

Stories of Sugpiaq Survivance:
Uncovering Lifeways at Ing'yuq Village

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Abstract

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This dissertation explores various storytelling methods in archaeology, as situated within a community-based project in Old Harbor, Alaska, a Sugpiaq village in the Kodiak Archipelago. The research is grounded in archaeologies of survivance, which center Native presence, sovereignty, and futurity throughout the archaeological research process. As a concept, survivance is an important intervention within studies of settler colonialism, especially in North America, because it encourages researchers to consider multiple ways of knowing beyond the dominant systems of the academy. Epistemic diversity creates rigorous and robust research practices and interpretations, and often leads to new insights when data are contextualized within specific Indigenous epistemic communities. In this dissertation, an engagement with survivance has led to the co-creation of storytelling methods with collaborators in Old Harbor. These story methods work to both interpret archaeological data and effectively communicate and engage with the Old Harbor community. Story genres employed in this dissertation include story-models for hypothesis generation, fictive narrative, personal reflection, artistic reconstruction, and object-centered vignettes.

These stories were generated as part of the Old Harbor Archaeological History Project (OHAHP). The purpose of OHAHP is to uncover Sugpiaq lifeways during the Russian colonial period (1760s to 1867 CE) in the Old Harbor region. This dissertation research focuses on labor

practices, foodways, and elements of residence and governance among the people of Ing'yuyq Village (KOD-114). Sugpiaq ancestors lived at Ing'yuyq, located on Sitkalidak Island, for at least a century prior to Russian arrival in 1784, and persisted in place until the year 1840. This dissertation draws on data from archaeological excavations at Ing'yuyq, critical examinations of the ethnohistoric and archival documentation of the Russian colonial period, and ethnographic interviews with Old Harbor community members to examine Sugpiaq negotiations of Russian colonialism. Analysis of these data reveal how Sugpiaq ancestors at Ing'yuyq creatively maintained their relationships to their homelands through the tumultuous period of Russian occupation.

Archaeofaunal remains from the Ing'yuyq site show that people ate a wider variety of locally-procured foods and lived at Ing'yuyq year-round during the Russian colonial period, which contrasts with indications of seasonal occupation in the century prior to Russian arrival. This signals a consolidation of the population, as men were sent away to hunt sea otter in distant regions for months at a time, and women pooled their labor to address Russian demands for goods. By reorganizing households, Sugpiaq families sought to maintain community even while so many relatives were lost to violence, disease, and removal. Analysis of belongings (a.k.a. artifacts) found that processing and manufacturing were the predominant activities in both the precolonial and colonial period deposits at Ing'yuyq. That pattern roughly fits in with the characterization of belongings from other late precolonial and early colonial sites in southeastern Kodiak, suggesting a continuity of practice within these villages through time. The ubiquity of locally made pottery at Ing'yuyq and the diversity of ulus found at the site suggest that Sugpiaq crafting traditions continued into the Russian colonial period, despite the increasing availability of imported goods through time.

Storytelling is what holds these archaeological conclusions together and makes them make sense anthropologically and in community. The narrative that emerges from integrating the archaeological interpretations together is one of persistence and survivance by Sugpiaq

people as they navigated, and continue to navigate, waves of Russian and American colonialism within their homelands. The use of collaborative storytelling in this dissertation contributes a novel framework for interpretation of the past. In using multiple storytelling strategies throughout this dissertation, I showcase a grounded method for making sense of archaeological data within an Indigenous survivance framework that weaves together cultural stories, archaeological data, personal narratives, and oral history to prioritize Indigenous experiences in our telling of Indigenous histories.

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researcher. Finally, thanks to my advisor Ben Fitzhugh, who introduced me to Alaska, read and commented thoroughly on numerous drafts of proposals, abstracts, and dissertation chapters, taught me how to run a field project, and supported me every step of my graduate journey (even when I disagreed with him). You've given me a lot to aspire to with your scholarship, your mentoring, your interdisciplinary collaborations, and your commitment to ethical practice, and taught me by example some things to avoid in my career like overcommitment and leaving too much grading for finals week (I know, it's unavoidable sometimes). Cheers to more summers on Sitkalidak!

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Chapter 1: Introductions

Every day when I arrived at Ing'yuuq and looked out over the water towards Kodiak Island, I smiled. I was grateful to be there learning about and from Sugpiaq ancestors, and I am always astounded by the beauty of this place – of Sugpiaq Land. I understand that my presence on Sugpiaq Land is a gift granted to me by the Sugpiat. I am not entitled to be here. The assumption of access to field sites, to data, to Land is a colonial relation (Liboiron 2021). As a white settler and an archaeologist trained in dominant systems of knowing and researching, it has taken me time to recognize the colonial logics in which I am enmeshed and, oftentimes, perpetuate. It is easier for me to see how archaeological research is bound up with settler colonialism in North America. It is more challenging to accept myself as a participant in ongoing colonial extraction from Indigenous Lands. Good intentions don't make an endeavor or practice anticolonial on their own (Ibid), but they are a starting point on a journey towards anticolonial futures.

My recognition of my position within an academic archaeology began with the acknowledgement that I didn't arrive at this place, co-directing an archaeological excavation at Ing'yuuq, on my own. I am here because of my relations – personal, professional, mentoring, readerly, community, etc. – and the support, teachings, wisdom, and stories they have given me on my journey to this point. This acknowledgement makes me feel gratitude and humility. It animates and motivates my archaeological research. It grounds me when I feel precarious, a state that graduate student life often prompts. It is why I do the work – to perpetuate and honor my relations, and to imagine futures for archaeology that are grounded in care (d'Alpoim Guedes et al. 2021; Lyons & Supernant 2020).

This dissertation explores various storytelling methods in archaeology, as situated within a community-based project in Old Harbor, Alaska, a Sugpiaq/Alutiiq community in the Kodiak Archipelago (Figure 1.1). In conducting and writing up my dissertation research, I have engaged with multiple genres of story, from interpretations of past lifeways based on archaeological evidence to imagined narratives of ancestral Sugpiaq experience to my own personal journey as a researcher and a scholar. These stories were generated as part of the Old Harbor Archaeological History Project (OHAHP). OHAHP's goal is to uncover Sugpiaq lifeways during the Russian colonial period (1760s to 1867 CE) in the Old Harbor region. My specific research interests within OHAHP are to understand labor practices, foodways, and elements of residence and governance among the residents of Ing'yuuq Village (KOD-114). Sugpiaq ancestors lived at Ing'yuuq, located on Sitkalidak Island, for at least a century prior to Russian arrival until the year 1840. This dissertation is based on archaeological excavations at Ing'yuuq, in addition to critical

examinations of the ethnohistoric and archival documentation of the Russian colonial period and ethnographic interviews with Old Harbor community members.

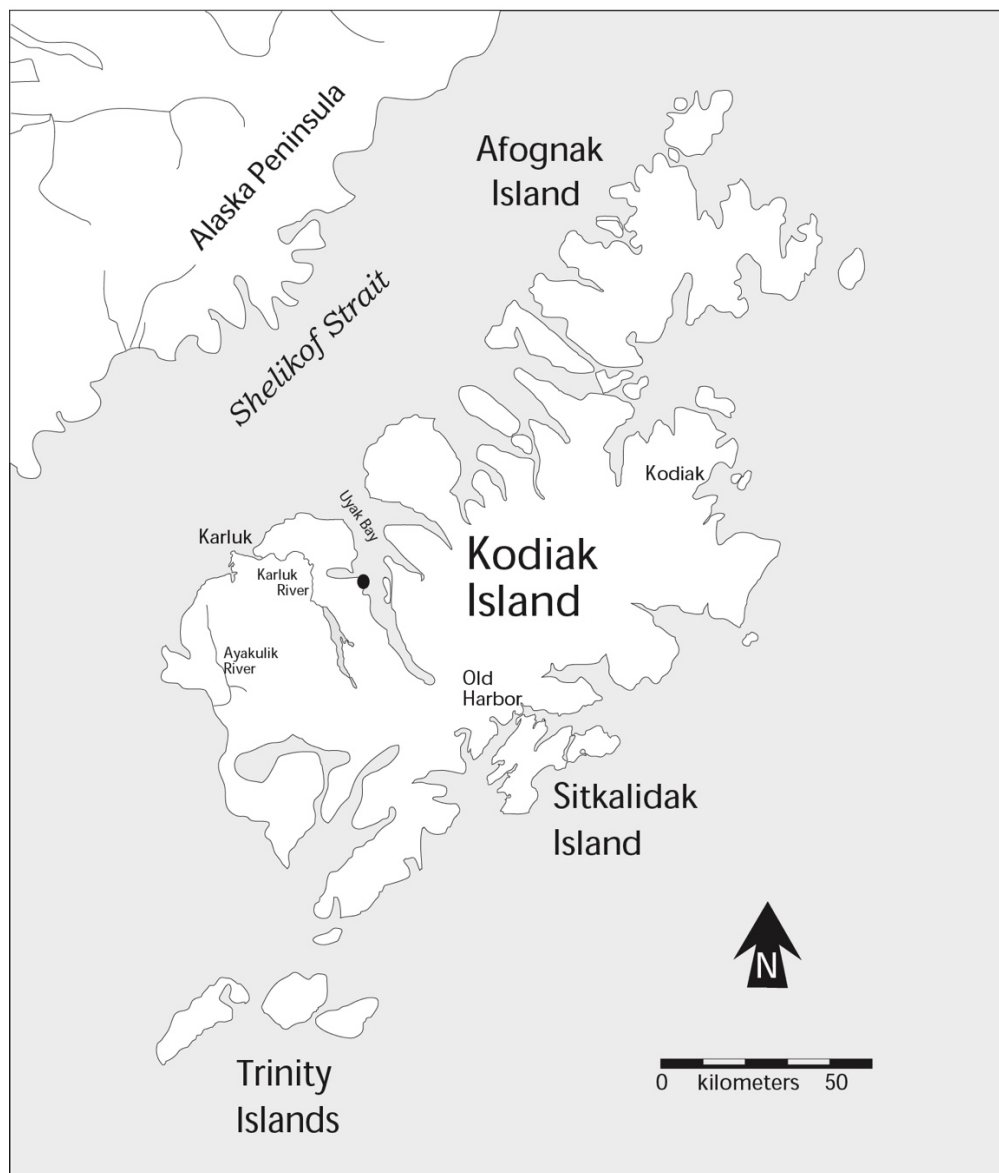


Figure 1.1: Map of the Kodiak Archipelago

While my goals with OHAHP are relatively straightforward within archaeological research traditions, I also designed this project to be accountable to the contemporary Old Harbor community. Keeping the research engaged and relevant to Old Harbor required/s some additional care and awareness on my part. I wanted to conduct the research in a way that would

be meaningful and relevant to people in Old Harbor and Sugpiaq/Alutiiq communities in general. While collaborative archaeologies are well-theorized within the discipline (Atalay 2012, 2020; Atalay & McCleary 2022; Colwell 2016; Lyons 2013; Silliman 2008; Supernant et al. 2020), pulling off a successful collaborative project is an immense undertaking that requires continual conversation and coordination with collaborators, as well as being open to critics who are not part of the academic process. There is no one-size-fits-all method for this kind of work. With OHAHP, I wanted to focus not just on process and method, but also to produce research outputs for multiple audiences – specifically for community members of Old Harbor, young people, and an academic audience. This dissertation is largely in the latter category, but it also includes outputs that were intended for Old Harbor, like Allison Pestrikoff-Botz’s narrative and Tamara Swenson’s artistic contributions in chapter two.

A Survivance Framework: Stories of Indigenous Pasts and Futures

Within the literature on collaborative and Indigenous archaeologies, I specifically draw on the concept of survivance to frame this research and ground my interpretations and conclusions within a Sugpiaq context. Survivance, as conceptualized by Anishinaabe scholar Gerald Vizenor, is “an active sense of presence and continuance of Native stories” within Indigenous communities (Vizenor 2008:19). As a concept, survivance informs theory, method, and action in archaeology (Kretzler & Gonzalez 2023) and is an important intervention within studies of settler colonialism, especially in North America. As theory, survivance decenters colonial narratives of victimhood and refocuses attention on how Indigenous peoples responded purposefully to colonial circumstances and ultimately have survived and continue to survive colonialism in settler nations (Acebo 2021; Acebo & Martinez 2018; Kretzler 2019; Walder & Yang 2018). Native communities were/are agents in colonial projects, not subjects to them (also see ‘thriveance’ in Acebo & Martinez 2018 and Acebo 2020). Communities can manifest survivance in various ways, such as refusal, adaptation, negotiation, resistance, residence, and

assimilation, among others (e.g., Nelson 2017; Schneider 2015). Each or any combination of these tactics may be used by different communities or individuals at different points in time. In this way, survivance as theory challenges archaeologists to adopt a strengths-based approach to interpreting and understanding Indigenous histories, rather than conceptualizing Indigenous communities through colonial lenses that highlight passivity, stasis, absence, or uniformity across communities (Joyce 2019; Panich & Schneider 2015; Rubertone 2012; Schneider & Panich 2022).

Survivance informs archaeological methods by encouraging researchers, especially those who are settler scholars, to consider multiple ways of knowing beyond the dominant systems of the academy. Epistemic diversity creates rigorous and robust research practices and interpretations (Atalay 2020; Wylie 2015, 2019), and often leads to new insights when data are contextualized within specific Indigenous epistemic communities (e.g., Gonzalez & Edwards 2020; Lelièvre et al. 2020; Sloan 2020; Supernant 2017). In my case, an engagement with survivance has led to the co-creation of storytelling methodologies with collaborators in Old Harbor. My collaborators, Allison Pestrikoff-Botz and Tamara Swenson, and I each offer different storytelling strategies for imagining the Sugpiaq past at the Ing'yuq site. Allison and Tamara, in particular, tell their stories for an Old Harbor audience and, in doing so, make the archaeological and historical research accessible to that community. When research is accessible, it also becomes accountable – a key component of good collaborative research. Accountability also leads to action, which is the third aspect of survivance that I wish to discuss.

A survivance framework (along with a participatory practice) puts archaeology into action in the service of Indigenous sovereignty and futurity. The material record, accessible through archaeology, holds information about the lives of ancestors that may have otherwise gone undocumented in the written or oral historical record. Those materials and belongings offer a tangible relationship with the past and a way to bring those stories and teachings into the

future. This is a process that Sugpiaq people practice through looking both ways¹ – drawing strength from the past to bring forth a vibrant future for generations to come. Some Indigenous and community-based archaeologists have theorized this process as “bearing witness”, or archaeology’s ability to document the past for the purpose of healing from historical or ongoing traumas and contributing to Indigenous well-being (Hauser et al. 2018; Montgomery & Supernant 2022; Schaepe et al. 2017; Simons et al. 2021). It is a researcher’s responsibility to do good for their partner community, not merely intend to do good. In thinking through survivance, archaeologists must become accomplices to movements for social justice in Indigenous communities, especially for the communities who entrust us with the care of their ancestors’ belongings and stories (Laluk et al. 2022; Schaepe et al. 2017).

Positionality Narrative

During my ongoing journey to develop an Indigenous and community-based archaeology project with the community of Old Harbor, Alaska, I have thought a lot about relationships through time. How do archaeologists build good relations with the ancestral peoples that we interact with through the very nature of our work? Our role is to put the past in conversation with the present; however, we are far from the only folks with the capacity or methodological tools to uncover the past or make cross-cutting connections. In the context of this research, I acknowledge and honor the fact that people in Old Harbor have their own stories and their own methods for knowing the past, and for imagining the future.

I received mentorship and training in Indigenous archaeology even before imagining a dissertation project or being introduced to Old Harbor. My first archaeological experience was with the Eastern Pequot Archaeological Field School in North Stonington, Connecticut in the

¹ “Looking both ways” is a quote from Old Harbor Elder Sven Haakanson, Sr. (1934-2002). He was interviewed in the 1990s for what would become the *Looking Both Ways* exhibition and published catalog of Alutiiq [Sugpiaq] culture and heritage (Crowell et al. 2001). In his quote, Sven, Sr. was discussing the process of simultaneously engaging with the past and the future and how important that process is to cultural revitalization on Kodiak.

summer of 2015. The field school was jointly run by the Eastern Pequot Tribal Nation and Stephen Silliman at University of Massachusetts-Boston (Sebastian Dring et al. 2019, Silliman & Sebastian Dring 2008). At the time, I was already accepted as a graduate student in archaeology at the University of Washington, but I had not yet begun the program. Thankfully for my impending graduate training, I quickly learned that I liked archaeological fieldwork, but more importantly, I got to witness and participate in a mature Indigenous archaeology project before it was time for me to formulate my own dissertation. Dr. Silliman was very open with the students about how the project was co-created with the Eastern Pequot to provide archaeological training for the next generation while also supporting the Nation's application for federal recognition. It was part of the field school curriculum to learn about how Dr. Silliman built and managed his relationships with tribal members and leadership in the context of the project. Most of this training happened through storytelling after dinner in the student apartments we shared that summer. Sometimes these stories were planned (and we had readings to do beforehand), but often they were impromptu. Sometimes tribal members visited to share their stories as well. I did not fully appreciate how much I learned about collaboration, relationality, and heritage at the field school until I had a few graduate school courses under my belt and had been exposed to more of the extractive history of American archaeology. I did not realize that I was learning a way to practice archaeology *otherwise* (see King et al. 2020).

After my experience with the Eastern Pequot Archaeological Field School, my training in Indigenous archaeology continued in graduate school through courses taught by Sara Gonzalez. In addition to coursework on historical archaeology and Indigenous and community-based archaeology, Sara became an important mentor for me as a woman coming into archaeology and as a student interested in stretching the boundaries of what archaeology can be. I also admired the project that Sara and her then graduate student, Ian Kretzler, were co-directing with the Confederated Tribes of Grand Ronde in Oregon, where they were documenting Grand Ronde residence and strategies of survivance on the reservation (Gonzalez et al. 2018; Gonzalez &

Edwards 2020; Kretzler 2019). My participation in that project, named Field Methods in Indigenous Archaeology (FMIA), was another pivotal moment in my training. FMIA gave me an example of how archaeology, in a community context, could be about more than excavation and material analyses: it could be about plant walks to learn about traditional foods and gather berries, it could be about attending powwow events, it could be about learning to dance at Achaf-Hammi (the plankhouse). Of course, in this and many other cases, excavation and material analyses are part of the research process too, but those activities are situated in the relationships that the archaeologists have with community and with fellow field and lab team members. I am grateful for the mentorship and scholarship of Stephen Silliman and Sara Gonzalez, which enabled me to envision good community-based archaeological practice on which to build a dissertation and a hopefully lifelong project with Old Harbor.

I have built a relationship with Old Harbor over the past six years and developed my dissertation research in partnership with this community to meet their needs as well as my interests as a scholar. Part of doing storytelling work is establishing relational accountability – that is, relationships built on trust and mutual respect. Those relationships only come about when people get to know one another, not just as researchers or research partners, but as people. This is an ongoing and rewarding process that is embedded in my archaeological work.

I am fortunate to have been introduced to Old Harbor by my PhD adviser, Ben Fitzhugh, who completed his own dissertation work on Old Harbor lands (Fitzhugh 1996a) after an introduction to the community by Sven Haakanson Jr. in the early 1990s. Sven is Sugpiaq and grew up in Old Harbor, raised by two community leaders and, eventually, Elders, Sven Haakanson Sr. and Mary Haakanson (née Christiansen). It was because of this history and Ben's lasting relationships with the Old Harbor community that it was even possible for me to pursue a new project with Old Harbor beginning in 2017. Not coincidental to this story, Sven Jr. is also a faculty member at the University of Washington and curator at the Burke Museum of Natural History and Culture in Seattle. He is a member of my dissertation committee and has been an

important mentor in the development of my research. Another reminder that we never work alone. We never work outside of relationships and histories.

In early 2017 I was finishing up my second year of graduate school and feeling pressure to decide on a dissertation project. I felt that my peers already had plans and research locations, while I was still trying to learn how to be an independent adult, let alone an archaeologist. This was a time that I was also thinking and learning more about the colonial relations embedded in archaeology and becoming excited about the ways some folks were starting to disassemble and rebuild the practice of archaeology. A key piece of reimagining archaeology is bringing in many and diverse voices to conversations about heritage – doing archaeology with, by, and for communities (Atalay 2012). I was experiencing some intellectual dissonance and thinking deeply about how I could engage in this process as a white settler (Miller 2021). I didn't have a clear vision for myself yet, but I had started to make intellectual commitments through opportunities such as the Preserving the Past Together seminar series (Gonzalez et al. 2019) and the Field Methods in Indigenous Archaeology program.

At this key point in my trajectory, Ben invited me to visit Old Harbor. He had wanted to discuss new project ideas with community leaders and thought it would also be a good time to introduce a new graduate student to Old Harbor. I was very nervous about going but quickly fell in awe of the stunning setting and community warmth that I experienced. Ben and I were graciously hosted by Mary Haakanson and her daughter, Phyllis Clough (Sven Jr.'s sister), who showed me all the best of Old Harbor – banyas, visits to watch the dump bears, alacit (fry bread), endless teasing, good storytelling, laughter, church services, and berry picking, among other joys.

That summer Ben and I travelled around the Old Harbor region visiting known archaeological sites to assess their condition and think about potential new research projects. This was also my crash course in Kodiak archaeology – learning how to predict where ancestors would have chosen to live, getting accustomed to stomping around hummocky terrain feeling for

house pits with my feet, recognizing the plants that prefer archaeological soil, tripping and falling on this unfamiliar land more times than I would like to admit. In addition to those day trips, we spent time in the village chatting with people. For Ben, this was a chance to catch up with old friends, while I was being introduced as a new face and a new potential collaborator. Through these conversations we learned that the highest priority for Old Harbor in terms of archaeological research was that youth were involved. Ben had organized and run a successful field program for Old Harbor middle and high school students as part of his dissertation and post-dissertation research (Fitzhugh 2001a) and they asked that we do something similar with the new project.

From that first summer's conversations and site visits, I started to develop the research questions that would become OHAHP and this dissertation. I wanted to understand how Sugpiaq ancestors navigated Russian colonialism, and how those actions led to the formation of the contemporary community of Old Harbor. I brought these questions back to the community in 2018, and then Ben and I used them to launch the Old Harbor Archaeological History Project. With OHAHP, I committed to answering these questions through community-engaged work, which includes paid youth internships, K-12 classroom engagement, online spaces for conversation and updates on Facebook and a project blog, and building a youth camp program with the Old Harbor Native Corporation. I would not have been able to imagine or build such a project without the intellectual and field experiences that I had had up to that point, nor without the development of good relations with Old Harbor, so those stories are important context for, if not part of, this dissertation.

Building a Research Project: Aspiring for CBPR

As many contributors to *The Community-Based PhD* (Atalay & McCleary 2022) describe, it takes many years to build a community-based participatory research (CBPR) project because researchers have to establish trust and accountability with the partnering community before the

partners are able to share knowledge and decision-making power in a research project. As I described in my positionality statement, I was able to make early connections with Old Harbor community members because my mentors already had deep relationships in Old Harbor – without those connections, I doubt that a community-based project would have been possible for this dissertation. While the foundation of my relations in Old Harbor are solid, OHAHP as a project is still aspiring to be participatory in all aspects.

Old Harbor leaders across the institutions that support the community (i.e., the Alutiiq Tribe of Old Harbor, the Old Harbor Native Corporation, the Old Harbor Alliance, and the City of Old Harbor) have given full consent but minimal input into the research questions that guide OHAHP. Their interventions have regarded how OHAHP works with the community, especially youth, rather than on what specifically the project studies. At times, the fact that community leaders did not seem to want to participate in framing the research bothered me – I wanted to do things by the book (the book being Sonya Atalay’s *Community-Based Archaeology* [2012]). Over time, however; I learned that that is not how CBPR projects happen, they do not just work out because of good intentions, nor do they look the same in every community. CBPR is an aspiration to work towards as a project grows and matures. So, while I developed OHAHP’s framing and made the day-to-day decisions about how the project would be run, I kept asking for input from Old Harbor. Eventually, once the project was established, some community members (i.e., my co-authors in chapter 2) elected to participate directly in the intellectual work of the project.

The community needed to witness evidence of my commitments and watch my follow-through in designing programs for Old Harbor youth and in sharing knowledge from the project with the community, before deciding if OHAHP was a worthwhile investment of their time and energy. That process is ongoing, as it should be. As this project and my engagement with Old Harbor continue post-dissertation, the work is becoming more participatory. For example, the Old Harbor Native Corporation is working closely with OHAHP to build programming for a

youth archaeology camp in July 2023 and to design a future research project that uses archaeological evidence to support Sugpiaq fishing rights and advocate for Indigenous co-management of fisheries.

Summary of the Work

In chapter two, my co-authors, Allison Pestrikoff-Botz and Tamara Swenson, and I outline the theoretical foundations of our storytelling work in archaeology. We draw from both Indigenous and feminist writings to argue that storytelling is necessary in order to make sense of empirical data. We must put datapoints in relation with one another to understand what they mean. Different methods of storytelling have a place in the practice of archaeology from initial formation of a research question to the sharing of results with community members and heritage professionals. Within community-based work, it is crucial that we make our results and interpretations legible to the specific community with whom we work. This is something that OHAHP accomplishes with youth programs and the sharing of story- and art-based outputs. In the chapter, I review existing information from historical accounts and archaeology to construct story-models that generate predictions for new archaeological research into the Russian colonial period at the Ing'yuyq site. My co-authors and I then braid these story-models together with personal field narratives, artistic interpretations of the Ing'yuyq site, and an imagined narrative about the Sugpiaq experience of initial Russian arrival in their homelands. Taken together these different storytelling strategies create a more nuanced picture of Sugpiaq lifeways at Ing'yuyq – a picture that includes the historical, emotional, and experiential context of relations to this specific place on the land.

In the third chapter, I begin to introduce and interpret the archaeological data the OHAHP field team collected from Ing'yuyq, specifically examining the archaeofaunal data in the context of survivance research. Food harvesting is imbued with relationality to the land and other living beings, and thus is part of Indigenous identity. I compare faunal data from

precolonial and colonial midden contexts to explore how Sugpiaq ancestors negotiated their harvesting and subsistence practices amidst the challenges of Russian colonialism. To get historical and Sugpiaq cultural perspectives, I put the faunal data in conversation with ethnohistoric data and ethnographic interviews with contemporary Sugpiaq residents of Old Harbor. I argue that Sugpiaq ancestors maintained their traditional diet as much as possible during the Russian colonial period, which I interpret as signaling an assertion of Indigenous identity, perhaps as a way to create solidarity in times of rapid change. Many of those harvesting strategies are still practiced by Sugpiaq people today.

Chapter four presents the belongings, or artifacts, collected from the Ing'yuyq site as another line of evidence through which to explore Sugpiaq survivance. I work through both standard archaeological analysis of the belongings and three object-centered vignettes. The former consists of functional analyses to interpret Sugpiaq activities at the Ing'yuyq site and compare its assemblage to those from other contemporaneous sites, while the latter consider the histories of ulus, glass beads, and locally made pottery, respectively, as they were used by ancestors in the village. In analyzing the data using these two methods, I identify some of the ways that Sugpiaq ancestors responded to colonial impositions, including centering community and care by intentionally creating spaces to gather, maintaining land relationships, and continuing to craft well-made tools.

Taken as a whole, this dissertation contributes to the discipline in three primary ways: the presentation of new archaeological data from Ing'yuyq Village, strategies for community-oriented science communication, and theorizing storytelling as an interpretive method in archaeology. OHAHP and this dissertation are scholarly projects, but I have also worked to keep them meaningfully connected to the Sugpiaq community of Old Harbor through science communication tailored for their interests and needs. Some examples are a youth internship program, close collaboration with Sugpiaq writers and artists to share and interpret archaeological findings, and the creation of social media content and an educational video for a

Sugpiaq audience. I prioritize Old Harbor's needs as a way to ensure that I am not removing knowledge from the community, but rather making sure this knowledge is able to be interpreted and used by community members as they see fit. Storytelling is a large part of this science communication, but it is also a method for archaeological interpretation. In using multiple storytelling strategies throughout this dissertation, I aim to showcase a grounded method for making sense of archaeological data within an Indigenous survivance framework that weaves together cultural stories, archaeological data, personal narratives, and oral history to prioritize Indigenous experiences in our telling of Indigenous histories.

Chapter 2: Braided Storytelling as a Method in Archaeology: Reimagining the Sugpiaq Past through Story

Hollis K. Miller¹, Allison Pestrikoff-Botz², & Tamara Swenson³

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2. Author/Artist, Sugpiaq Alutiiq from the Villages of Afognak and Old Harbor
3. Unangax[^] and Anishinaabe artist from Old Harbor, Alaska; Member of the Alutiiq Tribe of Old Harbor

Introduction

We were dropped off on the beach as the sun was starting to go down. All the excitement leading to this moment of arrival fell away as I watched the boat depart. We were alone at Tanginak (Figure 2.1). It took us the rest of the daylight hours to organize our gear and begin setting up our camp – our home for the next three weeks – a quarter mile uphill from the beach. I was unsettled that evening in my tent. Everything was new and the sounds were unfamiliar.

Eventually, I fell asleep and awoke the next morning with a new energy. Seeing our surroundings in the morning light put things in a better perspective. Here we were surrounded by Sugpiaq history and the lives of ancestors. We had slept atop the oldest archaeological site on the archipelago and, from that vantage, could see traces of Sugpiaq life stretching from 7,500 years ago to the present resting among the fireweed, salmonberries, putchki and nettles. I had not expected all this interconnection, although I should have. I had been so focused on a particular time and a single village, Ing'yuuq, that I had overlooked how Ing'yuuq was wrapped in a thick cloak of multigenerational, multimillennial lives and activities. Our presence here was merely a drop in the bucket.

We slowly became familiar with Ing'yuuq, our small team uncovering the sedimentary layers of its history in little squares, but the village was not yet ready to share what it had witnessed. We found very few artifacts, or ancestral belongings, but there was an abundance of charcoal-stained soil, fire-cracked rock and animal remains – evidence of a significant residence by Sugpiaq ancestors. It was not until the final day of excavation that we uncovered belongings – a slate ulu and a stone lamp, lying upside down on the floor of a house. Touching and holding artifacts, objects, belongings is powerful as you share a moment with those who made, used, and discarded them – uniting those pasts and this present.

-Hollis Miller, on archaeological field work at Ing'yuuq Village, 2019



Figure 2.1: Dawn in Tanginak Anchorage, Sitkalidak Island, July 2019. Photo by Hollis Miller

The primary task of the archaeologist is building relationships in the present. These present-day relationships are formed with descendants and tribal citizens, interested members of the public, their fellow field and lab crew mates, state and federal agencies, place (i.e., sites and landscapes), and the artifacts or belongings they collect, analyze and care for. While archaeologists have long recognized that their discipline is a practice in the present that seeks understandings of the past through the study of material traces in their current context (e.g. Schiffer 1987), it is less widely acknowledged that archaeology is immersed in the *social relations* of the present. Thus, we argue that we must keep in good relation in order to do good archaeology. Good archaeology, in an Indigenous context, encompasses a high standard of

ethical practice, a commitment to robust interpretations, and an investment in Indigenous futures (Atalay 2012; Gonzalez et al. 2006; Wylie 2019). The specifics of keeping in good relation vary from community to community, but shared central tenets include respect, trust, grace, humility, and deep listening (Gonzalez & Edwards 2020; Hoffmann 2020; Lelièvre et al. 2020). Archaeologists should work to build relations before or simultaneously with designing an archaeological project with descendant communities.

This paper is about storytelling as a method in archaeology and science communication. Storytelling can take many forms, but here we define it as telling narrativized versions of events to convey information, history, values and/or experiences. A key component of storytelling in Indigenous contexts is that the speaker/writer and listener/reader are identified (Wilson 2008). In other words, storytellers speak/write for a specific audience in each iteration of the story, and listeners/readers know who they are learning from. In this way, relationships are built into the storytelling (or the research) itself (Hodgetts & Kelvin 2020; Million 2009; Wilson 2008). We argue that different methods of storytelling have a place in the practice of archaeology from initial formation of a research question to the sharing of results with community members and heritage professionals. There is no one-size-fits-all model for community-based research and communication, but we must make our results and interpretations legible to the specific community with whom we work. Here we focus on the ways that personal, imagined, and scenario-driven narratives can be used as part of archaeological research with the Sugpiaq community of Old Harbor, Alaska. We braid together these different narratives to form a deeper understanding of Sugpiaq pasts.

Building Relations in, with, and for Old Harbor

Old Harbor is a Sugpiaq² (also called Alutiiq, see Csoba DeHass 2012) community in Alaska's Kodiak Archipelago (Figure 2.2). Sugpiaq homelands include the Kodiak Archipelago, the Alaska Peninsula, the Outer Kenai Coast and Prince William Sound. This broad territory encompasses many Sugpiaq communities with their own histories and relationships to one another, as well as speakers of several dialects of Sugt'stun. On Kodiak, Old Harbor is one of seven tribal communities in the archipelago, and the community's traditional lands and waters include most of the southeastern side of Kodiak Island, as well as Sitkalidak Island. The Alutiiq Tribe of Old Harbor and the Old Harbor Native Corporation have worked tirelessly to ensure continued access to their homelands for subsistence, ceremony, and economic engagement. It is very expensive to bring groceries into small remote villages like Old Harbor, so the Tribe and the Native Corporation emphasize food security in their work. For example, the Old Harbor Alliance (a nonprofit supported by the City, Tribe, and Native Corporation) has engaged in food projects such as managing a bison herd on Sitkalidak Island, building and maintaining greenhouses in Old Harbor, and investing in hydroponics within the community. The foods generated from these projects are redistributed within the community so that everyone, especially Elders, have access to healthy foods at no cost.

People in Old Harbor today find work primarily in the fishing industry, in local and regional service organizations or governments, or in the tourism and sport hunting and fishing industry. Just as their ancestors have for millennia, Sugpiaq people in Old Harbor harvest a bounty from the highly productive waters of the Gulf of Alaska, especially from the rich salmon runs that spawn all five types of Pacific salmon. Animals and plants harvested for subsistence are shared by the harvester with community Elders and family members, so that no one goes

² We purposefully use Sugpiaq, instead of Alutiiq, because Sugpiaq is the original name for this language/culture community. Sugpiaq means "real person". Sugpiaq is increasingly becoming the name of choice used by Indigenous Kodiak Islanders, although Alutiiq (which is the Indigenized version of the Russian term "Aleut") is also widely used and accepted.

hungry and the ‘old timers’ have access to their favorite delicacies. Those strong relationships with homelands and waters are part of what it means to be Sugpiaq today.

While Tamara and Allison grew up in Old Harbor and are enrolled in the Alutiiq Tribe of Old Harbor, Hollis is a settler scholar who was a graduate student at the University of Washington in Seattle when she was first introduced to the community by her advisor, Ben Fitzhugh, in 2017. Hollis arrived in Old Harbor that summer not knowing what to expect but hoping to develop a dissertation project with the support and input of Old Harbor leaders. While Old Harbor leaders did not have guidance on research questions to be explored in a new project, they did give their conditional approval for new archaeological research, provided that any new project engage with Old Harbor youth. This request for youth engagement in the research fundamentally shaped the methodological and theoretical design of the project. We couldn’t successfully involve youth without “looking both ways” (Crowell et al. 2001) at Sugpiaq pasts *and* Sugpiaq futures. Youth are the future and remind us why we do archaeological work. We are preserving archaeological heritage for the future generations. Furthermore, youth inspired Hollis to look for ways to make the archaeological research accessible and relevant to Old Harbor. She quickly learned that she needed to create community-facing products that would resonate with the descendant community, while also providing opportunities to engage with the research as it happens. In other words, youth brought Hollis to think deeply about storytelling, and from there she reached out to find collaborators in Old Harbor who would be interested in developing methods to share research with the community in meaningful ways. Allison and Tamara became those vital collaborators and co-authors.

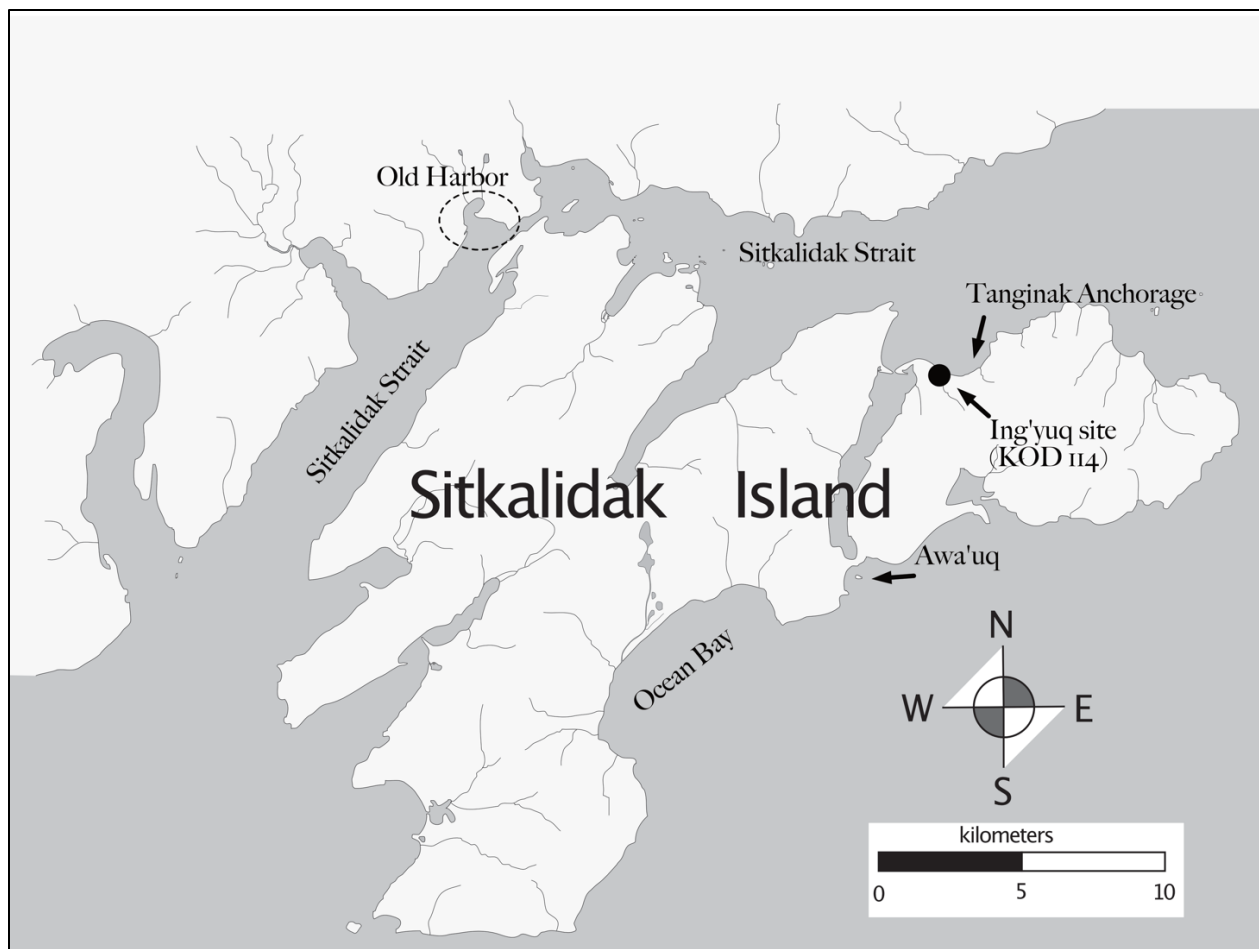


Figure 2.2: Map of the Old Harbor region and Sitkalidak Island in the southeast Kodiak Archipelago, showing the names of places mentioned in the chapter

From that first summer’s conversations and site visits, Hollis started to develop the research questions that would become her dissertation. She was interested in archaeologies of colonialism and curious about how Sugpiaq ancestors, who were central to Russian colonial projects, had navigated the vicissitudes of Russia’s unique colonial approach to Alaska. A key component of this research is survivance, a concept defined by Anishinaabe scholar Gerald Vizenor as “an active sense of presence and continuance of Native stories” within Indigenous communities (Vizenor 2008:19). Survivance is about more than just survival because it focuses on how Native peoples chose to live *against, through, and with* the challenges of settler colonialism. Native communities were agents in colonial projects, not subjects to them (also see

thriveance in Acebo & Martinez 2018 and Acebo 2020). Furthermore, doing survivance work within archaeology requires that researchers reckon with the colonial histories of the discipline and purposefully support Indigenous sovereignty and futurity (Acebo 2021; Kretzler & Gonzalez 2023). As we will describe in the following sections, we mobilize survivance as a concept through storytelling and through keeping the research project connected with Sugpiaq youth.

What did survivance look like within colonial period Sugpiaq villages and how did the ancestors' perseverance lead to the Old Harbor community that exists today? These are the questions that Hollis brought back to the community in 2018 and that she and Ben Fitzhugh used to launch the Old Harbor Archaeological History Project (OHAHP). OHAHP is committed to answering these questions through community-engaged work, which includes paid youth internships, K-12 classroom engagement, online spaces for conversation and updates on Facebook and a project blog, and eventually building a youth camp program with the Old Harbor Native Corporation. Interpreting ancestral Sugpiaq homes, belongings and histories through storytelling is another way to make sure that Sugpiaq voices and ways of knowing remain central to the research.

The community-oriented nature of OHAHP is vital. Without the grounding in the good relations that Ben and Hollis have tried to build with Old Harbor, this project would not exist, nor would the research be as meaningful or robust. Storytelling as a method of inquiry allows space for interpretations of multiple Sugpiaq pasts, while also being an essential tool for conversation about those interpretations with the Old Harbor community. The details matter. Specificity matters. When archaeologists talk about people in the past, we are talking about real ancestors, real people. Thus it is important that archaeological research about Sugpiaq pasts engage with Sugpiaq storytelling strategies. And this storytelling is not only for community, but a gift from community that allows non-Sugpiaq people to better understand Sugpiaq history and Sugpiaq ancestors. This pushes back on dominant academic discourse and asks

readers/listeners to foreground Sugpiaq perspectives and dispel notions of scholarly superiority or ownership of historical narratives.

The driving goal of OHAHP is to learn how Sugpiaq communities navigated Russian colonialism in the Kodiak Archipelago. Specifically, the project focuses on Sugpiaq daily life and practice – the very essence of persistence and resistance – during the Russian colonial period from the mid-1700s to 1867, before Russia sold Alaska to the United States. In the face of these challenges, how can we see resistance, persistence, and change through the daily practice of Sugpiaq ancestors in their village communities (Peelo 2011; Silliman 2000, 2009)? We use the lenses of foodways, labor, and residence to examine this broader question at two ancestral Sugpiaq sites near Old Harbor, Ing’yuyq (occupied ~1650 to 1840, located in Tanginak Anchorage on Sitkalidak Island) and Nuniaq (occupied 1840s to 1870s, now within the modern village of Old Harbor). How does Sugpiaq practice around food (including harvesting, processing, cooking, and disposal) change through the colonial period? What kinds of work or labor are people doing, both at the demand of the Russian American Company and for their own households? How are Sugpiaq folks maintaining their houses and managing ceremonial practices? These guiding questions focus OHAHP’s work firmly within ancestral Sugpiaq households and living spaces.

Social identities are interwoven with practice (Frink 2009, 2016; Lepofsky et al. 2009; Moss 1993), so OHAHP investigates how the experience of Russian colonialism was gendered or aged. At Ing’yuyq specifically, most residents would have been women, children, and Elders after the massacre at Awa’uq because Sugpiaq men were conscripted to hunt sea otters across the North Pacific, with many never to return home. Thus, the Ing’yuyq community would have been held together and supported by the work of Sugpiaq women, whose lived experience of Russian demands was very different from that of their male kin. Research at Ing’yuyq should therefore speak largely to women’s experiences, which are essentially undocumented in written accounts of Russian colonialism.

We explore these questions using ethnohistory, archaeology, and oral history. Ethnohistoric data, which comes from documents written by Russian and other European or American sailors, officers, and company employees, provides an outline of historical events and policies imposed on Sugpiaq communities, but usually says little about what Sugpiaq lives were like. Those gaps are addressed and illuminated by archaeological and oral historical research. From the archaeology, we draw data from the excavation of middens and houses, as well as mapping the sites of Ing'yuq and Nuniaq to learn about the lived experiences of ancestors in these places. Finally, oral history connects the past to the present community of descendants. While most specific histories of Russian colonialism are no longer remembered in Old Harbor, a deep knowledge of and relationship to the land and water remains. That knowledge helps us better understand the ancestors as people situated in a specific Sugpiaq community and a specific place. In the next section, we discuss the theoretical foundations of our storytelling practice.

Relating through Stories

Archaeologists already think about the past through stories. Oftentimes these stories are imagined on the spot, when we are sitting in the dirt and uncovering an object that hasn't been held by human hands in generations. Our hypotheses and explanations are stories too, although they are not often described that way in the academic literature. What is usually missing from academic archaeological stories though, is a consideration of relations to place and ancestors, as well as an acknowledgement of our own authority and power as authors. Empirical evidence is meaningless without the relational logics of storytelling to bind it together – and this requires some imagination. The storytelling we do in this paper draws both from storytelling traditions in archaeology (see Battle-Baptiste 2011; Joyce 2002; Spector 1993; Tringham 1994; Van Dyke & Bernbeck 2015; van Helden & Witcher 2019) and those from Old Harbor. We place these stories

on even footing because each storytelling tradition has its own work to do. Together they create a conversation, rather than a monologue.

