i>tlingitane</i>	Nahme (name)	<i>linikitti</i>
du (you)	<i>uaö</i>	Wille (will)	<i>chattuguga</i>
komm (come)	<i>akku</i>	heute (today)	<i>tschagit-et</i>
schuldig (guilty)	<i>tschechatisouchacha</i>	schenken (give)	<i>guttachu</i>

The words for father, heaven, earth, give, and evil are found in the word list below. The comparison shows significant deviation of the pronunciation as is frequently the case with such tribes; if one had knowledge of the language in its entirety, one would probably find more in

The Lord's Prayer* in Koluschen
after the Language from Sitka

(provided by Herr v. Baranoff, Director of the Russian possessions in America)

Vater <i>Ais</i> [Father]	unser <i>waan,</i> our,	welcher <i>wet</i> which	ist <i>wwetu</i> art	in den Wolken <i>tikeu;</i> in heaven]
Geehrt sey <i>Ikukastii</i> [Hallowed be]	Nahme <i>itssagi</i> name	dein <i>ba-e;</i> thy]		
Lass <i>Faa</i>	kommen <i>atikwakut</i> [come	Reich <i>ikustigi</i> kingdom	dein <i>ibe-e;</i> Thy]	
Geschehe <i>Atkwakut</i> [be done	Wille <i>attüitugati</i> will	dein <i>be-e,</i> Thy	so wie <i>ikachtekin</i> as it is]	
im Himmel <i>linkitani</i> [in heaven	und auf der Erde <i>zu tlekw.</i> on Earth]			
Nahrung <i>Katuachawat</i> [bread	unsere <i>uáan</i> our	nöthige <i>zu-ikwülkinichat</i> daily]		
gib <i>akech</i> [Give	uns <i>uáan</i> us	heute <i>itat;</i> this day]		
Erlass <i>Tamil</i> [forgive us	uns <i>uáan</i> our	Schulden <i>tschaniktshak</i> trespasses	unsere wie auch <i>aagi zu</i> as]	
wir <i>uáan</i> [we	schenken <i>akut</i> forgive	Schuldnern <i>tugati</i> them that trespass	unseren <i>ajat;</i> against us]	

* The approximate English is given.—*Trans.*

accordance [with the pronunciation of specific tribes]. Based on the confidence in the site where this Our Father was recorded, it cannot be doubted that this is an Our Father of the Koluschen. There can incidentally be no doubt that in the first and second plea *atikwakut* and *atkwakut* are one word: so the translation of the latter is less precise. Some grammatical notes on this language will follow at the end of this section.

Samples of Other Koluschen [Tlingit] Words				
	after Dawidoff	after Lisiansky	after two officials of the RAC	
Himmel (sky)	<i>kiíwa</i>	<i>chaáz</i>	<i>kügoo</i>	<i>ki</i>
Erde (Earth)	<i>tlin kitaannii</i>	<i>slinkytaáni</i>	<i>schü</i>	<i>tka</i>
Wasser (water)	<i>in</i>	<i>iin</i>	<i>in</i>	<i>in, jin</i>
Feuer (fire)	<i>kan</i>	<i>chaan</i>	<i>kan</i>	<i>kchan</i>
Sonne (sun)	<i>kakan</i>	<i>kakkaan</i>	<i>kakan</i>	<i>kakkan</i>
Mond (moon)	<i>tys</i>	<i>tys</i>	<i>tis</i>	<i>tis</i>
Mensch (person)	<i>tlinkit</i>	<i>tschalkleich</i>	<i>klingüt</i>	<i>ka, chinkin</i>
Mann (man)	<i>ka</i>	<i>ka</i>	<i>ka, kagn</i>	<i>ka, tochog</i>
Frau (woman)	<i>achlchset</i>	<i>schawwot</i>	<i>achchoch</i>	<i>tuschat</i>
Kind (child)	<i>togotki</i>	<i>tukonegi</i>		
Vater (father)	<i>is</i>	<i>kaisch</i>	<i>achais</i>	<i>tugisch</i>
Mutter (mother)	<i>achtlja</i>	<i>akli</i>	<i>achatli</i>	<i>tutla</i>
Sohn (son)	<i>achgit</i>	....	<i>achüit</i>	<i>tugit</i>
Tochter (daughter)	<i>achsyi</i>	....	<i>achsik</i>	<i>tassük</i>
Bruder (brother)	<i>achonoch</i>	<i>achchonoch</i>	<i>achüika</i>	
Schwester (sister)	<i>achtljak</i>	<i>achkläk</i>	<i>achlitoch</i>	
Kopf (head)	<i>achsjan</i>	<i>aschagi</i>	<i>kissägi</i>	<i>kascha</i>
Auge (eye)	<i>chawak</i>	<i>kawwak</i>	<i>kagok</i>	<i>kawak</i>
Ohr (ear)	<i>achkuk</i>	<i>kakuk</i>	<i>kakuk</i>	<i>kaakuka</i>
Zunge (tongue)	<i>tutljut</i>	<i>katmüt</i>		
Haar (hair)	<i>achsyháu</i>	<i>koschugaù</i>	<i>tichagu</i>	<i>schachaugu</i>
Hand (hand)	<i>achtschin</i>	<i>katschin</i>	<i>kitjun</i>	<i>kaáschi</i>
Fuss (foot)	<i>ikus</i>	<i>kachus</i>	<i>kagys</i>	<i>kakchós</i>
Tag (day)	<i>kejuwaga</i>	<i>kejéu</i>	<i>chügi</i>	<i>jäkgi</i>
gib (give)	<i>atéi</i>	<i>achtschüle</i>		
Böses (evil)	<i>tljek kljuschi</i>	....	(From Sitka)	
1.	<i>tlek</i>	<i>klejek</i>	<i>tlük</i>	<i>tschatlegk</i>
2.	<i>tech</i>	<i>tejech</i>	<i>tüek</i>	<i>tejech</i>
3.	<i>nezk</i>	<i>nazk</i>	<i>nüz k</i>	<i>nazk</i>

	Koluschen [Tlingit]		Tschitkitaner [?]	
	after Resanoff	after a young Kolushen	after Chanal	after Roblet
Himmel (sky)	<i>gus</i>	<i>ki</i>		
Erde (Earth)	<i>tlekkak</i>	<i>tlatka</i>	(sweet water)	
Wasser (water)	<i>chgin</i>	<i>jin</i>	<i>hill</i>	<i>hill</i>
Feuer (fire)	<i>kchan</i>	<i>chaan</i>		
Sonne (sun)	<i>kakkan</i>	<i>kakkaan</i>	....	<i>krā-nē</i>
Mond (moon)	<i>tis</i>	<i>tis</i>		
Mensch (person)	....	<i>ka</i>		
Mann (man)				
Frau (woman)	<i>achschat</i>			
Kind (child)	<i>kzanniga tteche</i>	<i>takkanera</i>		
Vater (father)	<i>ach-eisch</i>	<i>tugüşch</i>		
Mutter (mother)	<i>attli</i>	<i>tatlà</i>		
Sohn (son)	<i>achygit-te</i>	....	
Tochter (daughter)	<i>achsi</i>	....	
Bruder (brother)	<i>acháik</i>	....	
Schwester (sister)	<i>achkik</i>	....	
Kopf (head)	<i>achscha</i>	<i>kaschah</i>		
Auge (eye)	<i>kawak¹</i>	<i>kamak</i>	<i>kaoutstakitsi</i>	<i>kā hou hāc</i>
Ohr (ear)	<i>kaakuk</i>	<i>kakuk</i>	<i>kākouk</i>	<i>kěkoŭguě kaghoug</i>
Nase (nose)	....	....	<i>kātstoŭkoutsch</i>	<i>kā-chě toŭ</i>
Zunge (tongue)	<i>kach-e</i>	....	<i>kātslout</i>	<i>kats-loug</i>
Haar (hair)	<i>schachagu</i>	<i>schagaaaju</i>	<i>satkāg-hoŭ</i>	<i>kā chā kā oŭ</i>
Hand (hand)	<i>katin</i>	<i>katschin</i>	<i>kātchicou</i>	
Fuss (foot)	<i>kachos</i>	<i>kakchos</i>	<i>kayēstka</i>	<i>kā goŭ satē</i>
Tag (day)	<i>akkyge</i>	<i>jakeē</i>		<i>gli</i>
gib (give)	<i>achtschitte</i>			
Böses (evil)				
1.	<i>tleëk</i>	<i>tlàhk</i>	<i>clērg</i>	<i>kaike</i>
2.	<i>tech</i>	<i>tàhch</i>	<i>tērrk</i>	<i>tērg</i>
3.	<i>nezik-e</i>	<i>nazk</i>	<i>notchk</i>	<i>nōtx</i>
Portlock Harbor after Portlock		Portlock's and Dixon's voyages	Port de François after Lamanon	
1.	<i>claske</i>	<i>tlasch</i>	<i>keirrk</i>	
2	<i>taike</i>	<i>taasch</i>	<i>theirrh</i>	
3.	<i>nusk</i>	<i>noosch</i>	<i>neisk</i>	

Ugaljachmutzi, Kinaizi

The first of these people, the Ugaljachmutzi [Eyak], live in the region of Mt. St. Elias, north of Behrings [Yakutat] Bay.³⁵ They have not been known for a long time, and all news of their language—as was illustrated at the beginning of this section—which, when compared with Mexican is very peculiar, comes from the previously mentioned handwritten dictionary of Herr v. Resanoff. In the preface he says that this is not a numerous people and that their language is entirely different

³⁵ One must not confuse this bay, which has been adequately denoted as is, with the Behring Strait between America and Asia; otherwise all the peoples located on that bay would be positioned in an erroneous location. Everywhere in the area around that strait or sea-narrows we probably find the tribal languages dealt with in the last section of this work.

from others, although they might indeed have adopted some words from the neighboring Koluschen. The connections between these and other neighboring languages will be discussed later.

The *Kinaitze* [Tanaina] live around the entire bay by the same name, from 59° to 62° north latitude, but farther inland their language gets lost.³⁶ They must be distinguished completely from the Konägen [Koniag], as the residents of Kodiak are called. Between them and the Ugaljachmutzi [Eyak] live the Tschugazzi [Chugach], who obviously speak the same language as the residents of Kodiak, and thus belong to the Eskimo tribe and who will be discussed in the last section. The following words of the Kinaitze are from Resanoff's dictionary, Dawidoff's *Reise*, and Krusenstern's word collection.

