

THESIS AND DISSERTATION ABSTRACTS

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This issue includes nine dissertation and thesis abstracts addressing archaeological and cultural anthropological research topics relevant to Alaska from the University of Aberdeen, University of Alaska Anchorage, University of Alaska Fairbanks, University of Wales Trinity Saint David, and University of Washington. Brown's dissertation employs a demographic temporal frequency analysis to examine high-latitude case studies including Kodiak Island and Kuril Islands population histories. Using archaeological data, ethnohistoric records, and cultural anthropological theory, Day's thesis explores the hypothesis that ancestral Unanga^x mummified their whalers. Deed's thesis examines aspirations of Alaska Native youth in the Anchorage School District using qualitative anthropological methods. Analyzing lithic and faunal remains, Keeney's thesis interprets ancestral human behavior at Lake Matcharak in the Brooks Range. In his thesis, Miller explores the role of reindeer as food in the communities of Teller and Nome using participant observation, ethnographic interviews, and household surveys. In her dissertation, Raymond-Yakoubian uses socio-cultural anthropological methods to research salmon and identity in the community of Elim. Schiefer's thesis takes a hard look at human-salmon relationships on the Kuskokwim River. Incorporating Yup'ik traditional knowledge and oral histories combined with archaeological methods, Skinner's thesis examines artifacts from excavations at *Temyiq Tuyuryaq* (Old Togiak).

Contact Monty Rogers to submit an abstract of a recently completed thesis or dissertation that deals with topics of interest to *AJA* readers.

QUANTIFYING UNCERTAINTY IN DEMOGRAPHIC TEMPORAL FREQUENCY ANALYSIS (dTFA)

William A. Brown

PhD dissertation, 2019, Department of Anthropology,
University of Washington

ABSTRACT

The goal of archaeological demography is to recover information about past human populations through archaeological research. Demographic temporal frequency analysis (dTFA) constitutes one of archaeological demography's primary modes of analysis. This mode of analysis comprises two related operations: (1) describe the changing abundance of cultural materials created over time in a given study region (temporal frequency distri-

butions, or *tfd*s); and (2) treat these *tfd*s as proxy records for changing regional population size over time. dTFA has been applied in archaeology since at least the mid-1960s, though its early applications were largely ad hoc and its foundational principles and standards of practice remained largely implicit. Two decades later, John Rick's 1987 paper in the journal *American Antiquity*, "Dates as Data," provided a much-needed inaugural statement for dTFA's programmatic literature. Rick's paper systematically identified the program's definitive operations, foundational premises, and a theory of the *tfd* data generating process (DGP). This theory divided the *tfd* DGP into a sequence of sub-processes: creation of cultural material; preservation of cultural material over time following its creation; and archaeological investigation pursuing what cultural material has been preserved. Rick also recognized the potential for confounding entailed by this DGP with

respect to demographic inference and previewed explicit attempts to mitigate such confounding in the context of his own preceramic Peruvian case study.

Since Rick's paper, publications applying dTFA have continued to gain momentum, addressing regional and continental colonization and settlement processes, population responses to natural and cultural dynamics and events, and so on. A critical literature addressing dTFA's potential confounders and limitations has also developed alongside such applications, both among the program's proponents and its skeptics. Ongoing efforts to improve dTFA's best-practice protocols have included the development of methods to minimize both the systematic and random components of creation, preservation, and investigation error. Some gains have been made in our ability to understand and mitigate both systematic and random error, but further work is needed on both fronts.

Random error in the *tfd* DGP introduces artificial clusters and gaps into the temporal distributions of the datasets we use to construct *tfd*s that are not representative of booms and busts in past population abundance. The papers constituting this dissertation scrutinize and evaluate current and emergent methods for containing such error. Collectively, they emphasize the complementary needs to be explicit about which unknown quantity is the target of particular operations in dTFA and to select the statistical tools most appropriate for those targets. Such targets include (a) the temporal distributions strictly of archaeological samples, which are obscured by chronometric uncertainty; (b) the distributional forms of the generative processes underlying datasets; (c) temporal changes in past population abundance and associated changes in population growth rates over time; and (d) measures of the relationships between changing population abundance and other time-varying variables.

One type of *tfd*—the summed probability distribution (*spd*)—is shown to perform well as an estimator of the uncertain temporal distributions of archaeological samples. Likewise, for analyses attempting to measure the influence of various time-varying variables on population growth dynamics, the *spd* supports more accurate though less precise inferences than alternative kinds of *tfd*. However, when the research goal is to better understand the distributional form of the generative process underlying the data, neither the *spd* nor a second kind of *tfd*—a kernel density estimate (*kde*)—is well-suited. While both kinds of *tfd* can be modified to improve their performance in this respect, a third kind of *tfd* is recom-

mended—the finite mixture model (*fmm*)—which improves upon several of the statistical limitations characterizing *spds* and *kdes*.