We would not be able to do our storywork had others not led by example and shown us how narrative, fictive, and personal storytelling could be compatible with archaeology. Storytelling has always been a part of archaeology, but the limited positionalities of most archaeological authors have greatly impacted the depth and meaning of those stories. From early forays of settler feminist archaeologists into fictive and personal narratives like Janet Spector's *What This Aul Means* (1993) to today's full embrace of narrative and emotion by Indigenous and community-based archaeologists in volumes like *Archaeologies of the Heart* (Supernant et al. 2020), the landscape of archaeological storytelling has grown in exciting ways. We are thrilled to contribute to this expanding area of archaeological writing and interpretation.

Of course, our work is rooted not just in archaeological practice, but also in Old Harbor and in Sugpiaq/Alutiiq storytelling traditions. So before we go further, we want to thank Larry Matfay, Grandma Sasha Christiansen, Olga Keim, Mary Haakanson, Papa George Inga, Judy Simeonoff, Mary Peterson, June Pardue and all the Elders and storytellers who shared their gifts with the community, with us, and sometimes also with the world through publication, artwork, and recordings. We write for you. Quyanaasinaq.

We also find inspiration in the work of Sugpiaq/Alutiiq scholars and community leaders at the Indigenous-run Alutiiq Museum in Kodiak, Alaska, who have released numerous publications, podcasts, exhibits, workshops, and events that support Sugpiaq/Alutiiq culture and people past, present, and future. We recognize the thoughtful storywork done in *Iqsanim Ancirsuutii – Iqsani's Trout Hook* (Drabek & Lacy 2021), which combines fiction, illustration, and community-based archaeology in ways that bridge multiple audiences. We attempt to do that here as well. Other Sugpiaq writers and artists have found additional creative means to

work with and through their histories.³ For example, Sugpiaq poet Abigail Chabitnoy uses poetry to explore her great-grandfather's removal from Kodiak to the Carlisle Indian Industrial School in Pennsylvania and her family's subsequent forgetting and remembering about their Sugpiaq ancestors over the course of generations (Chabitnoy 2019). Through these approaches, Sugpiaq/Alutiiq creators show how ancestors remain important agents in the present and sources of strength for the future.

Feminist and Indigenous Foundations for Storytelling

Our method of storytelling is rooted in feminist and Indigenous critiques of science and archaeology. These critiques highlight the colonial, racist and/or masculine biases that are reinforced when archaeologists draw interpretations from a single epistemic community or discipline (Wylie 2015). Unchecked and unacknowledged, those biases can not only lead to less robust interpretations, but they can also do harm to those communities that have been “dispossessed by dominant narratives” (Wylie 2008: 210; Blakey 2008). As part of Indigenous archaeology practice, then, we must not only seek to avoid doing harm, but we should actively take care and do good for our partner communities and organizations. This can begin epistemically by drawing from multiple lines of evidence. Because different communities of practice have different standards to assess what is good evidence or good reason, when we draw the threads of research together from multiple sources, we get more robust inferences about the past (Wylie 2008, 2015, 2019). Combined inferences resist the norms of practice in any one discipline or epistemic community, which, when done well, can avoid disciplinary blind spots by forcing us to consider multiple perspectives and positions. In our case, we pull threads from archaeology, the Old Harbor community, and Indigenous studies to imagine and interpret the lives of Ing'yugmiut – the Sugpiaq ancestors who lived at Ing'yuq Village.

³ See, for example, the work of contemporary artists Hanna Sholl (<https://www.fineartsbyhannasholl.com/works>) and Lena Amason (<https://alutiiqmuseum.org/shop/artist-bios/233-lena-amason-berns>)

Feminist critics of archaeology (and of science more broadly) note that the emotional and social components of research are often feminized and therefore devalued (Baxter 2020; Hodgetts & Kelvin 2020; Surface-Evans 2020). Archaeology continues to “privilege an etic perspective that claims moral authority from a supposedly objective and disengaged practice” (Surface-Evans 2020: 73). In seeking a particular kind of objectivity, archaeology reinforces colonial logics by erasing the fact that a large amount of archaeological research is done from a relatively narrow white, male perspective. While archaeologists who work with Indigenous communities must grapple with their own subjectivities as part of their research, those considerations and conversations are not often included in academic publications (see Gero 2007). Whether intentional or not, these omissions devalue the importance of that emotional-epistemological labor. Alison Wylie’s feminist commitments are one way that feminist archaeologists have attempted to address this epistemic imbalance (Wylie 2007), and they have since been further updated by Black feminist archaeologist Kathleen Sterling (2015). Wylie’s and Sterling’s commitments explicitly acknowledge that research is situated with the interests of the researcher, so the discipline must have a diversity of researchers in order to foster “a conceptually richer, empirically more robust, and more broadly accountable responsible archaeology for the future” (Wylie 2007: 215).

Archaeologists that work with Indigenous communities have the important challenge of countering colonial narratives of erasure and dependence. This is caring work that requires a diverse research team to truly bring together multiple perspectives in methodology, epistemology, interpretation, and community outcomes (Atalay 2020). Natasha Lyons and Kisha Supernant conceptualize this kind of work as archaeology of the heart (2020). Archaeology of the heart has four central features: rigor, care, relationality, and emotion, which together make an archaeological practice for the whole person (Ibid: 1). Rigor (drawn from the Sandra Harding’s [1995] concept of “strong objectivity”) requires scientists to acknowledge that social inequality exists everywhere, including in science, so we must gather and evaluate

multiple perspectives on truth to come to the best interpretation. Self-reflexivity is an essential part of this process, as it prompts identification of our own blind spots and understanding of the web of relations in which we are embedded (Lyons & Supernant 2020; Wylie 2015).

Western knowledge systems tend to compartmentalize, so part of decolonizing knowledge production is unpacking those boxes and allowing ‘facts’ to piece back together into stories and narratives – those facts need to be in relation again (Million 2014: 320). In Indigenous scholarship, *relationality* is epistemology and methodology. All knowledge is embedded in specific relationships with kin, with ancestors, with non-human relatives, with place, etc. (Wilson 2008). For example, in Western Apache epistemology, place itself is what unifies time – where something happened is much more important than when it happened (Basso 1996). Histories and teachings are legible on the landscape to those who know how to detect them and then re-speak them into being again, in the language of the ancestors (Ibid). How can an outside academic author attempt to access these histories without deep collaboration with contemporary Indigenous community members, who already know the land and its places intimately?

Indigenous scholarship requires those relationships and collaborations. Even a literature review is about building relational accountability with (Wilson 2008) and giving thanks for (Liboiron 2021) the work that has come before. In writing research, as in talking story, the writer/speaker is actively forming a relationship with the reader/listener. Opaskwayak Cree scholar Shawn Wilson purposefully writes his book *Research Is Ceremony: Indigenous Research Methods* to a known reader, his sons, because he has already built relational accountability with them and knows what kind of information and stories they need in order to understand his research, and, by extension, learn more about Wilson himself (2008). Wilson writes to deepen his relationship with his sons and to imagine a better world for them to inherit as adults. How authors write and present their research matters. The writing itself reflects the values and paradigms of the author/s. In Indigenous Studies scholarship, knowledge is

produced for community and to honor sovereignty (Schneider & Hayes 2020). In contrast, archaeology has long produced knowledge for an imagined and narrowly defined scientific progress or ‘universal good’ (Ibid: 132). Archaeologists, especially settler scholars working with Indigenous communities or their ancestors, must fully consider the questions “for whom do we produce knowledge?” and “how can we be more accountable to the communities with whom we work?”.

We argue that as humans, emotions are a part of our research story – from the excitement of unearthing an ancestral belonging to the boredom of repetitive lab tasks, and every other positive, negative, and ambiguous emotion along the research journey. We feel our way through research as much as we think our way. As Tanana Athabascan scholar Dian Million articulates with her concept of felt theory, feelings and emotional experiences are ways of knowing and theorizing, too (Million 2009). The past is emotional, we all have emotional relationships to some past or pasts. This is especially true in Indigenous communities, as they continue to navigate the impacts of centuries of ongoing settler colonialism. Thinking and feeling the past through stories is a way to honor beloved ancestors and the process serves as a springboard for imagining possibilities for the future (Million 2014). As we work with the stories of Sugpiaq ancestors, it is important that two of us (Allison and Tamara) are Native Alaskans who grew up in Old Harbor. For too long it has been the imaginations and emotional experiences of outsiders and settler scholars alone that have crafted stories of Indigenous life from archaeological or ethnographic evidence. Those written, academic, often detached or “objective” voices have become history (Haakanson 2010).

As part of our commitment to foreground Sugpiaq survivance, we write to counter colonial narratives of Native passivity or stasis or disappearance. We write to learn, to teach, and to heal. We write to honor our various relationships to, with, and in Old Harbor. We write for our friends, our children, our parents, our colleagues, our Elders, the ancestors. Those

relationships keep us accountable to the evidence we collect, to the places and people who inspire us in our storytelling, and to ourselves.

Writing Engaged Stories

In theorizing archaeological storytelling with community, we focus on two intertwined themes: 1) fostering an activist and engaged practice and 2) foregrounding care, healing, and respect. These themes are enacted through stories that create connections between pasts and futures. Whitney Battle-Baptiste's *Black Feminist Archaeology* (2011) is a prime example of how this kind of storytelling can be realized in archaeology. She argues that archaeologists must consider the intersectional identities of people in the past and "...always understand [their] own position as a researcher in the overall scheme" (2011: 67). Battle-Baptiste grounds her archaeological writing in her experience as a Black woman archaeologist by telling stories of going through graduate school or conducting the research – writing as an act of reflection and self-care. These personal stories are interspersed with her data-driven, but still emotional, stories about The Hermitage, Lucy Foster's Homestead, and the W.E.B. Du Bois Boyhood Homesite. In helping her reader understand Black women of the past as whole people, while elucidating her experience as a Black woman in the present, Battle-Baptiste facilitates healing and envisions a just, anti-racist future. Archaeology, while focused on the study of the past, is firmly rooted in the present for Battle-Baptiste as she works closely with communities associated with the historic sites she studies. She comments on the contemporary nature of her work:

Since beginning this book project I have begun to more fully understand the ways that time alters how sites and the artifacts we find are interpreted. We do not simply change our opinions and approaches to the material, but we allow for current and contemporary thoughts and approaches to positively influence how we see the past. In other words, is it so terrible for our interpretations of the past to change over time if they continue to help us learn lessons at that moment? (Battle-Baptiste 2011: 165-166)

Battle-Baptiste shows us how to be engaged and activist archaeologists who understand the current and future impacts of our interpretations for descendant communities and the public.

Various authors have approached Indigenizing archaeological research and writing in their own, community-specific ways. D. Rae Gould and Stephen Mrozowski think through fictive vignettes of Nipmuc ancestors whose voices emerge from their archaeological project and couple these with their own stories of doing Nipmuc archaeology to create “double narratives” that hold space for Nipmuc futures (2019a, b). Sarah Surface-Evans and Sarah Jones use a feminist Indigenous lens to explore “haunting” at the Mount Pleasant Indian Industrial Boarding School and facilitate healing for the Saginaw Chippewa community (2020). Michelle Lelièvre and colleagues approach archaeology in Mi’kma’ki through relationality and build relations with each other and with Mi’kmaq ancestors through a shared connection to the land (2020). In each of these examples, the authors engage in activist storytelling that both illuminates the past and fosters healing and understanding in the present. Archaeology’s contribution, through storytelling, materials-based analyses, and relationship-building, can be further theorized as witnessing (Simons et al. 2021), or the act of bearing witness to history.

Archaeological Intimacies: Why Archaeology Needs Personal Stories

Archaeology is an intimate practice (Crossland 2020; Rizvi 2019, 2020). The work of archaeology involves the direct handling of belongings, ancient garbage, and sometimes the bodies of ancestors. In doing archaeological excavation, the excavator becomes intimate with the soil, rocks, plants, animals, and people that make their homes in that place. Archaeologists build relationships with each of those aspects as we dig, and each aspect exerts its own influence on our archaeological work in the moment (Rizvi 2019). Archaeological fieldwork is also a team activity, so part of the practice is the everyday intimacy of living with other people, often far away from home. There is vulnerability in fieldwork too. For many people, it is a step outside of their comfort zone, which can trigger anxieties or other mental health challenges (Hollis has

written about her own experience with anxiety in the field elsewhere, Miller, H. 2021). The intimate and vulnerable setting of fieldwork can also, horrifically, create a dangerous environment with heavy drinking (Miller, A. 2018) and sexual harassment (Voss 2021).

These intimacies emerge from the environment in which archaeological research and data collection is taking place, so therefore personal stories of research are a necessary part of the work. We need these stories to understand the context in which archaeological knowledge is created and to understand the decisions made on the ground and the interpretations raised ‘at the trowel’s edge’. The experience of doing archaeology is a part of the research. These stories are also inspiring and offer a glimpse into what archaeological work is really like for potential new archaeologists. Personal stories are also useful in contextualizing your commitments and your research questions and your relationships. Hollis has offered a small example of this in the vignette at the beginning of the paper, and many contributors to the *Archaeologies of the Heart* volume provide other examples in their chapters.

Ultimately, we hope our readers take away from this discussion that archaeology is emplaced (Supernant 2022). That is to say that archaeological traditions, along with Indigenous traditions, are shaped by their practice in particular places. Archaeology as practiced in the Southwestern United States is different from archaeology as practiced in Alaska or in the United Kingdom or in Egypt. Different motivations and historical questions have driven archaeological research in each of these places. Similarly, the local communities also have different interests in engaging with and allowing archaeology, or not. It matters who is doing the research. It matters how they are doing the research. Therefore, our personal engagement with archaeological practice is an important piece of the research.

What follows are three methods of storytelling about the Sugpiaq past at Ing’yuq Village (KOD-114). Each author draws from her strengths to imagine the lives of Sugpiaq people as they confronted Russian colonialism. When braided together, these stories provide a more nuanced interpretation of Sugpiaq life, imagining and interpreting not only the facts of Sugpiaq existence,

but the emotions and relations of ancestors as well. It is critical that outsider archaeologists make space for other knowers, especially those from partner communities, to share their real and imagined pasts on equal footing with academic writing. We can evaluate these stories using different criteria, depending on their context and genre, but each are providing an important function in relating knowledge about ancestors.

Ing'yugmiut Stories

In this section, Hollis presents story-models of Sugpiaq lifeways drawn from documentary and archaeological research, while Allison (in italics) shares an imagined narrative about a young woman from Ing'yuq, entitled 'Kicaq'. Allison's storytelling is informed by her experience growing up in Old Harbor and the stories that her family members have shared with her over the years. She was inspired to write 'Kicaq' to reclaim the narrative of the Awa'uq massacre as a specifically Sugpiaq story, rather than one event in a list of atrocities that colonial regimes have committed against Indigenous peoples. Allison wanted to remind a wider audience that there were real ancestors who experienced that event. Their names may no longer be known, but Allison is proud to be their descendant and to explore the same landscape that they did.

The story-models are narrative scenarios that describe aspects of Sugpiaq life immediately prior to Russian colonialism at Ing'yuq and in the subsequent period of colonialism, which is divided into early (1784 to late 1830s) and late (late 1830s to 1867). Hollis chose to place the early/late divide at the smallpox epidemic that prompted the Russian American Company (RAC) to consolidate the surviving Sugpiaq population into the seven villages, six of which persist on Kodiak today. This divide thus marks the movement of people from Ing'yuq village and other nearby settlements to Nuniaq (today known as Old Harbor). The story-models are specific and localized scenarios, in which the characters are identity or social groups (i.e. women, Elders, hunters, community leaders), rather than individuals. Drawing from

existing evidence and acknowledging inspiration in theories of practice, political economy, and survivance, Hollis created the story-models as a method of hypothesis generation prior to collecting any new archaeological data. The story-models should be quite familiar to archaeologists because they often think through hypothetical scenarios – especially when coming up working hypotheses and interpretations during field excavation. Yet, those scenarios are not often acknowledged when it comes time to publish results. For this project, we want to make that storied thinking transparent and specific to the Sugpiaq community.

In constructing these story-models as possible scenarios of how Sugpiaq people at Ing'yuyq (and later Nuniaq) altered their foodways, labor practices and social relations in the face of Russian colonialism, Hollis draws on evidence from previous archaeological analysis of related sites, ethnohistoric and archival documentation, and the community knowledge of Old Harbor and other Sugpiaq villages. It is not simple to cite community knowledge, especially when that knowledge is unpublished and not necessarily historically specific. This means that because of colonial trauma, most community knowledge and history in Old Harbor no longer extends back to Russian colonialism, so Hollis has not encountered specific stories of ancestors who experienced Russian colonialism (Pullar 2013). That being said, community knowledge is rich with Old Harbor Sugpiaq values and intimate place-based relationships, which are essential for conceiving of and understanding the Sugpiaq past. Hollis draws on these knowledges in the story-models, especially concerning the harvesting and distribution of food as well as social practices of visiting, ceremony, and the Sugpiaq value of reciprocity.

Classical Sugpiaq

Ing'yuyq was a thriving village in the decades or centuries prior to the Russian assault of Sitkalidak Island in 1784. Like other local villages of the time, households at Ing'yuyq were comprised of extended families and multiple generations. Extended families were further enmeshed in and connected with larger village and regional kinship and trade networks. This

kinship organization, focused around large families, meant that there were many hands to work together to provide food, clothing, fuel, shelter and valuable prestige or trade goods for the household (Fitzhugh 2003a,b). The winter festival season was a chance for families to show off and share stored wealth in the form of feasting, performing dances and stories, and gifting. The wealthiest household(s) at Ing'yuuq invited relations from neighboring and more distant villages to celebrate, build relationships, eat and keep up spirits during the dark days of winter. As they have always done, senior women in each household managed food storage and distribution, thus playing a large role in making feasts a success and keeping their families fed throughout the winter. During spring and summer months, when long-distance boat travel was easier, Sugpiaq villages such as Ing'yuuq were connected to the rest of the Kodiak Archipelago and the Gulf of Alaska through warfare and extensive trade networks – trading in shells, stone, foreign trade goods and food items (Burch 1988; Fitzhugh & Kennett 2010; Steffian et al. 2015). These interactions likely made Ing'yuuq and other Sugpiaq villages multicultural in the sense that people from other homelands lived together with Ing'yugmiut, either by choice or because they were taken as captives in war raids of neighboring communities.

Like today, lifeways and activities in ancestral Sugpiaq communities centered on food: procurement, processing, cooking, serving, eating and feasting. The diets of Ing'yugmiut and other Sugpiaq peoples consisted of a wide variety of marine, riverine, coastal and terrestrial plants and animals. Key foods included salmon, seals, whales, eggs, waterfowl, cod, halibut, local shellfish, lily bulbs, nettles, berries and cow parsnip, among other items (Crowell & Laktonen 2001; Graham 1985; Mishler 2003; Russell 2017; Steffian et al. 2015). Although they are not often well-preserved in archaeological sites, terrestrial plants were and are a critical component of Sugpiaq diets (Graham 1985; Russell 2017). Wild plants provide essential nutrients and were also used to create medicinal and/or spiritually powerful pastes, balms, and talismans that were administered by spiritual leaders, healers and midwives, as Ahkiok Elder and midwife Mary Peterson details in *Birth and Rebirth on an Alaskan Island* (Mulcahy 2001).

Sugpiaq communities were based in winter villages like Ing'yuyq, but families spread out to various seasonal harvesting/hunting camps during other parts of the year. At seasonal camps, harvesters focused on a few primary animal species, such as seals, salmon or cod, while also gathering nearby plants and berries (Etnier 2011; Knecht & Jordan 1985; Kopperl 2003; Partlow 2000, 2006; Steffian & Saltonstall 2014). Foods harvested at seasonal camps were processed or eaten on site by harvesters and their families, although the bulk was eventually brought back to winter villages for distribution and storage. Communities on the southern end of Kodiak, including those in the Old Harbor region, had prime access to migratory routes of sea mammals and waterfowl, salmon streams, deep sea fisheries, intertidal zones, and alpine tundra harvesting environments (Mishler 2003; Russell 2017; Steffian & Saltonstall 2014). Thus, Sugpiaq ancestors at Ing'yuyq sustained a diverse and nutritious diet.

Initial violent Russian colonialism and its aftermath disrupted these sustainable and place-specific food- and lifeways. Sugpiaq people at Ing'yuyq responded to these disruptions in ways that centered their survival and promoted their survivance in their homelands.

The water had pulled back, exposing the beach to offer qutmek neq'rqat (beach foods) to our tribe. It's farther back than normal and I see the rock that only happens to look at us when the ocean is being exceptionally giving. It's one of those crisp, cool days when the sun is starting to warm us for longer periods, but the mountains are still white, and the wind sweeps in a bitter chill. I walk out among the glassy eel grass and look through its blanket to unearth uritaaq (chiton), a black and orange food stuck to the rocks. I peel one off the rock and toss it into my grass woven basket, it's getting heavy with my spoils; "Awa'i, enough for today."

I start walking back up to the cache in the side of the cliff with my basket to clean out the chewy part of the food and put it in isuwiiq (seal) stomach that is filled with isuwiiq oil. I finish putting it away and go out to look for firewood.

There have been strange ships and men with furs on their face in our neighboring villages, their presence has put the Chief and tribe on edge, and I have been sent to stock up our special hiding place with supplies. This place is called Wiinaq Rock, am grateful they sent me away to work here. I wasn't getting along with anyone in the village and was getting into more and more arguments with everyone. The Chief told us that we needed to start preparing to retreat and seek sanctuary at our hiding places as these strange men want to take our furs from us and we aren't sure of what else they might try to take. Someone suggested that they send Kicaq out there to be with my anger and find my peace with the spirits. I have been angry and trying to find my place in our tribe.

When I was entering this world from my mother, I held on and refused to come out. Sadly, my mother was lost. The paapuskaa (midwife) was able to take me from my mother before I was gone too and now here I am. They named me Kicaq after an anchor as that is how I came to this world, holding on and hard to move. When my mother took her great walk to the people that came before us, I was handed off to the women to be cared for. As I got older, I grew an attachment to the very paapuskaa that brought me to the world, Iris. In my earliest memory she is hunched over, cracks across her forehead and stretching from the corner of her eyes to her hairline and the softest and most tender hands that felt like water dancing across from her touch. Her hands were always warm too, no matter how long she was picking medicine in the wintertime. Her sullen expression was always lifted by the sight of me coming to learn from her. In my time with her I learned to stop bleeding with the Qangananguaq (yarrow), a tea to relieve pain from the inner bark of the Nimrulyaq (willow tree), and how to heat Uqauyanat (nettles) to soften the stingers and make teas to help the stomach. I was learning to heal and that is what I wanted to do. It became harder and harder for Iris to walk, and she was also losing her sight. Often my time with her was sitting in silence as she was listening to the waves curl onto the pebble filled beach. One day she looked over to me and she said, "Kicaq, the ocean told me that the village would take a long walk together and you will need to lead the way."

I was confused but she was a wise woman and felt my questioning and told me, "It will be clear to you when it needs to be."

That was one of our last conversations, my mothers were now together, watching and guiding me. As much as I hear them, I'm so angry that they are gone, and I find a fire is growing in my spirit.

I sit there on the beach and look out. The sun is leaving us to make room for the moon. Time to curl up in my camp. I grab the pile of driftwood I collected and bind it with fireweed cordage. I strap it to my back and go to the camp I am staying at while I work. The water is coming back to Wiinaq Rock. The land that connects this place to the beach will soon disappear. I will be isolated on the island. The water comes up and swallows land, I will need a qayaq (kayak) if I want to leave. I'm happy to have had this isolation, I found I wasn't angry but have been in mourning.

I light my fire and pull out my drum as I feel a song coming to my lips.

Boom, boom, boom

*Thank you for life
Thank you for love
Thank you for life
Thank you for love*

*In my dreams, I will see you again
In the day, I walk with you at my side*

*Thank you for love
Thank you for life*

Tears stream down my face as I curl up in my isuwig fur bedding. The only company I have is the ocean, crashing loud waves on the cliffs to make sure I know I'm not alone.



Figure 2.3: View of Awa’uq from Sitkalidak Island. The rocky spit connecting the refuge rock to Sitkalidak is only open at low tide. Photo by Hollis Miller

Although Sugpiaq people on Kodiak first encountered Russians in their homelands in the 1760s (Black 1992), Russian fur traders did not make attempts at long-term settlement until 1784. In that year, the Russian fur trader Gregorii Shelikhov launched a surprise attack on the defensive refuge islet of Awa’uq on Sitkalidak Island (Black 1992, 2004a; Knecht et al. 2002; Shelikhov 1981). Shelikhov’s goal was to subdue the people of Kodiak and bring them into service to hunt fur-bearing sea mammals for the profit of his company. Knowing that foreign ships were approaching, people from villages around the region assembled at Awa’uq for safety. Unfortunately, their location was disclosed to Shelikhov by an informant. With that knowledge, Shelikhov blocked the escape route from Awa’uq, a rocky spit that is only exposed at low tide, and bombarded the islet with cannon fire, resulting in the massacre of hundreds of Sugpiaq people (Ibid; Figure 2.3). As one of the closest villages to Awa’uq, Ing’yugmiut would have taken refuge there. Following the massacre, Russian colonists forced survivors from Ing’yug into service or held them hostage at the new Russian settlement at Three Saints Bay.

Early Russian Colonial Period

The violence continued as Shelikhov and his promyshlenniki (fur traders) conscripted many Sugpiaq men to embark on months-long forced hunts for fur-bearing sea mammals and compelled Sugpiaq women into obligatory production of goods to sustain the Russians in Alaska, all while epidemic diseases began to take a serious toll on Kodiak (Black 2004a; Crowell et al. 2001; Luerhmann 2008; Miller, G. 2010). Many Sugpiaq women and girls also chose or were forced into sexual or marital relationships with Russian men, since Russian women did not travel with them over the North Pacific (Miller, G. 2010). Despite these many challenges, Sugpiaq communities responded in ways that foregrounded their physical, cultural, and spiritual survival, as evident by the continued active Sugpiaq presence and governance on Kodiak today.

I wake up in the morning, there is a family of wiinat (sea lions) barking at each other. I go out of my camp and look out to them. “Good morning wiinat, come back when we have hunters here.”

The sun is shimmering across the water. It’s cold but warming up. I have a hefty stockpile of food and firewood stashed away and I am ready to go back to my village as the water is about to share the land bridge with me.

I start my trek across the draining beach and it’s still quite squishy and smells of a salty low tide. The wiinat are following me as I walk the beach and swim parallel to me. As I walk up the beach and into the beach grass, I look for the trail that will lead me to my village and I see the ominous sight of the uguusirpak (king fisher). A sighting of these birds is never good. I find the trail and I start walking home. Then two women with babies on their backs come crashing through the alders and running towards me, their tattooed faces are covered with fear and they look like they are running from something.

“Kicaq! The strange men in the large kayaks are coming! They had sticks that cried out and killed men in our village that tried to tell them to go away, the Chief told us to come and hide. Our whole village is coming right now!”

I stand at the trail as the mothers pass by me. I’m paralyzed in fear and I hear the water curling on the beach and the voice of my second mother, “Kicaq you will be leading a great walk with your people.”

I run as fast as I can in the direction of the village, I run into a group of children trying to help each other get over the trail’s obstacles and go towards Wiinaq Rock. I pick up some of the children and start carrying them to the beach in view of the land bridge. The water has already turned out and will start coming back in soon. The people are scared and the air is thick with anticipation and fear. As I continue to guide more and more people to the bridge, the Elders

appear. They have the same sullen expression that Iris would have before she would see me. The years of sun, wind, and hard work showed in their leathery skin. The Elders were bothered mostly by their aching bodies, one said, "Today is a good day to be the last day." His words shook me. Did we come here to only hide? What does he know?

I get the Elders settled down on the beds of grass I made for them to sit on, and I look over to see the hunters and Chief finally coming over to our sanctuary. They are the last to walk across the bridge. The adults start taking care of the people, the children, the Elders and some just hold each other.

The Chief looks at the tribe and speaks; "This is the place we will be in hiding. We will stay on the side of this hill that faces the ocean. We will stay until the strangers have taken what they plan from our village. We might go back to Ing'yuuq, our village, or we might have to find a new home. For now, this is where we will stay."

We sat together for hours, and the silence from our people was deafening. We were at our sanctuary but unsure of our future. One of the small children came to me... "Kicaq will you sing me a song?"

I looked at her sad, brown doe eyes and held her close and sang:

*Thank you for life
Thank you for love
Thank you for life
Thank you for love*

*In my dreams, I will see you again
In the day, I walk with you at my side*

*Thank you for love
Thank you for life*

She thanked me, "Quyanaa, Kicaq. I need to go to the bathroom."

She walked up the hill a little to go to the bathroom and she immediately turns around and starts running back to the group. "THEY ARE HERE! THEY ARE HERE!"

The first decades of Russian colonialism were especially harsh for the Sugpiat. The Russians considered Unangax[^] and Sugpiat men to be the best hunters of sea otters and fur seals, whose valuable pelts drew Russians to Alaska. Russian companies conscripted Sugpiat men *en masse* during the first decades of Russian occupation and sent these men on months-long (and sometimes years-long) hunts to places as far away as the Kuril Islands and Southern California (Black 2004a; Gibson 1987). Sugpiat women were left to support their families and villages during these months, while providing service to the RAC in the form of sewing, fur

processing, gathering and food preparation. Starvation crept in during the winter months because those who remained in Ing'yuyq in the summer were few in number and much of their labor was diverted to Russian interests (Lisianski 1814; Luehrmann 2008). Procurement, processing, and storage of surplus foods likely became more difficult for the women of Ing'yuyq. To compensate for the loss of labor, especially that of men who traditionally harvested food over larger areas, the remaining Ing'yugmiut would have gathered food resources that were available closer to the village site. Locally available resources like riverine fish, seabirds, plants (e.g. berries, tubers) and intertidal foods, such as shellfish and kelp, were more accessible and required less effort to collect than marine fish or sea mammals. Using this strategy, the Ing'yuyq community was likely able to maintain a diet of traditional foods, although with notable absences like salmon, seal, and whale. These adjustments signify a reduction in food security, which would have made Ing'yuyq more vulnerable to stochastic resource variability, disease, and additional demands by the Russian American Company.

In effect, the village of Ing'yuyq would have become primarily a women's space for many months of the year. Women tended to their families, their community and its governance, and their work for the RAC. Some of their main tasks for the Russian American Company included preparing dried fish, processing skins and sewing garments. Women's labor was unpaid or underpaid by the Company (Grinëv 2022). If payments came, they were either in the form of metal needles, glass beads, scrips (vouchers that could be exchanged for food or goods at an RAC store), or the very items that Sugpiaq women themselves produced, like dried fish and parkas (Ibid). While governing the community at Ing'yuyq, women probably consolidated their households into fewer *ciqlluat* (sod houses), which would lessen demands on fuel for heating and cooking while still maintaining residence in the village.

In 1794 the first Russian Orthodox missionaries arrived in Alaska to proselytize and (eventually) to advocate for the humane treatment of Native Alaskans (Oleksa 1992). Despite their benevolent intentions, Orthodox missionaries were a key part of the Russian colonial

project and were responsible for the forced dismantling of Sugpiaq religious practices. Nevertheless, Sugpiaq people continued practicing their religions, ceremonies, and medicines, although more privately to avoid reprimand (Crowell 1992). While the church could be seen as a threat to Sugpiaq lifeways, there were also material benefits to joining the Orthodox church. These included the promise of protection from the secular and economically motivated RAC and access to some imported commodities like tea, tobacco, glass beads and metal trinkets. In the long months when many Sugpiaq men were away on hunts, some Sugpiaq women decided that these benefits were a good way to protect and feed themselves and their families. Some women also chose or were forced into marital/sexual relationships with Russian men, who similarly could have provided a measure of economic security, depending on the man's rank in the Company (Miller, G. 2010).

Colonialism also disrupted social relations on a wider scale as Indigenous movement and trade relations within the Kodiak Archipelago and beyond became more difficult. This led to local shortages of raw materials and other inter-tribal trade goods, as well as a loss of labor from captives taken in the pre-colonial raids that were common across the Gulf of Alaska. Slate was the primary lithic material used by Sugpiaq toolmakers; however, good quality slate is not available in the local catchment area around Ing'yuuq. Ing'yugmiut would have had to gather slate on longer distance subsistence hunting trips, which would be rarer during the colonial period, or by trade with immediate neighbors or Russian mediators. Thus, people likely repaired or recycled damaged slate tools, like knives and ulus, rather than fashioning new tools.

The Chief, the hunters and I look over the hill. There is a large group of the strange men coming, led by a Sugpiaq Man, and I can see the boy he once was in his face. That is my cousin Qaspeq, he was stolen from our village when we were very little and has now grown and is dressed like those men. Qaspeq was not much older than I and he was leading the men straight to us. The strange men were carrying those magic, loud sticks and even bigger ones on wheels that took six men to carry through the brush. They stood at the beach and stared towards our sanctuary.

The Chief came back to us and said, "Qaspeq has come home but he has betrayed us. I don't know what these men will try to do to us, but some may take a great walk today."

The mothers start to cry. One mother takes her baby and ties it to her so the baby's head sticks high above her head and jumps in the water and starts swimming to another part of the island. The greatest hunter starts pacing back and forth, his breathing is getting quick, his hands are clenching around his spear. He starts yelling at Qaspeq, "QASPEQ, YOU ARE NO MORE, I WILL END YOU!"

The water starts to go down and the bridge is starting to show. Women and children are huddled far to the edge of the island. The men are getting ready to fight, and slowly the strange men's heads start to peek over the top of the hill. One of the hunters starts running towards them yelling out the screams of a war cry. As he runs forward, one of the strange men with a stick points it at him and he falls over and he is no more. There is screaming and a foul-smelling smoke cloud from the stick fills the air. Most of the hunters run towards the strangers and the rest come to shield the women, children, and Elders.

Boom

The first wave of hunters and the Chief are all shot down, in a wave of blasts from the magic sticks they are gone, and the big stick made the earth erupt everywhere.

Crying, screaming, smoke, there is a haze and we can't see the strange men any longer.

"Please oh please our Great Creator make these men go away" I plead in my head. The wind lifts the smoke and then...

BOOM BOOM

The large stick that explodes the earth is going off. Many are dying where they stand and the chaos is making people push each other off the cliff onto the rocks.

BOOM

The rest of us that haven't gone off the cliff or already gone are huddled together. The strange men go silent as they prepare their sticks for more of the magic and I hear the ocean curling on the beach again... in the sound I hear Iris, "Kicaq, it is time to lead your walk."

I tell everyone to hold on to one another.

"Gwani! Ilat! Gwani!" (With me! Family! With me!)

I look up and I yell "Great One, Our Creator, I am ready to lead my people!"

An eagle dives for us and just as it is inches from the tops of our heads, it springs back up to the sky and pulls our spirits from our bodies. We are levitating above Wiinaq Rock and we watch as the strange men take our bodies and throw them from the cliff.

They walk by one girl, her hair is all tangled up, blood and dirt cover her face, she's sitting on the ground and her lifeless mother is in her arms. The men start to leave, we stand near her and we stay to watch them go. The little girl can't see me, but I place my hands on her shoulders. "Sweet girl, go and tell our story and if your sorrow is too much to bear our spirits will be here to numb your pain." I whisper "Awa'aq, it means a place to be numb" in her ear. She looks

around like she hears something and says out loud “Awa’aq.” On the horizon we see a light and it has the voices of ancestors past beckoning us to join them “ANWIK! ANWIK! Exit, exit!”

I tell the people, “We are done here. Now we walk.”

As we leave, Awa’uq, a place to be numb, I watch the girl holding her mother and stroking her face. She is the same girl I held and sang my song to. She cleans her mother’s face and sings:

*Thank you for life
Thank you for love
Thank you for life
Thank you for love*

*In my dreams, I will see you again
In the day, I walk with you at my side*

*Thank you for love
Thank you for life*

Late Russian Colonial Period

A particularly devastating smallpox epidemic in the late 1830s marks the beginning of the late Russian colonial period. Epidemic disease in settler colonial situations is especially destructive for Indigenous peoples as colonial policies and practices often minimize community resilience. At Ing’yuq and similar villages, Sugpiaq people had reduced resilience and resistance to disease due to disrupted social networks, nutritional stress from increased labor demands, and lack of access to care and medicines – all of which were the result of colonial impositions. In response to the resulting Sugpiaq population declines, the RAC mandated that all surviving Kodiak Islanders be consolidated into seven villages to better administer services and collect tribute. Ing’yuq was officially abandoned by the mid-1840s, and its remaining population moved to Nuniaq, a small outpost located on the Kodiak Island side of the Sitkalidak Narrows (Luehrmann 2008: 40).

Village consolidation led to more frequent contact with Russian colonists at sites like Nuniaq. This would have provided Sugpiaq communities with regular access to tea, flour and other dietary commodities and associated packaging. Imported tea began to play an important role in visiting and was a preferred social drink, especially since the RAC did not permit the sale

or distribution of alcohol to Indigenous Alaskans (Grinev 2010). When the RAC made a contract with the Hudson Bay Company in 1839 to supply the colonies (Black 2004a: 200-201), imported ceramics became more widely available and were incorporated into Sugpiaq lifeways. These new commodities would have been shared among family and community members, especially through informal social gatherings like visiting. Despite the availability of new goods, the majority of Sugpiaq diets probably still consisted of local foods that were harvested and processed by Nuniaq residents along with rations of salted salmon and cod that were provided by the RAC (although produced by Sugpiaq workers at fishing camps; Gibson 1987).

During the final quarter century of direct Russian influence, Sugpiaq identity continued to persist and adapt to changes as they came. Both Sugt'stun and Russian were used by the clergy, and children learned both languages in school (this persisted into the early 20th century; Rostad 1988). Sugpiaq religious traditions melded with Orthodox ones and created a unique religious expression that persists to this day (Oleksa 1992; Rathburn 1981). These new identity and material expressions were used to assert the Russian-ness of Sugpiaq people after the United States purchased Alaska – a strategy that was intended to prevent forced assimilation of Alaska Natives, as had occurred to Indigenous peoples in the contiguous United States (Pullar 2013).

Visualizing Ing'yuq

Tamara has produced two interpretive illustrations of Ing'yuq to visualize the village as it was used by ancestors, rather than as an archaeological site. She relied on maps and photos of the excavation at Ing'yuq, along with her own experience as a field team member in 2021, to make the illustrations accurate in a scientific sense, yet she also imbued her artwork with her familiarity and knowledge of the landscape.

The first illustration (Figure 2.4) is a pen and ink reconstruction of the house OHAHP has excavated at Ing'yuq, shown in cross-section looking west. She drew the house empty of

people and belongings but has given the house character and captured the construction of the ciqlluaq. The background surroundings clearly place this house in Tanginak Anchorage – anyone from Old Harbor would recognize the scenery.

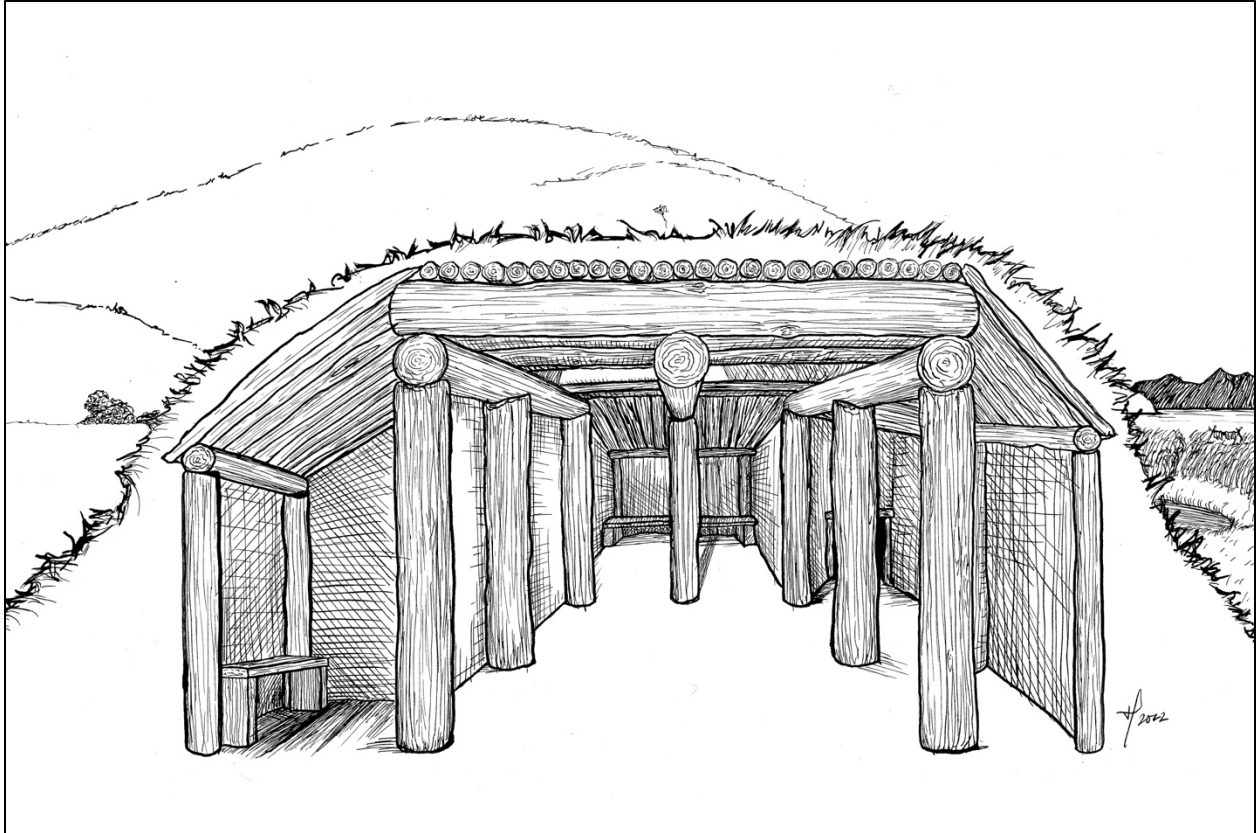


Figure 2.4: Pen and ink reconstruction of House 2 at Ing'yuq Village. Drawn by Tamara Swenson

The second illustration (Figure 2.5) is a watercolor and ink showing Ing'yuq Village in the fall. The caption below the painting reads: “the streams have swelled with salmon, now we dry the last of it for winter, summer is over when the fireweed has turned the hills to rust.” Tamara captures the shape of the landscape and the village as you would see it from standing on the beach in front of Ing'yuq. This aspect, along with the salmon drying racks and the smoke coming out of the ciqlluat (sod houses), reveal human presence at the site, although no ancestors are depicted. Tamara chose the colors and words carefully to bring out aspects of living in this specific place. Those details are important for connecting with descendants who

recognize the landscape and who have seen the fireweed bloom and fade many times before. Tamara's illustrations provide the setting for endless stories to be uncovered or told about this place.

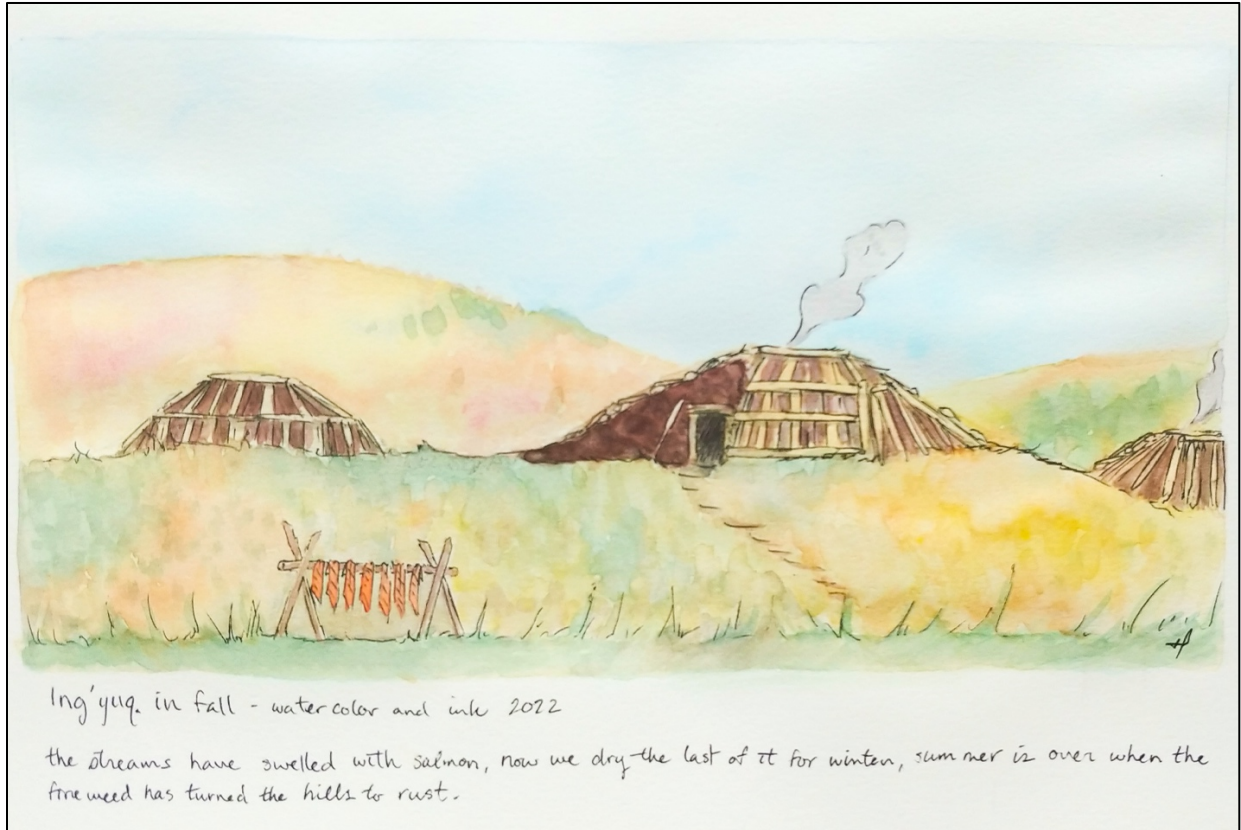


Figure 2.5: Watercolor illustration of Ing'yug Village in the fall. Painted by Tamara Swenson

Storytelling as Science Communication

When Ben Fitzhugh and Hollis discussed the formation of OHAHP and outlined research questions with Old Harbor leaders, they asked us to place youth at the center of the project. Old Harbor leaders wanted to make sure that young people in the community could gain experience doing research while learning about and interpreting their heritage and history. We have responded to this request in several ways, including by beginning an internship program, engaging with K-12 teachers and students in the Old Harbor School, and planning a youth

archaeology camp for summer 2023. Embedded in OHAHP's youth engagement is community-based science communication.