Word Samples

	Ugaljachmutzi [Eyak] after Resanoff	Kinai [Tanaina]			
		after Dawidoff	after Resanoff	after Lisiansky	after an unnamed person
Himmel	<i>koas</i>	<i>jujan</i>	<i>alljuonulchatl</i>	<i>jujan</i>	<i>jugan</i>
Erde	<i>an</i>	<i>altnen</i>	<i>alslin</i>	<i>alschlan</i>	
Wasser	<i>kaŋja</i>	<i>piltni</i>	<i>pilkne</i>	<i>wülchni</i>	<i>wilchn</i>
Feuer	<i>takak</i>	<i>tasi</i>	<i>tasch-y</i>	<i>taas-i</i>	<i>tasi</i>
Sonne	<i>katakyl</i>	<i>nii</i>	<i>neë</i>	<i>tschan-u</i>	<i>neëd</i>
Mond	<i>kacha</i>	<i>tljakaannu</i>	<i>tschan-e</i>	<i>neje</i>	<i>neëda</i>
Mensch	<i>kodeltschachallilja</i>	<i>kochtaana</i>	<i>kocht-annja</i>	<i>tinná</i>	
Mann	<i>sykka</i>	....	<i>skan</i>	....
Weib	<i>syët</i>	....	<i>sióo</i>	<i>schoo</i>	<i>mook-jelan</i>
Kind	<i>sukekeit-toju</i>	<i>skaniken</i>	<i>ischynnaka</i>	....	<i>teilskaschin</i>
Vater	<i>ata</i>	<i>stukta</i>	<i>schukt-a</i>	<i>tukta</i>	<i>tadak</i>
Mutter	<i>amma</i>	<i>anna</i>	<i>schunkta</i>	<i>anná</i>	<i>ana</i>
Sohn	<i>sy-asch</i>	<i>sija</i>	<i>schjusha</i>		
Tochter	<i>syasch</i>	<i>sezaa</i>	<i>schjutscha</i>		
Bruder	<i>kachaoch</i>	<i>külä</i>	<i>schanga</i>	<i>kalla</i>	
Schwester	<i>sytok-eja</i>	<i>tatscha</i>	<i>schutta</i>	<i>utalla</i>	
Kopf	<i>schischage</i>	<i>aisägge</i>	<i>schungaje</i>	<i>schang-je</i>	<i>nanlgä</i>
Auge	<i>kalljag</i>	<i>snaga</i>	<i>schinaga</i>	<i>tnaschaika</i>	<i>nagak</i>
Ohr	<i>katsch-ech</i>	<i>szoga</i>	<i>schtíl-u</i>	<i>szül-u</i>	<i>mitschii</i>
Nase	<i>kaljuatsch</i>	....	<i>schintschisch</i>		
Zunge	<i>kan-at</i>	<i>szylío</i>	<i>szillju</i>	<i>szü-lju</i>	
Haar	<i>lilejel</i>	<i>szygo</i>	<i>stschago</i>	<i>szügu</i>	<i>tlao</i>
Hand	<i>kajak-az</i>	<i>skona</i>	<i>schkunna</i>	<i>schkuuna</i>	
Fuss	<i>kagasch</i>	<i>skajetlna</i>	<i>skatlna</i>	<i>schkatna</i>	<i>katlnä</i>
Tag	<i>kak-ech</i>	<i>tschan</i>	<i>tschanna</i>	<i>tscháan</i>	<i>talkon</i>
gib	<i>ahushitscha</i>	<i>uchonda</i> (give me)	<i>schoknelkit</i>	<i>schlakangut</i>	
Böses	<i>koschijat</i>		<i>tschoolta</i>		
1.	<i>tlínk-e, tleki</i>	<i>zelkei</i>	<i>zyk-e</i>	<i>zilgtan</i>	<i>zellkai</i>
2.	<i>ljaat-te, lati</i>	<i>tycha</i>	<i>tech-a</i>	<i>nutna</i>	<i>techa</i>
3.	<i>toolkoa tulkua</i>	<i>lokchke</i>	<i>tok-je</i>	<i>tuk-ge</i>	<i>tukohé</i>

³⁶ Herr. v. Resanoff, *loc. cit.*, and Herr v. Adelung in v. Krusenstern's *Wörter-Samml.* [Word Collection], *loc. cit.*

Grammatical Notes on These Three Languages

Herr v. Resanoff has made the following grammatical notes on the six languages his handwritten dictionary covers, three of which belong to the Eskimo tribe (and will therefore be treated only in the last section).

Neither nouns nor verbs have a characteristic ending of sex or number.

Some of these languages indicate the tense of verbs through changes in their endings, others through sound changes at the beginning; yet others change both at the beginning and at the end but omit a root syllable in the middle. Finally, still others keep the verbal sound in all the different tenses without alteration; they often also indicate each particular tense with another word.

The comparison of all cases in the dictionary where an inflection of the verb can be observed puts us in a position to apply that information to the languages of the Koluschen, Ugaljachmutzi, and Kinaizi.

The cases in which words with different roots are used where other languages use inflection of a verbal sound appear to occur especially with the Koluschan and Kinai languages. In the latter, the imperative *give* differs from the infinitive only through the prefixed *sch*. The Resanoff list also contains *to order*, *to invite*, and *to make*, forms that have one and the same root, but no analogy can be drawn from that, and one cannot really draw any conclusions as to whether the prefix *tyschta*, which marks the comparative of *evil*, is a common way to form the comparative. Incidentally, the Kinai do have the letter *p* (*b* and *w* are also found in at least a few words).

Among Koluschen words are some verbs where forms of the same root are indicated with the ending *on* in the imperative as well as the infinitive, and once also in the present: but a form as such, that is, a common ending or beginning, cannot be found, and just as uncommon with several imperatives and infinitives as with several adjectives, which are placed side by side in the Dawidoff list. In the v. Resanoff dictionary, the imperative is in one case preceded by *ach* and then by *ju* in another, yet another case has *ana* in front. The infinitive is in one case preceded by *at*, in another by *a*, and yet another by *tuëch*; elsewhere the former has the ending *tete*, the latter has *in-o* or *nasynna*, when these are not unessential attachments; *make*, *carry out* is *ennesne*, the infinitive *ennechtasne*. The adjective *angry*, when connected to the verb, ends in the suffix *sat-e*, and the participle *loaded*, from the infinitive ending *in-o*, with the ending *igatte*. For *large*, and for *largest* or *most* *tljachakuke* is given; for *larger* *zuktljachakuke*. Grandson is *igatteagua*, granddaughter: *isygatteagua*. In order to express negation, *tlitl* is prefixed. Before the infinitive for *to smear*, the Koluschen and Ugaljachmutzi both have the prefix *kok* in front of entirely different words. Both people have developed distinctive names for the objects that they have gotten to know from trade with the Russians, while peoples living near the Russian settlements have adopted the Russian names. The Koluschen show this independence the most; however, they have also had trade with American and English ships.

It is different with the Ugaljachmutzi. The imperative and infinitive of a significant number of verbs are derived from one root, and it is the endings that differentiate them; but these deviate too much from one another to allow analogies to be drawn. Two imperatives have *lle*, a third *ll* as an ending, but different endings for the infinitive. In three cases the infinitive has *utsch* as a prefix. The following examples can perhaps serve as a guideline for future research on these languages:

zertheilen (to divide)	kakujasliatenna	imperative	kakoojaljachlian
schweigen (to be quiet)	lechtadeate	....	jatadech
wegnehmen (to take away)	aukatschetochatle	....	aukachechote
anfangen (to begin)	atschtschakl	....	alisyaaatschakl
befehlen (to command)	chynchochatljach	....	chenchytschaita
stechen (to stab)	syzuchl	....	azzuchn
fragen (to ask)	augokatlijach	....	katlijach
arbeiten (to work)	chakli	....	chaklitschejalsg-a
lachen (to laugh)	lech-enne	....	lechlik-al
lieben (to love)	uljakechulen	present	uljakesli
schenken (to give)	autschatte	....	auzylatl
bezahlen (to pay)	kench, (imperative) chengikeng	preterit	kenchit
stirbt (dies)	kous encl. preterit sys encl.		

Incidentally the endings *ach* (also *achl* or *akl*) and *te* are just as frequent as the ending *tl*, which has already been mentioned in the comparison with Mexican. In the case of *ijasch*: grandson, *ijasch* is again attached at the end to signify granddaughter. The dictionary contains a couple of derived adjectives, *angry*: *takaikutschei-ja* and *made of stone*: *zaa ochslenel* in addition to the root with these endings. The comparative *atkoschijat*: *worse* and *atetaalkoa*: *slower* has the prefix *at* or *ate*; with *auljachkatlitlja*: *broad* and *auljachaettle*: *higher* *aulich* or *aulja* are prefixed. Another pair of comparatives differ through their endings *itait*: *pretty, good*; *itautlini*: *better*; *ujachekail*: *broad*; *yjacheketlile*: *broad*.

The pronouns in this language are as follows (pronouns other than *I* and *you* are found only in v. Resanoff's dictionary).

	Kinai [Tanaina]	Koluschen [Tlingit]	Ugaljachmutzi [?]
ich (I)	sii, schi	chat-ti, chat-tu, chat	chu
mein (mine)	schijaga	ach-age	kak-os
wir (we)	nannja	ugan	kajûk
unser (our)	nanaidi	aage	kajûkaja
du (you, fam.)	nan, nin, non	weje, waje, wa-e	i
dein (yours, fam.)	ninniga	iaeeeija	i i jak-alle
ihr (her)	changi	igwan	kajûku
euer (yours, pl.)	channigijaga	iaggy	kowanakaju
er (he)	kunen	jutta	chyng
sie (she)	kunti	etta	ansch
sie (m. pl.)	tinalta	jutatschuesunne	chengeoachsatlil
sie (f. pl.)	kunna	schagak-ukke	kelkaintu
sein, ihm (his, him)	kun-jaga	jutaatteguë	ii
ihr (her, adj. & dat.)	....	ditto	....
ihr (their)	kunnajaga	jut-as-age	chechenuja

Connections Between These Languages and with the Eskimo Tribe

Apart from a few connections of these languages with those of the Eskimo tribe already cited on pp. 340 and 341³⁷ and several in the appendix of Herr v. Adelung in vol. I, p. 567,³⁸ (namely Koluschen), the following may be mentioned here as evidence of the comment made earlier, that Koluschen and Ugaljachmutzi share a number of words that are found among the nearly 1,200 words of the Resanoff dictionary to follow (except some still similar ones, for example [see above] *man, son, woman, head*) without deciding on that account whether, as Herr v. Resanoff claims, they adopted the latter from the former, or whether they have some manner of common origin.

	Bruder (brother)		Bauch (stomach)	Ochs (bull)	Kragen (collar)	
Koluschen	<i>achaik, achanoch</i>		<i>kaïju</i>	<i>chass-choch</i>	<i>tejak</i>	
Ugaljachm.	<i>kachaoch</i>		<i>kagott</i>	<i>chass-ka</i>	<i>tejak</i>	
	Meisel (chisel)	Haut, Fell (skin)	Schwan (swan)	Seife (soap)	Farrenkraut (fern)	
Koluschen	<i>takl</i>	<i>kattuk</i>	<i>kokl</i>	<i>chastugu</i>	<i>kotlich</i>	
Ugaljachm.	<i>takleljûke</i>	<i>katti</i>	<i>kochel</i>	<i>chassuche</i>	<i>kokotlija</i>	
	Staub (dust)	Matte (mat)	Löffel (spoon)	Häringe (herring)	Wolle (wool)	
Koluschen	<i>tuzn</i>	<i>kaatsch</i>	<i>scheill</i>	<i>gogu</i>	<i>kuch</i>	
Ugaljachm.	<i>suzn</i>	<i>kaatsch</i>	<i>schill</i>	<i>gagu</i>	<i>koch-o</i>	
	Silber (silver)	Fuss (foot)	Nagel am Fuss (toenail)	Überrock (topcoat)	Pfanne (pan)	Ey (egg)
Koluschen	<i>thatlizynno-et</i>	<i>kagos</i>	<i>kachchaku</i>	<i>kech-asch</i>	<i>schin</i>	<i>kott-a</i>
Ugaljachm.	<i>tachliz-u</i>	<i>kagasch</i>	<i>kajachazl</i>	<i>kech-asch</i>	<i>schin</i>	<i>kota-u</i>
	Blauberre (blueberry)					
Koluschen	<i>njet</i>	This same word among neighboring peoples of the Eskimo tribe means: red current and other berries.				
Ugaljachm.	<i>njet</i>					

	Eskimo Tribe		Kinai	Ugaljachmut
Muschelchen (small mussel)	Kodiak	<i>kajak</i>	<i>kajachu uk</i>	
Adler (eagle)	Chugach	<i>kotschkaljak</i>	....	<i>kutschkoljuk</i>
Durchfall (diarrhea)	....	<i>anagohtok</i>	<i>nak-ode</i>	
Zange (tongs)	....	<i>pukschuchok</i>	<i>pukschuchna</i>	
ich (I)	....	<i>chui</i>	....	<i>chu</i>
Sprache, Gespräch (conversation)	Kadiak	<i>kanoolschek</i>	<i>kanna</i>	
Anker (anchor)	....	<i>kischak</i>	<i>kitschak</i>	

³⁷ After page 474 (Vol. III) the page numbers skip around. One of them is page 340, but there is no page 341.—*Trans.*

³⁸ See Appendix in this work.—*Trans.*

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THE FRANZ BOAS PAPERS: DOCUMENTARY EDITION

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ABSTRACT

This article introduces the Franz Boas Papers: Documentary Edition (FBP) project. In addition to describing the scope of the project, including the various partners, collaborators and goals of the project, this article speaks to both the reasons and timeliness of carrying out a much needed revisionist assessment of Franz Boas for contemporary audiences. Given that Boas carried out much of his fieldwork with Indigenous peoples in the Pacific Northwest, this project and the collaborations it will facilitate promise to make crucial contributions to anthropological understandings of his work in the twenty-first century.