UNANGAĀ MUMMIES AS WHALERS: A MULTIDISCIPLINARY CONTEXTUALIZATION OF HUMAN MUMMIFICATION IN THE ALEUTIAN ISLANDS

Kathleen Day

Doctoral thesis, 2019, Department of Anthropology,
University of Wales Trinity Saint David

Online at https://www.researchgate.net/profile/Kathleen_Day/publication/333390505_Unangax_Mummies_as_Whalers_A_Multidisciplinary_Contextualization_of_Human_Mummification_in_the_Aleutian_Islands/links/5ceb2ba892851c4eabc116a7/Unangax-Mummies-as-Whalers-A-Multidisciplinary-Contextualization-of-Human-Mummification-in-the-Aleutian-Islands.pdf

ABSTRACT

This thesis provides an analysis of UnangaĀ (Aleut) mummification in the context of their other methods of body deposition. It explores the hypothesis that whalers and their families belonged to an ancient shamanistic whaling complex that existed throughout coastal regions that practiced whaling. This thesis presents an explanation pertaining to the reasons behind mummification and serves as an organized compilation of the most pertinent past and recent data regarding UnangaĀ mortuary customs and rituals.

A multidisciplinary approach is used that combines social anthropological theory, archaeological data, and ethnohistorical records. The known methods of precontact body deposition are evaluated in contrast to mummification. It is suggested that mummification proved to be the most complex of these methods and was reserved for the whaling elite and perhaps others of high rank in UnangaĀ communities. A comparative approach based on ethnographic analogy further explores the metaphysical relationship between hunter and whale. The geographical boundary for this study is also widened because mummification was practiced in regions contiguous to the Aleutians.

Literature pertaining to the passage between life and death focuses on the liminality of the soul. This concept is presented as one of the prime elements in understanding mummification. The interpretation offered in this thesis

builds on a recent approach to this topic, which suggests that individuals were deliberately mummified so they could remain in a state of persistent liminality in order to be preserved for their power.

The findings of this thesis suggest that mummification in the Aleutians was a key aspect to whaling. Whalers needed courage and power, and this was accomplished through the use of mummified bodies of whalers and their lineage members that were secreted in caves to be used as magical talismans. This ancient whaling complex is examined through the paradigms of liminality and shamanism. Members were initiated into a spiritual and dangerous world, which thereby elevated their status in the community. It is proposed that whalers also performed the mummification. This interpretation advances the study Unangaḡ mortuary rituals and sets the stage for further research.

THE ASPIRATIONS OF URBAN ALASKA NATIVE YOUTH IN THE ANCHORAGE SCHOOL DISTRICT

Susannah K. Deeds

Master's thesis, 2019, Department of Anthropology,
University of Alaska Anchorage

ABSTRACT

Alaska Native young men face some of the highest rates of suicide, substance abuse, and incomplete schooling in the nation. Their current "at-risk" status has persisted for over two decades. This thesis argues that by listening and taking the young men's aspirations seriously, their culturally informed vision of the future is visible. Collaborating together, families and the public educational system can work towards supporting youth aspirations. This anthropological research spanned over the course of a year and occurred within six Anchorage, Alaska, public schools. Three qualitative methods inform this research: image coding, semi-structured interviews, and participant observation. All methods focused on the implementation of a positive cultural identity building and goal setting activity with Alaska Native students. The data revealed a gender divide alongside a recognition of the persisting repercussions of colonization; together, these lend insight to the recommendations provided to the Anchorage School District. The recommendations are as follows: (1) There should be one person dedicated to creating relationships with families and facilitating the goal setting session at

each participating school; (2) The cultural enrichment program should build on their collaborative partnership with Anchorage Realizing Indigenous Students Excellence to reformat when and where the sessions occur; and (3) a group activity should occur at the beginning of the goal setting sessions.

FAUNAL AND LITHIC ANALYSES FROM THE MATCHARAK PENINSULA SITE (AMR- 00196) NORTHERN ARCHAIC CONTEXT: LAKE MATCHARAK, CENTRAL BROOKS RANGE, ALASKA

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Master's thesis, 2019, Department of Anthropology,
University of Alaska Fairbanks

ABSTRACT

This thesis focuses on the Matcharak Peninsula site (AMR-00196 or MPS), located on the east side of Lake Matcharak in the upper Noatak River valley of Alaska's central Brooks Range. The MPS contains a substantial and well-preserved collection of faunal remains dating to between 6190±35 and 3780±35 14C years BP, along with side-notched projectile points and microblade technology. Radiometric dating and stone tools attribute the collection to the Northern Archaic tradition, making MPS unique for yielding the largest and most well-preserved collection of faunal remains reported from a Northern Archaic context to date. This project analyzed both faunal and lithic materials to identify a more robust suite of human behaviors, better assess post-depositional processes, and delineate between cultural components. This project first focuses on intrasite activities and site function within a larger system of land use, indicating that MPS functioned repeatedly throughout the middle Holocene as a short-term hunting camp and late-stage hunting tool repair location that was occupied between the late spring and early fall. A small number of individual caribou dominate the faunal assemblage, but a narrow range of other Brooks Range prey species are also present including Dall's sheep and locally available fish and Arctic ground squirrel.