The internship program is the core of this work. Since 2018, we have worked with three young women from Old Harbor as interns, one of whom is co-author Tamara. The interns participate in summer fieldwork and then are local experts on the project within their community. The interns receive training in archaeological research and site stewardship and contribute to on-the-ground interpretation, ensuring that Sugpiaq voices are central throughout the research process. In Tamara's case, she has chosen to stay deeply involved in the research and the project is stronger for it.

Tamara's work expands OHAHP's vision of research accessibility. Throughout their histories, archaeologists and anthropologists have practiced extraction, where information is collected from local communities but interpreted and disseminated elsewhere (Schneider & Hayes 2020). With OHAHP, we keep our practice oriented towards community by making sure that the research is accessible to Old Harbor – both as it is happening and when there are significant results to share. The data that OHAHP collects is Sugpiaq data, so it needs to be understood and made sense of within the Sugpiaq community. Hollis has approached accessibility in multiple ways: short updates and photos on research as-it-happens through a project Facebook page (<https://www.facebook.com/OHArchy>), a more detailed accounting of the research process through blogging (<https://hollismiller.com/category/ohahp-project-blog/>), and a video report on OHAHP's summer 2021 fieldwork created specifically for Old Harbor (<https://youtu.be/29gCQARLQhw>). Tamara and Hollis are also in the process of creating an illustrated booklet about Ing'yuyq Village and the belongings found there to be distributed to Old Harbor households in print, and available freely online.

Storytelling is at the center of each of these science communication projects. While the storytelling is *for* Old Harbor, it can also be shared with a wider audience, both public and academic, as science communication. OHAHP has multiple audiences by design. For instance,

as an academic archaeologist, it is important that Hollis be able to share parts of OHAHP through scholarly writing and research. At the same time, she has an obligation to Old Harbor to cater to their needs first, which means checking in with community leaders frequently, storytelling (read: sharing data) with them, and protecting sensitive or sacred information that emerges from the research. Those open lines of communication are what make community-based science and storytelling accountable and accessible.

Making Conversation

Writing stories fulfills our researcher commitments to the Old Harbor community, the academic community, and the public because it invites people to engage with our work in an accessible way. Our stories make conversation with one another and encourage that conversation to continue among multiple audiences who have varying areas of expertise and experience regarding Sugpiaq history and archaeology. In presenting our three stories about life at Ing'yuyq – historical story-models, fictive narrative, and artistic representation – together, we hope to generate a braided, multivocal narrative whereby we can view the history and archaeology of Ing'yuyq at different scales simultaneously. We can understand the historical context, but also the emotional and experiential contexts of life for Ing'yugmiut. Together we get a more nuanced picture of the lives of Sugpiaq ancestors at Ing'yuyq, one that is grounded in connection to this specific place, to Sugpiaq homelands. Tamara and Allison's stories, in particular, encourage us to feel, not just report on, the past. From these braided stories we can further generate hypotheses to examine using evidence from archaeology, oral history, and ethnohistory, which will then be used to tell new stories about Ing'yuyq and the Sugpiaq ancestors who lived there.

Chapter 3: Eating at Ing'yuyq: Archaeofauna and Subsistence Strategies during the Russian Colonial Period, Sitkalidak Island, Alaska

Introduction

Foodways are a key component of survivance research in North American Indigenous communities. Harvesting foods requires a relationship to land and other living beings, and thus is fundamentally tied into Indigenous identity and politics (Basso 1996; Liboiron 2021; Todd 2017). By survivance research, I refer to the study of Indigenous resilience, persistence, negotiation, creativity, and presence on the landscape as Native communities were entangled with European and Euro-American colonists that sought control of Indigenous land, resources and labor. Archaeology, when done in collaboration with descendant communities, can inform survivance research, as the archaeological record holds the material evidence of lives and livelihoods that have otherwise gone undocumented in the written historical record. For foodways, zooarchaeological analysis of midden deposits provides insights into harvesting activities that are linked to the cultural practices and preferences of a community, and also to the physical sustenance and survival of that community.

In this paper, I analyze archaeofaunal data from a late precolonial and early Russian colonial period Sugpiaq village site in the Kodiak Archipelago, Alaska. The site, Ing'yuyq Village, is located near the modern village of Old Harbor, one of several contemporary Native villages on Kodiak. I am using the faunal data to gain insight into how Sugpiaq ancestors at Ing'yuyq managed their harvesting and subsistence strategies during the Russian colonial period (Russian colonial governance active in Kodiak from 1784 to 1867 CE). I bring the faunal data from precolonial and colonial midden deposits in conversation with information from the ethnohistoric record of Russian colonialism in Kodiak and interviews with contemporary Sugpiaq residents of Old Harbor. Taken together, these lines of evidence outline stories of subsistence as Sugpiaq survivance during the Russian colonial period.

Historical Context

Lifeways and activities in Sugpiaq communities have long centered on sharing food and feasting. Today, Sugpiaq folks in Old Harbor prepare meals using both country or traditional foods, which people harvest locally, and store-bought foods that are brought into town via airplane or boat. Despite the availability of imported foods today, many people supplement their diets by harvesting local foods because they are considered healthier, are often cheaper than what they can get in stores, and the process of harvesting is a way of asserting and living out Sugpiaq identity: “Subsistence is what we are. It’s what our ancestors were. It’s who we are. It’s how we are. It’s what we are” (Gary Kompkoff in Village of Tatitlek et al. 1997). The connection between subsistence harvesting and identity is mediated through the land and sea, through Sugpiaq peoples’ ongoing relationship with their homelands and the animals and plants with whom they share it. Sven Haakanson, Jr., a Sugpiaq anthropologist from Old Harbor, explains, “Every child growing up in the village knows where to go and get berries, fish, birds, clams, eggs, and plants to eat. While our language, beliefs, and material cultural were suppressed, the practice of harvesting and gathering our foods was never lost” (2023, personal communication). Within the Russian and American colonial systems that have intruded on Sugpiaq homelands over the past 250 years, subsistence is also about politics and asserting Sugpiaq rights to live within and manage the resources of their homelands.

Sugpiaq foods include salmon, cod, halibut, black bass, waterfowl, seabird eggs, shellfish, seals, sea lions, whales, berries, kelp, bulbs and tubers, and nettles, among other locally available items (Crowell & Laktonen 2001; Graham 1985; Mishler 2003; Russell 2017; Steffian et al. 2015). Pre-colonial Sugpiaq communities were based in large winter villages, but families spread out over the landscape seasonally to harvest resources as they became available. Summers are the richest seasons on Kodiak, with large salmon runs, whales, abundant berries and other wild plants, easier access to sea mammal haul-outs, deep-sea fish, and, as fall approached, migratory waterfowl. Communities take advantage of the long summer days to

harvest, process, and store enormous amounts of food, which sustain them through the winter and early spring. During the winter months, stored food is supplemented by fresh shellfish, cod, and the occasional seal. Sugpiaq communities are traditionally matrilineal, and Elder women managed the processing, storage, and distribution of foods within their extended family networks (Saltonstall 2022). Skills and recipes for processing and preparing foods were passed down within these matrilineal networks, perhaps developing regional cuisines or dishes around the archipelago.

Pre-colonial residence and lifeways have been documented on Kodiak by archaeological projects since the 1930s (Clark 1984a, 1984b, 1998; Erlandson et al. 1992; Fitzhugh 1996a, 2003a, 2003b, Hrdlička 1944; Jordan & Knecht 1988; Steffian 1992; Steffian & Saltonstall 2001; Steffian et al. 2006; West 2009). Archaeological research in the southeastern Kodiak Archipelago near Old Harbor, has helped to extend the antiquity of human residence on Kodiak and to expand our understanding of the subsequent technological, economic, social, and political changes that marked the histories of the region's hunting-fishing-gathering communities (Clark 1970, 1979, 1997; Fitzhugh 2001b, 2003a, 2003b, 2004, 2006; Fitzhugh & Kennett 2010; Steffian & Saltonstall 2014, 2018). According to these studies, Sugpiaq communities started as small groups of mobile foragers in the middle Holocene (Ocean Bay period), eventually establishing large and densely packed villages with political hierarchies, intensified economies, and regional trade relationships (Kachemak and Koniag periods). Precolonial Sugpiaq communities competed for political and economic status and engaged in endemic warfare with enemies on the mainland and Aleutian Islands (Black 2004b; Fitzhugh 2003a; Knecht et al. 2002; Moss & Erlandson 1992; Steffian & Saltonstall 2001). To mediate these challenges, Sugpiaq people maintained systems of security, including long- and short-distance trade, sustaining defensive sites, pooling labor, and hosting neighbors at feasting events. Those systems of security were tested by Russian colonial expansion in the late 18th century.

Sugpiaq ancestors on Kodiak were experienced in raiding and warfare prior to Russian arrival in the North Pacific. In fact, Sugpiaq communities on the southern end of the island had rebuffed a Russian ship that tried to overwinter there in late 1762 and early 1763, gaining the island a reputation as the home of formidable defenders (Black 2004a). This reputation kept other Russian vessels away from Kodiak until 1784 when Gregorii Shelikhov, seeking to forcibly subdue the people of Kodiak, loaded his merchant ships with cannons to launch a surprise attack on the southeastern side of the archipelago (Black 1992, 2004a; Knecht et al. 2002; Shelikhov 1981). Knowing that foreign ships were approaching, people from villages around the region assembled at a small refuge islet for safety, as they had always done at the signs of a raid. Unfortunately, their location was disclosed to Shelikhov by an informant, Kuspak, who was a captive from Kodiak. With this knowledge, Shelikhov blocked the escape route and bombarded the islet with cannon fire, resulting in the massacre of hundreds of Sugpiaq people (Ibid). The horror of the massacre earned the refuge islet on the south side of Sitkalidak Island a new name, Awa'uq, which means to become numb. Awa'uq continues to be a "haunted" place (following Surface-Evans and Jones 2020), where the memories of colonial violence linger for Sugpiaq/Alutiiq people who visit today (see Chapter 2). Interestingly, Awa'uq was not talked about within Old Harbor until 1992 when Rick Knecht led excavations of the site (Knecht et al. 2002). By bringing awareness to that piece of Kodiak's history, the archaeological work at Awa'uq catalyzed conversations and social change within Old Harbor, as community members began to reckon with (and heal from) the ways that centuries of colonialism were still impacting their lives.

Following the massacre at Awa'uq, Shelikhov and his crew used continued violence to take political control of the entire Kodiak archipelago. Following a common Russian practice from their conquest of Siberia, Shelikhov's men took the wives and children of village leaders as hostages to gain the leaders' loyalty. Through those village leaders, Shelikhov extracted tribute in the form of skins, sea otter pelts, and food (predominantly whale, seal, sea lion, fish, and

berries). The Russian fur traders lacked the tools and skills to hunt sea otters effectively, so they conscripted Sugpiaq and Unanga hunters to go on summer-long (and even years-long) hunting trips to harvest these animals. The waters around Kodiak were quickly depleted of sea otters, so subsequent hunting parties had to go further and further from home. By the early 1800s, Sugpiaq men were sent as far away as California and the Kuril Islands in the pursuit of the valuable pelts. The work of hunting sea otters and other valuable marine animals was dangerous, and many men never returned home due to death at sea or permanent relocation to other Russian outposts. This situation not only depleted the Native population, but it left a significant gender imbalance on Kodiak in the decades following Russian colonization, with women outnumbering men by 16% in Saint Paul Harbor in 1818 (Miller 2010: 135). The Native population on Kodiak was further reduced by disease, starvation due to interruptions in subsistence practices, and service demands by Russian colonists to gather food for them. This decline persisted from the first decades of colonial encroachment (Lisianskii 1814: 193; Clark 1987: 123) through an Alaska-wide smallpox epidemic of 1837 to 1840 (Crowell & Luehrmann 2001: 58-60; Fortuine 1989).

While conscripted hunters were primarily men, Sugpiaq women were also forced into the service of Russian enterprises to produce gut and bird skin parkas, skin boat covers, and dried salmon for the Russian American Company (RAC). These items were in turn redistributed by the Russians to Sugpiaq villages and hunters as payment for their service. During the summer months, when men were removed on hunting voyages, Sugpiaq villages were primarily occupied by women, Elders, and children. Women bore the responsibilities of village governance and sustenance in addition to their conscripted labor for the Russian men.

On Kodiak, foods are most abundant only during the summer months. With a reduced capacity for harvesting and storing traditional foods during this season of abundance, many Sugpiaq villages suffered periods of starvation in the winter and early spring (Gideon 1989; Luehrmann 2008). This was an intentional strategy on the part of the Russian mercantile

administration, headed by men like Shelikhov and his successor Baranov of the Russian American Company. The RAC wanted to control food distribution on the island to better keep Sugpiaq peoples under their power, so they removed most qayat (kayaks) and all the angyaat (open skin boats) from villages as the hunters returned from their summer voyages (Chya 2022; Gideon 1989:46-48). Without free access to their watercraft, Sugpiaq people were not able to effectively hunt for food or trade goods with other Indigenous communities. This created a dependence on the RAC to redistribute foods and other goods that were produced using the labor and skill of Sugpiaq women, Elders, and children.

While we lack documentary records of Sugpiaq life from a Sugpiaq perspective during this period, we do have many written accounts from European clergy, explorers and officers that passed through or lived on Kodiak during the Russian colonial period (e.g. Davydov, Gideon, Golovnin, von Langsdorff, Lisianskii, Golovin). Their publications detail their observations and commentary about Sugpiaq people, which, although biased and often racist, do provide some valuable details about the conditions that Sugpiat faced during this period. A common theme addressed in these accounts is the poor status of the Sugpiat because of unjust RAC policies towards them under Shelikhov and Baranov. Gideon and Lisianskii commented on the starvation that they saw among Sugpiaq people because the RAC did not allow them enough time to gather their own food in summer so that by later winter the food stores had run out (Gideon 1989: 70; Lisianskii 1814: 177). Gideon also criticized the colonial administration for its early use of the iasak tribute system, which exploited the labor of Sugpiaq hunters without fair remuneration by demanding a certain quota of sea otter pelts from each hunter. Due in part to Gideon's advocacy through the Russian Orthodox Church, the RAC eventually started paying hunters for the pelts they brought in for the company (Golovin 1979: 23). Despite this seemingly sympathetic behavior towards Sugpiaq people, these European authors maintained a stereotypical view of the Kodiak Islanders as “noble savages”, who “are peaceful, good, hospitable, willing to help those close to them, and honest [...]But at the same time they are very

lazy, heedless and given to gluttony [...]and feel no shame when they satisfy their natural [sexual] desires” (Golovin 1979: 21). In other words, these authors continued to justify Russian colonialism through a moral imperative, in addition to the economic arguments made by colonial governors. Sugpiaq people were viewed and treated as dependent wards that needed to be taken care of and ‘civilized’ by the colonial administration and the Orthodox Church.

Golovin also wrote about the local diet which he described as consisting of plants and fish plus sea mammal oil, “without which they cannot properly exist” (21). He goes on to say that Sugpiaq people were also very fond of bread, tea, sugar, and other imported foods, but that the Company limited their access to those goods by making them expensive. Indeed, Golovin reports, “The requirements of a European style of life are beginning to manifest themselves among the Aleuts, so that one finds they all have teapots, cups and glasses, and many have samovars” (24). Importantly, Golovin visited Kodiak in 1861, in the final years of Russian occupation, so his observations of Sugpiaq life should not be seen to represent those lifeways throughout the entire Russian colonial period. That said, Golovin’s account does suggest an increasing uptake and use of imported goods by Sugpiaq people as their entanglement with Euro-Russian settlers continued.

Faunal Analysis and Indigenous Survivance

Examining Indigenous foodways within colonial systems is an important component of survivance research. Food is nourishment for the physical body, but traditional foods are also linked to cultural practices and ideologies. The practices of harvesting, preparing, cooking, and eating reinforce relationships to place and to community, even as colonial processes seek to disrupt those connections. For example, the abundance of edible and medicinal plants like berries, nettles and pushki (cow parsnip) around the Ing’yuq archaeological site today speaks not just to the preference of these plants for disturbed soil, but also suggests that ancestors

sought to make habitable spaces for these plants near to their homes (following Lally & Funk 2022).

In colonial contexts, maintenance of Indigenous foodways is a political act of community autonomy, the importance of which both Russian administrators and Sugpiaq leaders understood. If Sugpiaq ancestors could continue to provide for themselves and nourish their communities with foods and medicines from the land and sea, then the Russian American Company would have less power over them. Knowing this, the RAC sought to take over the function of food production and distribution from women by restricting Sugpiaq access to their watercraft and conscripting Sugpiaq people to catch, process, and store foods at dedicated work camps where they were overseen by Russian *promyshlenniki* (Gideon 1989; Luehrmann 2008). The foods produced in these work camps were redistributed to Russian-picked leaders (*toions*) of local villages and to the European- or Siberian-born employees of the RAC. These new distribution structures limited Sugpiaq autonomy, and it is worthwhile to explore how effective they were in what became a more geographically peripheral village like Ing'yuyq. In analyzing the faunal remains at Ing'yuyq village, I want to understand what Ing'yugmiut ate, how they acquired those foods, and how foodways were central to the survivance and persistence of Sugpiaq peoples to this day.

Questions and Hypotheses

The faunal remains collected from Ing'yuyq represent a wealth of potential knowledge about Sugpiaq subsistence and foodways practice during the Russian colonial period. I approached my analysis with an eye towards specific questions: How were Sugpiaq people provisioning themselves at Ing'yuyq? To what extent did Ing'yugmiut rely on food distributed by the Russian American Company?

Compared to life at Ing'yuyq prior to the Russian invasion of Kodiak, I expected to see evidence of new subsistence strategies among the Ing'yugmiut during the colonial period. There

were fewer people in the village and, notably, adult men were removed from Ing'yuuq minimally through the summer months, and often for several years. Access to traditional watercraft was controlled by the Russian fur traders, and many children were held as hostages at Three Saints Bay (at least in the initial decade of Russian settlement). These rapid structural changes altered the capacity of the village to feed itself, so people had to adjust their subsistence strategies, especially as Sugpiaq populations remained unstable for the rest of the colonial period due to disease, violence, and removal. Prior to Russian occupation, families worked together to harvest from the abundant populations of salmon in summer and other fishes in the cooler seasons. This was in addition to hunting for marine mammals and waterfowl and gathering plants, intertidal foods, and bird eggs.

Table 3.1: Archaeofaunal Expectations, measured as relative abundance within each period

	Precolonial	Colonial
<i>Overall Food Diversity</i>	High, but dominated by salmon and marine mammals	High, but dominated by shellfish and terrestrial and marine plants
<i>Salmon</i>	High, most abundant fish resource	Low, marine and nearshore fish are dominant
<i>Shellfish</i>	Low	High
<i>Marine Mammals</i>	High, including evidence of whale harvesting	Low, no whale harvesting, opportunistic seal harvesting

To adjust to the new colonial conditions, I hypothesize that Sugpiaq women diversified the foods they harvested in each season to make up for the inability to mass harvest foods in the summer (following the general model outlined in Fitzhugh 2002). Collecting a diversity of foods close to the village would have entailed less coordinated effort on the part of the remaining Ing'yugmiut. Salmon is the typical example of resource intensification on Kodiak during the Kachemak and Koniag culture periods (Kopperl 2003; Partlow 2000). To best make use of this abundant resource that arrives en masse from late spring to early fall, Sugpiaq communities invested large amounts of labor in harvesting, processing, and storing salmon for consumption in leaner seasons. Without that large, concentrated labor capacity, Sugpiaq peoples could not

effectively harvest salmon, so I expect the relative abundance of salmon, compared to other fish species, to decrease during the colonial period. Instead, people focused their energies on the foods they could harvest closer to home and more consistently, such as terrestrial and marine plants, shellfish, and marine fishes that can be caught year-round like cod, halibut, sculpin, and rockfish. As a result, I expect non-salmonid and shellfish remains to make up a significant portion of the midden fauna at Ing'yuuq.

I similarly expect Ing'yugmiut to harvest fewer marine mammals during the colonial period compared to the preceding Koniag period. Since the primary marine mammal hunters were forcibly removed from Kodiak during the summer, marine mammals should be less relatively abundant in the colonial period midden compared to all other animal foods.

It is important to note that traditional harvesting practices were not the only way for Sugpiaq people to get food during the colonial period. The Russian American Company established fishing camps staffed by Sugpiaq people and overseen by promyshlenniki. These camps supplied the Russians with dried salmon and cod, known as iukola, and Kodiak was the center of iukola production for the entire RAC (Gibson 1987). Russian artels (large work encampments) throughout RAC colonies also tended domestic animals and attempted agriculture, although grain crops were only successful at Fort Ross in California (Lightfoot 2005). Through Russian trade networks and contracts with the Hudson Bay Company, imported foods such as sugar, tea, flour, and alcohol were also brought into Alaska. I do not expect, however, that many of these imported, domesticated, or agricultural foods were consumed in peripheral Sugpiaq villages like Ing'yuuq. Those products would have been saved for Russians and Creoles. That said, I do anticipate that iukola was distributed around the archipelago, both as a form of payment for services rendered to the Company and as a way to combat winter starvation in the villages. This would be a way for salmon to remain a staple in Sugpiaq households, even as they lost the labor capacity to harvest these fish on their own terms.

Unfortunately, it would be very challenging to distinguish iukola from locally-caught salmon in archaeological contexts.

The Ing'yuyq Village Site (KOD-114)

The Ing'yuyq Village Site (KOD-114) is the source of the faunal data presented in this paper. Ing'yuyq village was a Sugpiaq settlement located on an old beach ridge on the shores of Tanginak Anchorage on Sitkalidak Island. Ing'yuyq was likely a winter settlement prior to Russian arrival, a homebase from which families dispersed to gather resources during the summer months. It was occupied by at least 1600 CE and is recorded in Russian censuses and maps until the early 1840s, when the Ing'yugmiut (people of Ing'yuyq) were forcibly relocated to the Sitkalidak Narrows on Kodiak Island – which remains the site of Old Harbor, Alaska today (Luehrmann 2008: 45-46). Russian naval captain Yurii Lisianskii recorded staying overnight at Ing'yuyq in April 1805 to avoid travelling in bad weather (Lisianskii 1814: 184; Lisianskii labeled Ing'yuyq as Iezopkino on his maps, as that was its Russian-given name [Clark 1987:114]). Although he does not have very much to say about Ing'yuyq compared to what he wrote about other nearby villages, he describes being amused by a tame eagle flying into a ciqlluq (sod house) and sitting with its master by the fire (Ibid). These tame eagles were kept both for amusement and for their feathers, which were harvested for arrows. Despite Lisianskii's relative silence on Ing'yuyq, he does describe other contemporary villages around Sitkalidak as being better off than those in Kiliuda Bay on the main island several miles from Sitkalidak, where he had observed people who were starving (1814: 173-189). I interpret Lisianskii's lack of commentary on Ing'yuyq to mean that there was neither any significant grandeur (other than the eagle) nor suffering compared to the other villages that he had visited over the previous month.

The archaeological site was originally recorded by Donald Clark in 1963 as part of the University of Wisconsin's Aleut-Konyag Project. Clark did not excavate or collect any artifacts from the site, but he noted that housepits were obvious on the surface, indicating a relatively

recent occupation (Clark 1987: 114). As part of his Sitkalidak Archaeological Survey from 1993 to 1995, Ben Fitzhugh dug a single test pit in a side room of one of the housepits at Ing'yuyq in which he found some locally made ceramics (Fitzhugh 1996a). Based on these artifacts, along with Clark's (1987) work linking this site with Lisianskii's report of Iezopkino, Fitzhugh determined that this was a late precolonial/early colonial period site.

No one had conducted more complete archaeological testing or excavation at Ing'yuyq Village until Ben Fitzhugh and I returned to the site in 2019 with the Old Harbor Archaeological History Project (OHAHP). Our goal with OHAHP is to examine strategies of persistence and survivance among Sugpiaq communities during the period of Russian colonialism. During the summer of 2018, the OHAHP field team surveyed nine archaeological sites around Old Harbor to determine which was likely to yield intact deposits spanning the pre-colonial and colonial periods (Miller & Fitzhugh 2019). We ultimately selected Ing'yuyq as our primary excavation site because of its large, intact midden deposits. The team returned to Ing'yuyq in 2019 to map the site and open test excavations in several of the visible housepits and middens in order to select areas for open excavation (Miller & Fitzhugh 2020). The excavation, during which we collected the data for this paper, was conducted in summer 2021.

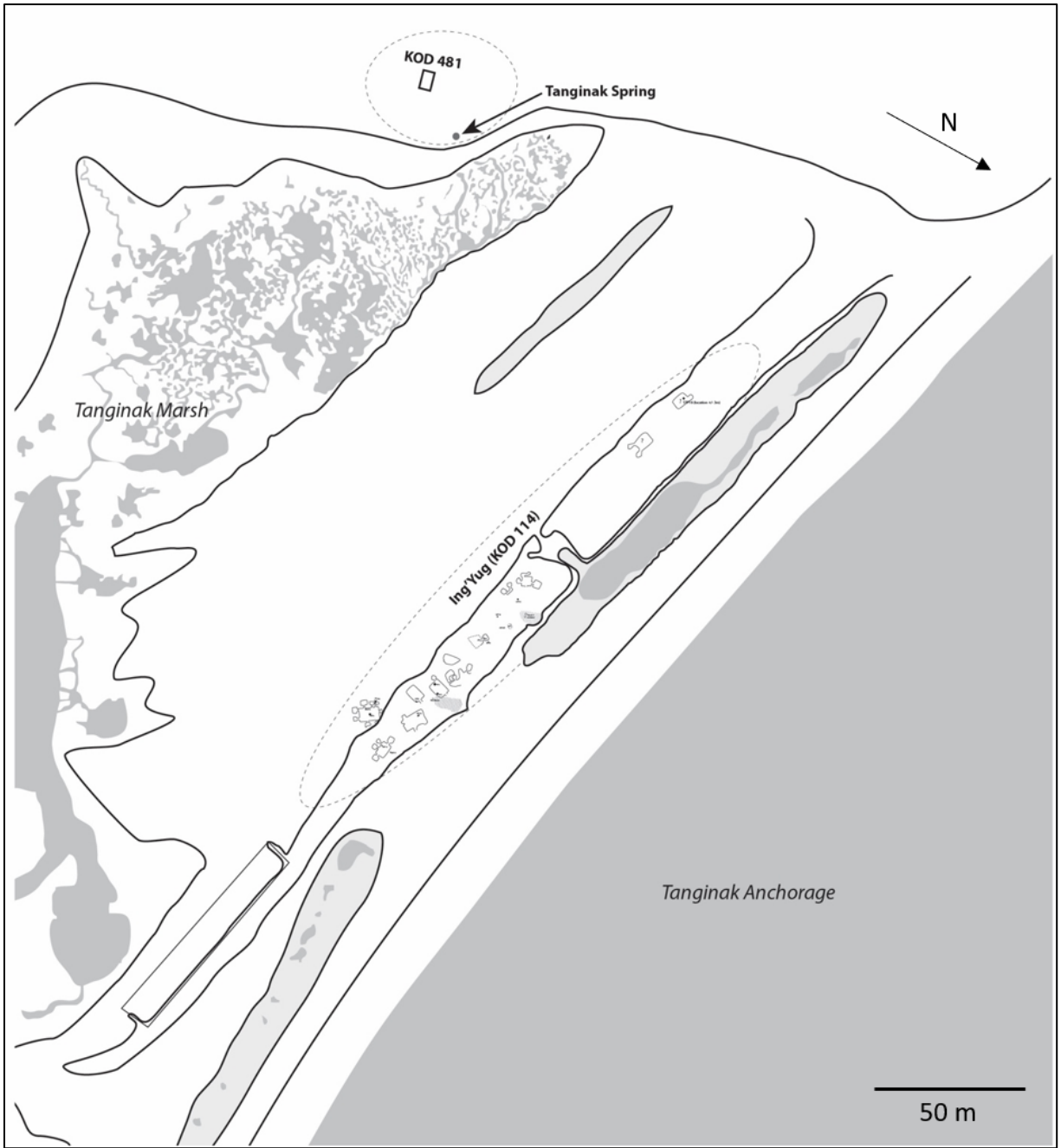


Figure 3.1: Map of Ing'yuq Village (KOD-114) within the Tanginak region on Sitkalidak Island, shown in relation to the Tanginak Spring Site (KOD-481), the oldest dated site in the archipelago

The Ing'yuq Village Site consists of 10 housepits arranged along an elevated old beach ridge. A narrow swale with some standing water separates the site from the active beach ridge of Tanginak Anchorage. The primary area of the site extends along about 100 meters of the beach

ridge, although there are two more housepits about 60 meters to the west on the other side of a deep cut in the beach ridge (Figure 3.1).

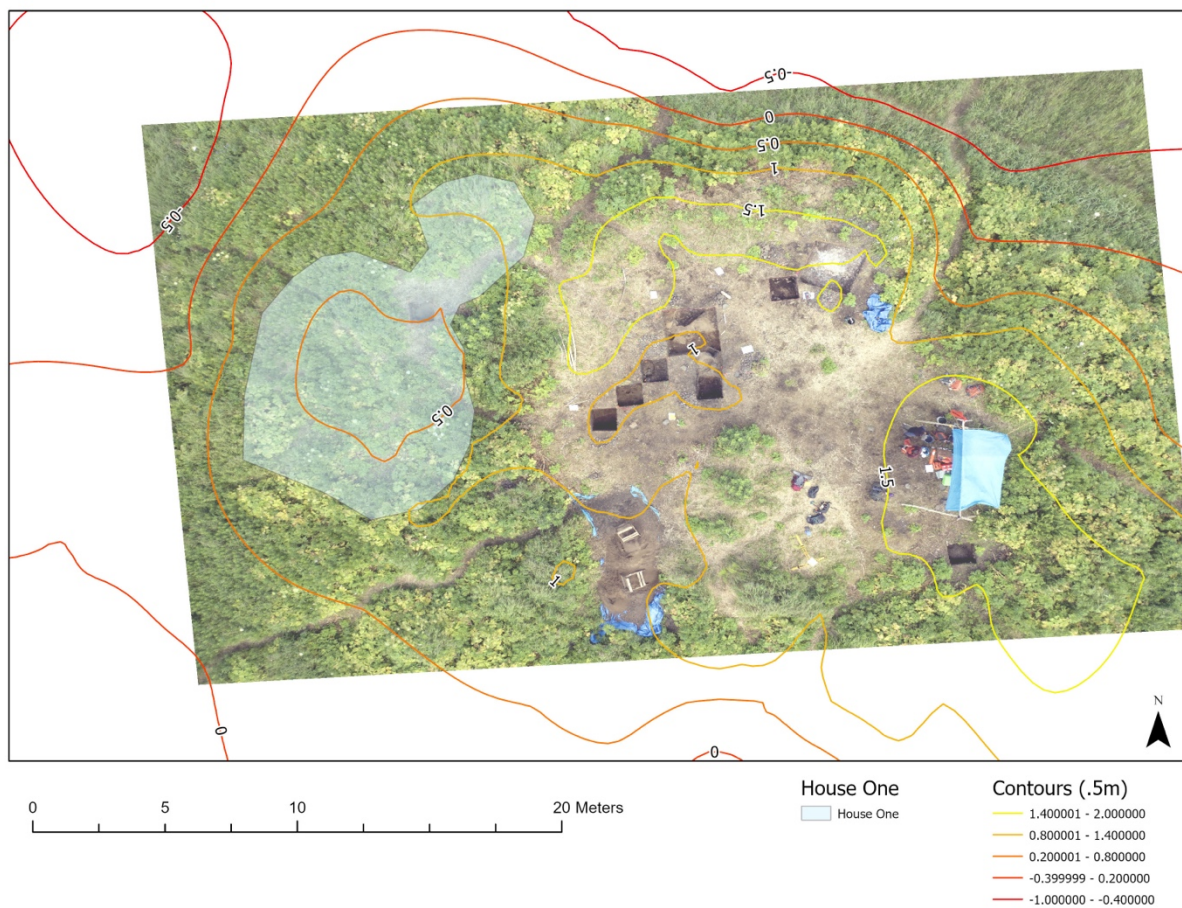


Figure 3.2: Contour map of House 2 excavation at Ing'yuuq, July 2021. The blue shaded area to the west is the mapped outline of adjacent House 1. Contour map by Alec Iacobucci

Our 2021 excavations were focused on House 2 and its associated midden (Figure 3.2), although we also opened three units in other parts of the site. Figure 3.2 shows a plan map of the excavation. We selected House 2 for excavation because of its association with a deep and well-defined midden even though the walls of House 2 were less obvious from the surface than other housepits at Ing'yuuq. By the end of the season, we had excavated ten units in House 2 and four in the adjacent midden.

Stratigraphy

The stratigraphy of House 2 was complicated, and it quickly became clear upon excavation that there had been multiple episodes of remodeling and reuse of the location. The following table is a generalized stratigraphy of House 2, which has two distinct cultural layers. As I explain in the following section, the stratum II cultural layer dates to the colonial period, while stratum IV dates to the late Koniag period.

Table 3.2: Generalized stratigraphy of House 2 at Ing'yuuq Village (KOD-114)

I	Thin vegetation mat with Katmai ash
II	Charcoal-rich cultural layer with gravel-sized FCR (most features cut down from this level)
III	Fill or sod
IV	Cultural layer, either charcoal-rich or sandy, but with abundant cobble-sized FCR
V	Sandy clay loam (brown or golden brown) with wood charcoal fragments and minimal FCR
VI	Dune sand, post holes often visible

During excavation it was unclear how the midden dated relative to the house, although their association was clear given that the midden abuts the north wall of the house. I used selective radiocarbon dating in conjunction with the presence of trade beads to locate an approximate stratigraphic boundary between the colonial and precolonial occupations of House 2 and its midden at Ing'yuuq Village.

The field team excavated the midden associated with House 2, deemed Midden 1, in six natural levels separate from the generalized stratigraphy described for House 2. The natural levels were excavated following visible transitions in faunal content, FCR, and soil matrix. Based on the presence of a bead in level 4 of the midden, we have deemed levels 1 through 4 upper Midden 1, and levels 5 and 6 lower Midden 1.

Importantly, the field team located an older buried midden beneath a hearth feature in House 2 within unit 3. The buried midden, called Midden 2, was located within stratum V and is comprised mostly of fish remains and charcoal. Its presence underneath cultural layers in the

house is evidence for remodeling and rebuilding episodes on the Ing'yuq sand dune and also offers an opportunity to compare subsistence practices over a longer time period at the site.

Dating: Radiocarbon and Trade Beads

The wobbly nature of the radiocarbon calibration curve close to the present makes it very challenging to confidently use radiocarbon dates for recently occupied sites. Nevertheless, I was not sure how long the site was occupied, so I sent nine charcoal samples to DirectAMS for dating. The selected samples were taken directly from excavation profiles ensuring an exact provenience for each. Dr. Jennie Deo Shaw of Salix Archaeological Services LLC identified these samples to taxa so that I could select charcoal pieces from local, short-lived tree species and avoid additional bias from the old wood effect (West 2011). Table 3.3 summarizes the uncalibrated radiocarbon data, including the generalized stratum the sample came from and whether that level or feature contained any glass trade beads.

Table 3.3: Radiocarbon dates from Ing'yuq Village (KOD-114)

DirectAMS Code	Local Code	Stratum	Depth (cm)	RCyBP	1s error	Beads?
D-AMS 046999	Ing614	II	22-29	modern		Yes
D-AMS 046997	Ing602	II	50-54	71	22	Yes
D-AMS 047004	Ing636	II	26-32	108	21	Yes
D-AMS 047005	Ing647	II	59-61	123	17	Yes
D-AMS 047003	Ing635	II	39-43	166	22	Yes
D-AMS 046998	Ing610	III	39-40	72	21	No
D-AMS 047000	Ing620	V	68-70	279	21	No
D-AMS 047001	Ing624	Upper midden 1	17-18	144	20	Yes
D-AMS 047002	Ing625	Lower midden 1	38-40	167	19	No

Initial calibration of the radiocarbon dates in the above table yielded no easy chronological sequence as all dates had overlapping probability curves (other than Ing620, which I will describe later). To better make sense of the radiocarbon data, I used the sequence function in OxCal version 4.4 (Bronk Ramsey 2021) to place the dates from House 2 in

stratigraphic order. I imposed boundaries of 1750 and 1840 CE to bracket known occupation of Ing'yuq Village from the documentary record. The village residents were resettled to Nuniaq in the late 1830s, and while folks certainly visited Tanginak after the resettlement, there was no permanent occupation of the area after the 1830s (Luehrmann 2008: 41). The earlier boundary marks when significant quantities of imported beads entered the region. While sporadic trade beads have been documented in Alaska back to the 15th century (Kunz & Mills 2021), there was not a steady supply of beads entering Alaska until Russian fur trade vessels began regular voyages into the Aleutian Islands and Bering Sea in the 1750s and 1760s (Black 2004a). Thus I use 1750 as a conservative estimate of when glass beads might start appearing in Kodiak.

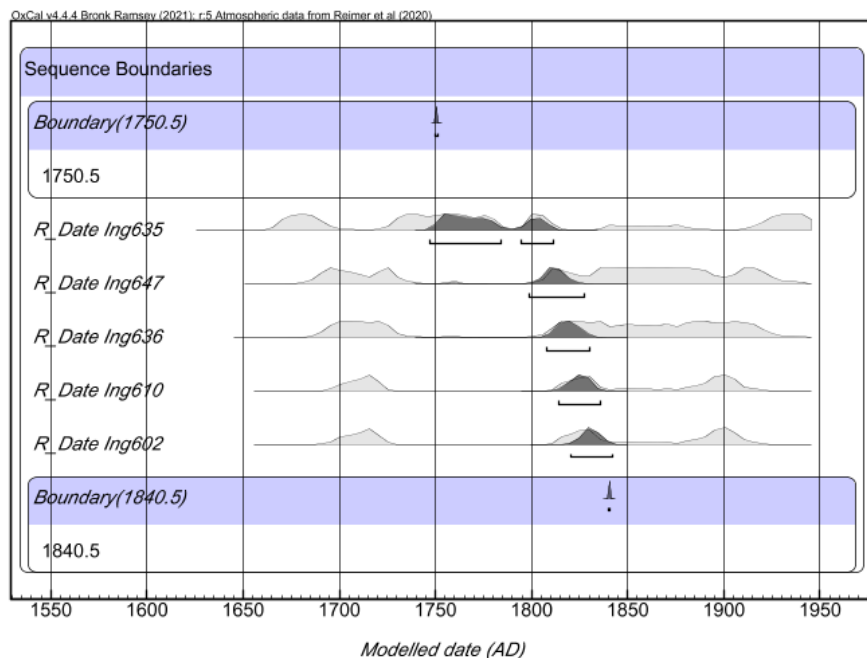


Figure 3.3: Sequenced calibrated radiocarbon dates from stratum II in House 2 at Ing'yuq Village (KOD-114). Temporal boundaries set at 1750 and 1840 CE

Figure 3.3 shows the sequenced calibrated dates for House 2. Note the slight gap in probability for the period between 1750 and 1800 CE for the latter four dates shown in Figure 3.3. Given that gap and the presence of beads in stratum II, I argue that samples Ing647, Ing636, Ing610 and Ing602 date between 1800 and 1840 CE. I sampled Ing635 from a large

charcoal pit feature that cut down from stratum II, so it should be roughly contemporaneous with the other stratum II dates, despite its wider calibrated date range.

The midden calibration was challenging as I had no good lower boundary date to impose on the sequence. As seen in Figure 3.4, Ing620 from Midden 2 is distinctly older than the Midden 1 dates. Midden 2 most likely dates to the mid-17th century, although the 16th century is also possible. In either case, Midden 2 is firmly in the Koniag cultural period prior to any direct or indirect entanglement with Euro-Russian fur traders.

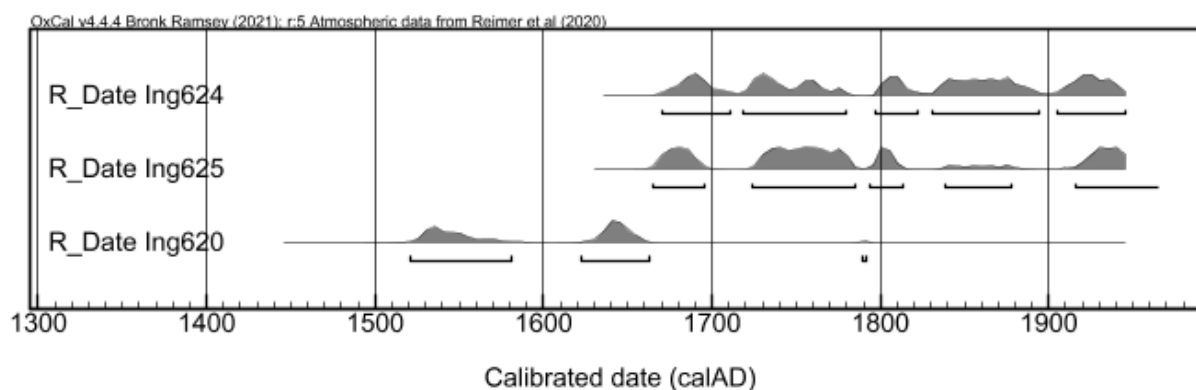


Figure 3.4: Calibrated dates from Midden 1 at the Ing'yug site (KOD-114)

For Midden 1, which was dated by Ing624 and Ing625, I used the presence of a bead found in the same context as Ing624 to create an analytical boundary between upper and lower levels of the midden. With that information, I argue that the upper midden (Ing624) dates to the colonial period (1780 to 1840 CE), but how to interpret the age of the lower midden (Ing625) is less clear. It is possible that the lower Midden 1 is also from the early colonial period (pre-1820 CE), although the immediate precolonial period (1670 to 1780 CE) cannot be ruled out. For the purposes of the faunal analyses, I use the analytic categories of upper and lower Midden 1, but chronologically meaningful comparisons can only be made confidently between Midden 1 as a whole and Midden 2.

Faunal Analysis

Methods

The 2021 OHAHP field team excavated Midden 1 from its highest point in a 2x2 meter area that was subdivided into four 1x1 meter units. Unlike the rest of the 2021 excavation, these four units were not oriented with the cardinal directions, but slightly rotated counterclockwise to best capture the topography of the midden mound. We excavated in natural levels, following identified changes in the composition of the midden matrix. The field team sieved all excavated midden material through a nested 1/4" and 1/8" water screen and bulk collected all material from each screen. When we uncovered a distinct buried midden under the house's hearth (Midden 2), we excavated it using the same methods as the household midden so that the samples are comparable. For this analysis, I only consider mammalian, fish, and invertebrate faunal material from the 1/4" screen.

Back in the lab, the 1/4" faunal samples were sorted into gross taxonomic categories of invertebrates, fish, birds, and mammals. Bird remains are not analyzed in this paper. To address the questions about local labor, the lab team extracted vertebrae from the fish bone samples and sorted them into two categories: salmon and non-salmon. I use vertebral counts to estimate the proportion of salmon vs. non-salmon consumed by the household. Salmon heads were typically discarded at the processing site, while the heads of cod and some other marine fish were preferentially saved and fermented as a delicacy (Davydov 1977: 172). Post-cranial elements are more likely to make it back to the household from all fish species, although some salmon drying preparation methods also included the removal of the spine (Partlow 2000). Given this, the assemblage of fish vertebrae is the best dataset to use in comparing fish species, as it is the least affected by differential disposal bias in the midden and density mediated attrition (Butler & Chatters 1994). Salmon vertebrae are also very easy to distinguish from non-salmonid vertebrae due to their distinctive fenestrations and even cylindrical shape (Cannon 1987).