Introduction

In the spring of 2013, the Social Sciences and Humanities Research Council of Canada (SSHRC) awarded a Partnership Grant to *The Franz Boas Papers: Documentary Edition* under the direction and general editorship of Regna Darnell (Distinguished Professor of Anthropology, University of Western Ontario). The primary objective of this project is to conduct research to make the professional and personal papers of anthropologist Franz Uri Boas (1858–1942) understandable for contemporary audiences and widely accessible in print and digital format in a critical documentary edition. The Franz Boas Papers (FBP) project goes well beyond a conventional documentary edition in its commitment to build non-hierarchical relationships with Indigenous communities seeking to use Boas' research materials in contemporary contexts. The initial partners are the University of Western Ontario, the American Philosophical Society (APS) where the Boas Professional Papers are housed, the University of Nebraska Press, the University of Victoria, and the Musgamakw Dzawada'enuxw Tribal Council.

Boas is without question the most significant founding figure of North American anthropology. His interdisciplinary oeuvre spans the humanities (history/ethnohistory, linguistics, folklore, museum studies, philosophy, science studies) and social sciences (anthropology, geography, politics, law, psychology) and further impacts multiple public and practical domains, including education, Indigenous Studies, African-American Studies, Critical Race Studies, Women's Studies. Nonetheless, despite unanimous recognition that Boas was the "father of American anthropology," introductory textbooks often lump his contributions under the concept of cultural relativism and thereafter relegate him to the anthropological past.

The FBP project aspires to redress this lack of historical perspectivism and to revisit Boas' actual contributions in a revisionist historicist mode. The project is neither a biographical assessment nor a simplistic exercise rendering Boas either iconic or demonic. Boas was prolific, driven, ambitious, and at the same time deeply political, outspoken, and brash both through his

research and his activism. Yet, it is difficult for us today to fathom the impact or trace his legacy within anthropology and beyond. He was truly larger than life, as were his visions of what was possible through the study of cultures, languages, geographies, the biological or physical human, and environmental worlds we interact with. His fieldwork, scope of engagements, and relentless pursuits are unique and instructive. The question then becomes: why Boas and why now? What was his anthropology and who is he to us today?

Significance of Franz Boas to Anthropology Today

The tentacles of Boas' rich genealogical history reach not only back in time but constantly forward to us today. His research and his politics are inextricably intertwined, rhizomatically interwoven into the last century and a half of intellectual, social, political and cultural histories. As a German of secular Jewish descent, he was raised in a family that passionately promoted the liberal ideals of the 1848 revolution. Much in line with his early education and upbringing, he became a scientist deeply committed to unbridled intellectual freedom—a legacy that, for better or worse, remains with anthropology today. His correspondence across vast networks crosses national and disciplinary boundaries from John Dewey to Albert Einstein to Alexander Graham Bell. From W.E.B. Dubois to American Presidents, Boas engaged in dialogue. He sought out and was sought out by the leading philosophers, geographers, linguists and archaeologists of his time, in a number of languages including German, English, and French. He was on the cusp of the radical politics of his day and, even with his faults (of which there are many) his stances remains critical for contemporary issues.

Boas took public stands on war, science and patriotism that were unpopular in his time, he wrote to and for newspapers and spoke to non-academic audiences, he prepared museum exhibits for public pedagogy, he encouraged minority group scholars, and he supported Indigenous and Afro-American communities defending their rights. His studies of immigrant head-form demonstrated the plasticity of human groups and the permeability of racial types. He was a single seminal scholar whose view of the complex nature of humankind across time and space indelibly imprinted twentieth century North American thought and culture. He pioneered in breaking down North American isolationism with its incumbent intolerance and mis-information about cultural, linguistic and biological diversity. He argued passionately for academic and intellectual freedom and for science as a value transcending the short-term goals of nation-states.

Boas models for us today the capacity of the public intellectual to call citizens to attend to social justice, environmental degradation, systemic discrimination and other ills of contemporary society. The humanities and social sciences serve in our day, as in his, to seek culture change consistent with these values and societal challenges. The historical research necessary to produce a documentary edition of his papers resonates beyond Boas' First Nations research and publication to define and exemplify the potential of the anthropologist as public intellectual to intervene positively in public life.

Boas did his primary field research among the Kwakwaka'wakw (whom he called Kwakiutl). His fieldnotes, the linguistic and ethnographic texts he recorded, and his related professional correspondence reside in the archives of the APS in Philadelphia, far removed both culturally and geographically from the Northwest Coast, especially the British Columbia First Nations communities where the materials originated.

Boas' institutional base at Columbia University in New York City, his fieldwork sites in Baffinland, now Nunavut, and British Columbia, and his continuing ties to the Germany of his youth and education weave a complex and largely unexplored legacy that has to date exceeded the capacity of any single scholar to integrate (Stocking 1968, 1974, 1992, 1996; Cole 1999). The challenge for Boas' intellectual heirs has been to match his scope, both academically and as public intellectual. Currently, the voluminous Boas scholarship largely fails because it lacks the breadth that integrated Boas' own work, ignores differentiation across the six decades of his career, and elides historicism in tracing his legacy to contemporary theoretical, methodological and public implications that go beyond his perspectives but build upon them. Boas died in 1942; post-war anthropology in North America changed dramatically with university expansion, new government funding sources, and expansion of overseas fieldwork opportunities.

Efforts have ranged from hagiography (Herskovits 1953; Goldschmidt 1959; N. Boas 2004) to vilification for failure to meet the preoccupations of his successors (Wax 1956; White 1963, 1966; Harris 1968) to focus on limited subjects (Hyatt 1990; Williams 1996; Patterson 2001; Zumwalt & Willis 2008) to institutional growth and professionalization (Stocking 1968; Hinsley 1981; Darnell 2000). Post-war positivism deemed Boas retrogressively atheoretical, an attitude that has hindered reception of the more nuanced reassessment that has been underway for some time (Stocking 1996; Valentine & Darnell 1999; Darnell 2000, 2001, 2010a/b; Darnell & Gleach 2002; Bunzl 2004; Harrison & Darnell 2006; Lewis 2014; Müller-Wille 2014; Darnell et al. 2015). Darnell (2001) argues for an "invisible genealogy" arising from Boas' theoretical paradigm, including a symbolic definition of culture, the interconnectedness of race, language and culture, and a text-based entrée to what Boas called 'the native point of view' that continues to characterize Canadian and American anthropology.

The Project

This is the right time to undertake a synthesis because complementary materials are increasingly available. The 2011 centennial of Boas' seminal critique of racism and eugenics, *The Mind of Primitive Man* (Boas 1911), renewed scholarly interest in his early theoretical work on biology and environment and culture and mind. Darnell (in Darnell et al., 2015) synthesizes her research for centennial events at Yale University and the New York Academy of Sciences. Moreover, Boas' Central Eskimo diaries are already published by Ludger Müller-Wille of McGill University (1998), as are the Northwest Coast diaries by Ronald Rohner (1969). Krupnik and Fitzhugh (2001) reevaluate the Jesup North Pacific Expedition materials. Aaron Glass and Judith Berman are preparing an annotated digital text, to be included in the documentary edition, of Boas' 1897 *Social Organization and Secret Societies of the Kwakiutl Indians* based on extensive manuscript revisions by Boas' Native collaborator George Hunt.

Ample archival resources exist to produce a more adequate contemporary assessment. The Boas papers at the APS in Philadelphia constitute the single most extensive repository on the history of Americanist anthropology and linguistics and constitute the source text for the documentary edition. The American Philosophical Society is the oldest learned society in the United States, "founded by Benjamin Franklin in 1743 for the Promotion of Useful Knowledge" (<http://www.amphilsoc.org>) and repository of the Franz Boas papers. The collection consists of 59 linear feet (46 reels of microfilm) plus graphics (1869-1940). Additional manuscripts include the Franz Boas Collection of Materials for American Linguistics (via the American Council of Learned

Societies), much of which was recorded or directly supervised by Boas (Leeds-Hurwitz 2004). Further Boas correspondence is contained in the papers of Elsie Clews Parsons, John Alden Mason, A. Irving Hallowell, Paul Radin, Ashley Montague and others. The APS also houses a microfilm of original materials held by the Office of Anthropology Archives of the Smithsonian Institution, Washington, D.C, relating to Boas' field trips to Baffin Island (NWT, now Nunavut) and British Columbia during which he recorded cultural and linguistic texts and collected cultural artefacts (Cole 1985). The papers have been catalogued and indexed (Scholarly Resources 1972; Voegelin and Harris 1974).

The editorial team will begin its work from the existing microfilms, but completion of the digitized version of the professional and personal papers in searchable format (with APS metadata added) will facilitate the task of the editorial team because the digital materials can be studied at the home institution and re-arranged in multiple order and format. Some overlap across thematic volumes is expected and details of limited multiple reprinting will be agreed on by the editors of the volumes in question. Digital dissemination alongside print editions will allow researchers selective access to the papers and provide a major research tool for further scholarship in several disciplines.

Successive Mellon Foundation grants have supported digitizing the manuscripts, photographs and recordings of endangered Native American languages long held in stewardship by the APS. The grants represent new partnerships with the Indigenous communities of their origin to return copies of the digitized endangered language materials for community use; an Advisory Board, of which Darnell is a member, adjudicates access to culturally sensitive materials and holds final authority thereon (Powell in Darnell et al. 2015; DPIC). The collaboration of Timothy Powell, APS Director of American Indian Projects, links the development of APS research protocols to the Boas documentary project.

The research and editing will be led by a team of Canadian scholars¹ and graduate students, supported by an Editorial Advisory Board of international experts ranging over the full scope of Boas' oeuvre as well as an Indigenous Advisory Council of First Nations representatives including, crucially, community-recognized knowledge keepers, to adjudicate the treatment and repatriation of culturally sensitive materials long inaccessible in distant archives and to return them to the communities. The archival research necessitates consulting Boas papers held in other Canadian and American archives, including the Geological Survey of Canada, Canadian Museum of Civilization, Ontario Historical Society, Royal British Columbia Museum; university archives at Harvard, Yale, Pennsylvania, Chicago, Michigan, Columbia, Berkeley; the National Anthropological Archives at the Smithsonian Institution; and the archives of the Field Museum in Chicago, the Peabody Museums in New Haven and Cambridge MA, and the American Museum of Natural History. These materials will flesh out the editorial research in the source documents at the APS. Where feasible financially and in accordance with the editorial policy of the research team and its Indigenous Advisory Council, such materials will be published in the documentary edition.