This project then develops broader interpretations about the Northern Archaic tradition, investigating technological, mobility, and subsistence strategies by mid-Holocene Brooks Range hunter-gatherers. The inhabitants practiced logistical mobility and organized special task groups when resources were leaner, and came together in

aggregated communities to engage in communal hunts when caribou were reliably abundant. Lithic raw material use at MPS reflects a broader Northern Archaic trend of favoring less common obsidian for maintainable tool components, and more commonly available cherts for more heavily engineered and reliable implements such as inset-microblade weapons. Finally, this thesis explores side-notched and inset-microblade projectile weapon armatures in the context of hunting strategies at MPS and other sites, suggesting that bifacially-tipped projectiles were more effective at hunting medium-range targets while inset-microblades were designed for long-range strategies.

**THE TAMING OF THE STEW: HUMANS,
REINDEER, CARIBOU, AND FOOD SYSTEMS
ON THE SOUTHWESTERN SEWARD
PENINSULA, ALASKA**

Odin Miller

Master's thesis, 2019, Department of Anthropology,
University of Alaska Fairbanks

ABSTRACT

This thesis addresses the question, *what is the role of reindeer within communities of Alaska's southwestern Seward Peninsula, particularly as a food source?* Employing a mixed-method approach, I conducted several months' fieldwork in the Seward Peninsula communities of Nome and Teller between 2016 and 2018, using methods that included participant observation, ethnographic interviews and a household survey designed to describe and quantify use of reindeer as food. As two varieties of the same species, *Rangifer tarandus*, reindeer and caribou are very similar in appearance. When caribou herds migrate nearby, reindeer tend to join them and become feral. Given the important role caribou played in Bering Straits Iñupiat culture before their disappearance and the subsequent introduction of reindeer during the late 1800s, I contextualize the history of reindeer herding as part of a broader pattern of human-*Rangifer* relationships. During the past 30 years, reindeer herding has been disrupted by the return of migrating caribou to the region. Results from my fieldwork suggest that herding involves not only keeping reindeer separate from caribou, but also achieving community-level recognition of reindeer herds as domestic, privately owned and non-caribou. This is reflected in reindeer's role as a food source. Among Seward Peninsula Iñupiat, reindeer's gastronomic role is similar to that of caribou and other land mammals.

Yet reindeer products can be monetarily exchanged in a way that caribou and other wild foods cannot. A further distinguishing feature of reindeer, as a domestic animal, is that it can be controlled and commodified while live. As rural Alaskans seek to adapt their food systems to rapid social-ecological change, some have expressed renewed interest in reindeer herding. I conclude that herders must actively negotiate between views of reindeer herding as monetary and marketable, on the one hand, and as a food that embodies Iñupiat values of generosity and (non-monetary) sharing, on the other.

**SALMON, COSMOLOGY, AND IDENTITY
IN ELIM, ALASKA**

Julie Raymond-Yakoubian

PhD dissertation, 2019, Department of Anthropology,
University of Alaska Fairbanks

ABSTRACT

This dissertation is the result of sociocultural anthropological research in and about the community of Elim, Alaska. Elim is a small community of approximately 330 (primarily Inupiat and Yup'ik Eskimo) people in Norton Sound. This research began with a focus on the topics of salmon and identity in the community. The focus on salmon was particularly important because the communities of this region have often traditionally been understood in the social sciences through the lens of relationships with marine mammals.

The research involved participant observation in the community, a variety of forms of ethnographic interviewing (free listing, structured, and semi-structured interviews), focus groups, storytelling sessions, and archival research. Over 80 adults in the community participated in the project through interviews. I also completed extensive photo-documentation of the community and various aspects of peoples' relationships with subsistence activities.

Much of this work began with inquiries about the importance of salmon to people in Elim, as well as an examination of other things which were important to Elim residents, and how people come to understand themselves. In this I also examined and learned about aspects of Elim residents' relationships with fish and other animals, with the environment, with the spiritual world, and with each other. This process led me to insights not just about identity in Elim – what matters, what is meaningful and valued, how people understand and define themselves and their

community, and so on—but it also led to me an understanding of how Elim residents think about the nature of the world in general (i.e., cosmology).