Mammal remains were identified to the lowest taxon possible. I made identifications using reference skeletons of harbor seal (*Phoca vitulina*), northern fur seal (*Callorhinus ursinus*), and harbor porpoise (*Phocoena phocoena*) from the Burke Museum and visited the Burke’s zoology collections on several occasions to identify samples that were not matches for the three reference skeletons on hand in the lab. I chose the three reference skeletons based on the most common marine mammals that are found around Sitkalidak Island today and those that are most represented in other archaeological collections from the area (Etnier 2011; Kopperl 2003). I also made use of the Idaho Virtual Museum’s Osteology collection (<https://virtual.imnh.iri.isu.edu/Osteo>) to narrow down taxonomic possibilities for some elements.

Mammal Data Description

Table 3.4: NISP and %NISP of mammalian fauna excavated from Middens 1 and 2 at Ing’yuq

Common Name	Species	NISP	%NISP Identified	%NISP Total
Seals/sea lions sp.	Pinnipeds	143	45.8	16.4
Harbor seal	<i>Phoca vitulina</i>	48	15.4	5.5
Northern fur seal	<i>Callorhinus ursinus</i>	86	27.6	9.9
Porpoise sp.	Phocoenidae	8	2.6	<1
Harbor porpoise	<i>Phocoena phocoena</i>	7	2.2	<1
Dall’s porpoise	<i>Phocoenoides dalli</i>	2	<1	<1
Whale sp.	Cetacea	13	4.2	1.5
Dogs/foxes sp.	Canid	1	<1	<1
Red fox	<i>Vulpes vulpes</i>	1	<1	<1
Brown bear	<i>Ursus arctos</i>	1	<1	<1
Rodent sp.	Rodentia	2	<1	<1
TOTAL IDENTIFIED		312	100	35.8
Unidentified mammal	Mammalia	559	-	64.2
TOTAL MAMMAL		871	-	100

Out of 871 bones and teeth that could be identified as mammals from the middens at Ing’yuq, the lab team was able to further identify 312 (35.8%) to a lower taxonomic level, some

as low as species level (Table 3.4). Most of the identified faunal remains are from pinnipeds, the clade of seals and sea lions. Samples identified only to pinniped (NISP 143) were the most common, followed by northern fur seal (*Callorhinus ursinus*, NISP 86), and harbor seal (*Phoca vitulina*, NISP 48). The assemblage also contains some members of the porpoise family (Phocoenidae, NISP 8), including some identified to harbor porpoise (*Phocoena phocoena*, NISP 7) and Dall’s porpoise (*Phocoenoides dalli*, NISP 2). We also found some fragments of whale bone (NISP 13), although none of the fragments were complete enough to identify to element. Finally, we found two rodent elements and a single element each from dog or fox (Canid), red fox (*Vulpes vulpes*), and brown bear (*Ursus arctos*).

Table 3.5 shows the mammal data separated by context in either Midden 1 or Midden 2. There are very few mammal remains in Midden 2, which is predominantly comprised of fish. Seven of the northern fur seal elements in this midden are articulated vertebrae from a single individual. Meanwhile Midden 1 contains 97.5% of all excavated mammal bones. Even accounting for the larger excavation area in Midden 1, the percentage of fauna in this midden is still 90.6% of all mammalian fauna collected, suggesting a significant increase in mammal harvesting at Ing’yuyq over time.

Table 3.5: NISP of mammalian fauna found in Middens 1 and 2 at Ing’yuyq

Common Name	Species	Mid 1 NISP	Mid 2 NISP
Seals/sea lions sp.	Pinnipeds	139	4
Harbor seal	<i>Phoca vitulina</i>	48	-
Northern fur seal	<i>Callorhinus ursinus</i>	77	9
Porpoise sp.	Phocoenidae	8	-
Harbor porpoise	<i>Phocoena phocoena</i>	7	-
Dall’s porpoise	<i>Phocoenoides dalli</i>	2	-
Whale sp.	Cetacea	12	1
Dogs/foxes sp.	Canid	1	-
Red fox	<i>Vulpes vulpes</i>	1	-
Brown bear	<i>Ursus arctos</i>	1	-
Rodent sp.	Rodentia	2	-
Unidentified mammal	Mammalia	551	8
TOTAL		849	22

Table 3.6 shows a more nuanced picture of mammal harvesting over time, subdividing Midden 1 into its upper (levels 1, 2, 3, 4) and lower (levels 5, 6) levels. In this format, the data show a decrease in harbor seal and unidentified pinniped elements in Midden 1 through time, while fur seals remain consistent.

Table 3.6: NISP of mammalian fauna found in Middens 1 and 2 at Ing'yuuq, by level

Common Name	Species	Upper Mid 1 L1/2/3/4 NISP	Lower Mid 1 L5/6 NISP	Mid 2 NISP
Seals/sea lions sp.	Pinnipeds	48	91	4
Harbor seal	<i>Phoca vitulina</i>	10	38	-
Northern fur seal	<i>Callorhinus ursinus</i>	38	39	9
Porpoise sp.	Phocoenidae	6	2	-
Harbor porpoise	<i>Phocoena phocoena</i>	7	-	-
Dall's porpoise	<i>Phocoenoides dalli</i>	1	1	-
Whale sp.	Cetacea	9	3	1
Dogs/foxes sp.	Canid	1	-	-
Red fox	<i>Vulpes vulpes</i>	-	1	-
Brown bear	<i>Ursus arctos</i>	1	-	-
Rodent sp.	Rodentia	-	2	-
Unidentified mammal	Mammalia	354	197	8
TOTAL		475	374	22

While the mammal data is limited, it does indicate that Sugpiaq ancestors at Ing'yuuq were able to harvest some marine mammals during the colonial period. It is unsurprising that pinnipeds, and specifically northern fur seals and harbor seals, dominate the identified assemblage (88.8% of identified assemblage). Seals have long been a primary source of oil, meat, and skins for Sugpiaq people. Other nearby archaeological sites record the harvesting of seals in great numbers, particularly northern fur seals which in the historic era are known to migrate past Sitkalidak twice a year on their way to and from the Pribilofs for breeding (Clark 1986; Etnier 2011). While ethnographic research with Old Harbor residents indicates a current

preference for Steller sea lion and harbor seal over northern fur seal (Mishler 2003), the latter were certainly an important resource for their ancestors.

The presence of porpoise remains is particularly interesting, since porpoises require great skill and access to a qayaq, to capture. With such limited data, however, we cannot rule out that the few porpoise remains recovered from Ing'yuuq were the result of harvesting stranded animals. If these porpoises were hunted, rather than stranded, then Ing'yugmiut must have had access to watercraft, which suggests some resistance to the Russian colonial policy that sought to tightly control Sugpiaq access to traditional watercraft and/or a change in policy in the later years of Russian America that officially returned boats to communities.

Fish Data Description

Table 3.7: Fish vertebrae counts and percentages from Midden 1 (Unit 7; Upper and Lower) and Midden 2 (Unit 3)

Unit	Level	Total verts	Salmon verts count	Non-salmon vert counts	Salmon %	Non- salmon %
7	1	109	53	56	48.6	51.4
7	2	170	79	91	46.5	53.5
7	3, 3B	40	15	25	37.5	62.5
7	4	118	39	79	33.1	66.9
7	Upper	437	186	251	42.6	57.4
7	5	200	28	172	14.0	86.0
7	6	1995	940	1055	47.1	52.9
7	Lower	2195	968	1227	44.1	55.9
3	5	16	0	16	0.0	100.0
3	7	1887	72	1815	3.8	96.2
3	Mid 2	1903	72	1831	3.8	96.2

I compared counts and proportions of salmon and non-salmon fish vertebrae between a single unit from Midden 1 (Unit 7) and the one-unit Midden 2 (Unit 3) that the team excavated in summer 2021. I chose to limit the Midden 1 sample to a single unit to reduce analysis time and to maintain a comparable excavation volume to Midden 2. For Midden 1, the proportion of salmon vertebrae in the upper (42.6%) and lower (44.1%) levels is much higher than in the older

Midden 2 (3.8%). Salmon were a more significant part of the diet during the upper and lower Midden 1 occupation of Ing'yuyq, whereas during the earlier Midden 2 (Koniag) occupation, the dietary focus was apparently other, non-anadromous fish. Salmon and cod were the primary fish caught and redistributed by the Russian American Company (using Sugpiaq labor) during the colonial period, which may partially account for the increase of salmon vertebrae in Midden 1. It is possible that different salmon preparation methods, some of which involve the removal of the vertebrae and the head of the fish, have resulted in an underrepresentation of salmon in all midden deposits at Ing'yuyq. With the relatively small sample size, it is also not possible to address the effects of seasonality on these midden deposits. Middens 1 and 2 could represent different harvesting seasons.

Invertebrate Data Description

Table 3.8: Invertebrate weights and percentages from Middens 1 and 2 at Ing'yuyq

Context	Invertebrate weight (g)	% Total weight	Avg weight per unit (g)
Mid 1, L1/2/3/4	20,099	25.7	5,024.75
Mid 1, L5/6	57,965	74.2	14,491.25
Mid 2	102	0.1	102
TOTAL	78,166	100	-

Most of the midden deposits at Ing'yuyq by weight are the remains of invertebrates (and fire-cracked rock). I did not make an attempt to systematically identify or quantify the invertebrate species, but the assemblage does include blue mussels, butter clams, whelks, sea urchins, chitons, limpets, and cockles. The data shown in Table 3.8 illustrate the stark difference in invertebrate use between Middens 1 and 2. Midden 2, which was dominated by fish remains, contains almost no invertebrate remains. In contrast, the Midden 1 fauna are mostly shellfish by mass, with about three quarters of the shellfish mass in the lower midden layers.

Contemporary Old Harbor Perspectives on Harvesting

To better contextualize the archaeological findings, I visited Old Harbor in March 2022 to speak with residents about the foods that they harvest from the land today. I wanted to learn about the local resources from a Sugpiaq perspective, from people who have lived in the area for all or most of their lives. The stories that Old Harbor residents told me are situated and emplaced knowledge that reference not just environmental or biological facts about the landscape or animal behavior but are also encoded with cultural values. Rather than relying solely on academic literature to learn about fish behavior or seasonal changes on the landscape, it is vital for this project to also have Sugpiaq cultural perspectives on these topics. The cultural-environmental knowledge of people on the landscape today better approximates that of their ancestors 200 to 500 years ago than any other source that is available to us today.

During my two-week trip to Old Harbor, I interviewed six Sugpiaq adults (3 women, 3 men) who have lived most of their lives in the Southeastern Kodiak Archipelago between Kaguyak and Eagle Harbor: Travis Berns, Frances French, Allen Christiansen, Gally Price, Mary Barb Christiansen, and Rolf Christiansen. Each of these individuals engages (or has engaged) in a combination of commercial and subsistence harvesting from the lands and waters surrounding Old Harbor. All of them were first introduced to hunting and fishing by an older relative, and they in turn have been passing this knowledge on to the next generation. My initial interview questions focused on when and where people go to harvest various food resources, but these quickly turned into stories about favorite foods, mishaps while out harvesting, and methods of preparing and serving foods. Several folks specifically highlighted some ethical practices of harvesting as well, such as only harvesting what you need and will use and giving thanks to (and respecting the remains of) hunted animals for the sustenance that they provide. Other interviewees shared concerns about declining animal populations (especially birds), pollution in the environment, and the preservation of ancestral sites. For the sake of simplicity when

integrating the interview data with the archaeological data, I have broken down this section by discussion of broad taxonomic category (fish, mammals, bird, shellfish, plants).

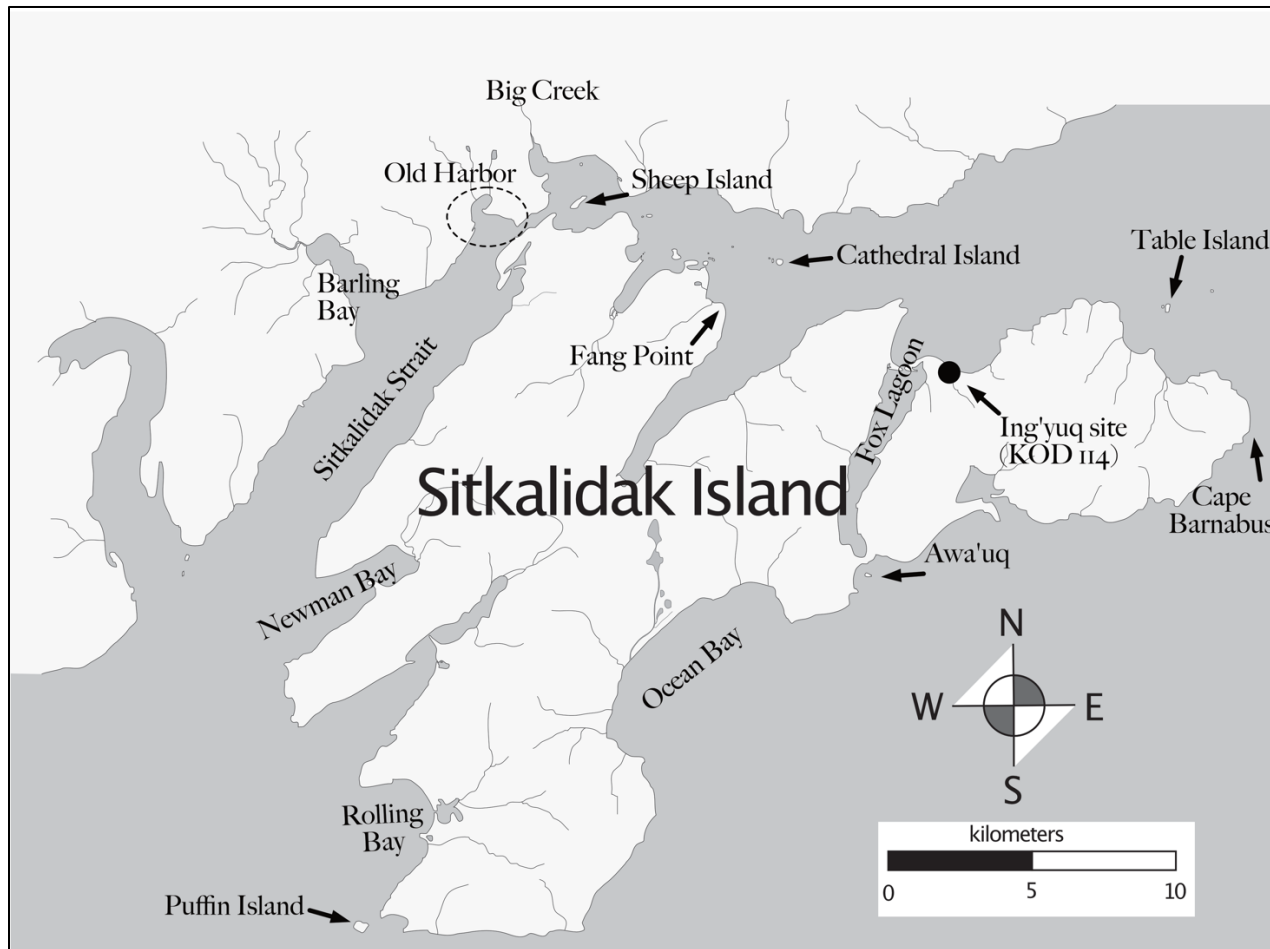


Figure 3.5: Map of harvesting places around Old Harbor and Sitkalidak Island mentioned by interviewees

Waters of Abundance: Fish resources

It is immediately obvious upon arriving in Old Harbor, that this is a fishing town. Life is oriented to the water and the boat harbor is centrally located. Even in the winter, the village is dotted with crab pots, nets, and buoys as they await their next usage. My interviews were also predominantly about fish and fishing. Salmon are central to commercial and subsistence fishing in the warmer months from late May to early October. Popular sites for salmon fishing around

Old Harbor include Big Creek, Barling Bay, Newman Bay, Rolling Bay, and Fang Point (Figure 3.5). Travis Berns explained that silver salmon have the tastiest meat for the effort of catching them and processing them, but that they take a really long time to dry for storage. Humpies dry faster, but they are more work to process per pound. While salmon can be cooked in many different ways and in a variety of dishes, several interviewees mentioned sikiq (partially smoked salmon) as a favorite among the older generations of residents. Rolf Christiansen also recalled his Grandma Sasha Christiansen fermenting salmon eggs and then eating them with mashed potatoes and blueberries. Because salmon only runs in the summer, people preserve it using multiple methods, including freezing, drying, pickling, salting, and smoking, to ensure they can enjoy the fish all year round.

Throughout the year, you can also readily catch cod, sculpin, bullhead, and ling cod. Allen Christiansen explained that you don't have to go far out in the winter to catch these species, and you could even catch them off a rocky point or from the beach in some places. He also noted that the cod populations have fluctuated wildly over his lifetime. Halibut are prevalent all year, but spend the winter in deeper water, so they are more often caught in warmer months by jigging at Cathedral Island, Fang Point, Fox Lagoon and Barling Bay (Figure 3.5). Herring are seasonal, usually arriving in March. People know it's time to fish them when they see birds and sea lions gathering in Sitkalidak Strait.

Another fish specialty is tamuq, or dried fish flesh, which can be made from any type of fish and everyone has their favorite variety. Tamuq can be eaten on its own, but it is often dipped in oil. Gally Price spoke about how her mother Mary really liked dried fish skin, which she would bake in the oven with onions and Wesson oil, although no one else in her family cared for it. Mary learned to like this dish from her mother, Grandma Sasha, who had her own set of ulus for filleting fish and removing the skin – she wouldn't let anyone else touch or use her ulus!

“Nothing wasted”: Marine mammal resources

When people from Old Harbor harvest a seal or sea lion today, they always share the meat with the community. Allen Christiansen mentioned that he often goes after a harbor seal for its hide, but it is important that he doesn't waste the meat, so he gifts it to his Elders. This ethic of sharing and caring for the community was a common thread in all the marine mammal stories that interviewees shared with me. Community members support one another in subsistence and also show respect and care for the marine mammals they encounter. Gally Price recalled a time when a sperm whale got tangled in her family's fishing net by accident one summer. They had to cut through the net to let the whale escape, but that left them with no net to complete their summer fishing season. Thankfully, another family lent them a net for the rest of the season so that they could still put up enough fish for the winter.

Pinnipeds, specifically sea lions and harbor seals, are the most common marine mammals harvested around Old Harbor today. There are a number of known haul out sites at Cape Barnabus, Table Island, and Puffin Island that Old Harbor folks visit (Figure 3.5). Hunters go after pinnipeds for their skins, meat, and oil. Rolf Christiansen shared how Grandma Sasha would fry seal blubber in a pan to render it into oil for eating and as fuel for lamps. Many traditional Sugpiaq foods were eaten with seal oil, such as tamuuq (dried fish) and berries, a delicacy that many folks in Old Harbor still eat when available. The oil from pinnipeds burns hot and, according to Rolf, can fuel a lamp for 40 hours on a single fill.

There are fewer stories about whales and porpoises today, since they are no longer actively harvested by Old Harbor residents. Some Elders enjoy muktuk (slices of whale skin and blubber) on occasion, but it is always sent by relatives from up north and never made from locally harvested whales, at least not in living memory (see Mishler 2003 for discussion of Mashataq, the last traditional Alutiiq whaler). Allen spoke about how his mother, Mary, used to eat porpoise as a child, but that he had never tried it. Porpoises are generally considered sacred animals and would only have been harvested in times of starvation (Haakanson 2023, personal

communication). People often see humpback whales in the Sitkalidak Strait, which is always a welcome sight. Multiple interviewees told me about several humpbacks spouting and breaching during Elder Mary Haakanson's funeral and burial in late 2021 – interpreted as a sure sign of a blessing to her spirit.

“Better for baking than chicken eggs”: Bird resources

Birds are a conservation concern among the folks I spoke to in Old Harbor. They have noticed some seabird populations in flux or in decline, particularly as compared to what they remember about their childhoods pre-Valdez oil spill. Perhaps as a result, the interviewees narrated a general trend of declining use of local seabirds. Rolf Christiansen and Travis Berns spoke about hunting migratory birds and puffins – Rolf's favorite is the 'butterball' or bufflehead, which can be found locally in the winter. Allen Christiansen recalled hunting ducks as a kid, eating the meat while using the feathers for down pillows and comforters, but today he, like all other interviewees, primarily gathers eggs from seagulls and Arctic terns but rarely harvests live birds. Multiple people named Sheep Island and Cathedral Island, both in Sitkalidak Strait, as prime locations for gathering eggs when they were kids and today. Rolf told me that seagull eggs are better for baking than chicken eggs and Frances French concurred, describing her recipe for quiche made with local eggs. This relatively modest harvesting of local bird resources described by interviewees is a change from the harvesting trends of the 1990s in Old Harbor as reported by Craig Mishler (2003). Mishler's interviewees described hunting preferred species like black scoters, white-winged scoters, and mallards between October and February, although his interviewees also had noticed declines in bird use over their lifetimes (Ibid).

“Only eat them in months with an ‘r’”: Shellfish resources

Shellfish were an extremely important part of Sugpiaq diets in the deep and recent past; however, the fallout from the Exxon Valdez oil spill and a rapidly changing climate makes many

of these animals unsafe to eat today. The rule of thumb is to only eat shellfish in months that have an 'r' in them (i.e. September to April), as the risk of paralytic shellfish poisoning (PSP) is lower in the winter time. Allen told me that he used to gather urchins, mussels, and chitons around Old Harbor and Sitkalidak Island, but that the mussels and chitons are no longer safe to eat. Butter clams, cockles, and razor clams are still harvested and eaten in the wintertime. Rolf advised that you should only eat clams whose flesh is clean and spit out any bite that tingles in your mouth. There have been several deaths from PSP in Old Harbor in the past few decades, so many people avoid shellfish altogether – quite a change from their ancestors who relied heavily on shellfish for subsistence in the winter. Travis Berns also spoke about a change in attitude towards crab. Crabs are now heavily harvested both for subsistence and commercially, yet Sugpiaq ancestors had a taboo against eating crab, since they are bottom-feeders associated with death.

“Summer is for berries”: Plant resources

There are also many local plant foods with which Old Harbor residents supplement their diets. My interviewees spoke mostly about the various berries they gather around the village during the summertime: salmonberries, cloudberry, lowbush cranberries, crowberries, blackberries, raspberries, and strawberries (introduced by visiting schoolteachers in the 1950s). While many berries are eaten during the picking process, most make it home to eat later or turn into jams and jellies. Rolf recalled that Grandma Sasha used to make salmonberry wine. She would ferment berries in trash cans from summer until Lent ended, then strain the contents before bottling and drinking the wine. Frances French also uses many other plants in her cooking, such as the stalks of putchki (cow parsnip), nettles, and petrushki (beach loveage). The latter freezes exceptionally well, so Frances gathers a lot at once and then uses the petrushki throughout the year. All these plants make great additions to soups and fish dishes. Gally and Travis described using devil's club root to make a healing tea that helps many ailments.

It was incredibly valuable to speak to current Old Harbor residents about food and harvesting. Some themes that emerged from the discussions summarized above are the centrality of sharing harvested foods with the community, and especially with Elders at no cost, and the great diversity of foods available in the region. In the interviews, people also spoke about culturally appropriate harvesting practices, such as respect for harvested animals, minimizing suffering, not wasting food, and thoughtful stewardship of animal populations. These practices were likely broadly shared by their ancestors at Ing'yuuq, although harvesting practices are adaptable as cultural norms and the harvesting landscape change. One example is crab. Sugpiaq ancestors did not harvest crab because of its association with death, but since it became a valuable commercial product in the 20th century, many Sugpiaq people today do harvest crab, both commercially and for their own consumption. Today, people in Old Harbor also manage a herd of bison on Sitkalidak Island, which provides food security and local job opportunities (Berns 2022). While bison are not native to Kodiak and were not a source of food for Sugpiaq ancestors, their descendants approach management of the herd with the same cultural ethic of stewardship that serves the continuation of both the Old Harbor community and the bison. Sugpiaq cultural values persist, even as landscapes, technologies, and practices change.

Discussion

In all the quantified taxonomic aspects, Midden 1 (colonial/precolonial) and Midden 2 (Koniag) at Ing'yuuq are quite distinct. Midden 1 has more abundant and more diverse marine mammal remains, two orders of magnitude more shellfish by weight, and a higher proportion of salmon to other fish compared to Midden 2. In fact, Midden 2 has mostly marine fish and little else. I interpret Midden 2 as indicative of Ing'yuuq as a marine fish-focused harvesting site prior to Russian arrival. The lack of salmon in this older midden might point to the fact that the salmon run at the stream near Ing'yuuq is not strong, so Sugpiaq ancestors focused their

attention on cod and other marine fish, equally important resources that could be harvested all year round. I favor this interpretation over the possibility that the portion of Midden 2 we excavated is a winter deposit, rather than a summer one (when salmon would be running), because there is an almost negligible quantity of shellfish in the Midden 2 deposit. If this were a winter season deposit, I would expect more invertebrate remains, as those are safe winter and early spring staples to supplement an otherwise lean season (Fitzhugh 1995a). More excavation is needed to better understand Midden 2's context, such as whether it is part of an earlier winter house or a seasonal camp. Interestingly, the Midden 2 fish assemblage most strongly resembles that at Awa'uq, which also has few salmon and a wide diversity of fish represented in significant proportions, notably herring (Partlow 2015). This makes sense, as Ing'yuyq and Awa'uq are both far from highly productive salmon streams, and perhaps suggests that Ing'yuyq was not frequently used as a winter residence in the century preceding Russian colonialism.

In contrast to Midden 2, Midden 1 shows a more diverse diet, as hypothesized for the colonial era. The deposits contain shellfish, bird, mammal, and fish remains. Shellfish are abundant in all excavated levels, suggesting that intertidal foods were harvested as both primary and supplemental subsistence resources during the colonial period. As mentioned above, the diminished capacity for traditional subsistence practices during the Russian occupation of Kodiak meant that storing food for winter was difficult. The people remaining at Ing'yuyq were primarily women and children, who gathered foods more locally and on an as-needed basis (rather than for storage) – harvesting shellfish from the intertidal zone, fishing from rocky points and beaches year-round, gathering terrestrial and marine plants, opportunistically hunting marine mammals in small numbers, and harvesting marine waterfowl and, presumably, their eggs seasonally.

The pinniped and porpoise remains in the upper Midden 1 (definitively colonial) layers were unexpected. I had hypothesized that marine mammals would be scarce due to the removal of men during prime summer hunting months and lack of access to traditional watercraft during

the early years of Russian occupation. While pinnipeds do haul out at several points around Sitkalidak Island where it might be possible to capture them without boats (and with some luck), porpoises are notoriously speedy and hard to hunt – and would certainly require a qayaq. Thus, the presence of porpoise remains in the upper layers of the midden suggests that Ing'yugmiut had some access to boats, at least in the later Russian colonial period when less draconian RAC leadership eased their attitudes and policies towards Sugpiaq peoples. Of course, it is also possible that a small number of animals were stranded and harvested from the beach. For the overall marine mammal assemblage, the relatively even split between northern fur seals and harbor seals, and lack of Steller sea lion, is somewhat out of character compared to other Kodiak sites, where harbor seal and Steller sea lion typically dominate with low frequencies of porpoise and fur seal (Clark 1974; Kopperl 2003). For Sitkalidak in particular, there is a major sea lion rookery at Cape Barnabus where sea lions are harvested by Sugpiaq people today. The occupation of Ing'yug; however, does fall within the range of Donald Clark's (1986) noted increase in fur seal harvests in the century preceding Euro-Russian fur trade in Alaska. Clark attributes this change to climate-driven alteration in fur seal migration routes that brought them closer to the shores of Sitkalidak Island. The availability of northern fur seals during this period likely made them a more accessible and the preferable pinniped to harvest within southeastern Kodiak, even during the colonial period. In his analysis of marine mammal remains from a late Koniag occupation of Awa'uq on the other side of Sitkalidak Island, Etnier (2011: Table 2) also recorded no Steller sea lion remains and an abundance of northern fur seals, which further concurs with Clark's (1986) observations.

I also identified several fragments of whale bone based on their size and texture, although none but a single vertebra could be identified to element. It would be unlikely for whole whale skeletons to be brought up to the village as whales were typically butchered where they beached and just their meat and selected skeletal elements brought home. These remnants may be leftover scraps from fashioning tools, as we did collect several artifacts made from whale

bone and it is a common raw material for toolmaking in coastal Alaska (Margaris 2006). Interestingly, our 2019 field team collected some whale barnacles from deeper layers of Midden 1 within our 2019 Trench 1 (*Coronula diadema*, found only on humpback whales; Miller 2019). These barnacles would have been transported to the village attached to pieces of skin that were cut from the animal on the beach. While I don't know whether those whale barnacles were deposited before or after Russian arrival, they do indicate that whales were consumed by Ing'yuyq residents at some point. It is more likely that colonial period whale bones were acquired from animals hunted under the direction of the RAC, which did maintain a blubbering station at Three Saints Bay, or from stranded animals, as traditional Kodiak whaling was an elite ceremonial activity that required a team of well-kitted hunters (Crowell 1994).

The increase in proportion of salmon remains in Midden 1 compared to Midden 2 was also unexpected given my hypotheses. I anticipated few salmon remains in the colonial midden layers due to the decrease in population at Ing'yuyq during the summer months when salmon arrive in large numbers and need to be processed quickly before they spoil. Finding virtually no salmon in Midden 2 might indicate, however, that there is not a strong salmon run in the stream at Tanginak. This is consistent with information gathered from current residents of Old Harbor, who do not list Tanginak among the local places where they fish for salmon today. Yet, there is a large proportion of salmon vertebrae in Midden 1 (42.6% of all fish vertebrae in the upper levels, and 44.1% in the lower levels). In the colonial period, this may be an indication of supplies provided by the RAC, and it may also be an indication that both the upper and lower levels of Midden 1 are from the colonial period as they have the same relative abundances of taxa. The RAC administered several fishing camps of various sizes around Kodiak. Conscripted Sugpiaq people worked at these camps to harvest salmon and cod in large numbers and then process them so that the fish could be stored and redistributed as needed. While much of the fish produced at these camps went directly to RAC employees or provisioned RAC vessels, some was

distributed to Sugpiaq villages during times of need and as payment for labor (Grinëv 2022; Margaris et al. 2015).

Overall the contents of the upper and lower Midden 1 deposits are structurally similar. This points to relatively consistent dietary composition across the last half-century or so of Ing'yuyq's occupation. Previous zooarchaeological work on Kodiak middens from sites dating to the late Koniag and Russian colonial periods have similarly documented a relative consistency in Sugpiaq diets in terms of the focus on local marine foods from a wide range of nearshore and intertidal taxa (Clark 1974; Crowell 1997a; Etnier 2011; Etnier et al. 2016; Margaris et al. 2015; Partlow 2000). Sugpiaq people keep harvesting local foods even after some domesticates are available, as domesticated remains are predominantly found in midden contexts associated with Russian administrators or workers (e.g. Three Saints Bay [Crowell 1997a] and Igvak artel [Etnier et al. 2016]).

Taken together, the middens at Ing'yuyq tell a story of Sugpiaq resilience and persistence through foodways in the face of huge demographic and political change on Kodiak. Ing'yugmiut maintained their relationships to their homelands through the harvesting of traditional foods like cod, halibut, seals, shellfish, and berries. While ancestors during the Russian colonial period could not harvest in exactly the same way due to increasing colonial demands on their labor both at home and off-island, the women-led communities who remained on Kodiak still preferred to eat local foods. Some domesticated animals, such as cows and pigs, were kept at Three Saints Bay and in the vicinity of present-day Old Harbor during the colonial period (Black 2004a; Crowell 1997a); however, there is no evidence of their use at Ing'yuyq. Neither do I find evidence for the use of imported foods like tea, flour, or sugar, the use of which would be visible by the presence of tea service items, tradeware dishes, glass vessels, or metal cooking pots. It may be that these imported foods were not made widely available to Sugpiaq ancestors during the earlier decades of Russian occupation. Ben Fitzhugh (1995b) uncovered glass bottles and trade ceramic plates, teacups, and saucers at Nuniaq odinochka, a small RAC work camp that

operated in Old Harbor from the 1850s to the 1860s and a likely site of resettlement for Ing'yugmiut following the forced abandonment of Ing'yuq in the late 1830s. Those glass and ceramic artifacts at Nuniaq signal a greater reliance on imported foods and products supplied by the RAC at that site.

At Ing'yuq, there are no imported artifacts other than glass trade beads and the excavated House 2 is full of locally made pottery sherds. These friable sherds are fired at low temperature, likely in open fires, and may have been used for storage or rendering of marine mammal fat into oil (Admiraal et al. 2020). Many of the sherds our field team collected bear a greasy black crust that signifies their usage for hot rendering or cooking with marine mammal oil. The ubiquity of local pottery, even following the introduction of some trade ceramics to Kodiak, indicates that it was still being produced at Ing'yuq. Abundant local pottery also suggests that Ing'yugmiut were still harvesting enough marine mammals, likely pinnipeds given their presence in the midden, to produce oil – a Sugpiaq dietary staple well into the 20th century that is still consumed occasionally today (Mishler 2003).

I bring these lines of evidence together to assert that Ing'yugmiut ate a diverse diet of traditional foods during the early Russian colonial period. These foods, with the possible exception of salmon, were harvested and processed by Sugpiaq people at Ing'yuq. In this way, Ing'yugmiut asserted their identity and their relationship to the lands and waters that their ancestors have inhabited for millennia, and that their descendants still call home. Traditional foods nourish the physical bodies and the cultural bodies of the community, providing nutrients for Sugpiaq perseverance and survivance despite colonial attempts to reshape Sugpiaq lives on Russian (and later, American) terms.

Conclusion

Ing'yuq, as an ancestral Sugpiaq village and archaeological site, offers insight into late precolonial and early colonial Sugpiaq life, which I, along with the OHAHP team and

collaborators in Old Harbor have only begun to uncover. Further excavation of midden deposits at Ing'yuq will enable us to tell stories that are better fleshed out with faunal data, as small sample sizes are a particular limitation of this study. Further radiocarbon dating of other parts of Midden 1 may also assist in distinguishing colonial and precolonial midden deposits. Planned analyses of avifaunal remains will help me understand the seasonality of the site and women's labor surrounding the production of bird skin parkas, a key part of the RAC's local economic strategy (Grinëv 2022).

The faunal data presented in this study reveal the continuance of Ing'yugmiut harvesting and dietary practices well into the Russian occupation of their homelands – signaling an assertion of Indigenous identity and, perhaps, a reliance on the familiar in times of rapid demographic, social and political change. It was not an easy time to be Sugpiaq, but the ancestors at Ing'yuq maintained key relationships with their homelands. That place-based knowledge and relation to land and water is very much alive in their descendants, who still harvest many of the same plants and animals from the same places on the landscape.

Chapter 4: Sugpiaq Survivance Stories at Ing'yuuq Village, Sitkalidak Island, Alaska

“It is a worthwhile practice, then, to learn the language absences speak and build the skill of valuing what has previously been voided. For here, in the space of loss and longing that the enslaved knew too well, we can choose an ‘abundant’ approach to history, resisting the default in which historical gaps feed contemporary forgetfulness.”

– Tiya Miles
All That She Carried (2021: 89)

Introduction

The Old Harbor Archaeological History Project (OHAHP) is community-oriented research that examines the strategies of persistence and survivance among Sugpiaq communities in the Kodiak Archipelago during the period of Russian colonialism (1784 to 1867 CE). With the support and partnership of the Old Harbor Native Corporation and the Alutiiq Tribe of Old Harbor, OHAHP is not just a scholarly enterprise, but a project that is connected to the living descent community that still lives on their traditional territory and maintains relationships with the land and water. That relational continuity means that our archaeological work is inherently survivance storytelling (Acebo 2021), uncovering the ways that Sugpiaq ancestors continued to assert Sugpiaq presence, governance, lifeways, and identity in the face of the new challenges brought about by Russian colonialism. The contemporary community attests to their ancestors’ success, and OHAHP’s archaeological, ethnohistorical, and oral historical research is a way to recover the specific details of that story and put that knowledge “back in a living context” (Haakanson et al. 2021: 525).

This research is situated in the Old Harbor region of Kodiak and Sitkalidak Islands, located on the southeastern side of the Kodiak archipelago. This region is unique in the study of Russian colonialism because of its proximity to the earliest Russian settlement in North America at Three Saints Bay from 1784 to 1792 (Crowell 1997a,b). Yet as the Russian administrative center moved to Kodiak city (in 1792) and to Sitka (in 1808), the Old Harbor region became peripheral within the Russian colonial project. We chose the archaeological site of Ing'yuuq Village as the center of OHAHP’s research because it reflects the transition from precolonial

Sugpiaq life to Sugpiaq life in the context of Russian colonialism. Ing'yuq village on Sitkalidak Island was a substantial settlement, occupied for at least 150 years prior to Russian arrival and recorded in colonial censuses and maps until the early 1840s. During the first few decades of the colonial period, it was primarily occupied by Sugpiaq women and children, as most Sugpiaq men were conscripted to hunt fur bearing marine mammals away from Kodiak for large portions of the year – and many never returned. Archaeology at Ing'yuq thus has the potential to tell the stories of Sugpiaq women, who are only sporadically mentioned in ethnohistoric literature.

In this chapter, I analyze the artifact assemblage that the OHAHP field team excavated from the Ing'yuq Village site in 2021, focusing on collections from House 2 and the adjacent midden, to interpret the lives of Ing'yuq residents during the first 50 years of Russian colonial occupation of Kodiak. I work through both traditional archaeological analysis of the small dataset available at this time and three object-centered vignettes (Brown et al. 2015; Spector 1993). For the latter, I drew inspiration from Tiya Miles (2021), whose words in the epigraph describe an abundant approach to history. Instead of allowing historical silences to stand, Miles argues that we can dig into the intersections of the written, material, and oral historical records to uncover the stories of people that traditional historical methods have overlooked. I bring this methodology together with that of survivance storytelling (Acebo 2020; 2021) to discuss how Sugpiaq ancestors actively navigated the landscapes of Russian colonialism at Ing'yuq Village. I conceive survivance stories through object-based examinations of lifeways at Ing'yuq. These stories connect with ideas of Indigenous futurity or the continuance of Indigenous relations to homelands and waters through time. Sugpiaq ancestors at Ing'yuq Village and their descendants in Old Harbor today both enact Sugpiaq futurity through their commitments to look both ways – drawing strength from the past to bring forth a vibrant future for the generations to come. Archaeology, when practiced in collaboration with Indigenous communities, can contribute to these important acts of sovereignty and healing.

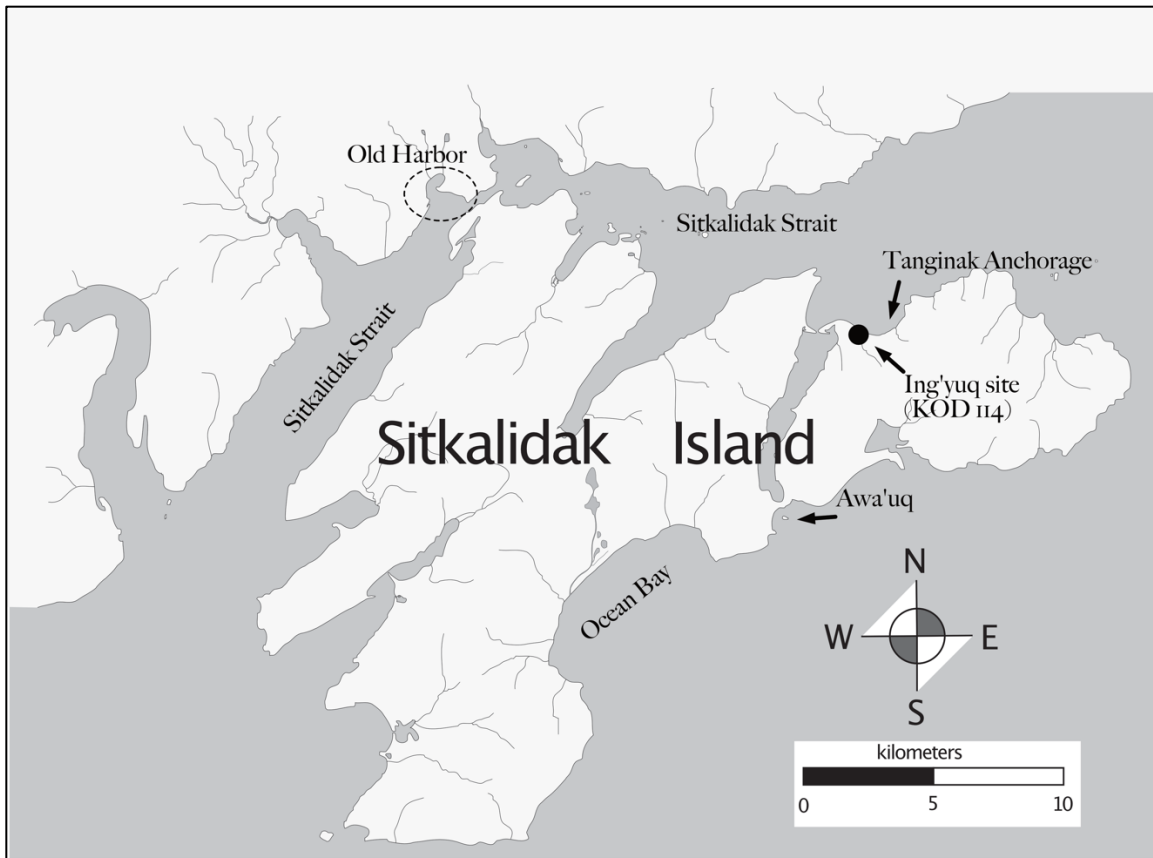


Figure 4.1: Map of the Old Harbor region of the Kodiak Archipelago. The Ing'yuq Village site is in Tanginak Anchorage.

Old Harbor's archaeological and historical context

The Old Harbor region is defined here as the coastal and riverine areas from Kiliuda Bay to Three Saints Bay, including Sitkalidak Island (Figure 4.1). The earliest settlement of the region occurred by at least 7500 years BP. Archaeologists divide Kodiak history into several culture periods: Ocean Bay I and II (7,500 to 3,500 years BP), Kachemak (3500 to 900 years BP), Koniag (900 to 250 years BP), and the Colonial Period, which is split into Sugpiaq-Russian (AD 1784-1867) and Sugpiaq-American (AD 1867-present) (Black 1992; Clark 1974, 1997; Crowell et al. 2001; Fitzhugh 2003a, 2004; Knecht et al. 2002; Kopperl 2012; Luehrmann 2008; Steffian & Saltonstall 2001; Steffian et al. 2006, 2015, 2016; Woodhouse-Beyer 2001).

Pre-colonial residence and lifeways have been documented on Kodiak by archaeological projects since the 1930s (Clark 1984a; Erlandson et al. 1992; Fitzhugh 1996a, 2003a; Hrdlička

1944; Jordan & Knecht 1988; Odell et al. 2019; Steffian 1992; Steffian & Saltonstall 2001; Steffian et al. 2006, 2016; West 2009). Archaeological research in the Old Harbor region, in particular, has helped to extend the antiquity of human residence on Kodiak and to expand our understanding of the subsequent technological, economic, social and political changes that marked the histories of the region's hunting-fishing-gathering communities (Clark 1970, 1979, 1997; Fitzhugh 2003a, 2004, 2006; Fitzhugh & Kennett 2010; Steffian & Saltonstall 2014, 2018). According to these studies, Sugpiaq communities started as small groups of mobile foragers in the middle Holocene (Ocean Bay period), eventually establishing large and densely packed villages with political hierarchies, intensified economies, and regional trade relationships (Kachemak and Koniag periods). Pre-colonial Sugpiaq communities competed for political and economic status and engaged in endemic warfare with enemies on the mainland and Aleutian Islands (Black 2004b; Knecht et al. 2002; Steffian & Saltonstall 2001). To mediate these challenges, Sugpiaq people maintained systems of security, including long- and short-distance trade, sustaining defensive sites, pooling labor, and hosting neighbors at feasting events. Those systems of security were tested by Russian colonial expansion in the late 18th century.

Ethnohistoric documentation provides a modest outline of the 83-year history of Russian and Sugpiaq entanglement and some of the social changes that emerged from that relationship (e.g. Davydov 1977; Gideon 1989; Golovin 1979; Lisianskii 1814; Shelikhov 1981; Tikhmenev 1978). As part of the new economic regime, Sugpiaq men were removed from their villages and families in forced service to the Russian American Company (RAC) and its predecessors. The work of hunting sea otters and other valuable marine animals was dangerous, and many men never returned home due to death at sea or permanent relocation to other RAC outposts. This situation depleted the Native population and left a significant gender imbalance on Kodiak in the decades following Russian colonization (Miller 2010). The Native population on Kodiak was further reduced by disease, interruptions in subsistence practices and service demands by

Russian colonists, which persisted from the first decades of colonial encroachment (Lisianskii 1814: 193; Clark 1987: 123) through an Alaska-wide smallpox epidemic of 1837 to 1840 (Crowell & Luehrmann 2001: 58-60; Fortuine 1989).