The theoretical framework for the research integrates the range of disciplines in Boas' theoretical toolkit and situates his ethnography in relation to specifically Canadian historical and political contexts, including resistance to Boasian anthropology among British Columbia-bred amateurs seeking nationalistic professionalization of anthropology (e.g., Maud 1982). Research undertaken as part of this project will help counter the contention that his so-called salvage

¹ including in addition to the authors of this report Michael Asch, Judith Berman, Michelle Hamilton, Susan Hill, John Leavitt, Brian Noble, Marc Pinkoski, Peter Stephenson, Nancy Turner, and Robert Wishart.

ethnography was isolated from then-contemporary First Nations cultures and will frame his activism on First Nations/Native American, Afro-American, Jewish, and racist questions in terms of his extensive scholarly and public professional network. It will explore his commitment to science as an intellectual and moral imperative, and reveal his full role as public intellectual (e.g., Darnell et al., 2015). The research to make these materials intelligible today will appear in conference presentations and journal articles during the course of the project, culminating in the 17-25 volume documentary edition based on this scholarship.

A major documentary editing project inevitably enhances and challenges disciplinary conventions, in this case particularly in anthropology, history, linguistics, environmental studies, Indigenous Studies and Aboriginal law. The interdisciplinary scope of the project itself encourages cross-fertilization as team members share research, public presentation, and publication. Cross-sector impacts arise from research on the policy and public culture implications of Boas' work and its role in contemporary Canadian society (These benefits will impact American scholars of the NWC as well, but they are less likely to acknowledge their Canadian context without the important interventions and perspectives that the Canadian Partnership and research team will provide.) The audiences for broad anthropological ideas have always been public, crossing the arts and humanities as well as social science policy and theory. We expect wide interest in the project within the culture and education sectors and in North West Coast Indigenous communities in the Northwest Coast and beyond. No single scholar, institution or discipline could amass the scope and skill sets to implement this project, but the team, through its intersecting collaborations, aspires to recapitulate the public range and impact of Boas himself.

At the same time, the immediate influence beyond the academy provides models for collaborative research between scholars, both Indigenous and non-Indigenous, and First Nations communities. Furthermore, exploration of Boasian ethnographic and political practice will highlight ways to counter the patent lack of effective communication between Indigenous peoples and Canadians (e.g., Asch 1997, 2014; Hancock 2007, 2008; Pinkoski 2008; Noble 2007, 2008a/b; Darnell 2014).

Documentary editing makes valuable materials accessible to contemporary audiences and communities, for example by identifying local individuals, places and events; reconstructing the general public culture of prior times; identifying changes in the positions of Boas and his major interlocutors over time; assessing the sources influencing Boas' thought; and exploring the consistency and/or contradiction between his positions on different topics, methods or theories (e.g., Baker 1998, 2010; Darnell et al., 2015).

Digital materials will be available for use, first by Indigenous communities with an ongoing proprietary stake but also by academic and archival institutions, including museums. The documentary edition, particularly in its digital form, will constitute a research tool for further collaboration and documentation of the relationships between First Nations and researchers. Recent APS experiments in bringing Indigenous users of linguistic manuscripts to Philadelphia to consult the collections first-hand dovetail elegantly with the protocols of this project. The speed of contemporary communication facilitates multiple and interactive uses, while the print edition cements long-term preservation and more traditional forms of access. Research during the project will enhance knowledge mobilization for the documentary edition itself. The networks established by and with North West Coast Indigenous communities will undoubtedly continue to snowball into future collaborative projects that cannot be predicted in advance. For example, the contents of the papers provide materials for language revitalization. Team members are poised to realize such potential uses based on their previous collaborative experience.

There are three aspects of the project in particular that we want to stress: the emphasis on intellectual partnership, the emphasis on relationships with Indigenous communities, and the emphasis on hitherto unknown German materials inaccessible in English. In many ways, these emphases overlap and cut across each other; at the same time, though, they reflect in fact the central role that work with Indigenous communities held in shaping Boas' wider project. A decentralized approach is required even to begin to contemplate an adequate approach to his oeuvre.

The Role of Partnerships

Effective research partnerships develop most productively when research questions inherently transcend conventional disciplines. Boas himself exemplifies such disciplinary cross-fertilization. Scholars who have reassessed his oeuvre must recapitulate this breadth. Boas' anthropology encompassed both culture and biology within the study of humankind. Our team is broad in disciplinary background (anthropology, history, law, Indigenous studies, linguistics, education) and ranges across the disciplines of Boas' own engagement through intersecting projects, interests and ongoing collaborations; this interdisciplinary legacy will continue after the project is completed.

The editorial team, assisted by an international Editorial Advisory Board selected to represent the range of Boas' scholarship and activism, will organize the archival materials and provide editorial emendation and historical context. The core editorial team is Canadian with the exception of Timothy Powell (APS/University of Pennsylvania); American scholars have too often elided the Canadian context of Boas' Northwest and Inuit ethnography, making redress of balance a high priority. Powell's work in consulting Native American communities on endangered language materials at the APS and returning them to their communities of origin is a model for this work; the Project Director serves on his Advisory Board. The Canadian team will redress the myopia of Boas scholarship about his work in Canada and its continuing impact on First Nations communities in British Columbia. Following this example, an Indigenous Advisory Council, including Indigenous members of the research team and other knowledge keepers authorized by their communities, will adjudicate the handling of culturally sensitive materials, the wishes of contemporary communities for disposition of and access to these materials, and dissemination of research results and digital materials within these communities.

The research team spans the generations of currently practicing Canadian anthropologists, historians and Indigenous scholars, ensuring the succession and longevity of the project through training and mentoring. It includes senior scholars and experienced mentors with broad theoretical, archival and ethnographic experience, mid-career academics with methodological, archival and ethnographic skills critical to training younger scholars, emerging scholars with research experience in historical and ethnographic documents, graduate students who will receive training, and community members. These collaborations strive to relationally co-construct knowledge through bringing together Indigenous and non-Indigenous perspectives as well as diverse disciplinary languages. This will result in co-publications and public presentations aimed at wide dissemination of research results to Northwest communities in Canada and the U.S. and more generally to academic and public audiences. First Nations graduate students in a variety of disciplines will have opportunities bring the perspectives of their communities to the collaborative project of reinterpreting and revitalizing Boas' oeuvre through multivocal dialogue.

Indigenous Partnerships

The FBP Documentary Edition is conceived simultaneously as a work of humanities and social science scholarship and as an intervention into the cross-cultural misunderstanding that has long plagued the relationships of First Nations and Native American peoples to the nation states in which they are now encapsulated. The dialogic and relational approach to the study of theories, networks and institutions in the history of anthropology (understood as an anthropological or ethnographic problem, Hallowell 1965) carries over into the contemporary political and social relations between the academy, its multiple disciplines that have studied Indigenous communities in North America, and the present-day needs of these communities. The First Nations themselves are critical partners to this emerging dialogue.

Central to the work of the project is the development of collaborative relationships with Indigenous communities where Boas carried out cultural, linguistic and ethnohistorical research. For this reason, the project is especially significant to the North West Coast where it must have a strong presence. Boas' ethnographic materials have been rendered largely inaccessible to the communities of their origin by distance and the lack of contemporary context for their use. Yet they contain materials of critical importance to Northwest Coast communities engaged in linguistic and cultural revitalization agendas. The print and digital Boas documentary edition will be searchable and accessible at a distance and thus easily adaptable to diverse local circumstances. First Nations community participants will have access to the edited digital product without cost.

The Indigenous Advisory Council is integral to the partnership structure. In accord with Indigenous protocols, our Editorial Advisory Board has built on prior team connections to relevant communities. The Musgamakw Dzawada'enuxw Tribal Council is a Partner; three University of Victoria Indigenous graduate students work with us to connect with additional B.C. communities. Robert Hancock (Métis) and Susan Hill (Mohawk) facilitate this extension of relationship while simultaneously enhancing the utility of the collaborative model for First Nations communities across Canada. Key members of the project team have begun to visit communities and meet with community members to introduce the project and open dialogue about its utility to the communities; we have already received several invitations for such consultation. The duration of the project is sufficient to enable relationships of trust to develop. The Indigenous Advisory Council will average 8 members over the 7 years, with a larger group in later years and will convene by teleconference or in person at least twice annually to adjudicate public dissemination of culturally sensitive materials; consensus-derived decisions will be binding on all research personnel. Advisory Council members (ca. 8 persons) will receive honoraria according to local protocols.

In the latter years of the project, emphasis will shift to knowledge mobilization within Indigenous communities, emphasizing contemporary uses of the research products such as land claims. The process is likely to lead to further complementary projects since researchers and communities are already in relationship. Many of these future researchers will be Indigenous, because they bring added cultural expertise and community connections because of their involvement in all stages of this research. The project's governance structure is designed to create community capacity as the students return to their communities with the skills acquired as well as the research products.

All partners and the editorial team prioritize collaboration with the Northwest Coast Indigenous communities visited by Boas, his collaborators and his students. In the early years of the project, the Indigenous Advisory Council will adjudicate documentary parameters, especially for culturally sensitive materials, turning in later years to greater emphasis on community dissemination and repatriation of digital and print materials of direct utility to contemporary communities.

Because so much of the documentary research engages with the intellectual property of First Nations communities in Canada, the ongoing construction and the dissemination of its results necessarily proceeds collaboratively with the Indigenous Advisory Council to establish effective protocols for achieving shared goals by consensus and compromise. Such a methodology ensures that knowledge moves from academy to First Nations communities to general public to policy makers and implementers and back again. Publically engaged scholarship creates a synergy of partners, researchers and contemporary First Nations users. All participants are simultaneously engaged in decisions (with veto power to the Indigenous Advisory Council if conflicts remain unresolved) about which documents are presented, how they are understood, and who has access to the results.

Indigenous scholars on the core research team have established a planning process to expand the Council. During the life of the project, knowledge mobilization initiatives will stress collaboration with the Indigenous communities whose traditional knowledge is represented. The Indigenous Advisory Council will consult on materials to be included; all partners have agreed to follow their consensus-derived advice. The Council will also consult on repatriating traditional knowledge (primarily in digital form), including both material and textual artefacts. Archives and museums, long-time stewards of such materials, are learning to share responsibility and curatorship with the descendants of the original producers.

The Musgamakw Dzawada'enuxw Tribal Council in B.C., has agreed to partner with us and to provide in kind support for community members from Kingcome Inlet to pursue research on the Kwak'waka'wakw language in archives and museums; the Boas papers are the largest repository of such materials. The research will bring back to the communities information about their culture and history. This Partnership provides a process and model that the documentary editing project expects to extend to other First Nations communities where Boas and his students worked.

The Indigenous Advisory Council will deal with issues of respectful treatment and dissemination of culturally sensitive materials. With their advice, we are seeking additional First Nations partners and collaborators. Council advice will be included at all stages of research and dissemination. The partner institutions are in agreement with the research team that the Indigenous Advisory Council will have final decision making authority and that materials will be excluded if they encounter cultural sensitivity issues. The existence and nature of such omitted materials will be acknowledged in the published text. Materials deemed inappropriate for public circulation by the Indigenous Advisory Council will be removed from the collections available for circulation or reproduction at the APS. We do not expect major conflict within the Council given the consensus methodology, the priority assigned in advance to its decisions, and the expectation that problematic material will be identified and should be excluded.