My main argument in this dissertation is that my research in and about Elim revealed that identity and cosmology are co-created – and it revealed how this is the case. I discovered that salmon are ‘good to think with’ in order to see that. This co-creation of identity and cosmology occurs within a particularly visible hybrid cosmological landscape of (primarily) ‘traditionally Indigenous’ and Christian ideologies. This landscape in lived culture and context is marked by a patterned heteroglossic ‘condition’ which includes a dominant (and indigenized) Christian discourse. This heteroglossia is constituted, represented, and evidenced by a (markedly) heterogeneous multiplicity of discourse, practice, and belief. This cosmological landscape and its heteroglossic condition are visible, and made, in various respects in co-implicated, co-indexical, interlocking instantiations of human-animal relationships, spirituality, systems of proper behavior, place attachments, and identity processes and formations.

CULTIVATING SALMON. HUMAN-FISH RELATIONS IN BETHEL, ALASKA

Paula Elise Schiefer

PhD thesis 2019, University of Aberdeen, Scotland,
Department of Anthropology

Online at <https://aberdeen.academia.edu/PaulaSchiefer>

ABSTRACT

This thesis focuses on the ways in which people cultivate relations with salmon along the Kuskokwim River in Southwest Alaska. It examines conservation narratives which develop around a decreasing salmon population and analyzes the different ascriptions of agency which are attributed to them. This work places human-animal relationships at the centre between State salmon conservation strategies and Yup’ik subsistence fishing, in particular after intensified conservation efforts and restrictions of king salmon harvest in the area. I argue that both subsistence harvesting and salmon management establish ways of knowing these animals, relations of care, and perceptions of environmental shifts, but emerge as incommensurable in moments of crisis. Combined with an understanding of the post-colonial structures in which salmon management is embedded, the research analyzes how the ontological tensions of relations between people and fish are too strong

to be mediated in co-management approaches and even court hearings. Yet, although conflicting, these relations co-exist most of the time. To understand how these relations are maintained, negotiated, and perpetuated, this thesis gives detailed ethnographic analyses of settings in which they take place. This includes management offices, fishing boats, fish camps, and weirs, and furthermore includes tools like nets and knives which help to understand the role of salmon in social lives in Bethel and the Yukon-Kuskokwim Delta. My work tells stories in which salmon cannot be mastered or controlled but become an indicator for the well-being of human relationships with each other, salmon, and their shared environment.

INDIGENOUS ARCHAEOLOGICAL APPROACHES TO ARTIFACT AND HOUSEHOLD ANALYSIS AT PRECOLONIAL VILLAGE TEMYIQ TUYURYAQ (OLD TOGIK)

Dougless Skinner

Master’s thesis, 2019, Department of Anthropology,
University of Alaska Fairbanks

ABSTRACT

The Upper Bristol Bay is home to a multitude of precolonial and colonial era villages dotting the coast, islands, and rivers. The bay’s dynamic history remains relatively unexplored in archaeological literature. Current data situate people in the region for nearly 6,000 years, living in complex, semi-permanent villages, subsisting on large land and sea mammals, fish and mollusks. One such village is *Temyiq Tuyuryaq* or Old Togiak (GDN-00203). The village is a mounded accumulation of household cycles, sand and organic materials atop an accreting sand spit in the Togiak Bay. Ancestral to *Nutaraq Tuyuryaq* [New Togiak], the village directly links precolonial and modern Yup’ik traditions in the Upper Bristol Bay.

Yup’ik traditions are a combination of transformation, continuity and resilience. Yupiit worldview seeks balance and co-existence with many life forms including the spiritual, natural and human. The aim of this research is to intersect the traditional Yup’ik values, knowledge and histories with archeological theory and methodology to explore the material culture and households of *Temyiq Tuyuryaq*. Research objectives include evaluating a sample of the culturally modified materials, assessing systems of activities

within households and exploring the Little Ice Age as a causation for increasing village complexities.

Results indicate that there is a direct continuity of knowledge spanning at least 600 years in the bay. Artifact production and function remain primarily continuous with intensifications of some materials circa 500 Cal BP. Household analysis reveals the importance of the *ena* [family house] for processing foods and cooking activities. Additionally, the research indicates that the Little Ice Age may not have had an extensive impact on tool and household function. Rather, the results may suggest that the Yup'ik precolonial Bow-and-Arrow War had a more extensive impact on the villages circa 600 years ago. Overall, this thesis explores the complex relationship of Indigenous knowledge and archaeological data, as well as, discussing the dynamic and continuous relationships that modern Yup'ik people of Bristol Bay have to their histories.