While relatively little colonial era archaeology has been done on Kodiak, OHAHP's research builds on the contributions of Crowell (1997a, 1997b, 2011), Woodhouse-Beyer (1999, 2001) and a handful of others (e.g., Etnier et al. 2016; Knecht & Jordan 1985; Margaris et al. 2015; Steffian et al. 2015; West 2011). Crowell (1997a, 1997b) showed how the Russian Empire's tributary economic systems affected Sugpiaq communities on the periphery of the European World System. Crowell's work provides a strong foundation of household excavation, glass bead seriation and material expectations for Russian-period sites in the Old Harbor region. Woodhouse-Beyer (1999, 2001), meanwhile, examined the gendered experience of colonialism by theorizing the Afognak artel, in the north of the Kodiak archipelago, as a female space for colonial production and Sugpiaq cultural reproduction. Other archaeological studies of colonial period sites on Kodiak (Etnier et al. 2016; Knecht & Jordan 1985; Margaris et al. 2015; Steffian et al. 2015; West 2011) provide a corpus of archaeological data regarding Sugpiaq foods, labor tasks and the use of imported materials. Until now, however, the focus has been on Russian-centered sites (artels and *odinochkas* [small seasonal work camps]) rather than on activities within Sugpiaq households outside of direct Russian oversight. Our research at Ing'yuyq Village expands archaeological understanding of Native-lived colonialism in Sugpiaq spaces, highlighting Ing'yuyq as primarily a women's space following initial violent interactions between Sugpiaq communities and Russian fur traders.

Archaeological excavation of Ing'yuyq

Tanginak Anchorage is a wide bay on the north side of Sitkalidak Island. The landscape is storied with Sugpiaq history. The oldest known archaeological site on Kodiak is located at Tanginak (Tanginak Spring site; KOD-481), while numerous other sites dating from the Ocean Bay cultural period to the colonial period dot the landscape around the Tanginak marsh and the beach. Ing'yuyq Village (KOD-114) is the youngest of the Sugpiaq sites in the area. The site is situated on an old beach ridge behind the active modern beach (Figure 2). There is a marshy swale with some small ponds that separates Ing'yuyq from the modern beach ridge. Behind Ing'yuyq lies the Tanginak marsh, where our field team often observed deer, foxes, and the occasional bear while we worked. Down the beach to the east from Ing'yuyq is a small stream that supports a small salmon run. Freshwater can be obtained from a spring to the southwest of Ing'yuyq Village, right beneath the aptly named Tanginak Spring archaeological site.

When the OHAHP field team first worked at Ing'yuyq in 2019, we camped on top of the Tanginak Spring site and got our water from that spring where Sugpiaq ancestors at the ancient site and at Ing'yuyq Village must have also drunk. With our larger field team in 2021, we camped in Fox Lagoon to the south and walked over a ridge that separates the lagoon from Tanginak every day. It was always a wonder to come over that ridge in the morning and see the expanse of the water at Tanginak and the mountains of Kodiak in the distance. Being able to do archaeology in this place is a privilege and a responsibility that I am honored to take on as part of OHAHP and our partnership with Old Harbor.



Figure 4.2: Drone photo of Tanginak Anchorage, looking southeast. The Ing'yuyq Village site is in the foreground. Photo by Ben Fitzhugh

Methods

In summer 2019, the OHAHP team mapped and conducted test excavations at Ing'yuyq Village (KOD-114). The site has intact archaeological deposits and structures with no recorded history of prior excavation. There are at least ten house structures at the site and at least two well-preserved and stratified middens (Miller & Fitzhugh 2020). The 2019 test excavations recovered artifacts of late Koniag to colonial period age and faunal samples. Artifacts collected in test excavations from House 2 and its associated midden are included in the tabulation done in this paper.

In 2021, we returned to Ing'yuyq for more extensive excavation. We excavated ten 1x1 meter units in House 2 (Figure 4.3), which was about a third of its observed area. We excavated the adjacent midden (called Midden 1) from its highest point in a 2x2 meter area that was subdivided into four 1x1 meter units. Unlike the rest of the 2021 excavation, these four units were not oriented with the cardinal directions, but slightly rotated counterclockwise to best capture the topography of the midden mound. Our team excavated all units in natural levels, following noted changes in the matrix or observed features like hearths or storage pits. We sieved all matrix through ¼" screens, also passing a quarter of excavated material from the house and all material from the midden through nested ¼" and ⅛" water screen to capture smaller objects like fish bones and beads (following Bundy et al. 2003).

Ing'yuyq Stratigraphy

The stratigraphy within House 2 reveals several phases of occupation and remodeling of the structure, but there are two distinct cultural components, strata II and IV, in which the field team uncovered most of the House 2 artifacts (see Table 3.2). Based on radiocarbon samples and the presence of trade beads (detailed in chapter 3), stratum II is dated to the colonial period, while stratum IV is dated to the late Koniag period, which I will also refer to as the precolonial period. The collected artifacts in House 2 are grouped based on their location in either of these cultural layers.

The midden stratigraphy is split into three strata based on age. In Midden 1 (units 6, 7, 8 and 9), excavation levels 1 to 4 are from the colonial period, while levels 5 and 6 are tenuously dated to the precolonial period. These temporal boundaries are based on combined radiocarbon and artifact analysis, which is detailed in chapter 3. Midden 2 is a buried midden found underneath the hearth in House 2, separate from the exterior Midden 1. Radiocarbon data from Midden 2 indicate that it dates to the mid-17th century, at least a century older than other radiocarbon dates from House 2 and firmly within the Koniag cultural period.

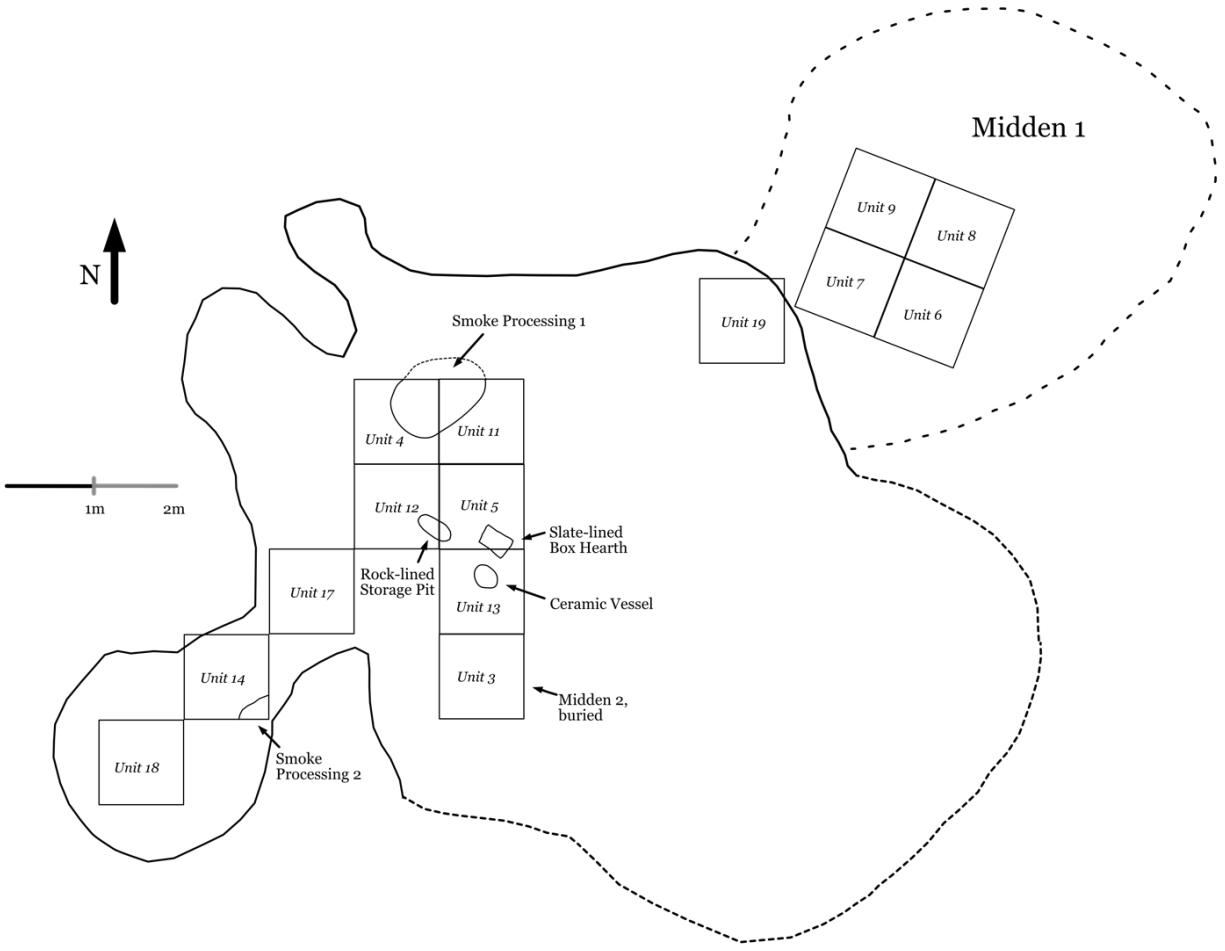


Figure 4.3: Plan map of House 2 excavations in 2021. Units and features labelled. Dotted sections of the house outline are inferred. The eastern half of the house has suffered flood damage.

Structures and features

The discussion in this paper derives primarily from the study of artifacts from House 2 at Ing’yuq, which is a multi-roomed semisubterranean house. The main room of House 2 is approximately 5x5.5 meters in size, probably with a grass roof since the minimal sediment accumulation between the 1912 Katmai ash and the first cultural layer does not suggest a sod roof. Three side rooms are visible on the surface and do seem to have had sod roofs, given that the living surfaces in the side rooms were buried deeper underneath the modern ground surface

than in the main room. Midden 1 is located against the northeastern side of the house. Next to the midden is a gently sloping surface that leads from the house down towards the active beach ridge. Our field team used this as a trailway between the excavation and the beach. It is unclear whether this was also a pathway created and used by Ing'yugmiut or if it was cut later by tsunami events like the one in 1964 and/or persistent use by animals. Given the faint nature of the house walls, I believe that some amount of wave damage (storm or tsunami related) has altered the ground surface of the site since its abandonment, although the archaeological layers beneath the 1912 Katmai ash are intact, at least where excavated.

There are four prominent features in House 2: a rock-lined storage feature, two potential smoke processing features, and a slate-lined hearth (Figure 4.3). The rock-lined storage feature is located within units 12 and 5. It cuts down from stratum II and is oblong in shape, measuring approximately 20cm by 30cm. Several flat pieces of slate and greywacke were supporting the sides of this feature and we found a slate rod hone, a hammerstone, two sherds and some shell fragments within the pit in a loose, charcoal-rich sandy loam matrix. We were only able to excavate the parts of the first smoke processing feature located in Units 4 and 11. Smoke processing is the use of slow-burning fires to dry or smoke meat and fish (Steffian & Saltonstall 2018: 46). Archaeologically, these features are places where fire-cracked rocks, hearth scrapings, and charcoal accumulated as a result of smoke processing activities. The first smoke processing feature in House 2 is a distinct deep pit with visible layers of accumulated charcoal and FCR, which suggests that residents were smoking foods in this part of the house during the occupation of stratum II. Our field team recovered burnt ceramic sherds, charred fish bones, and shell fragments from the feature. The second potential smoke processing feature is in Unit 14 and within stratum IV, the older cultural layer that appears to predate the Russian colonial period. Finally, the team fully excavated the slate slab-lined box hearth located between units 5 and 13. The hearth is roughly rectangular and measures approximately 28cm by 15cm at the bottom of the feature. It was full of ash, charcoal and charcoal-stained soil, and some ceramic

fragments (not all are sherds, some are hardened, unshaped clay and gravel). A ceramic vessel is inset into the floor next to the box hearth, which taken together could be interpreted as a cooking area. Like the other main features, this hearth was used during the occupation of stratum II, during the Russian colonial period, although its permanence of place does suggest that a similar feature was in the same location during precolonial occupations of the house as well.

The Ing'yuyq Collection

Here I describe and quantify the artifacts, or belongings, that OHAHP recovered from House 2 and Middens 1 and 2 at the Ing'yuyq Village site. Reconceptualizing artifacts as belongings that were made, owned, and used by ancestors is important for survivance storytelling because it emphasizes the relationships that people built with objects and the social identities enacted/built through those object relationships (Gonzalez et al. 2018: 93). The Ing'yuyq collection consists of 375 belongings collected from House 2 and an additional 73 from Middens 1 and 2. Locally produced ceramic sherds comprise most of the collection with 286 of them recovered from all contexts (63.8% of entire belonging collection), while the remaining percent is comprised of lithic, bone, and glass objects. Tables 4.1 through 4.4 enumerate these belongings, while Table 5 and Figure 1 analyze the belongings using functional groupings to understand the kinds of activities taking place at Ing'yuyq and compare those activities between the precolonial and colonial periods. While this comparison is instructive, it is somewhat limited by the small sample size of classifiable belongings.

Tables 4.1 and 4.2 display the weights and sherd counts of the Sugpiaq pottery collected at Ing'yuyq in House 2 and Middens 1 and 2. Counts only include sherds that are the size of a US quarter or larger, while the weight includes all collected ceramic material. In total, we collected 4213 grams of sherds from the house. This number does not include the weight of the ceramic vessel found inset into the house floor in Unit 13, stratum II. Of the collected weight, 3497 grams

(83.0%) are from colonial stratum II and 716 grams (17.0%) are from precolonial stratum IV. These proportions are similar when looking at sherd count (78.9% of sherds are in stratum II compared to 21.1% in stratum IV), which suggests that sherds in both contexts are broken up to a similar degree.

Table 4.1: House 2 Pottery Sherds by Weight and Count (sherds size of US quarter or larger)

Unit	Stratum	Weight (g)	Count (quarter size+)
3	II	436	43
4	II	265	21
5	II	139	3
11	II	129	10
Feature 2	II	555	17
12	II	324	9
13	II	1376 (excluding vessel)	85 (excluding vessel)
17	II	152	10
18	II	22	2
19	II	99	6
TOTAL	II	3497	206
3	IV	137	15
12	IV	108	5
14	IV	42	8
17	IV	429	27
TOTAL	IV	716	55
ALL	II+IV	4213	261

Table 4.2: Midden 1 and 2 Pottery Sherds by Weight and Count (sherds size of US quarter or larger)

Context	Weight (g)	Count (quarter size+)
Upper Mid 1	308	11
Lower Mid 1	3	0
Midden 2	119	14
TOTAL	430	25

The Ing'yug field team encountered comparatively few sherds from midden contexts (Table 4.2). Total weight of sherds from middens is 430 grams or 10.2% of the sherd weight collected from the house. This corresponds to 25 sherds larger than a US quarter, or 9.6% of the number of sherds found in the house. The overall lower presence of sherds in the middens

compared to the house suggests that many of the sherds recovered from the house may have been part of complete vessels when the house was abandoned, as we might expect broken pottery pieces to be removed from the house to the midden while people were living in the house. Another possible explanation is that broken sherds were reused as part of hearths. I imagine that their insulative properties might be superior to those of available rocks, making sherd use potentially advantageous inside the house as cooking “stones”.

Table 4.3: House 2 Lithic, Bone, and Glass Belongings

Type	Stratum	Count	Found in Units
Ulu	II	8	12, 17, 18, Feat. 2, STP14
Ground knife	II	1	4
Adze	II	2	4, 12
Ground slate blade fragment	II	2	17
Lance fragment	II	1	4
End blade	II	1	4
Slate rod hone	II	1	5
Lance preform	II	1	4
Slate tool tip	II	1	5
Ground slate fragment	II	6	5, 11, 12, 14
Worked slate fragment	II	1	4
Shatter	II	3	3, 11, 12
Flake	II	20	3, 11, 12, 13, 14, 17, 18, 19, Feat 2
Flake tool	II	2	3, 19
Net sinker	II	1	4
Pumice fragment	II	1	3
Hammerstone	II	4	5, 12, 13, 17
Whetstone	II	2	12, 19
Core	II	1	19
Stone Lamp	II	2	13, STP14
Bone awl	II	1	STP15
Glass bead	II	31	3, 4, 5, 11, 13, 14, 17, 18, 19
Ulu	IV	1	18
Lance fragment	IV	1	14
Hone	IV	1	12
Slate rod hone	IV	1	17
Ground slate fragment	IV	4	5, 12, 14
Flake	IV	10	3, 12, 14, 17, 18, 19

Hammerstone	IV	1	STP14
Anchor	IV	1	17
Whetstone	IV	1	19

Table 4.4: Belongings found in Middens 1 and 2

Type	Context	Count	Found in Units
Ground slate fragment	Colonial	9	6, 7, 8, 9
Glass bead	Colonial	1	7
Hammerstone	Colonial	1	Trench 1
Worked slate fragment	Colonial	2	9, Trench 1
Ground lance tip	Colonial	1	8
Flake	Colonial	8	6, 7, 9
Hone	Colonial	2	7, Trench 1
Chert core	Colonial	1	7
Worked chert fragment	Colonial	1	7
Cobble spall	Colonial	1	7
Shatter	Colonial	1	8
Labret	Colonial	2	8
Labret	Precolonial	3	3, 6, 7
Bone Wedge	Precolonial	1	9
Ground slate fragment	Precolonial	5	3, 6, 7, 8
Battered adze	Precolonial	1	7
Ulu fragment	Precolonial	1	6
Duck hyoid pendant	Precolonial	3	3, 6
Ground greenstone fragment	Precolonial	1	3
Hammerstone	Precolonial	3	3

Tables 4.3 and 4.4 itemize the belongings found in the house and middens. Artifact labels were applied using the Alutiiq Technological Inventory (Saltonstall et al. 2021), which provides descriptions, photos, and nomenclature in English and Alutiiq of all known types of belongings made and used by Sugpiaq/Alutiiq ancestors that have been previously recovered at archaeological sites on Kodiak. I used these established, standardized labels so that the Ing'yuuq collection can be more easily compared with other collections. In total we recovered 114 (70.4%) non-ceramic belongings from the house and 48 (29.6%) from midden contexts. When broken

down by temporal context, there are 123 (75.9%) non-ceramic belongings from the colonial period and 39 (24.1%) from the precolonial period.

Table 4.5: Belonging counts (house + midden) by functional group [numbers in parentheses are with sherds, slate frags, flakes and shatter removed from the counts]

Functional Group	Colonial Count	Precolonial Count
<i>Hunting</i> (Points and fragments, end blade)	5	1
<i>Fishing</i> (Net sinker, anchor)	1	1
<i>Processing</i> (Ulus, knife, flake tools, ceramic sherds)	231 (14)	71 (2)
<i>Site Maintenance</i> (Adze, wedge, stone lamp)	4	2
<i>Manufacturing</i> (Awl, cobble spall, core, flake, shatter, hammerstone, whetstone, hone, worked and ground slate)	65 (14)	27 (7)
<i>Adornment</i> (Beads, labrets, pendants)	34	6

In Table 4.5, I have further sorted all belongings from both the house and midden into functional groups to better understand the activities happening at Ing'yuuq (following Steffian & Saltonstall 2018 and Fitzhugh 2003a). These primary functional groups are hunting, fishing, processing, site maintenance, manufacturing, and adornment. Table 4.5 includes a list of artifact types that encompass each group. To better approximate the distribution of belongings across these categories, I have included counts in parentheses that remove flakes, shatter, ceramic sherds, and fragments of worked or ground slate. The removed types primarily consist of debitage and sherds, the former of which was not systematically collected by the field team and the latter of which is difficult to compare with other assemblages. Additionally, my analytical focus here is on tools used for particular activities, rather than on the process of creating those tools, so debitage is less instructive for my purposes in this chapter.

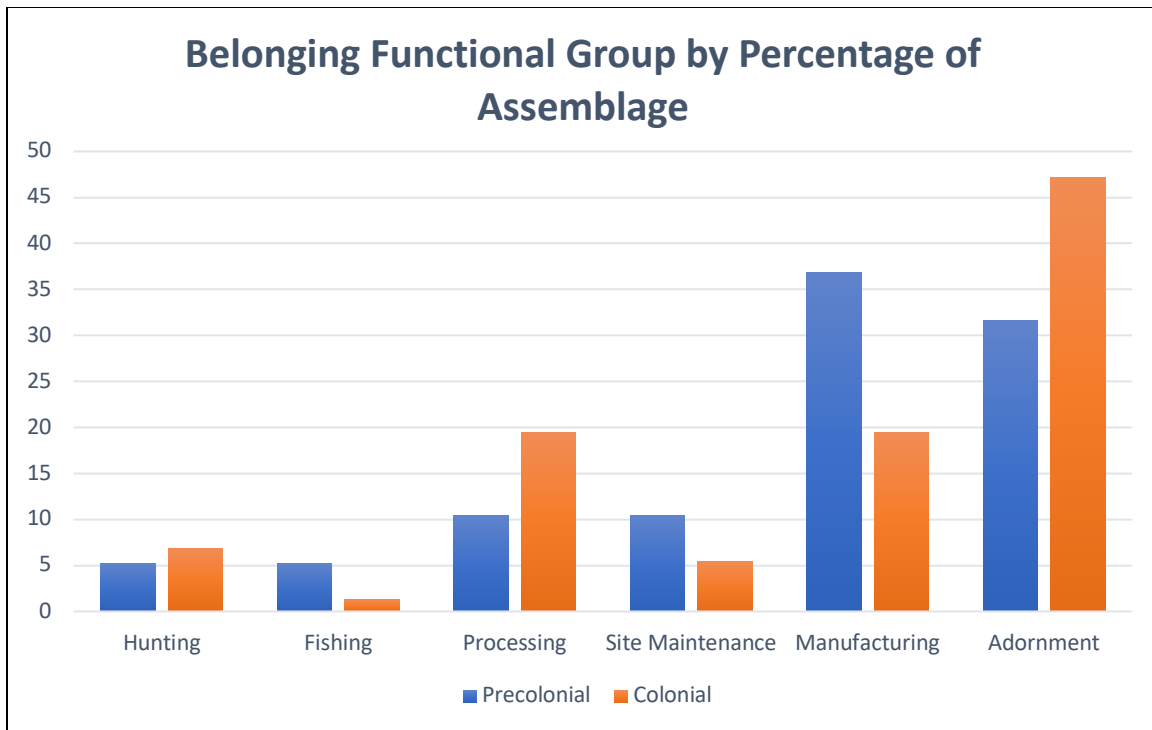


Figure 4.4: Belonging functional group by percentage of assemblage in the colonial and precolonial contexts. Ceramics and debitage removed from the counts

Figure 4.4 shows how the percentage of belongings in each category compares between the colonial and precolonial periods. Adornment (47.2%), processing (19.4%), and manufacturing (19.4%) are the most prevalent categories in the colonial period, while manufacturing (36.8%), adornment (31.6%), and processing/site maintenance (each 10.5%) are the most prevalent in the precolonial period. Adornment as a category is somewhat artificially inflated as each bead is counted as its own artifact for the purpose of this tabulation, which does not reflect the actual practice of creating adornments that would each have multiple beads as part of a single piece. Given the small belonging assemblage collected from the precolonial stratum IV in House 2, it seems likely that this was a rather short or ephemeral occupation, while the colonial occupation in stratum II was more intensive. Regardless, in both the colonial and precolonial periods, processing and manufacturing are far better represented than hunting or fishing. This makes sense given the household context and suggests that similar types of activities were taking place at Ing'yuyq during both occupations.

Object-Centered Vignettes

To better examine the relationships that Sugpiaq ancestors had with their belongings at Ing'yuuq, I take a closer look at three particularly expressive belongings from House 2: the inset ceramic vessel, glass beads, and ulus. These object-centered vignettes are the core of the survivance storytelling in this paper as I explore how Sugpiaq ancestors enacted survivance through each of these belongings.

Asuq – Pottery

The intact placement of a ceramic vessel next to the slate-lined hearth was very evocative for those of us who saw them together. The vessel is thick-walled and gravelly. Where the top of the pot is broken off, you can see that the outer and inner surfaces are a reddish-brown, while the core of the paste is light brown. The pot had been purposefully designed to be set into the floor, given its conical shape fanning downward to a very narrow, flat base. It would have served as in-floor storage for food, presumably sea mammal oil, or as a cooking vessel. There is no distinct crust of charred oil or other food remains in the pot, so it was likely used for storage/serving rather than hot rendering of oil from blubber. The outside of the pot is similarly not charred, so if it was used for cooking, stones heated in a hearth were likely used to cook the vessel's contents, rather than placing the pot directly over a fire. The placement of the pot next to the slate-lined hearth supports either (or both) use(s). Oil from the pot could be easily scooped into dishes cooking over the fire or for dipping foods into the pot as people ate. Similarly, the nearness of the hearth would have made the transfer of hot rocks for cooking very convenient.



Figure 4.5: The inset ceramic vessel found in Unit 13 at Ing'yuyq Village. Photo by Ian Provencal

While Kodiak archaeologist Don Clark (1987) supposed that Sugpiaq ancestors stopped producing pottery when the Russians arrived with trade ceramics and metal cooking pots, Ing'yugmiut continued to use local ceramics. We can imagine women walking from Ing'yuyq to clay sources in Fox Lagoon or in the Tanginak marsh to gather the raw material necessary for ceramic production. Back at home, they mixed the clay with gravel and perhaps some plant fibers or ground shells, then shaped the paste with paddles into the distinctive conical (base) building to cylindrical (top) form of SE Kodiak vessels (de Laguna 1939). Vessels were fired in open fires at relatively low temperatures, which leads to a delicate pottery but also prevents the vessel from exploding or cracking during the firing process (Ibid; Saltonstall et al. 2021). The potter then carefully dug out a space in the ciqlluaq floor, next to the hearth, to set the pot. They

packed gravel and broken sherds around the vessel to keep it in place and make it a permanent fixture in the house.

Even during the early Russian colonial period, which was a time of great stress and loss for Sugpiaq ancestors, women at Ing'yuyq continued to prioritize the use of ceramics for storing traditional foods like marine mammal oil, which is a staple in many Sugpiaq recipes and used as a condiment. Ceramic production is cultural knowledge passed down through generations of Sugpiaq women. One of women's duties in Sugpiaq households was to manage the production, storage, and distribution of food resources for their families and for the village community. Keeping a full vessel of oil accessible in the main part of the house for cooking and eating aligns with these duties. The location of the vessel within the house at Ing'yuyq is evidence of the persistence of these key practices and traditions well into the colonial period. These practices could provide comfort and stability during an era of uncertainty and profound loss. Simple rituals like these – keeping the pot filled with oil, dipping fish and berries into the pot, scooping oil into a stone lamp or onto food cooking on the hearth – are an important aspect of survivance, of asserting a cultural identity and feeding the body all at once.

Pinguat – Beads

When a field team member found a bead, the rest of us all rushed over to admire it. Apparently I was so vocal about my excitement for beads that my assigned catchphrase at the end of the season was “find beads”. The beads provided material proof that I had selected an appropriate site to excavate for my dissertation on the Russian colonial period and are also important materials to past and present Sugpiaq artists.

Glass beads are the only type of imported object that we uncovered at Ing'yuyq thus far. Beads signify a relationship between Russian fur traders and Sugpiaq ancestors, whether they were given as gifts or as meager payment for forced labor. In a village like Ing'yuyq, which is geographically peripheral to Russian settlements, beads were likely most often distributed by

Russian-selected village leaders (toyons) or passing visitors like Yurii Lisianski (1814). Once beads were in Sugpiaq hands, they could also be traded through local Indigenous networks. While Sugpiaq ancestors had produced beads from bone, shell, ivory, coal, and seeds, among other materials, that was a difficult and detailed process and beads could not typically be made as small as imported glass seed beads from Europe. The mass importation of glass beads during the colonial period made them more widely accessible and beads were quickly brought into Sugpiaq traditions of personal adornment. We have so far found only 32 glass beads in House 2 contexts at Ing'yuyq, most are drawn beads in white or blue, although we also uncovered a few drawn Cornaline d'Aleppo beads and wound beads. All of these were found isolated, rather than in a pattern suggesting that they were not part of a finished piece. As anyone who has worked with seed beads knows, it is easy to lose many beads to the floor while stitching, and these archaeological examples were probably similarly deposited. Finished beaded objects would have been highly valued and represented many labor hours, and so would have been taken with the occupants when they abandoned the house.



Figure 4.6: A portion of the bead collection from Ing'yuuq Village. Photo by Nathan Mitchell

There are numerous ethnographic and contemporary examples of elaborate beaded regalia and jewelry designed and made by Sugpiaq artists (see Branstetter 2020). Pre-colonial Sugpiaq ancestors also left incised slate depictions of themselves wearing beaded headdresses, jewelry, and clothing. The importation of foreign-made glass beads would have made the creation of such regalia much more elaborate since the beads no longer had to be produced first. I imagine that this led to an increase in creativity in designs and patterns for personal adornment objects. Beading may have provided a joyful social activity for women during the Russian colonial period, as they designed and crafted regalia for ceremonies or jewelry and clothing for everyday or spiritual use. Much like sewing circles or quilting circles familiar in Euro-American contexts, many Indigenous beadworkers today gather in beading circles to catch up, gossip, and keep one another company while doing the repetitive work of stitching beads together. Just as with the knowledge of ceramic production, beading skills and patterns were

passed down by Sugpiaq women. The similarity in headdress shape and rough design between those depicted on 700-year-old incised slate pebbles and those collected by Alphonse Pinart in 1872 suggest that women were active beadworkers throughout the Russian colonial period. I have not seen any mention of Russians taking an interest in monetizing Sugpiaq beadwork, so these creations were likely made by and for Sugpiaq women and their communities. Gathering to bead would have provided a welcome break from the compulsory labor for RAC benefit and been another space for women to maintain communities of care and artistic expression.

Uluaq – Ulu

Many Sugpiaq tools for hunting and processing are fashioned from slate. Access to this raw material, either through direct collection or trade with villages that were located closer to slate sources would have been important to life at Ing'yuyq, both before and after Russian arrival. To obtain quality slate to craft an ulu, Ing'yugmiut had to either trade with other villages or travel to the inner bays that cut closest to the center of the Kodiak mountains, where eons ago a magma dome metamorphosed the surrounding sedimentary rocks before cooling into a granitic batholith (Capps 1937). From Ing'yuyq, these slate sources are most easily accessible at the heads of bays, such as Kiliuda Bay and Three Saints Bay.

It is not clear to what extent Russian colonialism and attempts to control food and fur resources impacted the trade of lithic raw materials among Sugpiaq ancestors. From the limited evidence at Ing'yuyq, and at nearby contemporaneous sites of Saataq/Rolling Bay and Kiavak (Clark 1966), slate artifacts were prevalent and in fact comprise a significant portion of the colonial era assemblages. Given this, I interpret that access to slate resources was only minimally limited by the Russians, if at all.

Ulus are a multi-purpose tool but are most associated with processing fish for consumption and storage and for hide preparation. The field team did not recover many tools from House 2 at Ing'yuyq, but within that assemblage ulus are dominant – 8 found in colonial

levels and 1 in precolonial. The high proportion of ulus in the tool assemblage suggests the dominance of processing activities at Ing'yuyq during the colonial period. Processing foods and hides are traditionally women's responsibilities in Sugpiaq communities. We can imagine a group of women and children splitting fish, preparing foods for storage, tanning marine mammal and bird skins, and sewing clothing and boat covers in and around the house. All of these tasks would involve the use of ulus.



Figure 4.7: An ulu with drilled hole for handle attachment (FS#536) from House 2 at Ing'yuyq Village. Photo by Chris Fernandez

Processing tasks undertaken by women are the primary activities within the Sugpiaq houses. During the colonial period, women produced foods and goods for their families and were also conscripted by the Russians to keep RAC stores of food and clothing stocked. Food and hide processing had always been important to Kodiak lifeways, but those activities may have taken on a meaning linked to physical and social survival during the colonial period. Efficient

processing kept you alive, in good relation with Russian settlers, and perhaps allowed women doing processing labor to maintain or strengthen social ties with one another.

Ulus are versatile knives, but I believe they also show a great degree of specialization, and perhaps personalization. Within our small collection from House 2, no two ulus have the same shape and size. This could indicate that women would design and craft their own ulus to both suit a particular task and to suit their specific hand and stylistic preferences. We may be able to read some individuality in these belongings. The diversity of ulus in House 2 could be interpreted as either many women working together in the house (with diverse ulus to fit their unique preferences) or just a couple women who each have a selection of differently shaped ulus for completing specific tasks. For reasons of sociality and security, I favor the first interpretation. During the years of hardship, uncertainty and even terror that characterize the early Russian colonial period, people who survived violence and disease would likely want to spend more time together, especially as they worked to preserve community, keep each other company, and provide comfort and sense of security to one another. Prioritizing social cohesion and care as much as possible could have been part of a strategy of resilience that Ing'yugmiut developed to manage colonial impositions.

Ing'yuq Village within the southeastern Kodiak Archipelago

Taken together, the artifact assemblage at Ing'yuq suggests a story of perseverance and making do in the face of massive sociopolitical change. While Ing'yuq had a Russian-appointed toyon or Native village leader whose job was to make sure his village supplied the Russians with food, clothing, and hunters (Lisianski 1814), the village did not have constant or direct Russian presence or oversight. Thus, Ing'yugmiut had more flexibility than their relatives in Three Saints Bay (in the interval from 1784 to 1792) or St. Paul Harbor (after 1792) to carry on with their lives as they had always done. At Ing'yuq we found the same artifact types and functional groups in the precolonial and colonial layers, which I interpret as continuity of practice across these

periods. Ing'yugmiut during the colonial period were, for the most part, engaged in the same activities as they did before Russian arrival, albeit with a more limited population and the added stress of colonial imposition.

The persistence of local ceramics is especially noteworthy because it suggests a possible continuance of intergenerational knowledge transfer between potters, who were most likely women. While it is possible that pottery was only used but no longer produced at Ing'yuq during the colonial period, at the very least the pottery vessels are indicative of the maintenance of traditional marine mammal oil production and consumption and hot stone cooking (Admiraal et al. 2020). The primary difference between the precolonial and colonial assemblages at Ing'yuq is in adornment. Artifactual evidence from Ing'yuq preliminarily supports ethnohistoric documentation that the use of labrets by Sugpiaq ancestors declined relatively quickly following Russian arrival. The adornment category in the colonial period is dominated by glass trade beads, which would have been sparsely available through Indigenous trade networks before direct trade with Europeans in Alaska, but which arrived on Kodiak in large numbers with Russian fur traders in 1784. Now Sugpiaq beadworkers could craft elaborate beaded adornments and jewelry without having to first produce the beads. Glass beads are a prime example of an imported material that was made explicitly Indigenous (see Cipolla 2017) through the creativity of Sugpiaq ancestors who used them to continue traditions of adornment.

A limitation to the study of artifacts/belongings from Ing'yuq is the relatively small sample size from the excavation of a single household context, which bounds the scope of the interpretive story to activities and occurrences in that house. Some activities, like fishing and hunting, are not well-represented in the Ing'yuq assemblage probably because they are not done in the house, while it is expected that processing and site maintenance would be dominant in this context. Such limitations point to the partial nature of the story, which will be refined, strengthened, and embellished as OHAHP continues work at the site.

To better contextualize the Ing'yuyq assemblage, I here compare it to several other archaeological assemblages from contemporaneous sites in the southeastern Kodiak Archipelago. Saataq in Rolling Bay and Kiavak were occupied by Sugpiaq ancestors from the late precolonial to colonial periods, just like Ing'yuyq, while the Malriik site in Kiliuda Bay was likely abandoned around the time of Russian arrival. Nuniaq is a site where some Ing'yugmiut were relocated in the 1840s and is within the present boundaries of Old Harbor (and the Sug'stun name for Old Harbor). The other prominent Russian period site in the region that has been excavated is the artel at Three Saints Bay. I have excluded this site from my analysis because it is such a different type of site. Artels had many Russian workers and administrators stationed there, along with Sugpiaq hostages in the early colonial period. The activities at artels are thus very different from those happening at village sites like Ing'yuyq, Saataq, Kiavak, and Malriik. Russian artel sites on Kodiak have been well-described by Aron Crowell (1997a, 1997b) for the Three Saints Bay artel, and Katharine Woodhouse-Beyer (1999, 2001) for the Afognak artel.

Saataq at Rolling Bay

The Rolling Bay site (KOD-101) on the southwestern side of Sitkalidak Island is contemporaneous with Ing'yuyq, with ancestral Sugpiaq occupations in the late Koniag and early Russian colonial periods. The site was initially excavated as part of the University of Wisconsin's Aleut-Konyag Project in the 1960s (Clark 1966, 1974; McHugh 1962), and was re-surveyed by Ben Fitzhugh as part of the Sitkalidak Archaeological Survey in the early 1990s (Fitzhugh 1996a, 2003a). Rolling Bay is labeled on Russian maps as Mysovskoe in 1805 and 1830, and was among the villages consolidated in the 1840s, with residents of Mysovskoe being relocated to either Kaguyak or Old Harbor (Luehrmann 2008). Pinart recorded the local name for the Rolling Bay village as Shataq in the 1870s (Pinart n.d.), while Old Harbor residents reported the name was Saataq to archaeologist William Laughlin in the 1960s, which is the name I use here (Clark 1966: 159). The youngest archaeological components of Saataq are located on a bluff above the beach

(called Area II) and contain multi-roomed house structures, midden deposits, and stone slab boxes visible on the surface. Clark (1966) reports on the artifacts recovered from Saataq, including numerous sherds of Sugpiaq-made pottery totaling an estimated 87 vessels within Area II of the site. The vessels whose forms Clark could identify were all, “...flat-bottomed inverted conical lower half and cylindrical [sic], sometimes slightly concave or tapered, upper wall” (1966: 160). Such a description would also apply to the pottery vessel that the Ing’yuq field team uncovered in 2021 (Figure 4.5).

Kiavak

Kiavak is located across the Sitkalidak Strait from Rolling Bay on Kodiak Island. The site has two main components called Old Kiavak (KOD-100, Kachemak period age) and the historic Kiavak village (KOD-099), which is the portion of the site occupied in the Late Koniag and early Russian colonial periods and thus contemporaneous with Ing’yuq and Saataq (Clark 1966: 159). This colonial period component of Kiavak is located on a sand and gravel bar near the entrance of Kiavak lagoon. These sites were also partially excavated during the Aleut-Konyag Project in the 1960s (Ibid), with Clark returning to Old Kiavak in later decades to better define the early Kachemak culture history period on Kodiak (Clark 1997). As with Ing’yuq and Saataq, Luerhmann (2008) notes Kiavak’s (sometimes spelled Kiiavik) presence on RAC maps until the 1830s, after which the residents were relocated to Kaguyak. Pinart recorded the Sugpiaq name of the settlement as Qung”ngviq (Pinart n.d.).

Malriik site in Kiliuda Bay

The Malriik site (KOD-405) is located on the north central coast of Kiliuda Bay. A team of archaeologists from the Alutiiq Museum partially excavated the Malriik site in the summer of 2017 on behalf of the Alutiiq Tribe of Old Harbor and the Bureau of Indian Affairs (Steffian & Saltonstall 2018). The site consists of two distinct mounds on either side of a pond and its small

creek outlet. Steffian & Saltonstall (2018) identified three cultural components of the Malriik site, which were supported by radiocarbon dates: an Early Kachemak/Ocean Bay II occupation, a Late Kachemak occupation, and a late Koniag occupation. Here, I only focus my comparison on the Koniag component. Finds from the Malriik site's Koniag occupation included multi-roomed sod houses, a substantial midden, locally produced ceramics, lots of angular FCR (from sweat bathing and food processing), and a single glass trade bead, which was recovered during earlier examinations of the site by the BIA in 1998 (Slaughter 1998). The Alutiiq Museum team recovered no additional imported materials and argue that Malriik is a precolonial late Koniag settlement, given that a single bead could have made its way to the site through Indigenous trade routes prior to the arrival of Russians on Kodiak (Steffian & Saltonstall 2018: 43).

Table 4.6: Malriik¹, Saataq², and Kiavak² belongings by functional group. Ceramics, metal, flakes, and other scrap excluded from Saataq and Kiavak counts. Number in parentheses from Malriik is the count excluding those items.

Functional Group	Saataq Count	Kiavak Count	Malriik Count
Hunting (Points and fragments, end blade)	86	25	5
Fishing (Net sinker [all excavated notched stones included], fish hooks)	125	13	3
Processing (Ulus, knife, flake tools, spoons, scrapers)	124	79	70 (14)
Site Maintenance (Adze, wedge, stone lamp)	93	53	4
Manufacturing (Awl, cobble spall, core, hammerstone, abraders, burnishing stones)	207	107	29(15)
Adornment (Beads, labrets, pendants)	90	19	0

1. From Steffian & Saltonstall 2018, p. 56
2. From Clark 1966, pp. 171-172

Nuniaq

Nuniaq (also known as the Lighthouse Site [KOD-089]) is located along the Sitkalidak Narrows within the Village of Old Harbor. Its location was long known to Old Harbor residents but was not archaeologically investigated until 1995 and 1996 when Ben Fitzhugh led a field school with Old Harbor middle and high school students (Fitzhugh 2001a). The site has two components: a Late Kachemak/Ocean Bay II occupation and a late Russian colonial period occupation (Fitzhugh 1995b). Fitzhugh (1996b) reported that the site had 25 structure depressions visible on the surface, of which the Old Harbor Field School tested two. One of these was interpreted as a Russian period Sugpiaq house and another was a storage room or banya. Trade ceramics from the colonial period occupation date this component from the 1850s to 1870s, which is consistent with Sonja Luerhmann's documentation (2008: 45-46) that places a settlement at the Sitkalidak Narrows in the 1860s. The OHAHP field team re-surveyed Nuniaq in 2018 and found the site too badly damaged to merit further excavation into the Russian period component of the site, although we did recover another five trade ceramic sherds and some metal fragments in shovel test pits (Miller & Fitzhugh 2019).

The site first appears on Russian maps as an *odinochka* in the 1830s. *Odinochkas* were small work camps that only had one Russian foreman overseeing a group of Native workers in hunting, fishing, processing, and/or trapping (Luerhmann 2008: 45). These are contrasted with *artels*, which were much larger settlements, although the activities taking place were likely very similar. Following the late 1830s smallpox epidemic, RAC administrators consolidated surviving Sugpiaq ancestors from around the region to Old Harbor, which at that time may have been located at Nuniaq or to the southwest in Barling Bay. Those consolidated populations would have included the Ing'yugmiut. Thus, Nuniaq offers a continuation of Ing'yug's story and an opportunity to understand what life looked like for Sugpiaq ancestors following the epidemic and forced resettlement.

Table 4.7: Belonging counts by functional group from Nuniaq, colonial period assemblage from Alutiiq Museum catalog (AM12 and AM850)

Functional Group	Full Count	Count without scrap & ceramics
<i>Hunting</i> (Points and fragments)	10	10
<i>Fishing</i> (Fish hook)	1	1
<i>Processing</i> (Ulus, ground slate knives, scrapers, flake tools, <i>trade ceramic sherds</i>)	93	14
<i>Site Maintenance</i> (Barrel hoop fragments, window glass, bottle glass, nails)	18	18
<i>Manufacturing</i> (Hammerstones, iron chisel, cobble spall, hone, whetstone, worked wood, <i>flakes, worked and ground slate frags</i>)	103	10
<i>Adornment</i> (Beads, buttons, leather shoe fragments, sewn gutskin fragment)	31	31

Table 4.7 presents the Nuniaq assemblage, broken down by functional group. Given that many more of the belongings at this site are imported from Euroamerican sources, it was much more challenging to use these functional categories in a comparative way with earlier sites that have predominantly Sugpiaq-made artifacts. Items like nails, iron hoop fragments, and glass fragments bulk up the site maintenance category, whereas locally produced alternatives were made from perishable materials, so we would not find them in precolonial and early Russian period sites.

The influx of imported materials during the late Russian colonial period is due to an 1840s RAC contract with the Hudson’s Bay Company to supply Russian America with goods from Canadian markets, rather than having to transport them across Siberia and the North Pacific (Luerhmann 2008). Village consolidation in the late 1830s led to more frequent contact with Russian colonists at sites like Nuniaq. This would have provided Sugpiaq communities with regular access to tea, flour and other dietary commodities and associated packaging. The presence of tins, metal items, glass bottle, cloth, leather and trade ceramics, especially pieces

related to tea service, however, offer indirect evidence of imported foodstuffs at Nuniaq. When they had the option, it appears that Sugpiaq ancestors at this site chose to use imported glass and ceramic storage containers, rather than producing pottery, as there is not any locally made pottery in the assemblage. On the other hand, there are still abundant ground slate tools and debitage – perhaps ground slate blades were more effective and versatile than 19th century metal blades for the purposes of food and hide processing.

While some elements of diet, and perhaps dress, have changed at Nuniaq compared to Ing'yuyq, Sugpiaq ancestors were fundamentally doing the same kinds of subsistence and RAC-service activities at both sites. They were provisioning themselves from the local environment, catching and processing fish and furs for the RAC, sweat bathing, living in ciqlluut (perhaps some had added glass windows), and continuing to produce beautiful tools and adornments.