The importance of making background materials about Boas' ethnographic and linguistic fieldwork materials available to contemporary First Nations communities in Canada cannot be overstated. The APS has long been a responsible steward for these manuscripts and documents, but distance has rendered them isolated from the Canadian communities where the majority originated (Vancouver Island, northern and central British Columbia, Baffin Island). For example, Boas' early studies of Kwakwaka'wakw customs and traditional knowledge record matters that are no longer remembered within the community chain of oral transmission. Contemporary efforts to revitalize and reinstate ceremonies and their accompanying knowledge depend on evidence from earlier records produced in collaboration between Boas and his Indigenous collaborator George Hunt.

Ethnographic research requires anthropologists and linguists to work in close collaboration with particular knowledge keepers, many of whom have become respected researchers in their own

right, i.e., research is with and by Indigenous peoples. Knowledge kept secret because of its sacred nature is often preserved without consent in archives and museums disarticulated from the communities of its origin; it requires community consent to reactivate it. Boas' wide-ranging correspondence frames the source and authenticity of the knowledge contained in texts he recorded and co-authored with George Hunt and others. If, as both Boas and Indigenous communities believed, 'the native point of view' is revealed by Indigenous language texts, then the texts embody the thought and experience of their producers and can now bring these materials forward for ongoing social, political and ceremonial use. Despite research practices acceptable in his time but considered unethical today (e.g., concerning handling of human remains and ceremonial regalia), Boas pioneered in respectful collaboration and sharing of Indigenous and non-Indigenous perspectives; the project will contextualize these materials in their own time and our own.

German Context

Much of Boas' legacy and theoretical contributions can and must be traced to his home country along a multifaceted genealogical history. Thus, timely research into Boas' expansive German Network and upbringing allows for a more contextualized, detailed picture and textured appreciation of his motivations, ethics, efforts, methodologies, applied and institutional engagements. A number of recent scholarly works from German-speaking colleagues have begun to re-examine Boas' contributions to the German anthropological tradition and (diverging) disciplinary developments including that of ethnology, anthropology, and folkloristics (cf. Bender-Wittmann 2008; Dürr, Kasten and Renner 1992; Gingrich 2005; Pöhl and Tilg 2009; Schmuhl 2009). A number of our collaborators, primarily led by Dr. Michi Knecht at the University of Bremen, are similarly working on a project on 'Digitalizing Boas' to make Boas material more available and to potentially reclaim him for a neo-Boasian socio-cultural anthropology and history of science in German contexts.

Thus one distinctive focus of the FBP project relates to researching of Boas' German networks, his intellectual influences through mentors and teachers, his upbringing in a liberal secular Jewish German household, his early professional training and experiences that initially inspired his interest in working with both Inuit and Indigenous communities on the Northwest Coast. Arguably, a pivotal moment and trigger in Boas' professional career relates to meeting nine Salish-speaking Nuxalk (then known as Bella Coola) recruited as performers for *Hagenbeck's Thierpark* show in Hamburg in 1885. Boas was working at the Royal Ethnographic Museum of Berlin on his first anthropological employment contract organizing artifacts (personal communication Dürr and Kasten 2014). After all, it was the Indigenous peoples of the Pacific Northwest who then became the ethnographic focus of much of his professional life.

The FBP project accomplishes much of this in collaboration with colleagues of the Editorial Advisory Board in German-speaking countries, at universities, museums and archives that house frequently untapped Boas material. Many of these materials focus on Northwest Coast materials specifically. Much of Boas' correspondence, early fieldnotes and a variety of relevant publications are written in German and have never been transcribed and translated and thus have been largely inaccessible to non-German audiences (cf. Renner 1992). For example, archival research in Berlin shows that as member of the Berliner Society for Anthropology, Ethnology and Prehistory (BGAEU), Boas presented some of his work on the "Anthropology of the North-American Indians" in 1895 and delivered a presentation "On the Kwakiutl" in 1889 to a number of mainly physical anthropology critics including Rudolf Virchow and Adolf Bastian which would remain highly influential throughout

Boas' career. The FBP project seeks to address this gap directly.² In the course of the FBP project, contacts and collaborations are being initiated with a variety of museums, archives and institutions,³ following leads and traces that connect Boas' vast networks and tangible legacy across the Atlantic.

Summary

The APS is digitizing the Boas professional papers with completion envisioned by the end of 2014 and has for some years now been developing models for collaboration with Native American communities. Because existing Boas scholarship has elided Canadian contexts and First Nations as stakeholders in Boas' ethnographic materials, this project engages Indigenous scholars as researchers and partners and establishes an Indigenous Advisory Council with final say over public access to culturally sensitive materials. In addition to working to reconnect his Northwest Coast research to present-day communities, editorial integration of Boas' actions as a public intellectual will foreground the advantages of disseminating anthropological knowledge among both Canadian and international scholars and publics. Scholarly use of the documentary edition will cross academic disciplines, societal sectors, and national boundaries, and we hope that the model of community collaboration we are developing will shape such undertakings in other similar research projects.

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² Our German colleague, Rainer Hatoum's task has been the study and analysis of Boas' distinct shorthand system, currently scrutinizing and dis-entangling material that by and large relates Boas's relationship and collaboration with George Hunt.

³ The growing list of relevant institutions includes: The Berlin Society for Anthropology, Ethnology, and Prehistory (BGAEU); Deutsche Staatsbibliothek Berlin; Boas' own universities in Berlin, Heidelberg and Kiel; Austrian Academy of Sciences, Frobenius-Institut Frankfurt a.M.; Deutsches Archäologisches Institut Berlin; Ethnologisches Museum Berlin; Institut für Völkerkunde Wien; Universitätsarchiv Leipzig; Staatsarchiv Hamburg; Berlin-Brandenburgische Akademie der Wissenschaften; Bundesarchiv Berlin; the Museum of Ethnology Museum für Völkerkunde in Vienna; Humboldt Universität Berlin Archiv; Archiv der Max-Planck-Gesellschaft; Kommunalarchiv Minden; Universität Bremen; Institut für Europäische Ethnologie; Humboldt-Universität zu Berlin, etc. Additionally, a variety of private Nachlässe and collections will be investigated.

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65th Annual Northwest Anthropological Conference

March 15–17, 2012

Hosted by the Cultural Resources Protection Program of the
Confederated Tribes of the Umatilla Indian Reservation

Pendleton, Oregon



The Past is Present

“The Past Is Present” is this year’s theme for the Northwest Anthropological Conference hosted by the Confederated Tribes of the Umatilla Indian Reservation in Pendleton, Oregon. We look forward to exploring the theme in terms of both time and space. The Cayuse, Walla Walla, and Umatilla Tribes have lived on and shared a connection with this land since time immemorial. The past is literally all around us and our lives are informed by everyone and everything that has gone before. Cultural anthropology, archaeology, linguistics, paleoanthropology, and primatology all ask and answer questions about how human beings relate to the past. We encourage presenters to consider the various ways in which the past is with us and shapes the present, focusing on topics such as cultural continuity, people’s connection to the landscape, first foods, cultural perspectives on time and place, and other ways in which people relate to the past. However, submissions on all topics, subfields of anthropology, related fields, and geographic areas are welcomed.

Symposia, Forums, Workshops, Panels, Open Discussion, General Sessions, and Posters¹

Symposia

Archaeology at the Edge of the Known World: New Findings and Interpretations from Oregon's South Coast [T1]

In recent years, various collaborative research projects have taken place on the south coast of Oregon within the context of applied cultural and natural resource management projects managed the Coquille Indian Tribe, the U.S. Fish and Wildlife Service, Southern Oregon University, Oregon State University, The City of Bandon, and other regional partners. These individual projects benefit from a shared research agenda that considers a range of questions, and as a result, we collectively have been able to explore the anthropology, archaeology, history, and environment of the region in a detailed and sustained fashion. This symposium highlights some recent results from these projects.

Organizer and Introduction: Mark Tveskov, Southern Oregon University

Davis, Loren G. (Oregon State University), Steven A. Jenevein (Oregon State University), Jessica A. Ainslie (Oregon State University), and Alejandra P. Jimenez (Oregon State University) *Recent Research at the Devils Kitchen Site, Coos County, Oregon*

Lowe, Roy W. (U.S. Fish and Wildlife Service), David B. Ledig (U.S. Fish and Wildlife Service), and William T. Bridgeland (U.S. Fish and Wildlife Service) *Ni-les'tun Tidal Marsh Restoration on Bandon Marsh National Wildlife Refuge*

Byram, Scott (Byram Archaeological Consulting and University of California, Berkeley Archaeological Research Facility) *Interseismic Uplift and Wooden Artifact Preservation on the Southern Oregon Coast*

Tveskov, Mark (Southern Oregon University) *Shell Midden Chronology and Geomorphological Change on the Coquille River Estuary*

Johnson, Katie (Southern Oregon University Laboratory of Anthropology), Mark Tveskov (Southern Oregon University Laboratory of Anthropology), and Sharla Luxton (Southern Oregon University Laboratory of Anthropology) *The Zooarchaeology of the Old Town Bandon site*

Molino, Theresa (University of California, Berkeley) *Paleoethnobotanicals of Coastal Shell Midden and Riverine Settings on the Coquille River*

Luxton, Sharla (Southern Oregon University Laboratory of Anthropology) and Carly Eichhorn (Southern Oregon University Laboratory of Anthropology) *Bone Tools and Shell Beads: Artisan Artifacts of South Coast Oregon*

Rose, Chelsea (Southern Oregon University Laboratory of Anthropology) *Smoke on the Water: The Construction and Destruction of Old Town Bandon, Oregon*

Zybach, Bob (Oregon Websites and Watersheds Project) *Coquille Trails: Mapping an Unknown Past*

Norris, Nicole (Coquille Indian Tribe) *Walking on Shells: Is it a Midden or a Mess?*

Ivy, Don (Coquille Indian Tribe) Discussant

¹ Abstracts of individual papers can be found at <http://northwestanthropology.com/items.php>.

An Open Discussion about Mesh Size and Other Sampling Considerations in Northwest Archaeology [T3]

Organizer: Paul S. Solimano, Willamette Cultural Resource Associates

A recent trend in Pacific Northwest Archaeology is to process all excavated sediment through fine mesh screen (1/4-inch or 3.2 mm hardware cloth). That is, 1/8 mesh screen is replacing 1/4-inch screen with subsampling, as the default screen size for all archaeological investigations. This is contentious. Some maintain that vital information is lost when 1/4-inch mesh is used as the primary screen size. They suggest fine mesh vastly increases artifact recovery and is more precise. Other archaeologists argue using only 1/8-inch mesh has severe and often hidden consequences for archaeological investigations. These researchers assert that a flexible approach employing multiple screen sizes and standardized subsampling tailored specifically to research questions and expectations increases information recovery. This symposium examines the issues of screen size and sampling. Our goal is to begin a regional discussion on mesh size and sampling. A moderated question and answer period where presenters will respond to questions and comments from the audience will follow the papers and discussant's presentations.