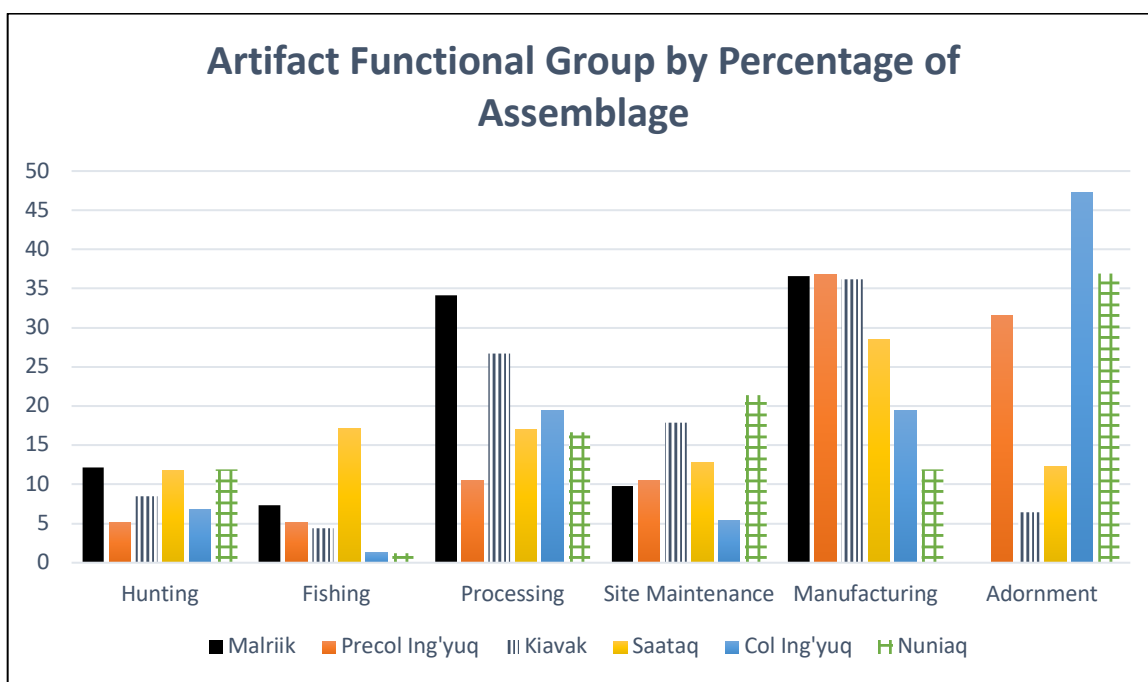


Figure 4.8: Artifact functional group by percentage of assemblage at Malriik, Ing'yuyq, Kiavak, Saataq and Nuniaq, ordered chronologically by date of occupation

Figure 4.8 compares the percentage of artifacts in each functional category from Malriik, Ing'yuyq (split into colonial and precolonial), Kiavak, Saataq, and Nuniaq. While all these sites,

except for Nuniaq, are quite similar in terms of the specific tool types found at each one and the excavated contexts of house and midden, no easy patterns emerge at the functional group level. This lack of pattern between colonial and precolonial could suggest a kind of persistence between these periods, whereby Sugpiaq ancestors at these various sites were managing their household labor in the same way as always – prioritizing the tasks that were needed to facilitate their communities’ survival amidst a shifting sociopolitical landscape. This somewhat contradicts the accounts of European travelers like Lisianskii (1814), who depicted many villages in the region as being in crisis in the early 19th century. While Sugpiaq ancestors faced extreme challenges in the face of Russian colonialism, this archaeological data suggests that the residents in these villages were able to navigate those challenges quite well, at least until the late 1830s smallpox epidemic drastically changed the social landscape again.

Conclusion

In pulling together these data from Ing’yuq and other nearby sites, I have identified some of the small ways that survivance was enacted by Sugpiaq ancestors in villages outside of direct Russian colonial oversight. It is important that we recognize the central role that community and care must have played during this tumultuous period. Sugpiaq ancestors faced violence, lost relatives to disease, were obligated to accommodate Russian presence in their homelands, and were forcibly resettled, but they also leaned on each other for support, created well-crafted tools and adornments, made families, and maintained their relationships to land and sea.

A limitation of the current archaeological study of Ing’yuq is that the available artifact assemblage is quite small. That effect was magnified when I removed debitage and ceramic sherds in order to make the collection more comparable to other sites. The currently small sample of belongings available for analysis was one reason why I also used object-centered vignettes as analytical tools for understanding this assemblage. Additionally, and in accordance

with the storytelling strategies outlined in chapter 2, the vignettes approach individual artifacts as archives that contain the stories, energies, and contexts in which they were made and used (Miles 2021: 16-19; see also Brown et al. 2015; Spector 1993). I found it instructive to think through the significances of these objects and their relationships with Sugpiaq ancestors at Ing'yuyq as a way of interpreting Sugpiaq strategies for perpetuating identity and community into the future. I will leave it to my Sugpiaq colleagues to “put faces on” those ancestors (following Tringham 1991), whose experiences I have only outlined.

I am eager to continue working with and refining these survivance stories through additional excavation and time spent at Ing'yuyq and through more conversations about the stories with the Old Harbor community. What we can learn from the archaeological record is amplified when it is shared with living descent communities, who can make sense of the data in ways that are inaccessible to outsiders. I hope that Old Harbor finds these archaeologically inspired stories useful, and I look forward to further exploring the history of the community through continued collaboration with them.

Chapter 5: Writing Stories of the Past, for the Future

While this dissertation is presented as three distinct papers or chapters, there is a larger narrative that emerges from reading them together. That narrative is one of persistence and survivance by Sugpiaq people as they navigated, and continue to navigate, waves of Russian and American colonialism within their homelands. The colonial challenges that Sugpiaq ancestors faced – new labor systems, disease outbreaks, environmental disasters, Christian missions, and relocation – are similar to those faced by contemporary Sugpiaq peoples. Communities continue to maintain strong ties to their homelands and waters, no matter the challenges. Their community responses to the COVID-19 pandemic are an example of that, as Old Harbor residents took care of each other and made sure everyone had enough food. They harvested from the Tribally-owned Sitkalidak bison herd (Berns 2022), grew vegetables in greenhouses and with hydroponics at the Sitkalidak Sunrise Farm, and gathered local foods for themselves, their Elders, and their neighbors. The community was enacting its values, as it had always done, and thriving despite the challenges.

Amidst that same pandemic uncertainty in 2020, I was trying to work on my dissertation research in Seattle and reckoning with the fact that my visits to Old Harbor, and my impending excavation at Ing'yuuq, were on indefinite hold. I wanted to keep our conversations about the research going, but I worried that discussions about archaeology would be a burden when the community had so many other, more pressing concerns surrounding the pandemic. In between my worrying and my online teaching obligations, the pandemic-induced travel pause allowed me the space to begin thinking about storytelling and developing the framework that would guide my dissertation. I did not yet have any new archaeological data to work with, but I had a lot of ideas about the intersections of archaeological writing, science communication, and collaboration with Old Harbor. I read widely on writing in archaeology (e.g., Joyce 2002; Lucas 2019; McGranahan 2020; Mickel 2012; Pluciennik 1999; van Helden & Witcher 2019). I dabbled in archaeo-fiction. I started drafting the story-models that appear in chapter 2. Then, I finally

got up the courage to put a message out to the Old Harbor community on Facebook to ask if anyone would be interested in composing a story about life on Sitkalidak Island during the Russian colonial period. To my great surprise, I got many responses (among them Allison Pestrikoff-Botz!). Not everyone was interested in writing, but my reaching out had prompted people to ask questions about archaeology or tell me stories about their grandparents. As it turns out, cultural heritage and local knowledge are sources of strength in times of crisis. That was when I understood that there is a place for this research in community, folks in Old Harbor (and Sugpiaq peoples elsewhere) are interested in the stories that archaeology can tell about their ancestors and want to be able to connect those stories to their own experiences on the Land.

I returned in-person to Old Harbor in June 2021 with a renewed excitement for archaeology and for the storytelling work that would come from it. I knew then that the foundations of our collaborative research project were strong, and now, two years later as I am closing my dissertation, I look forward to the next chapter of my relationships in Old Harbor.

Uncovering Lifeways at Ing'yuuq

Before examining the archaeological record from Ing'yuuq or the oral historical record, I did a careful and critical reading of ethnohistoric sources to create the story-models that I presented in chapter 2. Those models envision Russian colonialism as a disaster that struck Alaska and offer (alongside the narratives presented by Allison Pestrikoff-Botz's fictive account of the Russian attack on Sitkalidak Island and Tamara Swenson's artistic reconstructions of persistent ancestral places) hypothesized survivance stories that predict how Sugpiaq ancestors may have responded purposefully to the many changes brought by colonialism. Those hypotheses were that Ing'yuuq residents, who were predominantly women and children during the colonial period, would:

- 1) harvest foods more locally and rely less on marine mammals and salmon due to a reduced labor capacity
- 2) slowly cease to produce pottery and ground stone tools as imported metal and ceramic tools became more available
- 3) consolidate households to maintain community and pool labor

I addressed these hypotheses in chapters 3 and 4 with zooarchaeological analysis and belonging/artifact analysis.

Zooarchaeological analysis of the Ing'yuyq faunal assemblage provided evidence that people were eating a wider breadth of locally-procured foods during the Russian colonial period. Midden 1 (the colonial midden) is dominated by shellfish remains, but also contains the remains marine mammals and a diversity of fishes, including salmon (43% of fish vertebral assemblage; Table 3.7). In contrast, Midden 2 (the precolonial midden) lacks taxonomic diversity and is dominated by marine fish remains with little else. This evidence suggests that Ing'yuyq was a marine fish-focused harvesting site prior to Russian arrival, but that Sugpiaq ancestors lived there year-round during the colonial period. To me, this indicates the consolidation of households (hypothesis 3) as women pooled their labor to address Russian demands for goods and sought to maintain community even while so many relatives were lost to violence, disease, and removal. The faunal analysis also addresses and somewhat refutes hypothesis 1. There is evidence of more local food harvesting in response to labor shortages and the loss of hunters, yet salmon (which requires a large labor force) and marine mammals (which require watercraft access and hunting skill) continue to be harvested by Ing'yugmiut during the colonial period. While the salmon are likely from the distribution of iukola by the Russian American Company (and future analysis of cranial vs. post-cranial elements could test that hypothesis), the marine mammals were more likely harvested by Ing'yugmiut for food and for their skins to make boat covers or waterproof garments. It is probable that Elder men took on limited marine mammal hunting roles to harvest these animals in the absence of young men.

In chapter 4 I turned to evidence from the assemblage of belongings collected at Ing'yuyq to address hypotheses 2 and 3. Using a functional categorization of belongings (Figure 4.4), I found that processing and manufacturing were the predominant categories in both the precolonial and colonial periods at Ing'yuyq. That pattern roughly fits in with the characterization of belongings from other late precolonial and early colonial sites in southeastern Kodiak, suggesting a continuity of practice within these villages through time. I found it instructive to pair the functional analysis with close looks at specific belongings in the three object-centered vignettes, which focus on pottery, glass beads, and ulus. The ubiquity of locally-made pottery at Ing'yuyq and the diversity of ulus found at the site suggest that Sugpiaq crafting traditions continued into the Russian colonial period (hypothesis 2). Glass beads were the only imported objects found at Ing'yuyq, which could imply either that imported materials were not widely available to Sugpiaq people while Ing'yuyq was occupied or that Ing'yugmiut chose to maintain their production and use of stone tools and pottery. In the object-centered vignettes, I explore how the continuation of those crafting traditions suggests a maintenance of communities of care among Ing'yugmiut women, in support of hypothesis 3.

Through working with the archaeological data and speaking with contemporary residents of Old Harbor, it became clear that my hypotheses were not nuanced enough to fully capture the Sugpiaq experience of colonialism. I was breaking that experience up into measurable parts, rather than attempting to understand it contextually or emotionally. While I can use archaeological analysis to show that colonial period Sugpiaq ancestors at Ing'yuyq processed marine mammal oil in locally produced ceramics, increased their shellfish consumption, continued food and hide processing with traditional tools, and made adornments with imported glass beads, those interpretations have to be combined or put in relation in order to tell a survivance story. Storytelling is what holds these archaeological conclusions together and makes them make sense anthropologically and in community.

Contributions to Archaeological Practice

When working with the histories and belongings of Indigenous ancestors, it is crucial that descendant communities are able to engage fully and meaningfully with archaeological research. I have used different storytelling strategies throughout this dissertation to put archaeological data within a Sugpiaq cultural context, make my commitments and relationships plain, explore emotion in the past, and narrate the relations between belongings and the people who made and used them. There is no one-size-fits-all strategy for archaeological storytelling or science communication, so communication preferences and strategies must be worked out in collaboration with community. For this dissertation, Old Harbor leaders wanted youth to be at the center of the research, so I designed a youth internship program, produced an educational video, and have planned a youth archaeology camp with the Old Harbor Native Corporation for July 2023. Similarly, stories within this dissertation, such as the object-centered vignettes and the imagined narrative about Kicq, are community-oriented outcomes that simultaneously have a central role in the understanding and interpretation of archaeological data. Each of these different outcomes contributes to archaeology by providing models for how archaeologists can write about their work, both academically and publicly as science communication.

Through the use of collaborative storytelling with co-authors Allison Pestrikoff-Botz and Tamara Swenson, this dissertation contributes a novel framework for interpretation of the past. These braided stories draw on epistemic diversity to broaden and strengthen archaeology's ability to understand Indigenous ancestors as whole people and to foster collaborative and participatory research projects with descendant communities. Additionally, the story-models offer a narrative writing practice for archaeologists to use to imagine groups of ancestors as characters with agency when generating hypotheses about past actions and behaviors. In doing so, we make our thought process more transparent, and our hypotheses easier to share with partner community members – who should be our first audience.

Moving Forward

The storytelling work in this dissertation has transformed who I am, and want to be, as a scholar. I had to interrogate my motivations for doing archaeological research and consider how my scholarly journey had led me to be doing work with Old Harbor. Now that I am approaching the end of this chapter of my career, I am honored and humbled to have personal and professional relations on Kodiak Island. I carry the lessons that those relations have taught me about care and good communication forward into my teaching and research practices.

As I look to the future, I am grateful that my relationships with Old Harbor, and with Ing'yuuq, are ongoing. We have more work to do to grow and refine the Sugpiaq survivance stories at Ing'yuuq. Some new questions that have emerged from the research include: 1) how (and from where) were Ing'yugmiut sourcing raw materials to make tools and pottery, 2) to what extent and how were Sugpiaq ancestors around southeastern Kodiak able to maintain social and trading relationships across villages during the Russian colonial period, and 3) how was the contemporary community of Old Harbor born out of the mid-1800s consolidation of Sugpiaq people from many villages around the region. Addressing these questions will situate Ing'yuuq amongst other colonial period Sugpiaq villages in the region to illuminate survivance stories at multiple scales of social organization.

More immediately, following additional excavations with undergraduate students and Sugpiaq youth and in July 2023, I will strengthen and build on the analysis of Ing'yuuq belongings to better comprehend the activities taking place at the site. In particular, I plan on taking a closer look at local-ceramic production and investigating the various uses of pottery at Ing'yuuq. I would also like to spend more time working with Old Harbor collaborators on bringing interview and placename data together to understand Sugpiaq land philosophies and how those may have shaped decision-making by ancestors during the Russian colonial period. Ultimately, the survivance stories that emerge from this dissertation and the larger Old Harbor

Archaeological History Project are recursive and responsive to new data, new interpretations, and new generations of relationships between Sugpiat and archaeologists.

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APPENDIX A:

**Catalog of Collected Materials from
Ing'yuq Village Site (KOD-114)
2019 and 2021**

Specimen Code Key:

A=artifact

F=fauna

C=charcoal

D=dateable material

CS=column sample

G=geologic sample

Field Specimen Number	Site	Unit	Level	Depth	Description	Date	Initials	Specimen Type
1	KOD-114	TP2	Level 1	5cmbs	bone wedge in west wall	07/15/2019	HKM, SJH	A
2	KOD-114	TP2	Level 1	top 0-5cm	midden, 2 bags	07/15/2019	HKM, SJH	F
3	KOD-114	TP2	Level 1	0-5cmbs	charcoal	07/15/2019	HKM, EJG	C
4	KOD-114	TP2	Level 2	5+ cmbs	charcoal	07/15/2019	HKM, SJH	C
5	KOD-114	TP2	Level 2	-	charcoal	07/16/2019	HKM	C
6	KOD-114	TP2	Level 2	-	faunal sample, 3 bags	07/15/2019	HKM	F
7	KOD-114	TP2	Level 3	-	salmonberry sample	07/16/2019	HKM	D
8	KOD-114	TP2	Level 3	-	faunal sample	07/16/2019	HKM	F
9	KOD-114	TP3	Level 1	surface	surface fauna	07/15/2019	EJG	F
10	KOD-114	TP3	Level 2	-	bone	07/16/2019	EJG, JBF	F
11	KOD-114	TP3	Level 2	17-18cmbs	salmon berry seed	07/16/2019	JBF	D
12	KOD-114	TP3	Level 2	20-23cmbs	salmon berry seed	07/16/2019	JBF	D
13	KOD-114	TP3	Level 2	-	charcoal	07/16/2019	EJG, JBF	C
14	KOD-114	TP2	Level 4	-	salmonberry seeds	07/17/2019	HKM	D
15	KOD-114	TP2	Level 4	-	fauna	07/17/2019	HKM	F
16	KOD-114	TP2	Level 4	-	charcoal	07/17/2019	SJH	C
17	KOD-114	TP2	Level 4	-	green chert graver	07/18/2019	HKM	A
18	KOD-114	TP2	Level 4	-	whale bone fragments	07/18/2019	HKM	F
19	KOD-114	TP2	Level 4	40cmbs	charcoal	07/18/2019	HKM	C
20	KOD-114	TP3	Level 2B	57cmbLL2	notched cobble, from lower hearth dump	07/18/2019	JBF	A
21	KOD-114	TP3	Level 2B	43-53cmbLL	calcined bone from SW 1/2	07/18/2019	JBF	F
22	KOD-114	TP3	Level 2B	n.r.	charcoal	07/18/2019	JBF	C
23	KOD-114	TP3	Level 2B	58cmbLL2	charcoal from base L.2B	07/18/2019	JBF	C
24	KOD-114	TP3	Level 2B	73cmbLL2	charcoal, base L.2B	07/18/2019	JBF	C
25	KOD-114	TP2	Level 4	98cmbLL1	round stone	07/19/2019	SJH	A
26	KOD-114	TP2	Level 4	99cmbLL	salmonberry seeds	07/19/2019	HKM	D
27	KOD-114	TP2	Level 4B	100.5cmbLL	charcoal	07/19/2019	SJH	C
28	KOD-114	TP2	Level 4	-	ground slate tool flake	07/18/2019	HKM	A
29	KOD-114	TP4	Level 3	53cmbLL	charcoal	07/19/2019	EJG	C
30	KOD-114	STP5	-	35cmbs	charcoal	07/19/2019	HKM	C

31	KOD-114	TP3	-	51-54cm	charcoal	07/19/2019	HKM	C
32	KOD-114	TP3	-	45-48cmbLL	charcoal, north profile column sample #5	07/19/2019	JBF	C
33	KOD-114	TP3	-	38-40cmbLL	column sample #4	07/19/2019	JBF	CS
34	KOD-114	TP3	-	26-30cmbLL	column sample #3	07/19/2019	JBF	CS
35	KOD-114	TP3	-	34-38cmbLL	column sample #2	07/19/2019	JBF	CS
36	KOD-114	TP3	c.s.#6	65-70cmbLL2	north profile column sample from 10cm above	07/19/2019	JBF	CS
37	KOD-114	TP3	c.s.#7	75-77cmbLL2	north profile column sample from lowest level at sand contact	07/19/2019	JBF	CS
38	KOD-114	TP4	Level 3	48cm	charcoal	07/20/2019	EJG	C
39	KOD-114	TP4	Level 3	53cm	charcoal	07/20/2019	EJG	C
40	KOD-114	STP6	-	-	green spall	07/20/2019	EJG	A
41	KOD-114	STP6	-	-	salmonberry seeds	07/20/2019	EJG	D
42	KOD-114	STP7	-	below sod	splintered bone	07/22/2019	EJG	F
43	KOD-114	STP9	-	-	fauna, midden	07/22/2019	EJG	F
44	KOD-114	STP10	-	50cmbs	charcoal sample	07/23/2019	HKM	C
45	KOD-114	Geo. pit	-	3-30cmbs	pumice	07/23/2019	JBF	G
46	KOD-114	Trench 1	surface	-	slate frags	07/23/2019	EJG	A
47	KOD-114	Trench 1	-	-	hammerstone?	07/23/2019	EJG	A
48	KOD-114	Trench 1	-	55cmbs	sea mammal femur	07/23/2019	JBF	F
49	KOD-114	Trench 1	-	90cmbs	shell sample	07/23/2019	JBF	F
50	KOD-114	Trench 1	-	0-75cmbs	discretionary faunal sample (top of hill)	07/23/2019	HKM, EJG, JBF	F
51	KOD-114	Trench 1	-	0-5cmbs	midden sample (top)	07/23/2019	HKM, EJG	F
52	KOD-114	Trench 1	-	2-8cmbs	midden sample (middle)	07/23/2019	HKM, EJG	F
53	KOD-114	Trench 1	-	5-10cmbs	midden sample (bottom)	07/23/2019	HKM, EJG	F
54	KOD-114	Trench 1	-	12-17cmbs	midden sample (bottom)	07/23/2019	HKM, EJG	F
55	KOD-114	Trench 1	-	25-30cmbs	midden sample (top)	07/23/2019	HKM, EJG	F
56	KOD-114	Trench 1	-	25-30cmbs	midden sample (middle)	07/23/2019	HKM, EJG	F
57	KOD-114	STP11	Level 7	7-40cmbs	charcoal sample	07/24/2019	JBF	C
58	KOD-114	STP12	-	14cmbs	charcoal sample	07/24/2019	JBF	C
59	KOD-114	STP12	-	24cmbs	charcoal sample	07/24/2019	JBF	C
60	KOD-114	STP12	-	38cmbs	charcoal sample	07/24/2019	JBF	C

61	KOD-114	STP13	-	30cmbs	pumice abrader	07/24/2019	EJG	A
62	KOD-114	STP14	-	-	ulu fragment	07/24/2019	EJG	A
63	KOD-114	STP15	-	-	bone awl	07/26/2019	HKM	A
64	KOD-114	STP15	-	20-22cmbs	midden sample	07/26/2019	HKM	F
65	KOD-114	STP15	-	30cmbs	charcoal sample	07/26/2019	HKM	C
66	KOD-114	STP15	-	55cmbs	charcoal sample	07/26/2019	HKM	C
67-2019	KOD-114	TP2	N. profile	75-77cmbLL2	north profile column sample #7 base of hearth/charcoal deposits at contact with sand	07/19/2019	JBF	CS
68-2019	KOD-114	TP3	N. profile	65-70cmbLL2 (56-61cmbs)	north profile column sample #6 from dense charcoal zone/horizon (large burned wood fragments) 10cm above sterile sand	undated	JBF	CS
69-2019	KOD-114	STP14	-	30cmbs	charcoal sample from profile	07/26/2019	EJG	C
70-2019	KOD-114	STP14	-	55cmbs	charcoal from bottom floor	07/26/2019	EJG	C
71-2019	KOD-114	STP14	-	55cmbs	weird organic material (possibly fur?) with charcoal floor matrix attached	07/26/2019	EJG	F
72-2019	KOD-114	STP14	-	55cmbs	possible pecking stone	07/26/2019	EJG	A
73-2019	KOD-114	Trench 1	-	-	shell midden column sample #2, mystery hoops, what are they?	07/26/2019	JBF	CS
74-2019	KOD-114	Trench 1	-	25-30cmbs	shell midden column sample #2, charcoal (circa 30cmbs) and salmon berry seeds (circa 25cmbs)	07/26/2019	JBF	CS
75-2019	KOD-114	Trench 1	Level 2 (bottom)	35cmbs (bottom Level 2)	shell midden column sample #2	07/26/2019	JBF	CS
76-2019	KOD-114	Trench 1	Level 1	20cmbs	column sample Level 1	07/26/2019	JBF	A
77-2019	KOD-114	Trench 1	Level 3	35cmbs	stone pestle? Midden Trench 1 column sample Level 3	07/26/2019	JBF	A
78-2019	KOD-114	Trench 1	Level 5	80cmbs	charcoal sample, Trench 1 column sample	07/26/2019	JBF	C
79-2019	KOD-114	Trench 1	-	5-20cmbs	shell midden column sample #1	07/26/2019	JBF, HFM, EJG	CS
80-2019	KOD-114	Trench 1	-	20-37cmbs	shell midden column sample #2	07/26/2019	JBF, HFM, EJG	CS
81-2019	KOD-114	Trench 1	-	37-55cmbs	shell midden column sample #3	07/26/2019	JBF, HFM, EJG	CS
82-2019	KOD-114	Trench 1	-	55-70cmbs	shell midden column sample #4	07/26/2019	JBF, HFM, EJG	CS
83-2019	KOD-114	Trench 1	-	70-85cmbs	shell midden column sample #5	07/26/2019	JBF, HFM, EJG	CS
84-2019	KOD-114	Trench 1	-	85-105cmbs	shell midden column sample #6	07/26/2019	JBF, HFM, EJG	CS

67	KOD-114	surface	-	surface	rim sherd	6/30/21	HKM	A
68	KOD-114	3	1		pottery sherd	7/2/21	RJM, HKM, LLF	A
69	KOD-114	3	1		metal	7/2/21	RJM, HKM, LLF	A
70	KOD-114	1	1	18cm	blue glass bead	7/2/21	SLS, TJS	A
71	KOD-114	1	1	20cm	slate fragment	7/2/21	SLS	A
72	KOD-114	1	1	screen	white glass bead	7/2/21	SLS, TJS	A
73	KOD-114	1	1	screen	pottery sherd	7/2/21	HKM, RJM, LLF	A
74	KOD-114	1	1	screen	chipped stone	7/2/21	HKM, RJM, LLF	A
75	KOD-114	2	1		lithic	7/2/21	NUM, EAE	A
76	KOD-114	2	1		shell fragments	7/2/21	NUM, EAE	A
77	KOD-114	2	1		blue glass bead	7/2/21	NUM, EAE	A
78	KOD-114	2	1		scraper	7/2/21	NUM, EAE	A
79	KOD-114	3	1	NW quad	red glass bead	7/3/21	RJM, LLF	A
80	KOD-114	3	1	NW quad	blue glass bead	7/3/21	RJM, LLF	A
81	KOD-114	3	2	15cmbs	wood charcoal	7/3/21	RJM, LLF, HKM	C
82	KOD-114	3	2	15cmbs	chipstone tool	7/3/21	RJM, LLF, HKM	A
83	KOD-114	3	2	12cmbs	pottery sherd	7/3/21	RJM, LLF, HKM	A
84	KOD-114	3	2	screen	pottery sherds	7/3/21	RJM, LLM, HKM	A
85	KOD-114	3	2	11cmbs	pottery sherds	7/3/21	RJM, LLF, HKM	A
86	KOD-114	3	2	15cmbs	pottery sherds	7/3/21	RJM, LLF, HKM	A
87	KOD-114	2	1		pottery sherds	7/3/21	RJM, LLF, HKM	A
88	KOD-114	3	2	southern half	debitage	7/3/21	HKM	A
89	KOD-114	1	2	30cm SW quad	pottery sherd	7/4/21	RJM, SLS	A
90	KOD-114	1	3	37cm SW quad	charcoal	7/4/21	RJM, SLS	C
91	KOD-114	2	2	41cm SW quad	pottery sherd	7/4/21	EAE, NUM	A
92	KOD-114	2	2	41cm SE quad	shell	7/4/21	EAE, NUM	F
93	KOD-114	3	2	35cm SE quad	charcoal	7/4/21	LLF, JBF	C
NAA	KOD-114	3	2		DEACCESSIONED			
95	KOD-114	3	2	water screen	microlithics	7/4/21	LLF, JBF	A
96	KOD-114	3	2	waters screen NW quad	lithics	7/4/21	LLF, JBF	A
97	KOD-114	3	2	waterscreen NW quad	bone	7/4/21	LLF, JBF	F

98	KOD-114	2	3	57cm NW quad	shell	7/5/21	EAE, NUM	F
99	KOD-114	2	3	screen SE quad	shell	7/5/21	EAE, NUM	F
NAA	KOD-114	2	3		DEACCESSIONED			
101	KOD-114	2	3	water screen SE quad	charcoal	7/5/21	EAE, NUM	C
102	KOD-114	2	3	N half SE quad	pottery	7/5/21	EAE, NUM	A
103	KOD-114	2	3	screen N half	lithic	7/5/21	NUM, EAE	A
104	KOD-114	2	4	screen NW quad	flake	7/5/21	NUM, EAE	A
105	KOD-114	2	4	screen NE quad	net sinker	7/5/21	NUM, EAE	A
106	KOD-114	3	2	38cm NE quad	flake	7/5/21	LLF, JBF, RJM, TJS	A
107	KOD-114	3	2	40cm NE quad	pottery	7/5/21	LLF, JBF, RJM, TJS	A
NAA	KOD-114	3	2		DEACCESSIONED			
109	KOD-114	3	3	SW quad	bone	7/5/21	LLF, RJM	F
110	KOD-114	3	3	S half	pumice frag	7/5/21	LLF, JBF, RJM, TJS	A
111	KOD-114	3	3	SE quad	quartz shatter	7/5/21	LLF, JBF, RJM, TJS	A
112	KOD-114	3	3	SE quad	pottery sherds	7/5/21	LLF, JBF, RJM, TJS	A
113	KOD-114	3	3	NW quad	pottery sherds	7/5/21	LLF, JBF, RJM, TJS	A
114	KOD-114	3	3	-	pottery sherd	7/5/21	RJM, LLF, TJS	A
115	KOD-114	3	3	screen	bone	7/6/21	RJM, LLF	F
116	KOD-114	3	3	screen	pottery sherds	7/6/21	LLF, RJM	A
NAA	KOD-114	2	4		DEACCESSIONED			
118	KOD-114	2	4	screen NW quad	ground stone	7/5/21	NUM, EAE	A
119	KOD-114	3	4	47cmbll NW quad	charcoal	7/6/21	LLF, RJM	C
120	KOD-114	3	4	NW quad	bird humerus	7/6/21	LLF, RJM, HKM	F
121	KOD-114	3	4	55cmbll NW quad	charcoal	7/6/2021	LLF, HKM, RJM	C
122	KOD-114	3	4	56cmbll NW quad	charcoal	7/6/2021	LLF, HKM, RJM	C
123	KOD-114	4	1	NE quad	ground slate lance fragment	7/6/2021	TJS, SLS	A
124	KOD-114	4	1	NE quad	shell	7/6/2021	TJS, SLS	F
125	KOD-114	4	1	NE quad	ground slate point	7/6/2021	TJS, SLS	A
126	KOD-114	4	1	NE quad	bone	7/6/2021	TJS, SLS	F
127	KOD-114	4	1	NE quad	charcoal next to lance #123	7/6/2021	TJS, SLS	C
128	KOD-114	4	1	NE quad	fauna	7/6/2021	TJS, SLS	F

129	KOD-114	5	1	NE quad	ulu	7/6/2021	MLL	A
130	KOD-114	5	1	NW quad	bead	7/6/2021	EAA	A
131	KOD-114	5	1	screen	painted rock?	7/6/2021	EAA, MLL, IRP	A
132	KOD-114	2	5	SE quad	charcoal sample	7/7/2021	EAE, NUM	C
133	KOD-114	2	5	SW quad	charcoal sample	7/7/2021	EAE, NUM	C
134	KOD-114	2	5	NE quad	charcoal sample	7/7/2021	EAE, NUM	C
135	KOD-114	2	5	NW quad	charcoal sample	7/7/2021	EAE, NUM	C
136	KOD-114	2	5	NE quad	pottery sherds	7/7/2021	EAE, NUM	A
137	KOD-114	3	4	screen	bone	7/7/2021	LLF, RJM	F
138	KOD-114	3	pit	wet screen	bone	7/7/2021	LLF, RJM	F
139	KOD-114	4	2	NE quad	blade	7/7/2021	TJS, MLL	A
140	KOD-114	4	2	SE quad	blue glass bead	7/7/2021	MLL	A
141	KOD-114	4	2	NE quad	salmonberry seed sample	7/7/2021	TJS, RJM	D
142	KOD-114	4	2	SE quad	lance preform	7/7/2021	MLL	A
143	KOD-114	6	1		tooth	7/7/2021	LLF, HKM, MLL	F
144	KOD-114	6	1		drilled rock	7/7/2021	HKM, LLF	A
145	KOD-114	5	pit 2	SW quad	slate rod	7/7/2021	EAA	A
146	KOD-114	5	2	NE quad	pottery (rim)	7/7/2021	EAA	A
147	KOD-114	5	2	NW quad	slate tool tip?	7/7/2021	IRP	A
148	KOD-114	5	2	SE quad	bone fragment	7/7/2021	EAA	F
149	KOD-114	5	3	SW quad	fish bone	7/7/2021	EAA	F
150	KOD-114	5	2	SW quad	charcoal sample	7/7/2021	EAA	C
151	KOD-114	5	2	SE quad	charcoal	7/7/2021	EAA	C
152	KOD-114				Collapsed with FS#197 from same context			
153	KOD-114	9	1	wet screen 1/4"	midden	7/7/2021	SLS, MLL, NUM	F
153a	KOD-114	9	1	wet screen 1/4"	sorted invertebrates	7/7/2021	SLS, MLL, NUM	F
153b	KOD-114	9	1	wet screen 1/4"	sorted fish bones	7/7/2021	SLS, MLL, NUM	F
153c	KOD-114	9	1	wet screen 1/4"	sorted bird bones	7/7/2021	SLS, MLL, NUM	F
153d	KOD-114	9	1	wet screen 1/4"	sorted mammal bones	7/7/2021	SLS, MLL, NUM	F
154	KOD-114	6	1	wet screen 1/4"	midden	7/7/2021	LLF, EAE, HKM	F
154a	KOD-114	6	1	wet screen 1/4"	sorted invertebrates	7/7/2021	LLF, EAE, HKM	F
154b	KOD-114	6	1	wet screen 1/4"	sorted fish bones	7/7/2021	LLF, EAE, HKM	F
154c	KOD-114	6	1	wet screen 1/4"	sorted bird bones	7/7/2021	LLF, EAE, HKM	F
154d	KOD-114	6	1	wet screen 1/4"	sorted mammal bones	7/7/2021	LLF, EAE, HKM	F
154e	KOD-114	6	1	wet screen 1/4"	sorted otoliths	7/7/2021	LLF, EAE, HKM	F

155	KOD-114	6	1	wet screen 1/8"	midden	7/8/2021	LLF, EAE, HKM	F
156	KOD-114	9	1		midden - mammal bone fragments	7/8/2021	SLS, MLL, NUM	F
157	KOD-114	5	pit 1		charcoal	7/8/2021	EAA	C
158	KOD-114	5	3		worked stone	7/8/2021	IRP	A
159	KOD-114	5	3		fishbone + shell	7/8/2021	IRP, EAA	F
160	KOD-114	5	pit 1	60.5cm	pottery	7/8/2021	EAA	A
161	KOD-114	5	3	66.5cm	fish bone	7/8/2021	IRP	F
162	KOD-114	5	3	midden	fauna	7/8/2021	EAA, IRP	F
163	KOD-114	5	3	midden	fauna	7/8/2021	EAA, IRP	F
164	KOD-114	5	3	70cm	fauna, shell	7/8/2021	IRP	F
165	KOD-114	4	3	58cm	fish fin	7/8/2021	RJM	F
166	KOD-114	4	3	SE quad, screen	pottery	7/8/2021	RJM	A
167	KOD-114	4	3	SE quad, 59cm	salmonberry seed	7/8/2021	RJM, TJS	D
168	KOD-114	4	2	44cm	charcoal	7/8/2021	RJM	C
169	KOD-114	4	2	E half, screen	pottery	7/8/2021	RJM	A
170	KOD-114	6	1	midden	pottery sherd	7/8/2021	HKM, LLF	A
171	KOD-114	4	3	58cm	fish	7/9/2021	RJM	F
172	KOD-114	4	3	screen	pottery sherd	7/9/2021	RJM	A
173	KOD-114	5	4	midden	fish bone/shell	7/9/2021	IRP	F
174	KOD-114	6	1	midden	salmonberry seeds	7/9/2021	LLF	D
175	KOD-114	6	1	midden	wood	7/9/2021	LLF	D
176	KOD-114	4	3	SW quad, 64cm	salmonberry seeds	7/10/2021	TJS, RJM	D
177	KOD-114	4	3	wet screen	pottery sherd	7/10/2021	TJS, RJM	A
178	KOD-114	4	3	SW quad, 68cm	pottery sherd	7/10/2021	TJS, RJM	A
179	KOD-114	10	1	SW quad	pottery sherd	7/10/2021	SLS, NUM	A
180	KOD-114	10	2	SE quad	salmonberry seeds	7/10/2021	SLS, NUM	D
181	KOD-114	5	4	midden	bulk midden	7/10/2021	EAA, IRP	F
182	KOD-114	5	4	midden	bulk midden	7/10/2021	EAA, IRP	F
183	KOD-114	5	4	midden	bulk midden	7/10/2021	EAA, IRP	F
184	KOD-114	5	4	NW quad, 58cm	possible seal humerus	7/10/2021	IRP	F
185	KOD-114	5	4	NW quad	fishbone, shell	7/10/2021	IRP	F
186	KOD-114	5	4	SW quad	bone	7/10/2021	EAA	F
187	KOD-114	5	4	SE quad, 73cm	ground slate	7/10/2021	EAA	A

188	KOD-114	5	pit 1	90cm	pottery sherd	7/10/2021	EAA	A
189	KOD-114	5	pit 1		charcoal		EAA	C
190	KOD-114	8	1	midden 1/8"	bulk midden	7/8/2021	MLL	F
191	KOD-114	8	1	midden 1/4"	bulk midden (1 bag of unsorted material)	7/8/2021	MLL	F
191a	KOD-114	8	1	midden 1/4"	sorted invertebrates	7/8/2021	MLL	F
191b	KOD-114	8	1	midden 1/4"	sorted fish bones	7/8/2021	MLL	F
191c	KOD-114	8	1	midden 1/4"	sorted bird bones	7/8/2021	MLL	F
191d	KOD-114	8	1	midden 1/4"	sorted mammal bones	7/8/2021	MLL	F
191e	KOD-114	8	1	midden 1/4"	sorted otoliths	7/8/2021	MLL	F
192	KOD-114	8	1	midden 1/4"	bulk midden (2 field bags, now 1 bag unsorted)	7/9/2021	MLL	F
192a	KOD-114	8	1	midden 1/4"	sorted invertebrates (2 bags)	7/9/2021	MLL	F
192b	KOD-114	8	1	midden 1/4"	sorted fish bones	7/9/2021	MLL	F
192c	KOD-114	8	1	midden 1/4"	sorted bird bones	7/9/2021	MLL	F
192d	KOD-114	8	1	midden 1/4"	sorted mammal bones	7/9/2021	MLL	F
192e	KOD-114	8	1	midden 1/4"	sorted otoliths	7/9/2021	MLL	F
193	KOD-114	7	1	midden 1/4	bulk midden	7/10/2021	LLF	F
193a	KOD-114	7	1	midden 1/4	sorted invertebrates	7/10/2021	LLF	F
193b	KOD-114	7	1	midden 1/4	sorted fish bones	7/10/2021	LLF	F
193c	KOD-114	7	1	midden 1/4	sorted bird bones	7/10/2021	LLF	F
193d	KOD-114	7	1	midden 1/4	sorted mammal bones	7/10/2021	LLF	F
194	KOD-114	7	1	midden 1/8	bulk midden	7/10/2021	LLF	F
195	KOD-114	9	1	midden 1/4	bulk midden	7/11/2021	MLL	F
196	KOD-114	9	1	midden 1/4	bulk midden	7/11/2021	MLL	F
197	KOD-114	9	1	midden 1/8	bulk midden	7/11/2021	MLL	F
198	KOD-114	8	2A	35cmbll	salmonberry seeds	7/12/2021	MLL, HKM	D
199	KOD-144	8	2A	36cmbll	ash sample	7/12/2021	HKM	G
200	KOD-114	7	1	39cmbll	green chert ore	7/12/2021	JBF, LLF	G
201	KOD-114	4	3	wet screen	pottery sherd	7/11/2021	RJM, TJS	A
202	KOD-114	4	3	wet screen	worked slate	7/11/2021	RJM, TJS	A
203	KOD-114	4	3	53cm NE quad	net sinker	7/11/2021	RJM, TJS	A
NAA	KOD-114	11	3		DEACCESSIONED			
205	KOD-114	11	3	NW quad	salmonberry seed	7/11/2021	RJM, HKM	D

NAA	KOD-114	11	4		DEACCESSIONED			
207	KOD-114	11	4	SE quad, 59cm	salmonberry seed	7/11/21	RJM, TJS	D
208	KOD-114	5	pit 1	pit bottom	charcoal	7/11/21	EAA	C
209	KOD-114	7	1	24cm, midden	bone tool	7/11/21	LLF	F
210	KOD-114	7	1	NW quad, 25cm	salmonberry seeds	7/11/21	LLF, JBF	D
211	KOD-114	7	1		large mamal skull bone	7/11/21		F
212	KOD-114	8	1	wet screen 1/4"	ground slate	7/11/21	MLL	A
213	KOD-114	10	3	37cm, NW quad	worked stone	7/11/21	NUM, RG	A
214	KOD-114	10	2	wet screen 1/4"	flake	7/11/21	NUM	A
215	KOD-114	10	2	32cm, NW quad	pottery sherd	7/11/21	NUM, RG	A
216	KOD-114	10	2	NW quad, wet screen	grind stone	7/11/21	NUM, RG	A
217	KOD-114	10	2	SW quad	grind stone	7/11/21	NUM, RG	A
218	KOD-114	10	3	35cm, NW quad	pottery sherd	7/11/21	NUM, RG	A
219	KOD-114	6--9		wet screen	spoils of waterscreen	7/11/21	JBF	F
220	KOD-114	10	3	37cmbll	core	7/12/21	NUM, RG	A
221	KOD-114	11	2	NW quad	beads	7/12/21	RJM, TJS	A
222	KOD-114	11	2	NW quad, 63.5 cmbll	mica sample	7/12/21	RJM	G
223	KOD-114	11	3	NW quad	salmonberry seeds	7/12/21	RJM, TJS	D
224	KOD-114	11	3	NW quad	charcoal	7/12/21	RJM, TJS	C
225	KOD-114	10	4	NW quad, 1/4" w	flake	7/12/21	NUM, RG	A
226	KOD-114	10	4	NW quad, 46 cmbll	metal fragments	7/12/21	NUM, RG	A
227	KOD-114	10	4	NW quad, 1/4 wet sereen	shell fragments	7/12/21	NUM, RG	F
228	KOD-114	10	4	NE quad; 49 cmbll	wood fragments	7/12/21	NUM, RG	D
229	KOD-114	12	1	screen	worked slate fragments	7/12/21	HKM	A
230	KOD-114	13	1	surface	stone lamp	7/12/21	EAA, IRP	A
231	KOD-114	13	1		glass? quartz?	7/12/21	EAA	A
232	KOD-114	7	2	midden 1/4"	fauna	7/12/21	JBF	F

232a	KOD-114	7	2	midden 1/4"	sorted invertebrates	7/12/21	JBF	F
232b	KOD-114	7	2	midden 1/4"	sorted fish bones (includes an inset bag of bones from a concentration in NW corner)	7/12/21	JBF	F
232c	KOD-114	7	2	midden 1/4"	sorted bird bones (includes an inset bag of bones from a concentration in NW corner)	7/12/21	JBF	F
232d	KOD-114	7	2	midden 1/4"	sorted mammal bones	7/12/21	JBF	F
232e	KOD-114	7	2	midden 1/4"	sorted otolith	7/12/21	JBF	F
233	KOD-114	7	2	midden 1/8"	fauna	7/12/21	JBF	F
234	KOD-114	8	2A	midden 1/4"	fauna (3 bags - bags 1 & 2 sorted)	7/12/21	MLL, HKM	F
234a	KOD-114	8	2A	midden 1/4"	sorted invertebrates	7/12/21	MLL, HKM	F
234b	KOD-114	8	2A	midden 1/4"	sorted fish bones [2 bags of fish]	7/12/21	MLL, HKM	F
234c	KOD-114	8	2A	midden 1/4"	sorted bird bones	7/12/21	MLL, HKM	F
234d	KOD-114	8	2A	midden 1/4"	sorted mammal bones	7/12/21	MLL, HKM	F
234e	KOD-114	8	2A	midden 1/4"	sorted otoliths	7/12/21	MLL, HKM	F
235	KOD-114	10	5	screen	lithic flake	7/13/21	NUM, RG	A
236	KOD-114	10	6	NW quad	charcoal sample	7/13/21	NUM, RG	C
237	KOD-114	10	6	NW quad, 67 cmbll	charcoal sample	7/13/21	NUM, RG	C
238	KOD-114	11	1	NE quad, 38.5 cmbll	wood sample	7/13/21	RJM	D
239	KOD-114	11	3	NW quad	pottery sherd	7/13/21	RJM	A
240	KOD-114	11	3	NW quad	chert fragment	7/13/21	RJM	A
241	KOD-114	11	3	NW quad	pottery sherds	7/13/21	RJM, TJS	A
242	KOD-114	7	3		wood	7/13/21	LLF	D
243	KOD-114	7	3	1/4" wet	flake	7/13/21	LLF, JBF	A
244	KOD-114	7	3	1/4" wet	flake	7/13/21	LLF, JBF	A
245	KOD-114	7	3		cobble spall scraper	7/13/21	LLF, JBF	A
246	KOD-114	7	3	midden 1/4"	fauna	7/13/21	LLF, JBF	F
246d	KOD-114	7	3	midden 1/4"	sorted mammal bones	7/13/21	LLF, JBF	F
247	KOD-114	7	3	midden 1/8"	fauna	7/13/21	LLF, JBF	F
248	KOD-114	7	3B	midden 1/4"	chipped stone	7/13/21	LLF, JBF	A
249	KOD-114	7	3B	midden 1/4"	fauna	7/13/21	LLF, JBF	F
250	KOD-114	8	2A	midden 1/8"	fauna	7/13/21	MLL, HKM	F
251	KOD-114	8	3	midden 1/4"	ground slate point	7/13/2021	MLL	A

252	KOD-114	8	3	midden 1/4"	fauna	7/13/2021	MLL	F
252a	KOD-114	8	3	midden 1/4"	sorted invertebrates	7/13/2021	MLL	F
252b	KOD-114	8	3	midden 1/4"	sorted fish bones	7/13/2021	MLL	F
252c	KOD-114	8	3	midden 1/4"	sorted bird bones	7/13/2021	MLL	F
252d	KOD-114	8	3	midden 1/4"	sorted mammal bones	7/13/2021	MLL	F
252e	KOD-114	8	3	midden 1/4"	sorted otolith	7/13/2021	MLL	F
253	KOD-114	8	3	midden 1/8"	fauna	7/13/2021	MLL	F
254	KOD-114	9	2	35.5 cm	scapula	7/13/2021	MLL	F
255	KOD-114	9	2	midden 1/4"	fauna	7/13/2021	MLL	F
255a	KOD-114	9	2	midden 1/4"	sorted invertebrates	7/13/2021	MLL	F
255b	KOD-114	9	2	midden 1/4"	sorted fish bones	7/13/2021	MLL	F
255c	KOD-114	9	2	midden 1/4"	sorted bird bones	7/13/2021	MLL	F
255d	KOD-114	9	2	midden 1/4"	sorted mammal bones	7/13/2021	MLL	F
255e	KOD-114	9	2	midden 1/4"	sorted otoliths	7/13/2021	MLL	F
256	KOD-114	9	2	midden 1/8"	fauna	7/13/2021	MLL	F
257	KOD-114	6	3	midden 1/4"	fauna	7/14/2021	LLF, HKM	F
257d	KOD-114	6	3	midden 1/4"	sorted mammal bones	7/14/2021	LLF, HKM	F
258	KOD-114	6	4		flakes	7/14/2021	JBF, LLF	A
259	KOD-114	6	4	1/4" wet	pottery shard	7/14/2021	JBF, LLF	A
260	KOD-114	6	4	37 cmbll	charcoal	7/14/2021	HKM, LLF	C
261	KOD-114	6	4	34 cmbll	charcoal	7/14/2021	HKM, LLF	C
262	KOD-114	6	4		ground slate	7/14/2021	HKM, LLF	A
263	KOD-114	8	4		phalanx	7/14/2021	MLL	F
264	KOD-114	8	4	47cmbll	charcoal	7/14/2021	MLL	C
265	KOD-114	8	4		ground slate fragment	7/14/2021	MLL	A
266	KOD-114	11	3	SW quad, 43.5 cm	charcoal	7/14/2021	TJS, RJM	C
267	KOD-114	12	1	NW quad	shatter	7/14/2021	HKM	A
268	KOD-114	13	3	NW quad	bead	7/14/2021	IRP	A
269	KOD-114	13	3	NW quad, 9cmb	pottery sherd	7/14/21	IRP	A
270	KOD-114	13	3	NW quad, 14cmb	bead	7/14/21	IRP	A
271	KOD-114	13	4		pottery sherd	7/14/21	IRP	A
272	KOD-114	13	4	SE quad; 42cm	pottery sherd	7/14/21	IRP	A
273	KOD-114	13	pit 1	27cm	salmonberry seeds	7/14/21	EAA	D

274	KOD-114	13	pit 1	47cm	pottery sherd	7/14/21	EAA	A
275	KOD-114	13	pit 1	bottom (~50cm)	chipped chert	7/14/21	EAA	A
276	KOD-114	13	pit 1	~50cm	charcoal sample	7/14/21	EAA	C
277	KOD-114	13	pit 1	~60cm	pottery debris	7/14/21	EAA	A
278	KOD-114	7	3B	1/4" wet (picked)	picked fauna	7/14/21	JBF	F
278a	KOD-114	7	3B	1/4" wet (picked)	sorted invertebrates	7/14/21	JBF	F
278b	KOD-114	7	3B	1/4" wet (picked)	sorted bones and teeth (all vertebrates)	7/14/21	JBF	F
279	KOD-114	7	3B	1/4" wet	lithic	7/14/21	JBF	A
280	KOD-114	7	4	midden 1/4"	bulk fauna	7/14/21	JBF	F
280a	KOD-114	7	4	midden 1/4"	sorted invertebrates	7/14/21	JBF	F
280b	KOD-114	7	4	midden 1/4"	sorted fish bones	7/14/21	JBF	F
280c	KOD-114	7	4	midden 1/4"	sorted bird bones	7/14/21	JBF	F
281	KOD-114	7	4	midden 1/8"	bulk fauna	7/14/21	JBF	F
282	KOD-114	7	4	1/4" wet	lithic	7/14/21	JBF	A
283	KOD-114	9	3	midden 1/8"	fauna	7/14/21	MLL	F
284	KOD-114	9	3	midden 1/4"	fauna, all sub-bags in this one	7/14/21	MLL	F
284a	KOD-114	9	3	midden 1/4"	sorted invertebrates	7/14/21	MLL	F
284b	KOD-114	9	3	midden 1/4"	sorted fish bones	7/14/21	MLL	F
284c	KOD-114	9	3	midden 1/4"	sorted bird bones	7/14/21	MLL	F
284d	KOD-114	9	3	midden 1/4"	sorted mammal bone	7/14/21	MLL	F
NAA	KOD-114	11	3		DEACCESSIONED			
286	KOD-114	5	4	SE quad; 59cm	ground slate	7/9/21	EAA	A
287	KOD-114	7	1		hammer stone	7/12/21	LLF, JBF	A
288	KOD-114	10	7	SE quad, 73cmbll	charcoal sample	7/13/21	NUM, RG	C
289	KOD-114	11	2	NE quad; 49.5cmbll	flake	7/14/21	RJM	A
290	KOD-114	11	3	NW quad, 72cmbll	charcoal sample	7/13/21	RJM	C
291	KOD-114	13	2	NE quad, 18cm	bead	7/13/21	EAA	A
292	KOD-114	13	2	SW quad, 16cm	bead	7/13/21	EAA	A
293	KOD-114	13	2	SW quad	beads	7/13/21	EAA	A
294	KOD-114	13	3	SW quad; 27cm	chipped chert	7/13/21	EAA	A
295	KOD-114	13	3	29cm	charcoal	7/13/21	EAA	C
296	KOD-114	13	3		shard of rock crystal	7/13/21	EAA	G

297	KOD-114	8	4	midden 1/4"	bulk fauna	7/14/21	MLL	F
297a	KOD-114	8	4	midden 1/4"	sorted invertebrates	7/14/21	MLL	F
297b	KOD-114	8	4	midden 1/4"	sorted fish bones	7/14/21	MLL	F
297c	KOD-114	8	4	midden 1/4"	sorted bird bones	7/14/21	MLL	F
297d	KOD-114	8	4	midden 1/4"	sorted mammal bones	7/14/21	MLL	F
297e	KOD-114	8	4	midden 1/4"	sorted otoliths	7/14/21	MLL	F
298	KOD-114	8	4	midden 1/8"	bulk fauna	7/14/21	MLL	F
299	KOD-114	13	6	34cm	large pottery sherd	7/15/21	EAA	A
300	KOD-114	6	4	1/4" wet	bulk midden fauna	7/14/21	HKM, LLF	F
300a	KOD-114	6	4	1/4" wet	sorted invertebrates	7/14/21	HKM, LLF	F
300b	KOD-114	6	4	1/4" wet	sorted fish bones	7/14/21	HKM, LLF	F
300c	KOD-114	6	4	1/4" wet	sorted bird bones	7/14/21	HKM, LLF	F
300d	KOD-114	6	4	1/4" wet	sorted mammal bones	7/14/21	HKM, LLF	F
301	KOD-114	6	4	1/8" wet	bulk midden fauna	7/14/2021	HKM, LLF	F
302	KOD-114	6	4	1/4" wet	ground slate fragment	7/15/2021	LLE, JBF	A
303	KOD-114	13	6	NE quad	midden: fishbones	7/15/2021	EAA	F
304	KOD-114	13	4	NW quad	pottery sherd	7/15/2021	EAA	A
305	KOD-114	13	4	29cm	seal humerus	7/15/2021	IRP	F
306	KOD-114	10	7	SE quad, 68cm	burned log	7/15/2021	NUM	C
307	KOD-114	13	4	NW quad, 28cm	rim sherd (pottery)	7/15/2021	EAA	A
308	KOD-114	12	1	NE quad	chipped quartz	7/15/2021	HKM	A
309	KOD-114	9	3--4		possibly worked stone	7/15/2021	MLL, LLF	A
310	KOD-114	13	4	NW quad	pottery sherds	7/15/2021	EAA, IRP	A
311	KOD-114	13	4	NW quad	fishbones	7/15/2021	EAA, IRP	F
312	KOD-114	13	4	NW quad	seeds (small sample)	7/15/2021	EAA	D
313	KOD-114	9	3--4	1/4" wet	ground slate fragment	7/15/2021	MLL, LLF	A
314	KOD-114	9	3--4	1/4" wet	bulk midden fauna - unsorted	7/15/2021	MLL, LLF, JBF	F
314a	KOD-114	9	3--4	1/4" wet	sorted invertebrates	7/15/2021	MLL, LLF, JBF	F
314b	KOD-114	9	3--4	1/4" wet	sorted fish bones	7/15/2021	MLL, LLF, JBF	F
314c	KOD-114	9	3--4	1/4" wet	sorted bird bones	7/15/2021	MLL, LLF, JBF	F
314d	KOD-114	9	3--4	1/4" wet	sorted mammal bones	7/15/2021	MLL, LLF, JBF	F
314e	KOD-114	9	3--4	1/4" wet	sorted otoliths	7/15/2021	MLL, LLF, JBF	F

315	KOD-114	9	3--4	1/8" wet	bulk midden fauna	7/15/2021	MLL, LLF, JBF	F
316	KOD-114	9	3--4	1/4" wet	lithic	7/15/2021	MLL, JBF	A
317	KOD-114	9	3--4	1/4" wet	lithic	7/15/2021	MLL, JBF,	A
318	KOD-114	13	inside the pot	40 cm	hammerstone	7/15/2021	EAA	A
319	KOD-114	11	4	1/4" dry	pottery sherd	7/15/2021	TJS, RJM	A
320	KOD-114	11	3	NE quad, 62cm	salmonberry seeds	7/16/2021	RJM	D
321	KOD-114	11	3	NE quad	pottery sherd	7/16/2021	RJM	A
322	KOD-114	9	3--4	1/4" wet	bulk midden fauna	7/16/2021	MLL, LLF	F
322a	KOD-114	9	3--4	1/4" wet	sorted invertebrates	7/16/2021	MLL, LLF	F
322b	KOD-114	9	3--4	1/4" wet	sorted fish bones	7/16/2021	MLL, LLF	F
322c	KOD-114	9	3--4	1/4" wet	sorted bird bones	7/16/2021	MLL, LLF	F
322d	KOD-114	9	3--4	1/4" wet	sorted mammal bones	7/16/2021	MLL, LLF	F
322c	KOD-114	9	3--4	1/4" wet	sorted otoliths	7/16/2021	MLL, LLF	F
323	KOD-114				Collapsed with FS#315 from same context			
324	KOD-114	10	7	90cm	charcoal bulk	7/16/2021	NUM, RG	C
325	KOD-114	11	4	NE quad, 62cm	ground slate	7/16/2021	RJM	A
326	KOD-114	8	5	1/4" wet	bulk midden fauna (6 field bags, now 1 bag unsorted)	7/16/2021	MLL, LLF	F
326a	KOD-114	8	5	1/4" wet	sorted invertebrates (3 bags of shells)	7/18/2021	MLL, LLF	F
326b	KOD-114	8	5	1/4" wet	sorted fish bones	7/18/2021	MLL, LLF	F
326c	KOD-114	8	5	1/4" wet	sorted bird bones	7/18/2021	MLL, LLF	F
326d	KOD-114	8	5	1/4" wet	sorted mammal bones	7/18/2021	MLL, LLF	F
326e	KOD-114	8	5	1/4" wet	sorted otoliths	7/18/2021	MLL, LLF	F
327	KOD-114	8	5	1/8" wet	bulk midden fauna	7/16/2021	MLL, LLF	F
328	KOD-114	8	5	40cmbll	cranium	7/16/2021	MLL, LLF	F
329	KOD-114	8	5	1/4" wet	cranium	7/16/2021	MLL, LLF	F
330	KOD-114	8	5	40cmbll	mandible	7/16/2021	MLL, LLF	F
331	KOD-114	13	7		fish bones / shells	7/16/2021	EAA, IRP	F
332	KOD-114	13	near pot		pottery sherds	7/16/2021	TJS, RJM	A
333	KOD-114	11	5	1/4" dry	dry pottery sherd	7/16/2021	TJS, RJM	A
334	KOD-114	8	5	43cmbll	scapula	7/18/2021	MLL, LLF	F
335	KOD-114	8	5	43cmbll	radius	7/18/2021	MLL, LLF	F
336	KOD-114	8	5	43cmbll	cranium	7/18/2021	MLL, LLF	F

337	KOD-114	12	2	49cmbll	pottery sherd	7/18/2021	HKM	A
338	KOD-114	12	2	SW quad	pottery sherds	7/18/2021	HKM	A
339	KOD-114	12	2	SW quad	whetstone	7/18/2021	HKM	A
340	KOD-114	17	2		chipped chert	7/18/2021	EAA	A
341	KOD-114	10	8	pit #7, 90-105cmbll	charcoal bulk sample	7/18/2021	JBF	C
342	KOD-114	17	2	SW quad	pottery sherd	7/18/2021	EAA, IRP	A
343	KOD-114	17	2	53cm	wood	7/18/2021	EAA, JRP	D
344	KOD-114	17	2	37.5cm	ulu	7/18/2021	IRP, EAA	A
345	KOD-114	18	1	screen	pottery sherd	7/18/2021	RJM	A
346	KOD-114	17	2	36cm	ulu (goes with 344)	7/18/2021	EAA, IRP	A
347	KOD-114	8	5	54cm	salmonberry seeds	7/18/2021	MLL, LLF	D
348	KOD-114	6	5	1/4" wet	bulk midden fauna (1 bag unsorted material)	7/18/2021	MLL, LLF	F
348a	KOD-114	6	5	1/4" wet	sorted invertebrates [2 bags of shells]	7/18/2021	MLL, LLF	F
348b	KOD-114	6	5	1/4" wet	sorted fish bones	7/18/2021	MLL, LLF	F
348c	KOD-114	6	5	1/4" wet	sorted bird bones	7/18/2021	MLL, LLF	F
348d	KOD-114	6	5	1/4" wet	sorted mammal bones	7/18/2021	MLL, LLF	F
348e	KOD-114	6	5	1/4" wet	sorted otoliths	7/18/2021	MLL, LLF	F
349	KOD-114	6	5	1/8" wet	bulk midden fauna	7/18/2021	MLL, LLF	F
350	KOD-114	17	3	44.5cm	ground slate	7/18/2021	EAA, IRP	A
351	KOD-114	17	3		ground slate	7/18/2021	JRP, EAA	A
352	KOD-114	12	2	NW quad	flake	7/18/2021	HKM	A
NAA	KOD-114	12	2		DEACCESSIONED			
354	KOD-114	11	1	SE quad, 41cm	bead	7/19/2021	TJS	A
355	KOD-114	17	4	NW quad, 43cm	ulu blade fragment	7/19/2021	EAA, IRP	A
356	KOD-114	17	4	44cm	small hammerstone	7/19/2021	IRP, EAA	A
357	KOD-114	6	5	50cmbll	bird premaxilla	7/19/2021	MLL, LLF	F
358	KOD-114	6	5	47cmbll	cranium	7/19/2021	MLL, LLF	F
359	KOD-114	17	4	NW quad	bead	7/19/2021	JBF, EAA	A
360	KOD-114	17	4	NW quad	pottery	7/19/2021	EAA	A

361	KOD-114	17	4	NW quad, 49.5cm	strange concretion thing	7/19/2021	EAA	G
362	KOD-114	7	5	1/4" wet	labrett	7/19/2021	JBF	A
363	KOD-114	17	4	54.5cm	wood	7/19/2021	JRP, EAA	D
364	KOD-114	17	3	40cm	ulu blade fragment	7/19/2021	EAA, IRP	A
365	KOD-114	17	4	41cm	ground slate blade piece	7/19/2021	EAA, RP	A
366	KOD-114	17	4	50cm	pottery	7/19/2021	EAA	A
367	KOD-114	17	4	57cm	wood	7/19/2021	IRP, EAA	D
368	KOD-114	17	4	56cm	wood	7/19/2021	IRP	D
369	KOD-114	11	2	45cm	misshapen bead (broken)	7/19/2021	TJS	A
370	KOD-114	9	5	44cm	bone wedge	7/19/2021	MLL, LLF	A
371	KOD-114	9	5	47cm	innominate (pelvis)	7/19/2021	MLL, LLF	F
372	KOD-114	9	5	1/4" wet	bulk midden fauna (4 bags, all sorted)	7/19/2021	MLL, LLF	F
372a	KOD-114	9	5	1/4" wet	sorted invertebrates (3 bags of shells)	7/19/2021	MLL, LLF	F
372b	KOD-114	9	5	1/4" wet	sorted fish bones	7/19/2021	MLL, LLF	F
372c	KOD-114	9	5	1/4" wet	sorted bird bones	7/19/2021	MLL, LLF	F
372d	KOD-114	9	5	1/4" wet	sorted mammal bone	7/19/2021	MLL, LLF	F
372e	KOD-114	9	5	1/4" wet	sorted otoliths	7/19/2021	MLL, LLF	F
373	KOD-114	9	5	1/8" wet	bulk midden fauna	7/19/2021	MLL, LLF	F
374	KOD-114	6	5B	1/4" wet	sorted midden fauna, all in one bag	7/19/2021	MLL, LLF	F
374a	KOD-114	6	5B	1/4" wet	sorted invertebrates	7/19/2021	MLL, LLF	F
374b	KOD-114	6	5B	1/4" wet	sorted fish bones	7/19/2021	MLL, LLF	F
374c	KOD-114	6	5B	1/4" wet	sorted bird bones	7/19/2021	MLL, LLF	F
374d	KOD-114	6	5B	1/4" wet	sorted mammal bones	7/19/2021	MLL, LLF	F
375	KOD-114	6	5B	1/8" wet	bulk midden fauna	7/19/2021	MLL, LLF	F
376	KOD-114	6	5B	47cm	charcoal sample	7/19/2021	JBF	C
377	KOD-114	7	5	1/4" wet	bulk midden fauna, unsorted	7/19/2021	JBF	F
377a	KOD-114	7	5	1/4" wet	sorted invertebrates	7/19/2021	JBF	F
377b	KOD-114	7	5	1/4" wet	sorted fish bones	7/19/2021	JBF	F
377c	KOD-114	7	5	1/4" wet	sorted bird bones	7/19/2021	JBF	F
377d	KOD-114	7	5	1/4" wet	sorted mammal bones	7/19/2021	JBF	F

378	KOD-114	7	5	1/8" wet	bulk midden fauna	7/19/2021	JBF	F
379	KOD-114	17	5	NE quad	bulk midden	7/19/2021	EAA, IRP	F
380	KOD-114	17	5	NE quad	seeds	7/19/2021	EAA, IRP	D
381	KOD-114	17	5		pottery	7/19/2021	EAA, IRP	A
382	KOD-114	14	2	43cm	small lithic flake	7/20/2021	NUM, RG	A
383	KOD-114	8	5B	1/4" wet	bulk midden fauna	7/20/2021	MLL, LLF	F
384	KOD-114	8	5B	1/8" wet	bulk midden fauna	7/20/2021	MLL, LLF	F
385	KOD-114	6	6	53cmbll	salmonberry seeds	7/20/2021	MLL, LLF	D
386	KOD-114	6	6	59cmbll	inominate (pelvis)	7/20/2021	MLL, LLF	F
387	KOD-114	17	6	NE quad	bulk midden	7/20/2021	IRP, EAA	F
388	KOD-114	17	7	SW quad	wood	7/20/2021	IRP, EAA	D
389	KOD-114	17	7	SW quad	bone	7/20/2021	IRP, EAA	F
390	KOD-114	17	7	SW quad	pottery	7/20/2021	IRP, EAA	A
391	KOD-114	14	3	SW quad	ground slate	7/20/2021	NUM, RG	A
392	KOD-114	17	7	NW quad	pottery	7/20/2021	IRP, EAA	A
393	KOD-114	6	6	1/4" wet	ulu fragment	7/20/2021	MLL, LLF, HKM	A
394	KOD-114	19	1	1/4" dry	bead	7/20/2021	JBF	A
395	KOD-114	19	1	1/4" dry	fauna	7/20/2021	JBF	F
396	KOD-114	19	1	1/4" dry	lithics	7/20/2021	JBF	A
397	KOD-114	17	7	NW quad	pottery sherd	7/20/2021	IRP	A
398	KOD-114	19	1	NW quad 1/4"	fauna	7/20/2021	JBF	F
399	KOD-114	18	2	NE quad 33cm	wood fragment	7/19/2021	RJM	D
400	KOD-114	18	2	dry screen bucket, NE	bead	7/20/2021	RJM	A
401	KOD-114	18	2	SE quad	mica fragments	7/20/2021	RJM	G
402	KOD-114	18	2	NW quad	mica fragments	7/20/2021	RJM	G
403	KOD-114	18	2	NW quad 25cm	clay fragment	7/20/2021	RJM	A
404	KOD-114	18	2	NW quad 29 cm	wood fragment	7/20/2021	RJM	D

405	KOD-114	6	6	1/4" wet	bulk midden fauna (3 bags)	7/20/2021	MLL, LLF	F
405a	KOD-114	6	6	1/4" wet	sorted invertebrates [3 bags of shells]	7/20/2021	MLL, LLF	F
405b	KOD-114	6	6	1/4" wet	sorted fish bones	7/20/2021	MLL, LLF	F
405c	KOD-114	6	6	1/4" wet	sorted bird bones	7/20/2021	MLL, LLF	F
405d	KOD-114	6	6	1/4" wet	sorted mammal bones	7/20/2021	MLL, LLF	F
405e	KOD-114	6	6	1/4" wet	sorted otoliths	7/20/2021	MLL, LLF	F
406	KOD-114	6	6	1/8" wet	bulk midden fauna	7/20/2021	MLL, LLF	F
407	KOD-114	14	3	67cmbll	small red bead	7/20/2021	NUM, RG	A
408	KOD-114	19	2	16cmbll	pottery sherd	7/21/2021	JBF	A
409	KOD-114	13	4		ceramic rubble from FS#410	7/21/2021	EAA	A
410	KOD-114	13	4		ceramic vessel	7/21/2021	EAA	A
411	KOD-114	19	2	12cmbll	salmonberry seeds	7/21/2021	JBF	D
412	KOD-114	6	6	1/4" wet	pottery sherd	7/21/2021	LLF, EAA, RG	A
413	KOD-114	17	5	SE quad	fish bones/shell	7/21/2021	IRP, EAA	F
414	KOD-114	17	8	NE quad	shell	7/21/2021	EAA, IRP	F
415	KOD-114	17	9		rock crystal flake	7/21/2021	EAA, IRP	G
416	KOD-114	17	9		pottery sherds	7/21/2021	IRP	A
417	KOD-114	17	9	NW quad	pottery sherds	7/21/2021	IRP, EAA	A
418	KOD-114	17	9	SE quad	slate rod	7/21/2021	IRP	A
419	KOD-114	17	9	SE quad	wood	7/21/2021	IRP, EAA	D
420	KOD-114	17	10	SW quad 71.5cm	white bead	7/21/2021	EAA	A
421	KOD-114	17	10	72cm	purple bead	7/21/2021	EAA	A
422	KOD-114	17	10	72cm	rim sherd	7/21/2021	EAA	A
423	KOD-114	7	6	1/4" wet	bulk midden fauna (2 bags of unsorted material)	7/21/2021	LLF	F
423a	KOD-114	7	6	1/4" wet	sorted invertebrates [5 bags of shells]	7/21/2021	LLF	F
423b	KOD-114	7	6	1/4" wet	sorted fish bones	7/21/2021	LLF	F
423c	KOD-114	7	6	1/4" wet	sorted bird bones	7/21/2021	LLF	F
423d	KOD-114	7	6	1/4" wet	sorted mammal bones	7/21/2021	LLF	F
423e	KOD-114	7	6	1/4" wet	sorted otoliths	7/21/2021	LLF	F
424	KOD-114	7	6	1/8" wet	bulk midden fauna	7/21/2021	LLF	F
425	KOD-114	7	6	45cmbll	cranium	7/21/2021	LLF	F

426	KOD-114	7	6	1/4" wet	mandible	7/21/2021	LLF, RG	F
427	KOD-114	7	6	1/4" wet	green stone scraper	7/21/2021	LLF, RG	A
428	KOD-114	19	2	1/4" dry	lithics	7/21/2021	JBF	A
429	KOD-114	19	2	1/8" dry	bone/shell	7/21/2021	JBF	F
430	KOD-114	18	3	NW quad	beads	7/22/2021	HKM	A
431	KOD-114	17	10	NW quad	pottery sherds	7/22/2021	EAA, IRP	A
432	KOD-114	12	2	56cmbll	slate adze	7/22/2021	HKM	A
433	KOD-114	17	11	23cm	hammer stone	7/22/2021	IRP, EAA	A
434	KOD-114	19	2	NW quad 1/4" wet	lithics	7/22/2021	JBF	A
435	KOD-114	19	2	NW quad 1/4" + 1/8" wet	fauna	7/22/2021	JBF	F
436	KOD-114	19	2	NE quad 17cmbll	pottery	7/22/2021	JBF	A
437	KOD-114	17	11	SW quad 73cm	bead	7/22/2021	JBF	A
438	KOD-114	17	11	NE quad	bulk midden	7/22/2021	EAA	F
439	KOD-114	17	11	SE quad	charcoal	7/22/2021	EAA	C
440	KOD-114	14	56	SE quad	Wood fragment	7/22/2021	NUM	D
441	KOD-114	18	4	NE quad 39cm	Bead	7/22/2021	RJM	A
442	KOD-114	19	2B	Ca 20cm bll	Core-SE quad	7/22/2021	JBF	A
443	KOD-114	17	11	1/4 dry	pottery	7/22/2021	IRP EAA	A
444	KOD-114	17	11a	84cm	pottery (pit)	7/22/2021	EAA	A
445	KOD-114	7	6	54cm	salmonberry seeds	7/22/2021	MLL, LLF	D
446	KOD-114	7	6	69cmbll	cranium	7/22/2021	MLL, LLF	F
447	KOD-114	2	2	34cm,SE	wood fragment	7/21/2021	RJM	D
448	KOD-114	18	2	SE quad	wood sample	7/21/2021	RJM, HKM	D
449	KOD-114	18	3	Screen	bead	7/21/2021	RJM	A
450	KOD-114	18	4	27cmbll, NW quad	flake	7/22/2021	RJM	D
451	KOD-114	14	5	NW quad	pottery sherd	7/22/2021	RG,RJM	A
452	KOD-114	14	5	NW quad	lithic shatter	7/22/2021	RG,RJM	A
453	KOD-114	17	11	SE quad	wood	7/22/2021	IRP	D
454	KOD-114	17	11	SE quad	seeds	7/22/2021	IRP, EAA	D
455	KOD-114	17	11	NW quad	lithic flake	7/22/2021	IRP,EAA	A
456	KOD-114	17	11A	77cm	pottery sherd	7/23/2021	EAA,IRP	A
457	KOD-114	17	11A	84cm	pottery sherd	7/23/2021	EAA,IRP	A

458	KOD-114	14	5C	65cm	charcoal sample	7/23/2021	NUM	C
459	KOD-114	14	5C	65cm	burnt bone fragments	7/23/2021	NUM	F
460	KOD-114	7	6	1/4" wet	cranium	7/22/2021	MLL LLF	F
461	KOD-114	19	2B	24cm	clay and pebble sample	7/23/2021	JBF	G
462	KOD-114	14	5	1/4 wet	pottery	7/23/2021	RG	A
463	KOD-114	19	2B	24cm bll associated w/ FS#464	pottery for TL dating	7/23/2021	JBF MLL	A
464	KOD-114	19	2B	24-28cm associated w/ FS#463	charcoal bulk sample	7/23/2021	JBF MLL	C
465	KOD-114	19	2B	1/4 dry	pottery	7/23/2021	JBF	A
466	KOD-114	19	2B	1/4 dry	fauna	7/23/2021	JBF	F
467	KOD-114	18	4	40cm, SW	ulu	7/23/2021	HKM RJM	A
468	KOD-114	18	4	39cm, SW	charcoal sample	7/23/2021	HKM RJM	C
469	KOD-114	19	2B	31cm bll SW 1/4	fire cracked rhyolite for TL dating	7/23/2021	JBF	G
470	KOD-114	4	5	SW quad	pottery sherd	7/23/2021	LLF	A
471	KOD-114	19	2B	SE q (28 cm)	pottery in charcoal	7/23/2021	JBF	A
472	KOD-114	19	2B	32cm	pottery in thick charcoal	7/23/2021	JBF	A
473	KOD-114	19	2B	32cm	charcoal	7/23/2021	JBF	C
474	KOD-114	19	2B	NW quad(21-24cm)	slate fragments	7/23/2021	JBF	A
475	KOD-114	19	2B	24cm	wet stone	7/23/2021	JBF LLF	A
476	KOD-114	17	11A	NW quad	pottery (2 bags)	7/23/2021	EAA IRP	A
477	KOD-114	18	4	32cm, NW	bead	7/23/2021	RJM	A
NAA	KOD-114	19	2B		DEACCESSIONED			
479	KOD-114	19	2B	1/4 wet	lithic for NW quad	7/24/2021	JBF	A
480	KOD-114	6--9	wall cleaning		fauna from wall cleaning	7/24/2021	MLL LLF	F
481	KOD-114	3	5	1/4 dry	pottery	7/24/2021	IRP EAA	A
482	KOD-114	3	5	1/4 dry	lithic	7/24/2021	IRP EAA	A
483	KOD-114	3	5	1/4 dry	ground slate	7/24/2021	IRP EAA	A
484	KOD-114	3	5	68cm	seeds	7/24/2021	IRP EAA	D
485	KOD-114	3	5	72cm, NE quad	bone/shell	7/24/2021	IRP EAA	F

485a	KOD-114	3	5	72cm, NE quad	sorted invertebrates	7/24/2021	IRP EAA	F
485b	KOD-114	3	5	72cm, NE quad	sorted fish bones	7/24/2021	IRP EAA	F
485c	KOD-114	3	5	72cm, NE quad	sorted bird bones	7/24/2021	IRP EAA	F
485d	KOD-114	3	5	72cm, NE quad	sorted mammal bones	7/24/2021	IRP EAA	F
486	KOD-114	12	3	NW quad	pottery sherds	7/24/2021	HKM	A
487	KOD-114	12	3	NW quad	ground slate	7/24/2021	HKM	A
488	KOD-114	feature2		69cm	charcoal sample	7/24/2021	TJS NUM	C
489	KOD-114	feature2		67.5cm	pottery sherd	7/24/2021	TJS NUM	A
490	KOD-114	feature2		74cm	Ulu	7/24/2021	TJS NUM	A
491	KOD-114	feature2		1/4 in wet	wood fragment	7/24/2021	TJS NUM	D
492	KOD-114	feature2		1/4 in wet	charcoal fragment	7/24/2021	TJS NUM	C
493	KOD-114	feature2		1/4 in wet	bone fragment	7/24/2021	TJS NUM	F
494	KOD-114	feature2		1/4 in wet	pottery sherds	7/24/2021	TJS NUM	A
495	KOD-114	feature2		1/4 in wet	shatter	7/24/2021	TJS NUM	A
496	KOD-114	14	6	70cm	bead	7/24/2021	RG	A
497	KOD-114	12	pit 2	SE quad	pottery sherd	7/24/2021	HKM	A
498	KOD-114	14	5	73cm	wood	7/26/2021	RG	D
499	KOD-114	12	pit 2		pot sherd	7/26/2021	HKM	A
500	KOD-114	F2	n/a	76.5 cm bll	salmonberry seeds	7/26/2021	TJS, NUM	D
501	KOD-114	12	6	1/4 wets.	pottery	7/26/2021	RG	A
502	KOD-114	F2		waterscreen	oxidized pottery sherd	7/26/2021	TJS, NUM	A
503	KOD-114	12	Pit 2	85cmbll	charcoal sample	7/26/2021	HKM	C
504	KOD-114	12	4	64.5 cmbll	salmonberry seeds	7/26/2021	HKM	D
505	KOD-114	12	Pit 2		shells	7/26/2021	HKM	A
506	KOD-114	F2		83 cmbll	pottery sherd	7/26/2021	NUM, TJS	A
507	KOD-114	F2		78 cmbll	wood fragments	7/26/2021	NUM, TJS	D
508	KOD-114	3	5	60.5cm NWQ	hammerstone	7/26/2021	IRP, EAA	A
509	KOD-114	3	5	NE Quad	fauna from midden	7/26/2021	IRP, EAA	F
510	KOD-114	3	5	NW Quad	midden	7/26/2021	IRP, EAA	F
511	KOD-114	3	7	65cm NWQ	hammerstone	7/26/2021	IRP, EAA	A

512	KOD-114	3	7	72cm NWQ	hammerstone	7/26/2021	IRP, EAA	A
513	KOD-114	F2		1/4" wet screen	ochre fragments	7/26/2021	NUM, TJS	G
514	KOD-114	F2		79cmbll	pottery rim sherd 2pc	7/26/2021	NUM, TJS	A
515	KOD-114	F2		84 cm	pottery sherd	7/26/2021	NUM, TJS	A
516	KOD-114	12	Pit 2	83 cmbll	hammerstone	7/26/2021	HKM	A
517	KOD-114	F2		1/4" wet screen	pottery sherd	7/26/2021	NUM, TJS	A
518	KOD-114	3	7	71.5cm	ground green stone flake	7/26/2021	IRP, EAA	A
519	KOD-114	12	4	23cmBSouthwall	ULU	7/26/2021	HKM	A
520	KOD-114	F2		82cmbll	pottery sherd	7/26/2021	NUM, TJS	A
521	KOD-114	F2		89cmbll	pottery sherd	7/26/2021	NUM, TJS	A
522	KOD-114	12	4	SW Quad	pottery sherd	7/26/2021	HKM	A
523	KOD-114	12	4	SE Quad	fish bone	7/26/2021	HKM	F
524	KOD-114	F2		84cmbll	large pottery rim sherd	7/26/2021	NUM TJS	A
525	KOD-114	3	7	NW Quad	fauna bulk	7/26/2021	NUM, TJS	F
525a	KOD-114	3	7	NW Quad	sorted invertebrates	7/26/2021	NUM, TJS	F
525b	KOD-114	3	7	NW Quad	sorted fish bones	7/26/2021	NUM, TJS	F
525c	KOD-114	3	7	NW Quad	sorted bird bones	7/26/2021	NUM, TJS	F
525d	KOD-114	3	7	NW Quad	sorted mammal bones	7/26/2021	NUM, TJS	F
526	KOD-114	3	7	NW Quad	pottery	7/26/2021	NUM, TJS	A
527	KOD-114	14	7	NW Quad	bead	7/26/2021	RG	A
528	KOD-114	3	7	NWQ 1/8 wet	bulk midden	7/26/2021	EAA, IRP	F
529	KOD-114	12	5	NWQ 1/4" wet	coracoid	7/26/2021	LLF, MLL, HKM	F
530	KOD-114	F2		93cmbll	fish bones	7/26/2021	TJS, NUM	F
531	KOD-114	F2		1/4" wet screen	burnt fish bones	7/26/2021	TJS, NUM	F
532	KOD-114	F2		1/4" wet screen	pottery sherds	7/26/2021	TJS, NUM	A
533	KOD-114	12	5	NE Quad	worked slate	7/26/2021	HKM	A
534	KOD-114	12	5	NW; 77.5 cmbll	pottery sherd	7/27/2021	HKM	A

535	KOD-114	12	5	NW; 77.5 cmbll	charcoal sample	7/27/2021	HKM	C
536	KOD-114	18	5	NE 57 cmbll	Ulu	7/27/2021	NUM	A
537	KOD-114	F2			charcoal sample-bottom of feature	7/27/2021	TJS	C
538	KOD-114	F2		93 cmbll	wood fragments-bottom of feature	7/27/2021	TJS	D
NAA	KOD-114	F2			DEACCESSIONED			
540	KOD-114	F2		93cmbll	shell fragments	7/27/2021	TJS	F
541	KOD-114	19	3	32cmbll	whetstone from rock pile	7/27/2021	JBF	A
542	KOD-114	19	3	27cmbll	charcoal between sod	7/26/2021	JBF	C
543	KOD-114	19	3		fauna from in/under sods	7/24/2021	JBF	F
544	KOD-114	19	3	38cmbll	wood from base level 3/rop Level 4	7/26/2021	JBF	D
545	KOD-114	19	3	35cmbll	salmonberry seeds under/over rocks	7/26/2021	JBF	D
546	KOD-114	19	3	1/4 dry	lithic	7/24/2021	JBF	A
547	KOD-114	F2		88cmbll	pottery sherds	7/27/2021	TJS	A
548	KOD-114	19	3	36cmbll	charcoal and seeds	7/27/2021	JBF	D
549	KOD-114	F2		95cm	ochre	7/27/2021	TJS	G
550	KOD-114	F2		1/4" wetscreen	pottery sherds	7/27/2021	TJS	A
551	KOD-114	F2		1/4" wetscreen	shell fragments	7/27/2021	TJS	F
552	KOD-114	19	3	1/4" wetscreen	fauna from NW 1/4	7/27/2021	JBF	F
553	KOD-114	19	3	1/4+1/8" wetscreen	lithics from NW 1/4	7/27/2021	JBF	A
554	KOD-114	19	3	36-38cm	charcoal and wood from lower rocks/base rock pile in NE 1/4	7/27/2021	JBF	C
555	KOD-114	12	5	1/4" dry	bulk fauna	7/27/2021	LLF	F
556	KOD-114	12	5	83.5 cmbll	pottery sherds	7/27/2021	LLF	A
557	KOD-114	12	5	88 cmbll	charcoal	7/27/2021	LLF	C
558	KOD-114	12	5	1/4" dry	flake	7/27/2021	LLF	A
559	KOD-114	12	5	85cmbll	salmonberry	7/27/2021	LLF	D
NAA	KOD-114	12	5		DEACCESSIONED			
561	KOD-114	12	5	1/4" wetscreen	pottery sherd	7/27/2021	LLF	A
562	KOD-114	12	5	85cmbll	ground slate	7/27/2021	LLF	A
563	KOD-114	3	7	88cm	whale vertebra	7/27/2021	IRP	F
564	KOD-114	3	7	NE Quad	discretion-midden	7/26/2021	IRP	F

565	KOD-114	3	7	NE Quad, 77cm	Bulk-midden 1/8"	7/27/2021	IRP	F
566	KOD-114	3	7	SE Quad	discretion-midden	7/27/2021	IRP	F
567	KOD-114	3	7	NW Quad	discretion-midden	7/27/2021	IRP	F
568	KOD-114	3	8	68 cm	wood	7/27/2021	IRP	D
569	KOD-114	3	7	NE Quad, 1/4"	bulk-midden (2 bags-both have been sorted)	7/27/2021	IRP	F
569a	KOD-114	3	7	NE Quad, 1/4"	sorted invertebrates	7/27/2021	IRP	F
569b	KOD-114	3	7	NE Quad, 1/4"	sorted fish bones (2 bags of fish)	7/27/2021	IRP	F
569c	KOD-114	3	7	NE Quad, 1/4"	sorted bird bones	7/27/2021	IRP	F
569d	KOD-114	3	7	NE Quad, 1/4"	sorted mammal bones	7/27/2021	IRP	F
570	KOD-114	18	5	NE 1/4 67cm	wood fragment	7/27/2021	NUM	D
571	KOD-114	18		Volehole	flake	7/27/2021	NUM	A
572	KOD-114	18	5	1/4 in wet	wood fragments	7/27/2021	NUM	D
573	KOD-114	18	5	NW 1/4 62cm	wood fragments	7/27/2021	NUM	D
574	KOD-114	14	7	NE; 100cmbll	ground slate point	7/27/2021	HKM	A
575	KOD-114	14	7	NW; 86cmbll	pyrite	7/27/2021	HKM	G
576	KOD-114	14	7	NW Quad	pottery sherds	7/27/2021	HKM	A
577	KOD-114	14	7	NW Quad	worked slate	7/27/2021	HKM	A
NAA	KOD-114	F2			DEACCESSIONED			
NAA	KOD-114	F2			DEACCESSIONED			
580	KOD-114	19	3-base	40cmbll	wood from SE corner	7/28/2021	JBF	D
581	KOD-114	3	7		pottery sherds	7/28/2021	IRP	A
582	KOD-114	3	7	NW quad	interesting burned object	7/27/2021	IRP	D
583	KOD-114	5	5	SW: 85cmbll	worked slate	7/28/2021	HKM	A
584	KOD-114	3		profile clean	pottery sherds	7/28/2021	IRP	A
585	KOD-114	4 and 11	all	North wall	wall cleaning	7/28/2021	LLF, TJS	A
586	KOD-114	17	12		fauna	7/28/2021	HKM	F
587	KOD-114	17	11	SE corner	humerus	7/28/2021	HKM	F
588	KOD-114	17	12	NW Quad	flake	7/29/2021	HKM	F
589	KOD-114	3	7	NE Quad	vertebrae, C. Ursinus	7/30/2021	HKM	F
590	KOD-114	3	7	NW Quad	pottery sherds	7/29/2021	IRP	A
591	KOD-114	18	5		shatter	7/24/2021	RJM	A

592	KOD-114	8	5	1/4"wet	ground slate fragments from midden bag 5 of 6	10/20/2021	HKM	A
593	KOD-114	8	2A	1/4"wet	shatter from midden bag 2	11/1/2021	HKM	A
594	KOD-114	4	3	52cm SW quad	chipped greenstone	7/7/2021	TJS, RJM	A
595	KOD-114	18	4	1/4"dry SW+SE	pottery sherd	7/23/2021	RJM	A
596	KOD-114	13	4	30 cm NW Quad	pottery sherd	7/15/2021	EAA	A
597	KOD-114	18	E wall profile	column sample #1	East wall; top cultural charcoal lens	7/30/2021	HKM, JBF	CS
598	KOD-114	18	E wall profile	column sample #2	Wood at top of 2nd charcoal layer at 20 cmbs	7/30/2021	HKM, JBF	CS
599	KOD-114	18	E wall profile	column sample #31	charcoal below wood (CS #2) at 31-34 cm below surface; includes FCR for T.L. dating (?)	7/30/2021	HKM, JBF	CS
600	KOD-114	18	E wall profile	column sample #4	wood layer from 50 cmbs	7/30/2021	HKM, JBF	CS
601	KOD-114	18	S wall profile	column sample #5	10 cmbs	7/30/2021	HKM, JBF	CS
602	KOD-114	18	S wall profile	column sample #6	charcoal from base pit #1 in stratum "C" at 50-54 cmbs	7/30/2021	HKM, JBF	CS
603	KOD-114	18	W wall profile	column sample #7	salmonberry seeds and charcoal in small pit in stratum "H" at 26-30 cmbs	7/30/2021	HKM, JBF	CS
604	KOD-114	18	W wall profile	column sample #8	from charcoal lens in stratum "C" at 40 cm below the surface	7/30/2021	HKM, JBF	CS
605	KOD-114	19	N wall profile	column sample #9	tephra (katmai?) at 8 cmbs	7/31/2021	HKM, JBF	CS
606	KOD-114	19	N wall profile	column sample #10	salmonberry seeds and charcoal below tephra (#9) at 9-13 cmbs	7/31/2021	HKM, JBF	CS
607	KOD-114	19	N wall profile	column sample #11	Feldspar-rich FCR and charcoal resting on it at 15-20 cmbs (and L.L.)	7/31/2021	HKM, JBF	CS
608	KOD-114	19	E wall profile	column sample #12	charcoal and quartz pebble from ca. 21 cmbs	7/31/2021	HKM, JBF	CS
609	KOD-114	19	E wall profile	column sample #13	base of FCR charcoal stratum "D" in SE corner at 26-28 cmbs in East and 6-21 cmbs in South	7/31/2021	HKM, JBF	CS
610	KOD-114	19	E wall profile	column sample #14	charcoal from base of excavation - below wood layer - Strat "F" at 39-40 cmbs	7/31/2021	HKM, JBF	CS
611	KOD-114	13	E wall profile	column sample #15	tephra 3 cmbs	7/31/2021	HKM, JBF	CS
612	KOD-114	5	E wall profile	column sample #16	charcoal etc from top charcoal layer at 7-9 cmbs	7/31/2021	HKM, JBF	CS