Solimano, Paul S. Introduction

Ozbun, Terry (Archaeological Investigations Northwest), Dan Steuber (Archaeological Investigations Northwest), and John Fagan (Archaeological Investigations Northwest) *In Small Things Forgotten (with apologies to James Deetz)*

Schalk, Randall (Cascadian Archaeology) *Pushing Back on the Tyranny of Think-Small Archaeology*

Gleason, Eric B. *Testing Efficiency*

Solimano, Paul (Willamette Cultural Resource Associates) *The Universal Use of Fine Mesh Screen: A Manifesto in Opposition*

Elder, J. Tait (ICF International) *Carts and Horses: Discussing the Use of Mesh in Relation to Archaeological Sampling Design*

Butler, Virginia L. (Portland State University), Michael Delacorte (California State University – Sacramento), Kenneth M. Ames (Portland State University) and Ann Trieu Gahr (University of Southern Illinois – Carbondale) *On Sampling and Faunal Recovery: Promoting a Mixed Design that Incorporates Large Mesh Screens and Bulk Samples*

Kopperl, Robert (Northwest Archaeological Associates/SWCA Environmental Consultants) and Ross Smith (Northwest Archaeological Associates/SWCA Environmental Consultants) *Making the Most of It: Opportunities and Constraints of Small-Scale Shell Midden Excavations*

Bowden, Bradley (Historical Research Associates), Jennifer Gilpin (Historical Research Associates, Inc.), and Lindsay Ponte (Historical Research Associates) *Hawkeye Saves the Leg: Excavations at the Medhold Site (45PI728)*

Ames, Kenneth (Portland State University) Discussant

Lewarch, Dennish (Suquamish Tribe of Indians) Q&A

Past and Present Meet: The Ruby Pipeline Project in Southern Oregon [T6]

The Ruby Pipeline is a 680-mile-long 42-inch interstate natural gas pipeline beginning in Opal, Wyoming, and terminating near Klamath Falls, Oregon. Within Oregon, the pipeline transects 84 miles of a variety of federal and private lands within the Northern Great Basin of south-central Oregon. The project traverses upland forests and lacustrine settings. Archaeological survey began in 2008. Construction of the entire pipeline was completed July 28, 2011. Archaeological fieldwork was completed in November of 2011. This symposium will provide multiple perspectives on the Ruby Project. Several papers in this symposium will present a summary of archaeological data recovery at select habitation and lithic quarry sites. Other papers will provide perspectives on tribal concerns, places of traditional religious and cultural importance, and tribal participation in the project. Regulatory agencies will provide insights regarding the challenges of managing and coordinating an interstate-interagency project of Ruby's scope and magnitude.

Organizers: Stan McDonald (Bureau of Land Management Portland Office) and John Fagan (Archaeological Investigations Northwest)

McDonald, Stan (Bureau of Land Management Portland Office) *Managing Cultural Resources in Energy Development Projects: Some Context for Viewing the Ruby Pipeline Project*

Pedigo, Nicole (El Paso Corporation), Floyd Robertson (Ecology and Environment), Jo Reese (AINW), and John Fagan (AINW) *Ruby Pipeline Project Overview*

Smits, Nicholas (Archaeological Investigations Northwest) *More than a Quarry: The Surveyor Spring Site (35LK1231), Lake County, Oregon*

Punke, Michelle (Archaeological Investigations Northwest) *Tuff Love: The Geoarchaeological Setting of the Surveyor Spring Obsidian Source (Archaeological Site 35LK1231)*

Windler, Zach (Archaeological Investigations Northwest) *And a Quarrying We Shall Go: Basalt Tool Production at Archaeological Site 35LK3842*

Holstad, Emily C. (Archaeological Investigations Northwest) *Data Recovery at Archaeological Site 35LK3337: A Food-Processing Site Located in Southeast Oregon*

Davis, Sara (Archaeological Investigations Northwest) *Data Recovery at a Suspected House Feature at Site 35KL3262*

Walker, Cam (Archaeological Investigations Northwest) *Burning Down the Pithouse: Preliminary Findings at 35KL3449*

Chocktoot Jr., Perry (Klamath Tribes), Todd M. Volkenand (Klamath Tribes) *Respect the Rock: A Klamath Tribal Perspective of Cultural Resource Issues in the Wake of the Ruby Pipeline*

Churchill, Thomas E. (Oregon State Historic Preservation Office) *Observations of the Ruby Pipeline Project by an Armchair Archaeologist: Perspective from the Oregon State Historic Preservation Office*

Connecting to the Past: Transportation and Cultural Resources Management [F1]

Transportation, the getting from "here to there", represents people's connection to the landscape: it is both a (literally) concrete reminder of the past in the form of historic bridges and highways and the historic areas they connect, and a way to "get to" the past, making it possible to travel to and

experience places important to our cultures and history. Both WSDOT and ODOT have extensive programs to address and manage cultural resources that may be impacted by transportation projects, as well as resources that are part of the transportation systems of the region. This symposium presents the work of transportation related projects in both states.

Organizers: Scott S. Williams (Washington State Department of Transportation), and Carolyn Holthoff, (Oregon Department of Transportation)

Williams, Scott S. (Washington State Department of Transportation) and Carolyn McAleer (Oregon Department of Transportation) *The Past is Present, and to Get There Turn Left at the Next Intersection*

Elliott, Patrick (ICF International), Patrick Reed (ICF International), and J. Tait Elder (ICF International) *Use, Application, and Lessons Learned with Geotechnical Data and Methods to Assess Archaeological Site Potential*

O'Neill, Brian L. (University of Oregon Museum of Natural and Cultural History) and Christine C. O'Neill (University of Oregon Museum of Natural and Cultural History) *Revisiting the Gold Hill Site*

Stevenson, Alexander E. (ICF International) and Kurt Perkins (ICF International) *The Role of Freshwater Mussels in Precontact Upper Willamette Valley Subsistence*

Connolly, Thomas J. (University of Oregon Museum of Natural and Cultural History) *A Legacy of Late 19th-Early 20th Century Transportation Projects in the Columbia River Gorge through the Lens of the Oregon Department of Transportation's Milepost 2016 Reconnection Project*

Croes, Dale (South Puget Sound Community College) and Michael Martin (South Puget Sound Community College) *Mapping, Archaeologically Testing, and Modeling an 1880s Logging Railroad System on the SPSCC Campus, Olympia, Washington*

Oderman, Eric (South Puget Sound Community College) *Video Documenting the Mapping, Archaeological Testing and HO Modeling OF an 1880s Historic Logging Railroad in South Puget Sound*

Yunker, Trevor (South Puget Sound Community College) and Cassandra Johnson (South Puget Sound Community College) *Foster Logging Railroad Artifacts: A Reflection of Our Campus' Past*

Graham, Tyler (South Puget Sound Community College) *The 1880s Logging Railroad HO Scale Model Project—Bringing it to Life*

Hawes, Kathleen (South Puget Sound Community College), Tracey Arnold (South Puget Sound Community College), and Aloura McDaniel (South Puget Sound Community College) *After the Railroad: The "Double Cola" Testing Area*

Chidley, Michael (Washington State Department of Transportation) *The Pilchuck Creek Bridge Replacement (?)*

de Boer, Trent (Washington State Department of Transportation) and Catherine Dickson (Confederated Tribes of the Umatilla Indian Reservation) *Traditional Cultural Property Consultation in Washington State*

Maritime and Submerged Cultural Resources in the Pacific Northwest [F5]

The goals of this session are to raise the profile of maritime and submerged cultural resources in the Pacific Northwest, to highlight 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 several topics, including: the current state of laws pertaining to submerged pre-contact and historic resources in Washington and Oregon, paleoshoreline modeling in Puget Sound, documenting the effects of tectonic events on the residents of pre-contact coastal sites, and intertidal and subtidal cultural resource surveys. Technological advances in submerged site recording and the capabilities of local organizations to assist in submerged resource identification and documentation will also be discussed. Further presentations will cover topics in nautical archaeology, presenting methodologies for recording extant vessels.

Organizers: Ross Smith (SWCA Environmental Consultants) and Jacqueline Marcotte (ESA)
Griffin, Dennis (Oregon State Historic Preservation Office) *Underwater Archaeology in Oregon: Out of Sight but not Necessarily Out of Mind*

Kramer, Stephanie (Washington Department of Archaeology and Historic Preservation) and Maurice Major (Washington Department of Natural Resources) *Into the Abyss: Navigating Washington's Submerged Cultural Resource Laws*

Lewarch, Dennis E. (Suquamish Tribe) *Using Landform, Sea Level, and Bathymetric Data to Estimate Probabilities for Subaqueous Archaeological Deposits in Puget Sound*

Sterling, Sarah (Portland State University) *Integrating the Seismic and Occupational Chronologies at Tse-whit-zen, a Long-term K'lallam Settlement on the Shores of Port Angeles Harbor*

Major, Maurice (Washington State Department of Natural Resources) *On the Shoals of SOAL: Archaeology on Washington's State-Owned Aquatic Lands*

Williams, Scott S. (Washington Department of Transportation) *The Identity of the Beeswax Wreck of Nehalem, Oregon*

Hudson, Lorelea (Northwest Archaeological Associates/SWCA Environmental Consultants) *Submerged Archaeological Reconnaissance Survey along Seattle's Waterfront*

Smith, Ross (Northwest Archaeological Associates/SWCA Environmental Consultants) *Submerged Industrial History: Documenting Intertidal and Subtidal Features and Artifacts Along a Working Waterfront in the Irondale National Historic District*

Marcotte, Jacqueline (Environmental Science Associates) *Maritime Archaeology in the Columbia River: Columbia River Crossing*

Perry, Joel (OceanGate) *Practicability of Deploying High-resolution Multi-beam Sonar on Manned Submersibles for Deep Ocean Survey and Nautical Archaeology*

Howe, Nathaniel (Northwest Seaport) *Archaeology Afloat: Shipboard Systems Mapping Aboard Lightship No. 83*

MacKenzie, Morgan (Northwest Seaport) and Jacqueline Marcotte (Environmental Science Associates) *Working Outside of the Junction Box: Archaeological Methods of Documenting Shipboard Electrical Systems*

Howe, Nathaniel (Northwest Seaport) *Death with Dignity: Sending a National Historic Vessel to Fiddler's Green*

Wessen, Gary (Wessen & Associates) Discussant

Current Methods for Preserving the Past: Approaches from the Confederated Tribes of the Colville Reservation [F9]

For members of the Confederated Tribes of the Colville Reservation, there is no distinction between past traditions and those currently observed. In this symposium, we present evidence of traditional practices still in use as documented by the Colville Tribes' History/Archaeology Program. Additionally, we look at methods employed by the History/Archaeology Program to protect and preserve cultural resources that are important to the Colville Tribes.

Organizer: Jon Meyer (Confederated Tribes of the Colville Reservation)

Moura, Guy (Confederated Tribes of the Colville Reservation) *Introduction to the Confederated Tribes of the Colville Reservation*

Coyote, Arrow (Confederated Tribes of the Colville Reservation) *Land Use Patterns in the Wedge*

Meyer, Jonathan (Confederated Tribes of the Colville Reservation) *Regulating Cultural Resources – An Approach from the Confederated Tribes of the Colville Reservation*

Marchand, Amelia (Confederated Tribes of the Colville Reservation) *The Anatomy of a Fire: Cooperation Efforts to Protect and Document Cultural Resources*

Naumann, Aaron J. (Confederated Tribes of the Colville Reservation) *"Following the Fish" – An Alternative Frame of Reference Pertaining to Cultural Continuity*

Monaghan, Brian (Confederated Tribes of the Colville Reservation) and Eric Oosahwee-Voss (Confederated Tribes of the Colville Reservation) *Present-Day Traditional Food Gathering by Tribal Members of the Confederated Tribes of the Colville Reservation*

Luevano, Lucy (Confederated Tribes of the Colville Reservation) *Sustaining our Way of Life by Fishing the Way our Forefathers Have Done Before Us*

Kinship Studies: Fact, Fiction, Fantasy and the Future [S5]

This session explores recent developments in the anthropology of kinship. During the past decades we have witnessed, on a worldwide scale, challenges to the notion of kin relations as defining the individual's place in society as well as radical transformations in the meaning of family and kinship roles, approaches to biological reproduction, marriage, and the care and socialization of children. Yet the status of kinship as a crucial feature of society, and its continued fascination to anthropologists, endure. The session's four papers cover the following topics: The important role of "Aunties" in the perpetuation of indigenous knowledge among the Makah of Neah Bay, Washington; Women's fertility in relation to mother and/or mother-in-law's assistance, female education and post-marital residence in contemporary Japan; International and interethnic adoption and adult identity; Re-focusing the cross-cultural lens: How the discussion of new reproductive

technologies in the undergraduate classroom challenges and enriches student understandings of time-honored topics in the anthropology of kinship.

Organizer: Elizabeth Brusco (Pacific Lutheran University)

Nosaka, Akiko (Pacific Lutheran University) *Working Women's Fertility and Inter-generational Family Support in Contemporary Japan*

Brusco, Elizabeth (Pacific Lutheran University) *30 Years of Teaching Kinship: From Post-marital Residence Patterns to Frozen Embryos*

Klein, Laura (Pacific Lutheran University) *Surviving Kinship: Facts and Fiction of Kinship for Adult Adoptees*

Urbanec, Alina (University of Washington – Tacoma), Theresa Parker (Makah Tribal Member), and Deanna Buzzell-Gray (Makah Tribal Member) *Bringing the Past into the Present: Aunties and Cultural Transmission among the Makah*

Forum

Something Old, Something New; Something Short and Just for You: A 3-minute Artifact Forum [F8]

A Special 2.5 Hour Forum of Three Minute Papers with Discussions. This exciting forum will explore individual artifacts recovered from historical archaeological sites in Idaho and Washington in a forum setting of three minute papers. Often artifacts are skimmed over in reports or lumped into classes rather than giving those interested a detailed look at the individual pieces which contributed to the everyday lives of the past. During this forum presenters will showcase an artifact every three minutes, revealing the details and asking the bigger questions that will not only shape the history of the Pacific Northwest but will aid archaeologists in our region identify and interpret common and not so common artifacts found throughout the region. These papers also explore the meaning of the artifacts and productive avenues in artifact research. Time is allowed for questions and discussions throughout this forum.

Organizer: James C. Bard (SWCA Environmental Consultants)

1:20- Panelists: Erik Anderson, James C. Bard, Amanda Haught Biemann, Tiffany Brunson,
4:20 Breanne Kisling, Olivia McDaniel, Kali D.V. Oliver, Mary Petrich-Guy, Molly E. Swords,
Alicia Valentino, Mark Warner, Robert M. Weaver, Priscilla Wegars, Jessica Workman, Heather Sargent

Workshop

The Damage Is Done...Now What? The Scientific and Legal Aspects of Archaeological Damage Assessments [T8]

Cultural resource laws at both the federal and state level, such as the federal Archaeological Resources Protection Act (ARPA) and the Washington State Archaeological Sites and Resources Act (RCW 27.53 and WAC 25-48), require archaeological damage assessments in the event archaeological resources are harmed by unauthorized acts. Archaeologists and other cultural resource professionals who are called upon to

perform damage assessments must understand the process and conduct it in a credible manner so that legal action and successful imposition of criminal and civil penalties are supported.

If you were called on to respond to a case of archaeological resource damage, would you know how to execute the three components of an archaeological damage assessment (field assessment, value and cost determinations, and report preparation)? Do you understand the differences between archaeological value, commercial value, and the cost of restoration and repair? What data would your damage assessment report contain?

The Association for Washington Archaeology (AWA) invites you to participate in a workshop led by a panel of archaeologists and cultural resource professionals experienced in various aspects of archaeological damage assessments. Presentations and open discussion with the audience will include the following topics: 1) situations requiring an archaeological damage assessment, 2) conducting a damage assessment, and 3) civil penalties and public disclosure. Join in the conversation to gain an increased understanding of archaeological damage assessments and how you can work with law enforcement and the legal community to further the protection of archaeological resources.

Organizer: Mary Rossi (APT-Applied Preservation Technologies)

Sponsor: Association for Washington Archaeologists

Panelists: Kelly Bush (Equinox Research and Consulting International)

Alex Gall (Archaeological Services of Clark County and AWA Director-At-Large)

Stan Gough (Eastern Washington University)

Stephenie Kramer, (Washington State Dept. of Archaeology and Historic Preservation and AWA Board of Directors *Ex Officio*)

Shane Scott, (Central Washington Anthropological Survey)

Open Discussion

Medical Anthropology [F10]

Dr. Bill Bestor (Linfield College) will discuss medical anthropology, including his research and career options in the subfield.

General Sessions

CRM Issues [T2]

Bush, Kelly R. (Equinox Research and Consulting International), Julia M. Rowland (Equinox Research and Consulting International), and Lindsay E. Koehler (Equinox Research and Consulting International) *Consultation Success! A Rare Site Type Brings Stakeholders Together for Hard Work and Problem Solving*

Bush, Kelly R. (Equinox Research and Consulting International) *Lessons Learned! Fisher Slough Habitat Restoration Project, Skagit County, Washington*

Hogg, Erin (University of British Columbia) *An Analysis of the State of Archaeology in the Canadian School Curricula*

Petrich-Guy, Mary (University of Idaho and SWCA Environmental Consultants) *Developing and Testing an Archaeological Teaching Kit for Elementary School Classrooms: An Example from Idaho*

Pouley, John (Oregon State Historic Preservation Office) and Matt Diederich (Oregon State Historic Preservation Office) *Eligibility Trends of Archaeological Sites in Oregon: 1966-2011*

First Foods [T5]

Farrow Ferman, Teara (Confederated Tribes of the Umatilla Indian Reservation), Wenix Red Elk (Confederated Tribes of the Umatilla Indian Reservation), and Thomas Morning Owl (Confederated Tribes of the Umatilla Indian Reservation) *CTUIR First Foods & the Importance of Place in Indigenous Food Culture*

Merkle, Carl (Confederated Tribes of the Umatilla Indian Reservation) *Fish Consumption Rates: Correcting an Environmental Injustice to Better Protect Fish and the People Who Eat Them*

O'Brien, Christine A. (Confederated Tribes of the Umatilla Indian Reservation), Jayne Brimbox (Confederated Tribes of the Umatilla Indian Reservation), Karen Mock (Utah State University), Donna Nez (Confederated Tribes of the Umatilla Indian Reservation), David Wolf (Confederated Tribes of the Umatilla Indian Reservation), Tamao Kasahara (Utah State University), and Danielle Kreeger (Academy of Natural Sciences) *Freshwater Mussel Restoration: Using The Past To Construct The Future Of Freshwater Mussels In The Umatilla River, OR*

Ashley, Aaron (Confederated Tribes of the Umatilla Indian Reservation), Shawn Steinmetz (Confederated Tribes of the Umatilla Indian Reservation), and Jennifer Karson Engum (Confederated Tribes of the Umatilla Indian Reservation) *Returning to Buffalo: Traditional Practices of the Past Collide with the Politics of the Present*

Mack, Cheryl and Rick McClure (Gifford Pinchot National Forest) *The Sawtooth Berryfields Project: Intensive Management as Restoration of a TCP*

Historic Sites Archaeology [T4]

Horton, Beth (Fort Vancouver National Historic Site) *An Historic House Moves Home: Relocating a Mid-Nineteenth Century Officers' Quarters to San Juan Island National Historical Park, Washington*

Payne, James (Fort Walla Walla Museum) and Gregory Civay (Fort Walla Walla Museum) *Recent Archaeological Research at Fort Walla Walla*

Jerofke, Linda (Eastern Oregon University) *Analysis of the Occupation of the Camp Carson Historic District*

Pollock, Jacob N. (P-III Associates) and Christopher W. Merritt (P-III Associates) *Independence Valley, Elko County's First Electrical Powerhouse (1896-1920)*

Huntington, Sarah M. (Confederated Tribes and Bands of the Yakama Nation) and Merrilie Gunnier (Confederated Tribes and Bands of the Yakama Nation) *A Brief History of Sheepherding on the Yakama Nation Reservation*

Von der Porten, Edward (Drake Navigators Guild) *The Sixteenth-Century Manila Galleons in Baja California and Alta California*

Mace, Timothy (University of Idaho) *Investigations of Medieval Slag from Gotland, Sweden*

Henry, C. Shea (University of Idaho) *Bear's Paw Soup: Resistance and Additions from Market Street Chinatown to the Melting Pot*

Wegars, Priscilla (University of Idaho) *"Chinese Tunnels": Myth or Reality?*

Jenkins, Sarah L. (Archaeological Investigations Northwest) *What Faunal Remains Can Reveal About a Jewish Neighborhood in Downtown Portland*

Johnson, Paula (ESA Paragon), Katie Wilson (ESA Paragon), Bryan Hoyt (ESA Paragon, and Chris Lockwood (ESA Paragon) *Old Pine Street (45-KI-737): Recent Archaeological Investigations at a Deeply Buried Urban Site*

Lockwood, Chris (ESA Paragon), Aaron Raymond (ESA), Katie Wilson (ESA Paragon), and Paula Johnson (ESA Paragon) *Regarding Regrades (and Other Urban Disturbances) in the Formation and Preservation of Seattle's Old Pine Street (45-KI-737)*

Freeman, Alicia (University of Idaho), Ray von Wandruszka (University of Idaho, and Mark Warner (University of Idaho) *Analysis of Gunpowder Retrieved from Sandpoint Excavation*

Morton, Ashley M. (University of Idaho) and Robert Lee Sappington (University of Idaho) *Digging for Wealth, Archaeological and Historical Analysis of Elusive Inhabitants at an Early 20th Century Mill Site in Shoshone County, Idaho*

Cemetery Concerns [F3]

Kaehler, Gretchen A. (Washington State Department of Archaeology and Historic Preservation), and Guy Tassa (Washington State Department of Archaeology and Historic Preservation) *Steel Traps and Glass Beads: Evidence of Culture Shift in an Inadvertent Human Remains Find on a Historic Prairie in Thurston County, Washington*

Anderson, Erik D. (Northwest Anthropological Associates/SWCA Environmental Consultants) *A Unique Tomb in Lincoln County, Washington: It's History and Construction*

Battillo, Jenna M. (Washington State University) *Legal Protections of Human Remains in Idaho: Potential Improvements of Current Legislation*

Kretzler, Ian (Whitman College) *"If It Can Happen Here...": Putting Remains To Rest At Fort Vancouver, WA.*

General Anthropology [F4]

Wilding, Lisa (Central Washington University) *Audible Communication Comparison of Western Lowland Gorillas (Gorilla gorilla gorilla) and Virunga Mountain Gorillas (Gorilla beringei beringei)*

Molvik, Heather (Eastern Washington University) *A Methodological Problem in the Study of the Evolution of Language: The Question of the Loss of Laryngeal Air Sacs and Humanoid Vocal Anatomy*

Lyon, John (University of British Columbia) *Re-visiting Linguistic Evidence for an Oregon Landing in 1579*

Bader, Alyssa (Whitman College) *Mummy Dearest: How Archaeology is Shaping the Identity of Modern Day Uyghurs*

Jarrett, Jordan (Washington State University) *Ceramic Evidence for Distinct Mogollon and Puebloan Cultural Traditions at Largo Gap, NM*

Harris, Megan (University of British Columbia) *Material Utilization at Campsite 1, White Rock Springs, British Columbia, Canada*

Tribal Issues [F6]

Collins, Mary (Washington State University) *Progress Toward A Meaningful Scholarship Protocol between WSU Anthropologists and the Plateau Tribes*

Sam, Marlowe (University of British Columbia) *Ancient Relationships: Water and Indigenous Peoples*

Major, Maurice (Washington State Department of Natural Resources) *What I Learned on Badger Mountain: Gathering, Sustainability, and Cultural Resources*

Harrison, Tanya (CTUIR) *Beyond Eagle Feathers: Native American Access to Culturally Significant Birds*

Greymorning, Neyooxet (University of Montana) *Grounding Our Youth in the Present Through Stories of Our Past*

Schwartz, Tracy (University of Idaho) *When a Haama Loves an 'Aayat': Modern Nez Perce Marriage as a Form of Resistance*

Burney, Michael (Burney & Associates) *The Cultural Resource Protection Program: Honoring the CTUIR's Past ... Celebrating Its Present*

Contributions to Socio-cultural Anthropology [F7]

Pasilov, Bakhodir (Academy of Sciences Uzbekistan; Fulbright Scholar-in-Residence at Eastern Washington University) *Spiritual Life Among Uzbekistan's Muslim Society, 1960–1990*

Maier, Kadence (Washington State University) *Pacific Islander's on the Mainland U.S: Cultural Assimilation and Socioeconomics*

Bestor, William (Linfield College) *The Past is Present in Social Conflict: Nahuatl Indian Symbols in Tepoztlan's "Golf War"*

Packwood, Kirk (University of Montana) *Sports Commentators and Late Monopoly Capitalist Indoctrination in the United States*

Smith, Brina (Eastern Washington University) *Misperceptions Between Loitering Youth and Business Owners in Downtown Spokane, Washington*

Borer, Sara (Central Washington University) *Bacon Mania in America: A Surprising Cultural Phenomenon*

Smith, Julia (Eastern Washington University) *Coffee Connects Us: People and Place in the Specialty Coffee Market*

1:40 Petrich-Guy, Mary (University of Idaho and SWCA Environmental Consultants) and Jim Clark (University of Idaho) *Finding Humor in Things*

West Side Archaeology [S1]

Purdy-Silbernagel, Sarah (Natural Resources Conservation Service) *Results of the Archaeological Investigations at 35MA278, Talbot, Oregon*

Shong, Michael (Northwest Archaeological Associates/SWCA Environmental Consultants) *Transitional Weapon System Technology: Analysis of Projectile Points from the Careys Lake Site, a 2100 BP Settlement on the Upper Skagit River, Washington State.*

Cooper, Jason B. (AMEC Environment & Infrastructure) *Howard A. Hanson Dam Archaeological District (DT 184) Revealed, King County, Washington*

Chatters, James C. (AMEC Environment & Infrastructure), Jason B. Cooper (AMEC Environment & Infrastructure), and Tim Gerrish (AMEC Environment & Infrastructure) *Eagle Gorge Site I (45KI1083): A Late Prehistoric Hunting Camp in the Foothills of the Cascade Range*

Rorabaugh, Adam N. (Washington State University), Nichole Bettencourt (Washington State University), and Colin Grier (Washington State University) *Sometimes a Basalt is Just a Basalt: A Preliminary Comparison of Crystalline Volcanic Rock Sources at the Dionisio Point Locality and Implications for Traditional Toolstone Procurement in the Gulf Islands*

Tierney, Angus (Western Washington University) *Climatic effects on Wapiti (Cervus elaphus) and Implications For Human Hunters During the Late Holocene in Northwestern Washington*

Methodological Considerations [S3]

Shannon, Donald (Willamette Cultural Resources Associates) *Mining Archival Texts for Ethnographic Data Relevant to a Section 106 Undertaking: A Primer on Ethnographic Work While Doing Background Research*

Becker, Rory (Eastern Oregon University) *Using LiDAR to Identify Historic Trails*

Dolan, Patrick (Washington State University – Vancouver) *Examining the Potential for Systematic Errors in Volume-based Estimates of Unifacial Lithic Tool Curation*

McFarland, Douglas P (Mission Support Alliance) *No Strata No Data: Compliance, Conservation and Paleoclimate with Geophysical Science*

Jankowski, Stephen (Central Washington University) *Methods in Archaeological Data Collection: A Field Recordation Form for Rock Features*

Student Contributions to Historic Archaeology [S4]

Akina, Kaila (University of Idaho) and Mark Warner (University of Idaho) *Small but not Forgotten: Bric-a-Brac from the Sandpoint Archaeology Project*

Arnzen, Jason (Oregon State University) *Typology and Chronology of Prince Albert Tobacco Pocket Tins*

Miller, Amy (University of Montana) *Survey Methodologies of the Big Hole National Battlefield*

Triplett, Mallory (University of Idaho) *Moose City: Ghost Town in the Clearwater National Forest*

Posters

Barrick, Wilbur (Central Washington University), Lisa Euster (Central Washington University), and Whitney Matthes (Central Washington University) *Roza Rockshelter (45YK301): A Unique Look at Precontact Native Textiles*

Bauer, Briana (Central Washington University), L.K. Sheeran (Central Washington University), M.D. Matheson (Central Washington University), S. Wagner (Central Washington University), and J.H. Li (Anhui University, China) *Male Tibetan Macaque Choice of Infant Bridging and Female Affiliation Partners*

Bayly, Elaine (University of Idaho) *Children, Race, and Children's Literature: The Implications of Enculturation Through Picture Books*

Becker, Thomas (Applied Archaeological Research), Bill Roulette (Applied Archaeological Research), and Lucy Harris (Applied Archaeological Research) *Results of Investigations at Site 35TI90 on the Lower Trask River, Tillamook, Oregon*

Bestor, William (Linfield College) *The Aldeia Project: A Longitudinal Community Study in Portugal*

Brouwer, Eric (Central Washington University) *Faunal Analysis of Three Archaeological Sites in the Washington Cascades*

Burwell, Laura (Central Washington University) *Competition for Provisioned Corn in Macaca thibetana at Mt. Huangshan, China*

Carter, Samantha (Central Washington University) *Calculating the Genetic Variation of Vervets Using Alu Insertions*

Cascella, Melissa (ICF International) *Connecting Resources and Space: Using Databases and GIS in Tandem!*

Dampf, Steven (Historical Research Associates), Eric Carlson (Historical Research Associates), and Todd Ahlman (Historical Research Associates) *And Now for Something Completely Different: Investigation of an Upland Site Near Kettle Falls, Washington*

Daniels, Michael (Portland State University and Willamette Cultural Resource Associates) *Projectile Point Variation at the Briar Archaeological Site (35C035) Near Scappoose, Oregon*

Derr, Kelly M. (Washington State University), Kaitlyn Scott (Washington State University), and Colin Grier (Washington State University) *The Old House and the Sea: Current Excavations at a Late Period Plankhouse in the Southern Gulf Islands, coastal British Columbia*

Eckerle, William (Western GeoArch Research), James Mayer (Western GeoArch Research), and Sasha Taddie (Western GeoArch Research) *Optical Stimulated Luminescence Dating of Landforms on Loess Uplands in Owyhee County, Idaho*

Elder, J. Tait (ICF International), Patrick Reed (ICF International), and Shane Sparks (ICF International) *Experimental Research on the Effects of Fluvial Processes on Exposed Archaeological Features Located on Point Bars Along Streams with Annual Discharge Variation – Research Design*

Elder, J. Tait (ICF International), Kurt Perkins (ICF International), and Rori Perkins (ICF International) *Finding Features with Photos: Identifying Stone Fish Capture Features along the Northern Washington Coast with High Resolution Aerial Imagery and LiDAR*

Epstein, Emily Mueller (Burns District Bureau of Land Management), Ethan A. Epstein (Burns District Bureau of Land Management), and Rick D. Wells (Bureau of Land Management) *Stone Spheres from the Steens Mountain and Surrounding Region*

Ferri, Serafina (Central Washington University) and Ingrid Gardner (Central Washington University) *Similarities Between Native Traditions Today and 4,000 Years Ago*

Galm, Jerry R. (Eastern Washington University) and Tiffany Fulkerson (Eastern Washington University) *Cultural Responses to Holocene Climate Change: A Re-Evaluation of Columbia Plateau Data Records*

Gerrish, Tim (AMEC Environment and Infrastructure) and Tyler McWilliams (AMEC Environment and Infrastructure) *McCormick: Assessing the Significance of an Historic Logging Town in the Southwestern Interior of Washington State*

Goodwin, Matt (Willamette Cultural Resource Associates) *Interpreting Site Data at The Briar Site (35CO35)*

Hurley, Nicole (U.S. Fish and Wildlife Service) *A Spatial Modeling Tool for Effective CRM: A Case Study at Sycan Marsh, Oregon*

Johnson, Paula (ESA Paragon) and Laura Phillips (Burke Museum of Natural History & Culture) *"When the Past Is Present on Your Private Property": An Invitation for Constructive Criticism*

Kaufman, Rowan (Central Washington University) *Experimental effects of burning and boiling on modern land snail shell $\delta^{18}O$ and $\delta^{13}C$*

Kneifel, Rebekah (Western Washington University) *Chalk it up to Feasting and Burning*

Kozlik, Angela (Willamette Cultural Resource Associates) *Assessing Site Function: An Analysis of Groundstone and Bone Tools from The Briar Site (35CO35)*

Miller, Dana (Confederated Tribes and Bands of the Yakama Nation), and Rose Ferri (Confederated Tribes and Bands of the Yakama Nation) *Yakama Nation Cultural Resources on the Hanford Site*

Morning Owl, Thomas (Confederated Tribes of the Umatilla Indian Reservation) *Creation Symbolology of the Waashat Faith*

Murphy, Thomas (Edmonds Community College), Erin Ryan (Edmonds Community College), Damien Douglas (Edmonds Community College), Calvin Hanson (Edmonds Community College), Jane Hutchinson (Edmonds Community College), Kate Luebke (Edmonds Community College) and Joey Madsen (University of Washington) *Wildlife Tracking and Road Ecology: Using Skills from the Past to Solve Present Problems*

Nez, Donna (Confederated Tribes of the Umatilla Indian Reservation), Christine A. O'Brien (Browns River Environmental Consultants) and Gene Shippentower (Confederated Tribes of the Umatilla Indian Reservation) *Fragments of Mollusk Shells to Make Tools and Ornaments: Investigation of Archeological Findings in Eastern Oregon* Palmer, Alison (Western Washington University) *Personal Adornment and Social Signaling in the Salish Sea*

Palmer, Jamie (Western Washington University) *A New Interpretation of Edged Cobbles at Cherry Point, WA*

Pollock, Jacob N. (P-III Associates) and Christopher W. Merritt (P-III Associates) *Independence Valley, Elko County's First Electrical Powerhouse (1896–1920)*

Simmons, Stephanie (ICF International) and Merris Mullaley (ICF International) *Factors to Consider before Preparing CRM Collections for Permanent Curation*

Spencer, Jessica (University of Montana) and Kaleigh Best (University of Montana) *The effects of Western Montana's Unique Weather on the Rate and Sequence of Decomposition Using Pig (Sus scrofa) Cadavers*

Williams, Shalaya (Confederated Tribes of the Umatilla Indian Reservation), Jennifer Karson Engum (Confederated Tribes of the Umatilla Indian Reservation), and Shawn Steinmetz (Confederated Tribes of the Umatilla Indian Reservation) *Cayuse, Umatilla, and Walla Walla Tribes Traditional Relationship to Buffalo and Buffalo Hunting*

Withee, Katee (Portland State University) *Research of a Lost Historic Grave near Wagontire Mountain, Oregon*