613	KOD-114	13	E wall profile	column sample #17	charcoal etc. from 2nd charcoal layer - just below orange brown sod layer at 10 cmbs	7/31/2021	HKM, JBF	CS
614	KOD-114	3--13	E wall profile	column sample #18	charcoal etc from "finger" between sods (level 5) at 22-29 cmbs	7/31/2021	HKM, JBF	CS
615	KOD-114	3--13	E wall profile	column sample #19	bottom charcoal lens feeding into base of unit 3; black charcoal pit at 30-33 cmbs	7/31/2021	HKM, JBF	CS
616	KOD-114	3	E wall profile	column sample #20	charcoal etc from next cultural layer below black pit at 40-44 cmbs in southern half of unit wall	7/31/2021	HKM, JBF	CS
617	KOD-114	3	E wall profile	column sample #21	charcoal from 2nd cultural layer below pit in southern 1/4 of wall at 50-52 cmbs	7/31/2021	HKM, JBF	CS
618	KOD-114	3	E wall profile	column sample #22	charcoal from lens at top of deep midden at 48 cmbs	7/31/2021	HKM, JBF	CS
619	KOD-114	3	E wall profile	column sample #23	charcoal from near top of deep midden (2-3 cm below sample 22) at 51-54 cmbs	7/31/2021	HKM, JBF	CS
620	KOD-114	3	E wall profile	column sample #24	salmonberry seeds, charcoal and rocks from near bottom of excavation in deep midden (not bottom of midden which is unexcavated) at 68-	7/31/2021	HKM, JBF	CS
621	KOD-114	3	W wall profile	column sample #25	charcoal from below top layer of fish bone midden at base of excavation at 62-64 cmbs	7/31/2021	HKM, JBF	CS
622	KOD-114	13	W wall profile	column sample #26	pottery for T.L. dating at 20 cmbs	7/31/2021	HKM, JBF	CS
623	KOD-114	13	W wall profile	column sample #27	charcoal etc from around pottery fragment (#26) at 20-22 cmbs	7/31/2021	HKM, JBF	CS
624	KOD-114	6	E wall profile	column sample #28	charcoal etc from between top two shell and bone midden lenses at 17-18 cmbs	7/31/2021	HKM, JBF	CS
625	KOD-114	6	E wall profile	column sample #29	charcoal etc. from within thick shell midden (Level 6) at 38-42 cmbs in northern end of unit	7/31/2021	HKM, JBF	CS
626	KOD-114	6	S wall profile	column sample #30	rock for T.L. dating in middle of thick shell midden (exc. at level 6) at 36 cmbs	7/31/2021	HKM, JBF	CS
627	KOD-114	7	S wall profile	column sample #31	charcoal from near bottom of pit in southwestern corner at 31-34 cmbs	7/31/2021	HKM, JBF	CS

628	KOD-114	12	S wall profile	column sample #32	column sample from western edge - charcoal at 33-36 cmbs at SW corner	7/31/2021	HKM, JBF	CS
629	KOD-114	12	S wall profile	column sample #33	rock for T.L. dating in pit near western end (SW corner) at 41-45 cmbs	7/31/2021	HKM, JBF	CS
630	KOD-114	12	W wall profile	column sample #34	charcoal, etc. from top of pit in NW corner (north end of wall) at 16 cmbs	7/31/2021	HKM, JBF	CS
631	KOD-114	12	W wall profile	column sample #35	charcoal, etc. from base of pit in NW corner at 48-51 cmbs	7/31/2021	HKM, JBF	CS
632	KOD-114	4--11	N wall profile	feature 2; column sample #36	from rock/charcoal at top of or above pit feature at 9-11 cmbs	7/31/2021	HKM, JBF	CS
633	KOD-114	4--11	N wall profile	Feature 2; column sample #37	charcoal from 20-23 cmbs at top of densest black feature fill and 10cm below CS #36	7/31/2021	HKM, JBF	CS
634	KOD-114	4--11	N wall profile	Feature 2; column sample #38	rock for T.L. dating; should match charcoal date from C.S. #37	7/31/2021	HKM, JBF	CS
635	KOD-114	4--11	N wall profile	Feature 2; column sample #39	charcoal exc. from base of pit feature at 39-43 cmbs	7/31/2021	HKM, JBF	CS
636	KOD-114	17	N wall profile, Level 4	column sample #40	charcoal at 26-32 cmbs	7/31/2021	HKM, JBF	CS
637	KOD-114	17	N wall profile	column sample #41	charcoal exc. from NE unit corner under rock filled pit, 52-56 cmbs	7/31/2021	HKM, JBF	CS
638	KOD-114	17	E wall profile	column sample #42	charcoal from pocket in strat. 12; 57-60 cmbs	7/31/2021	HKM, JBF	CS
639	KOD-114	17	S wall profile	column sample #43	from bottom of pit feature in S/SW quads at 18-24 cmbs	7/31/2021	HKM, JBF	CS
640	KOD-114	17	S wall profile	column sample #44	from charcoal layer (strat 11) at 34-40 in SE corner	7/31/2021	HKM, JBF	CS
641	KOD-114	14	Strat C.	column sample #45	charcoal sample from top lens in NW corner	7/31/2021	HKM, JBF	CS
642	KOD-114	14	below Strat E	column sample #46	charcoal sample from between strat E and C in NW corner of unit; 33-37 cmbs	7/31/2021	HKM, JBF	CS
643	KOD-114	14		column sample #47	charcoal, seeds, and T.L. rock from lowest lense in NW corner; 50-54 cmbs	7/31/2021	HKM, JBF	CS
644	KOD-114	14		column sample #48	charcoal sample from 3rd layer down in NW corner	7/31/2021	HKM, JBF	CS

645	KOD-114	14	E wall profile	column sample #49	charcoal from base of feature in SE corner	7/31/2021	HKM, JBF	CS
645a	KOD-114	14	E wall profile	column sample #49	outer layer of wood; charcoal from layer sample	7/31/2021	HKM, JBF	CS
646	KOD-114	14	S wall profile	column sample #50	burned orange sand below charcoal p. 7 at 55-59 cmbs (in SE corner)	7/31/2021	HKM, JBF	CS
647	KOD-114	14	S wall profile	column sample #51	charcoal from beneath burned earth; 59-61 cmbs	7/31/2021	HKM, JBF	CS
648	KOD-114	14	S wall profile	column sample #52	charcoal from 24-30 cmbs towards SW corner	7/31/2021	HKM, JBF	CS
649	KOD-114	14	S wall profile	column sample #53	charcoal from 41-45 cmbs	7/31/2021	HKM, JBF	CS
650	KOD-114	6	1	from 1/4" wet	pottery fragments	1/11/2022	GTD	A
651	KOD-114	18	5	SE quad, 49 cmbll	wood sample	7/24/2021	RJM	D
652	KOD-114	6	4	1/4" wet	pottery crumble	1/12/2022	HKM	A
653	KOD-114	18	5	dry screen	fauna	7/24/2021	RJM	F
654	KOD-114	17	2	34cm	ulu/ground slate fragment	7/18/2021	EAA	A
655	KOD-114	3	7	77cm	pottery crumbles	2/4/2022	HKM	A
656	KOD-114	9	3--4	1/4" wet	pottery crumbles	5/23/2022	HKM	A
657	KOD-114	8	2A	1/4" wet	ground slate fragment	6/28/2022	HKM	A
658	KOD-114	7	6	1/4" wet	ground slate fragment	7/5/2022	HKM	A
659	KOD-114	6	6	1/4" wet	labret (bone)	7/12/2022	IMH	A
660	KOD-114	7	4	1/4" wet	bead (amber?)	3/15/2022	EAP	A
661	KOD-114	6	6	1/4" wet	ground slate fragment	8/12/2022	HKM	A
662	KOD-114	8	4	1/4" wet	labret (bone or ivory)	4/4/2022	LC	A
663	KOD-114	8	4	1/4" wet	labret (ivory)	4/5/2022	EAP	A
664	KOD-114	6	6	1/4" wet	pendant made from bird hyoid	8/12/2022	HKM	A
665	KOD-114	3	7	1/4" wet	pendant made from bird hyoid	9/22/2022	HKM	A
666	KOD-114	3	7	1/4" wet	labret	9/27/2022	HKM	A
667	KOD-114	3	7	1/4" wet	pottery crumbles	9/15/2022	HKM	A
668	KOD-114	7	3	1/4" wet	ground slate fragment	7/13/2021	LLF, JBF	A

APPENDIX B:

**Taxonomic Identifications and NISP
of Mammalian Specimens from Middens 1 and 2
at the Ing'yuq Village Site (KOD-114)**

FS Number	Unit	Level	Depth	Description	Date	Initials	Taxa	NISP
143	6	1		tooth	7/7/2021	LFF,MLL,HKM	P. vitulina	1
153d	9	1	wet screen 1/4"	unidentified mammal bone	7/7/2021	SLS, MLL, NUM		38
153d-1	9	1	wet screen 1/4"	lumbar vertebra	5/10/2022	NGJ	C. ursinus	1
153d-2	9	1	wet screen 1/4"	metapodial	5/10/2022	NGJ	C. ursinus	1
153d-3	9	1	wet screen 1/4"	vertebra	5/10/2022	NGJ	P. dalli	1
153d-4	9	1	wet screen 1/4"	vertebra	5/10/2022	NGJ	porpoise	1
154d	6	1	wet screen 1/4"	unidentified mammal bones	7/7/2021	LLF, EAE, HKM		54
154d-1	6	1	wet screen 1/4"	proximal scapula	1/25/2022	HKM, BSC	C. ursinus	1
154d-16 to -17	6	1	wet screen 1/4"	unidentified whale frags	4/18/2022	HKM, DRL	Cetacean	4
154d-18	6	1	wet screen 1/4"	rib	4/18/2022	HKM, DRL	C. ursinus	1
154d-19 to -21	6	1	wet screen 1/4"	ribs	4/18/2022	HKM, DRL	Pinniped	3
154d-2	6	1	wet screen 1/4"	proximal scapula	1/25/2022	HKM, BSC	P. phocoena	1
154d-3	6	1	wet screen 1/4"	ulna	1/14/2022	YD, DRL	C. ursinus	1
154d-4	6	1	wet screen 1/4"	humerus	1/25/2022	HKM, BSC	C. ursinus	1
154d-5	6	1	wet screen 1/4"	femur	1/25/2022	HKM, BSC	C. ursinus	1
154d-6 to -15	6	1	wet screen 1/4"	metapodials and phalanges	4/18/2022	HKM	Pinniped	10
156	9	1		unidentified whale bone fragments	7/8/2021	SLS, MLL, NUM	Unidentified Cetacean	2
191d	8	1	midden 1/4"	unidentified mammal bone	7/8/2021	MLL		31
191d-1	8	1	midden 1/4"	bone chunk			Unidentified Cetacean	1
191d-2 and -3	8	1	midden 1/4"	vertebrae			porpoise	2
191d-4	8	1	midden 1/4"	rib	4/26/2022	NGJ	P. vitulina	1
192d	8	1	midden 1/4"	unidentified mammal bones	7/9/2021	MLL		91
192d-1	8	1	midden 1/4"	tympanic bulla		HKM	porpoise	1
192d-14	8	1	midden 1/4"	scapula	6/29/2022	HKM	porpoise	1
192d-15	8	1	midden 1/4"	vertebra	6/29/2022	ICW	P. vitulina	1
192d-16 to -21	8	1	midden 1/4"	vertebrae	6/29/2022	ICW, HGL	P. phocoena	6
192d-2	8	1	midden 1/4"	pubis	4/18/2022	HKM, DRL	Pinniped	1
192d-22	8	1	midden 1/4"	vertebra	6/29/2022	ICW	C. ursinus	1
192d-23	8	1	midden 1/4"	fibula	6/29/2022	HKM	C. ursinus	1
192d-24	8	1	midden 1/4"	calcaneus	6/29/2022	HKM	C. ursinus	1
192d-25 and -26	8	1	midden 1/4"	ribs	6/29/2022	ICW	C. ursinus	2
192d-27	8	1	midden 1/4"	rib	6/29/2022	ICW, HKM	porpoise	1
192d-28 and -29	8	1	midden 1/4"	phalanges	6/29/2022	HKM	Pinniped	2
192d-3 and -4	8	1	midden 1/4"	metapodials	4/18/2022	HKM, DRL	C. ursinus	2
192d-30 to -32	8	1	midden 1/4"	vertebrae	6/29/2022	HKM	Pinniped	3
192d-33	8	1	midden 1/4"	caudal vertebra	7/5/2022	HKM, ICW, HGL	Canid	1
192d-34	8	1	midden 1/4"	metatarsal	7/5/2022	HKM, HGL	Ursus arctos	1
192d-5 and -6	8	1	midden 1/4"	vertebrae	4/18/2022	HKM, DRL	C. ursinus	2
192d-7 to -13	8	1	midden 1/4"	phalanges	4/18/2022	HKM, DRL	Pinniped	7

FS Number	Unit	Level	Depth	Description	Date	Initials	Taxa	NISP
193d	7	1	1/4" wet	unidentified mammal bones	7/10/2021	LLF		48
193d-1	7	1	1/4" wet	humerus	1/25/2022	BSC	C. ursinus	1
193d-2	7	1	1/4" wet	tooth	4/18/2022	HKM, DRL	C. ursinus	1
193d-3 and -4	7	1	1/4" wet	phalanges	4/18/2022	HKM, DRL	Pinniped	2
211	7	1		crushed skull from a single individual	11/29/21	HKM, GTD	P. vitulina	1
232d	7	2	midden 1/4"	unidentified mammal bones	7/12/21	JBF		6
232d-1 and -2	7	2	midden 1/4"	metapodials	4/26/22	NGJ	P. vitulina	2
232d-3	7	2	midden 1/4"	tooth	4/26/22	NGJ	C. ursinus	1
232d-4	7	2	midden 1/4"	phalanx	4/26/22	NGJ	C. ursinus	1
234d	8	2a	1/4" wet	unidentified mammal bones	7/12/2021	MLL, HKM		31
234d-1	8	2a	1/4" wet	sacral vertebra	4/18/2022	HKM, DRL	C. ursinus	1
234d-10 to -12	8	2a	1/4" wet	vertebrae	5/24/2022	NGJ	C. ursinus	3
234d-13 and -14	8	2a	1/4" wet	distal ribs	5/24/2022	NGJ	C. ursinus	2
234d-15	8	2a	1/4" wet	rib	5/24/2022	NGJ	C. ursinus	1
234d-16	8	2a	1/4" wet	metapodial	5/24/2022	NGJ	C. ursinus	1
234d-17	8	2a	1/4" wet	distal femur	5/24/2022	NGJ	C. ursinus	1
234d-18 and -19	8	2a	1/4" wet	ribs	5/24/2022	NGJ	Pinniped	2
234d-2 and -3	8	2a	1/4" wet	ribs	4/18/2022	HKM, DRL	C. ursinus	2
234d-20	8	2a	1/4" wet	vertebra	6/30/2022	HKM	C. ursinus	1
234d-21	8	2a	1/4" wet	sternebra	6/30/2022	HKM	C. ursinus	1
234d-22	8	2a	1/4" wet	metapodial	6/30/2022	HKM	Pinniped	1
234d-4 to -8	8	2a	1/4" wet	phalanges	4/18/2022	HKM, DRL	Pinniped	5
234d-9	8	2a	1/4" wet	carpal	4/18/2022	HKM, DRL	C. ursinus	1
246d	7	3	midden 1/4"	unidentified mammal bones	7/13/21	LLF, JBF		6
246d-1	7	3	midden 1/4"	phalanx	4/26/22	NGJ	Pinniped	1
252d	8	3	midden 1/4"	unidentified mammal bones	7/13/2021	MLL		2
252d-1 and -2	8	3	midden 1/4"	phalanges	4/18/2022	HKM, DRL	Pinniped	2
254	9	2	35.5 cm	scapula	11/19/2021	HKM, LC	C. ursinus	1
255d	9	2	midden 1/4"	unidentified mammal bones	7/13/2021	MLL		10
255d-1 and -2	9	2	midden 1/4"	phalanges	4/18/2022	HKM, DRL	Pinniped	2
255d-3	9	2	midden 1/4"	metapodial	5/24/2022	NGJ	C. ursinus	1
255d-4	9	2	midden 1/4"	rib	5/24/2022	NGJ	C. ursinus	1
255d-5	9	2	midden 1/4"	rib	5/24/2022	NGJ	P. vitulina	1
257d	6	3	midden 1/4"	unidentified mammal bones	7/14/2021	LLF, HKM		2
263	8	4	picked in field	phalanx	4/11/2022	HKM	Unidentified Whale	1

FS Number	Unit	Level	Depth	Description	Date	Initials	Taxa	NISP
278b-1 and -2	7	3B	picked fauna from 1/4" wet screen	teeth	8/21/2022	HKM	P. vitulina	2
284d	9	3	midden 1/4"	unidentified mammal bone	7/14/21	MLL		1
297d	8	4	midden 1/4"	unidentified mammal bones	7/14/21	MLL		9
297d-1 to -5	8	4	midden 1/4"	phalanges	4/18/22	HKM, DRL	Pinniped	5
300d	6	4	1/4" wet	unidentified mammal bones	7/14/21	HKM, LLF		9
300d-1	6	4	1/4" wet	vertebral plate from unidentified whale	4/18/2022	HKM, DRL	Cetacean	1
314d	9	3--4	1/4" wet	unidentified mammal bones	7/15/2021	MLL, LLF, JBF		23
314d-1	9	3--4	1/4" wet	metapodial			C. ursinus	1
314d-2	9	3--4	1/4" wet	radius			P. vitulina	1
314d-3	9	3--4	1/4" wet	phalanx	4/18/2022	HKM, DRL	Pinniped	1
314d-4	9	3--4	1/4" wet	rib	5/31/2022	NUM	Pinniped	1
322d	9	3--4	1/4" wet	unidentified mammal bones	7/16/2021	MLL, LLF		2
326d	8	5	1/4" wet	unidentified mammal bones	7/18/2021	MLL, LLF		98
326d-1	8	5	1/4" wet	humerus	7/18/2021	MLL, LLF	C. ursinus	1
326d-10 and -11	8	5	1/4" wet	ribs	4/26/2022	NGJ	P. vitulina	2
326d-117 and -118	8	5	1/4" wet	phalanges	8/12/2022	HKM	Pinniped	2
326d-12 to -16	8	5	1/4" wet	vertebrae	4/26/2022	NGJ	P. vitulina	5
326d-17	8	5	1/4" wet	radius	5/31/2022	NUM	C. ursinus	1
326d-18	8	5	1/4" wet	innominate	5/31/2022	NUM, HKM	C. ursinus	1
326d-19	8	5	1/4" wet	rib	6/7/2022	ICW	C. ursinus	1
326d-2	8	5	1/4" wet	thoracic vertebra	7/18/2021	MLL, LLF	C. ursinus	1
326d-20	8	5	1/4" wet	rib	6/7/2022	NUM	P. vitulina	1
326d-21	8	5	1/4" wet	metapodial	6/7/2022	ICW	C. ursinus	1
326d-22	8	5	1/4" wet	carpal	6/7/2022	NGJ	C. ursinus	1
326d-23 to -28	8	5	1/4" wet	vertebrae	6/7/2022	ICW, HKM	P. vitulina	6
326d-29 to -34	8	5	1/4" wet	ribs	6/16/2022	ICW	P. vitulina	6
326d-3 to -8	8	5	1/4" wet	phalanges	4/18/2022	HKM, DRL	Pinniped	6
326d-35	8	5	1/4" wet	vertebra	6/7/2022	ICW	C. ursinus	1
326d-36	8	5	1/4" wet	radius	6/15/2022	ICW	C. ursinus	1
326d-37 and -38	8	5	1/4" wet	ribs	6/16/2022	ICW	C. ursinus	2
326d-39	8	5	1/4" wet	cranium	6/15/2022	ICW	C. ursinus	1
326d-40	8	5	1/4" wet	calcaneus	6/15/2022	ICW	C. ursinus	1
326d-41	8	5	1/4" wet	manubrium	6/16/2022	ICW	P. vitulina	1
326d-42	8	5	1/4" wet	sternebra	6/16/2022	ICW	P. vitulina	1
326d-43	8	5	1/4" wet	third phalanx	6/16/2022	ICW	P. vitulina	1
326d-44	8	5	1/4" wet	carpal/tarsal	6/16/2022	ICW	P. vitulina	1
326d-45 to -48	8	5	1/4" wet	phalanges + carpal/tarsal	6/15/2022	ICW	Pinniped	4
326d-49 to -51	8	5	1/4" wet	ribs	6/16/2022	ICW	Pinniped	3
326d-52 and -53	8	5	1/4" wet	phalanges	8/12/2022	HKM	Pinniped	2

FS Number	Unit	Level	Depth	Description	Date	Initials	Taxa	NISP
326d-54	8	5	1/4" wet	atlas	8/12/2022	HKM	Pinniped	1
326d-55	8	5	1/4" wet	occipital	8/12/2022	HKM	Pinniped	1
326d-56 to -116	8	5	1/4" wet	vertebrae	8/12/2022	HKM	Pinniped	61
326d-9	8	5	1/4" wet	sternebra	4/18/2022	HKM, DRL	P. vitulina	1
330	8	5	40cmbll	mandible	1/25/2022	EAP	C. ursinus	1
334	8	5	43cmbll	scapula	1/25/2022	BSC	C. ursinus	1
335	8	5	43cmbll	radius	1/25/2022	BSC	C. ursinus	1
348d	6	5	1/4" wet	unidentified mammal bones	7/18/2021	MLL, LLF		13
348d-1 and -2	6	5	1/4" wet	phalanges	4/18/2022	HKM, DRL	Pinniped	2
348d-3	6	5	1/4" wet	sternebra	5/3/2022	NGJ	P. vitulina	1
348d-4 and -5	6	5	1/4" wet	phalanges	5/3/2022	NGJ	C. ursinus	2
348d-6	6	5	1/4" wet	vertebra	5/3/2022	NGJ	C. ursinus	1
348d-7	6	5	1/4" wet	lumbar vertebra	7/11/2022	HKM	P. vitulina	1
348d-8	6	5	1/4" wet	ulna	7/11/2022	HKM	C. ursinus	1
348d-9	6	5	1/4" wet	rib	7/11/2022	HKM	C. ursinus	1
371	9	5	47cm	innominate	1/25/2022	EAP	C. ursinus	1
372d	9	5	1/4" wet	unidentified mammal bone	7/19/2021	MLL, LLF		12
372d-1 and -2	9	5	1/4" wet	vertebrae	4/18/2022	HKM, DRL	C. ursinus	2
372d-10	9	5	1/4" wet	rib	5/31/2022	NGJ	Pinniped	1
372d-3	9	5	1/4" wet	carpal	4/18/2022	HKM, DRL	C. ursinus	1
372d-4	9	5	1/4" wet	thoracic vertebra	4/18/2022	HKM, DRL	P. vitulina	1
372d-5	9	5	1/4" wet	thoracic vertebra	4/18/2022	HKM, DRL	Phocoenoides dalli	1
372d-6	9	5	1/4" wet	cranial frag	5/31/2022	NGJ	C. ursinus	1
372d-7	9	5	1/4" wet	occipital frags from same individual	5/31/2022	NGJ	P. vitulina	1
372d-8	9	5	1/4" wet	thoracic vertebra	5/31/2022	NGJ	C. ursinus	1
372d-9	9	5	1/4" wet	lumbar vertebra	5/31/2022	NGJ	P. vitulina	1
374d	6	5B	1/4" wet	unidentified mammal bones	7/19/2021	MLL, LLF		2
377d	7	5	1/4" wet	unidentified mammal bones	7/19/2021	JBF		3
377d-1	7	5	1/4" wet	tooth	4/18/2022	HKM, DRL	C. ursinus	1
386	6	6	59cmbll	innominate	1/25/2022	EAP	P. vitulina	1
405d	6	6	1/4" wet	unidentified mammal bones	7/20/2021	MLL, LLF		24
405d-1	6	6	1/4" wet	lumbar vertebra	7/13/2022	EJG	P. vitulina	1
405d-2 and -3	6	6	1/4" wet	thoracic vertebrae	7/13/2022	EJG	C. ursinus	2
405d-4	6	6	1/4" wet	astragalus	7/13/2022	HKM	C. ursinus	1
405d-5	6	6	1/4" wet	right tibia	7/13/2022	EJG	P. vitulina	1

FS Number	Unit	Level	Depth	Description	Date	Initials	Taxa	NISP
405d-6	6	6	1/4" wet	rib	7/13/2022	HKM	C. ursinus	1
405d-7	6	6	1/4" wet	mandible	7/13/2022	HKM	Rodent	1
405d-8	6	6	1/4" wet	fragment	7/13/2022	HKM	Cetacean	1
405d-9	6	6	1/4" wet	tooth	8/12/2022	HKM	P. vitulina	1
423d	7	6	1/4" wet	unidentified mammal bones	7/21/2021	LLF		36
423d-1	7	6	1/4" wet	fragment	4/26/2022	HKM	Cetacean	1
423d-10	7	6	1/4" wet	tarsal	7/13/2022	HKM	C. ursinus	1
423d-11	7	6	1/4" wet	fragment	7/13/2022	HKM	Cetacean	1
423d-12	7	6	1/4" wet	thoracic vertebra	7/13/2022	HKM	P. vitulina	1
423d-13 to -15	7	6	1/4" wet	teeth	7/13/2022	EJG	C. ursinus	3
423d-16	7	6	1/4" wet	mandible	7/13/2022	EJG	Pinniped	1
423d-17 and -18	7	6	1/4" wet	ribs	7/13/2022	HKM	porpoise	2
423d-19 to -21	7	6	1/4" wet	phalanges	7/13/2022	HKM	Pinniped	3
423d-2	7	6	1/4" wet	temporal	4/26/2022	HKM	C. ursinus	1
423d-22	7	6	1/4" wet	radius	7/13/2022	HKM	Pinniped	1
423d-23	7	6	1/4" wet	femur	7/13/2022	HKM	Rodent	1
423d-24	7	6	1/4" wet	tooth	9/9/2022	HKM	Pinniped	1
423d-3 and -4	7	6	1/4" wet	ribs	7/13/2022	HKM	Pinniped	2
423d-5	7	6	1/4" wet	tibia	4/26/2022	HKM	Vulpes vulpes	1
423d-6	7	6	1/4" wet	rib	5/10/2022	NGJ	P. vitulina	1
423d-7 and -8	7	6	1/4" wet	ribs	7/13/2022	HKM	P. vitulina	2
423d-9	7	6	1/4" wet	femur	7/13/2022	EJG	C. ursinus	1
426	7	6	1/4" wet	mandible	1/25/2022	EAP	C. ursinus	1
485d	3	5	72cm, NE quad	unidentified mammal bones	7/24/2021	IRP EAA		3
525d	3	7	NW Quad	unidentified mammal bones	7/26/2021	NUM, TJS		2
525d-1 and -2	3	7	NW Quad	thoracic vertebrae	9/28/2022	HKM	C. ursinus	2
563	3	7	88cm	whale vertebra	7/27/2021	IRP	Unidentified Whale	1
569d	3	7	NE Quad, 1/4"	unidentified mammal bones	7/27/2021	IRP		3
569d-1 to -4	3	7	NE Quad, 1/4"	phalanges	4/18/2022	HKM, DRL	Pinniped	4
589	3	7	NE Quad	vertebrae	1/26/2022	DRL	C. ursinus	7

APPENDIX C:

**Fish Vertebral Counts from Middens 1 and 2
Ing'yuq Village Site (KOD-114)**

*Counts from Midden 1 (Units 6, 7, 8, 9) are incomplete. Only Unit 7 counts are considered in this dissertation. Counts from Midden 2 (Unit 3) are complete.

FS Number	Site	Unit	Level	Depth	Description	Total # of verts	Salmon verts count	Non-salmon verts count	Salmon %	Non-salmon %
191b	KOD-114	8	1	1/4" wet	sorted fish bones	1129	401	728	35.52	64.48
193b	KOD-114	7	1	1/4" wet	sorted fish bones	109	53	56	48.62	51.38
232b	KOD-114	7	2	1/4" wet	sorted fish bones	170	79	91	46.47	53.53
246b	KOD-114	7	3	1/4" wet	fish verts	24	9	15	37.50	62.50
249b	KOD-114	7	3B	1/4" wet	sorted fish bones	12	5	7	41.67	58.33
278b	KOD-114	7	3B	1/4" wet	sorted bones and teeth	4	1	3	25.00	75.00
280b	KOD-114	7	4	1/4" wet	sorted fish bones	118	39	79	33.05	66.95
348b	KOD-114	6	5	1/4" wet	sorted fish bones	926	288	638	31.10	68.90
372b	KOD-114	9	5	1/4" wet	sorted fish bones	430	86	344	20.00	80.00
374b	KOD-114	6	5B	1/4" wet	sorted fish bones	164	64	100	39.02	60.98
377b	KOD-114	7	5	1/4" wet	sorted fish bones	200	28	172	14.00	86.00
423b	KOD-114	7	6	1/4" wet	sorted fish bones	1995	940	1055	47.12	52.88
485b	KOD-114	3	5	1/4" wet	sorted fish bones	16	0	16	0.00	100.00
525b	KOD-114	3	7	1/4" wet	sorted fish bones	1158	31	1127	2.68	97.32
569b	KOD-114	3	7	NE Quad, 1/4"	sorted fish bones (2 bags of fish)	729	41	688	5.62	94.38

APPENDIX D:

**Invertebrate Weights from Middens 1 and 2
Ing'yuq Village Site (KOD-114)**

FS#	Unit	Level	Shells	Weight (g)
485a	3	5	sorted invertebrates	4
525a	3	7	sorted invertebrates	36
569a	3	7	sorted invertebrates	62
154a	6	1	sorted invertebrates	1300
257a	6	3	shells	18
300a	6	4	sorted invertebrates	217
348a	6	5	sorted invertebrates [2 bags of shells]	5070
374a	6	5B	sorted invertebrates	173
405a	6	6	sorted invertebrates [3 bags of shells]	12438
193a	7	1	sorted invertebrates	307
232a	7	2	sorted invertebrates	181
246a	7	3	sorted invertebrates	45
249a	7	3B	shells	15
278a	7	3B	sorted invertebrates	14
280a	7	4	sorted invertebrates	92
377a	7	5	sorted invertebrates	1610
423a	7	6	sorted invertebrates [5 bags of shells]	16586
191a	8	1	sorted invertebrates	2703
192a	8	1	(2 bags) sorted invertebrates from bag 1 of 2	7153
234a	8	2A	sorted invertebrates	2895
252a	8	3	sorted invertebrates	32
297a	8	4	sorted invertebrates	278
326a	8	5	sorted invertebrates (3 bags of shells)	12667
383a	8	5B	sorted invertebrates	11
153a	9	1	sorted invertebrates	3019
255a	9	2	sorted invertebrates	938
284a	9	3	sorted invertebrates	10
314a	9	3--4	sorted invertebrates	840
322a	9	3--4	sorted invertebrates	42
372a	9	5	sorted invertebrates (3 bags)	9410

APPENDIX E:

**Charcoal Analysis Report
Jennie D. Shaw
Salix Archaeological Services**



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April 5, 2022

Hollis Miller
University of Washington
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Submitted via email to: hollism@uw.edu

RE: Taxonomic Identification and Radiocarbon Sample Evaluation of Charcoal, KOD-114, Ing'yuq Site, Sitkalidak Island, Kodiak, Alaska; SALIX 22-02

I recently analyzed eighteen charred and unburned wood samples from archaeological site KOD-114, the Ing'yuq Site, located on Sitkalidak Island, Kodiak, Alaska. This work generated taxonomic identifications for the woody samples and informed suitability assessments for radiometric dating. The goal of genus-level identification is to isolate and recommend for dating a short-lived hardwood, twig, or piece of bark. Submitting such a fragment for Accelerator Mass Spectrometry (AMS) reduces the likelihood that radiometric ages will be subject to the "old wood effect."

In the Pacific Northwest and Alaska, where 800 to 1,000 year-old conifers abound, the "old wood effect" is a particular risk when interpreting radiocarbon dates. The "old wood effect" (sometimes called the "pre-sample-growth error") refers to the offset produced when wood from the inner rings, or heartwood, of a long-lived tree species is dated and equated to the archaeological event of interest (e.g., the burning of the wood). The heartwood is the oldest part of the tree, while the outer rings represent sapwood, where the newest wood is formed (Taylor and Bar-Yosef 2014:66-68). Assessing whether a tiny piece of charcoal is heartwood or sapwood can be difficult if no pith or bark is present. Instead, it is best to avoid dating long-lived conifers altogether (e.g., Douglas fir, western redcedar), while most angiosperms or "hardwoods" (e.g., alder, willow) are relatively short-lived and appropriate for radiocarbon dating. Dating the heartwood from a 50-year old alder will minimize the old wood effect and the 50-year offset may in fact barely exceed the uncertainty in the conventional radiocarbon age (Taylor and Bar-Yosef 2014:68).

Alternatively, a twig or piece of bark represents recent or new growth and, for the most part, dates run on these materials should not be subject to the old wood effect. Some barks, such as Douglas fir bark, are very thick, can accumulate for many years, and should be avoided.

VEGETATION HISTORY OF THE KODIAK ARCHIPELAGO

When discussing the woody taxa available to present and past Kodiak Island-area inhabitants, we must consider both local trees and shrubs as well as driftwood. Today, native vegetation varies drastically across the Kodiak Archipelago, with *Picea sitchensis* (Sitka spruce) forests and *Populus trichocarpa* (black cottonwood) stands characterizing the northeast and various shrub- and wet-tundra biomes to the southwest. *Picea sitchensis* is the only conifer found on Kodiak and has spread into the northern third of the archipelago within the last 1,000 years (Heusser 1960). The shrub-tundra includes rolling meadows of grasses, sedges, heaths, berries, and wildflowers, as well as small thickets of shrubby *Alnus sinuata* (Sitka alder), *Salix* spp. (willows), and *Betula kenaica* (Kenai birch) that dot the valley bottoms and low-elevation zones. *Populus trichocarpa* and *Populus balsamifera* (balsam poplar) may also be found along river valleys and other low-lying areas in the south (Peteet and Mann 1994; Viereck and Little 1986).

Driftwood is washed upon the shores of Kodiak and forms a major source of fuelwood to island residents, past and present (Adams 1998; Fitzhugh 1996; Shaw 2012; Tennessen 2000). The Gulf of Alaska surface currents, specifically the North Pacific Current, the Alaska Current, and the Alaska Coastal Current, carry logs swept in from northwest rivers and eroded from coastal banks. The logs may have originated on the Kenai Peninsula, southeastern Alaska, British Columbia, Washington, Oregon, and northern California.

The composition of driftwood found on Kodiak-area beaches would have changed throughout the Holocene, reflecting the changing composition of the Pacific Coastal Forest (Shaw 2008:26-28). In the early Holocene (11,000 to 9,000 14C yr BP), dicotyledons (often imprecisely called "hardwoods" or "deciduous" trees) such as *Populus*, *Alnus*, and *Salix* characterized much of post-glacial Alaska, as well as conifers like *Picea sitchensis* and *Pinus contorta* (lodgepole pine) in the Alaska panhandle. In the early to mid-Holocene (9,000 to 6,000 14C yr BP), *Picea glauca* (white spruce) migrated from interior Alaska onto the Kenai Peninsula and Cook Inlet. A northern migration of *Tsuga* spp. (hemlocks) occurred in the mid- to late Holocene and by about 3,000 14C yr BP, the southern Alaska vegetation regime approximated the modern state (Anderson et al. 2004).

Today, *Tsuga heterophylla* (western hemlock) and *Picea sitchensis* dominate the forests of southeastern Alaska, accompanied by occasional *Tsuga mertensiana* (mountain hemlock), *Thuja plicata* (western redcedar), and *Chamaecyparis nootkatensis* (Alaska yellow cedar) trees. Other notable trees include conifers such as *Taxus brevifolia* (Pacific yew), *Abies lasiocarpa* (sub-alpine fir), and *Abies amabilis* (Pacific silver fir), and dicotyledons like *Populus trichocarpa*, *Betula papyrifera* (paper birch), *Betula kenaica*, *Alnus sinuata*, *Alnus rubra* (red alder), and a few members of *Salix* that attain tree heights (*Salix barclayi*, *Salix scouleriana*, and *Salix sitchensis*) (Viereck and Little 1975, 1986).

It follows that residents of the Ing'yūq study site may have burned any of the above species, as well as other species found further south and washed into the coastal current. These additional species could include *Pseudotsuga menziesii* (Douglas fir), *Arbutus menziesii* (Pacific madrone), and *Sequoia sempervirens* (coast redwood), among others. Numerous small, shabby taxa grow on Kodiak Island and the greater region and may be referenced in Viereck and Little (1986).

SAMPLES AND METHODS

Samples

Eighteen sample bags were provided to Salix Archaeological Services LLC (SALIX) for this analysis. The Field Specimen (FS) numbers and associated provenience are presented in Table 1 and, more comprehensively, in Appendix 1.

Table 1. KOD-114 charcoal/wood samples submitted to SALIX

<i>Field Specimen (FS) No.</i>	<i>Unit</i>	<i>Column Sample</i>	<i>Depth (cmts)</i>	<i>Material*</i>
600	18	4	50	unburned wood
602	18	6	50-54	charcoal
608	19	12	21	charcoal & unburned wood
610	19	14	39-40	charcoal
612	5	16	7-9	charcoal
613	13	17	10	charcoal
614	13	18	22-29	charcoal
616	3	20	40-44	charcoal
620	3	24	68-70	charcoal
624	6	28	17-18	charcoal
625	6	29	38-42	charcoal
627	7	31	31-34	charcoal
633	4,11	37	20-23	charcoal
635	4,11	39	39-43	charcoal
636	17	40	26-32	charcoal
637	17	41	52-56	charcoal
647	14	51	59-61	charcoal
648	14	52	24-30	charcoal

*many samples also include sediment, lithic material, and faunal material, as noted in Appendix 1 comments

Methods

Two types of woody fragments are present in the Ing'yuq site samples: unburned wood and charred wood, or charcoal. Unburned wood fragments were manually sliced with a single-edge razor blade to remove transparent sections. Sections were removed from three planes – the tangential, radial, and cross sections. The sections were mounted in a mixture of alcohol and glycerin on a slide and secured with a glass cover slip. The slides were briefly heated to drive off air bubbles. Charcoal fragments were fractured along three planes with a single-edge razor blade and mounted in a sand-filled box for easy manipulation under the microscope. All fragments were identified using an Olympus BX43 microscope with transmitted light (for unburned wood) and reflected light (for charcoal) and up to 500x magnification. Care was taken to thoroughly wash and sterilize all points of contact between identified samples and the analyst, in order to minimize cross-contamination.

Identifications were aided by the use of standard anatomical keys, namely the hardwood (dicotyledon) and softwood (conifer) keys published by Panshin and De Zeeuw (1980), Friedman (1978), and Kukachka (1960).

Wood anatomists typically provide genus-level identifications for wood and charcoal samples, since individual species are difficult, if not impossible, to differentiate under the microscope. I followed this standard practice for the KOD-114 samples. In some cases, it is safe to assume a species from a genus-level identification, if the analyst is confident that the species is the only member of its genus to be indigenous to or present in the given area. For instance, *Pseudotsuga menziesii* (Douglas fir) is the only *Pseudotsuga* native to the Pacific Northwest.

Goals for Analysis

My goal for each sample was to locate a short-lived hardwood, twig, or bark fragment that met the minimum weight requirements for DirectAMS, the dating laboratory selected for this project. Charcoal fragments must weigh $\geq 0.01\text{g}$ and unburned wood fragments must weigh $\geq 0.02\text{g}$ (DirectAMS 2022). On the Kodiak Archipelago, there are many short-lived tree and shrub species that would be excellent candidates for dating, since they typically live for 50 years or less, including: *Alnus sinuata* (Sitka alder), *Oplopanax horridus* (devil's club), *Rubus spectabilis* (salmonberry), *Salix* spp. (willows), *Sambucus* spp. (elderberry, elder), and *Vaccinium* spp. (blueberry, cranberry) (Arno and Hammerly 1999; Viereck and Little 1986). *Betula papyrifera* var. *kenaica* (Kenai birch) has a slightly longer maximum lifespan, at 100 years, but is preferable to longer-lived hardwoods and conifers. Less desirable local woods include *Populus balsamifera* (balsam poplar; 200 year lifespan), *Populus trichocarpa* (black cottonwood; 200 year lifespan) (Burns and Honkala 1990), and *Picea sitchensis* (Sitka spruce; 700 year lifespan) (Arno and Hammerly 1999:56).

In my experience, *Alnus* tends to be the short-lived hardwood that is most prevalent in Kodiak-area archaeological charcoal assemblages; as such, when I found an *Alnus* fragment in the KOD-114 samples, I typically stopped analysis. As mentioned previously, twigs and bark are also suitable for dating, as they are recent growth and will approximate the event of interest.

RESULTS

The identified fragments are detailed in Appendix 2 and summarized below.

Summary of Identified Fragments

FS 600. This sample is represented by numerous fragments of unburned wood and sediment clumps. I examined twenty wood fragments from FS 600; of these, sixteen were identified as "unidentified conifer," while two fragments are *Picea* sp., one fragment is *Picea/Larix* sp. (undifferentiated spruce or larch/tamarack), and one is "unidentified wood." The fragments labeled "unidentified conifer" displayed the anatomical structure of conifers (e.g., absence of vessels), but no other distinguishing landmarks were observed.

I halted analysis after twenty fragments, per our agreement; however, additional fragments are present in the 4-8mm fraction that would meet or exceed minimum weight requirements for AMS. Due to the homogeneity of the sample as either spruce or unidentified conifer (many of the latter may indeed be spruce - the only conifer that grows naturally on Kodiak), and the absence of an obvious bark or twig fragment, further analysis may produce no better candidate for AMS dating. Alternatively, one of the *Picea* fragments - I would suggest 600.20 - could be submitted for AMS, with the caveat that resulting age ranges may appear artificially old, as compared to the behavioral event of interest.

FS 602. I analyzed three charcoal fragments from this sample bag; one is *Picea* sp. and two are *Alnus* sp. One of the *Alnus* fragments, 602.03, is recommended for dating.

FS 608. I analyzed two charcoal fragments from this sample bag; one is undifferentiated *Alnus/Betula* sp. (alder or birch) and one is an unidentified conifer. The *Alnus/Betula* fragment (608.01) would typically be a solid sample for dating, but this piece contains numerous adhering rootlets, which represent modern plant intrusion. The unidentified conifer fragment (608.02) weighs in at 0.01g, the minimum charcoal weight for DirectAMS, and runs the risk of representing "old wood" from the heartwood of a long-lived conifer. Additional fragments are present in this sample; however, none of the remaining fragments in the 4-8mm or 2-4mm fractions meet the minimum weight requirements for AMS (≥ 0.02 g for wood, ≥ 0.01 g for charcoal) (DirectAMS 2022). As such, there are no ideal specimens for dating in this sample, but it may be worth discussing the options with DirectAMS staff.

FS 610. A single charcoal fragment was analyzed from this sample bag. The fragment is *Alnus* sp., 610.01, and is recommended for dating.

FS 612. Six charcoal fragments were identified from this sample, including two *Tsuga* sp., two *Picea* sp., one *Salix* sp., and one unidentified conifer fragment. Dating candidates include the cf. *Picea* sp. fragment (612.04), which is a partially vitrified twig, with 10 annual rings, and the *Salix* sp. fragment (612.06). I would typically recommend the twig, but a conversation with DirectAMS is warranted to determine whether vitrification will be problematic for the dating process.

FS 613. A single charcoal fragment was identified from this sample bag. The fragment is *Alnus* sp., 613.01, and is recommended for dating.

FS 614. A single charcoal fragment was identified from this sample bag. The fragment is *Alnus* sp., 614.01, and is recommended for dating. An adhering rootlet was removed.

FS 616. A single charcoal fragment was identified from this sample bag. The fragment is *Alnus* sp., 616.01, and is recommended for dating.

FS 620. A single charcoal fragment was identified from this sample bag. The fragment is *Alnus* sp., 620.01, and is recommended for dating.

FS 624. Three charcoal fragments were analyzed from this sample bag. One fragment is *Tsuga* sp. and two fragments are *Alnus* sp. One *Alnus* fragment, 624.02, is recommended for dating.

FS 625. Two charcoal fragments were analyzed from this sample bag; both are *Alnus* sp. *Alnus* fragment 625.01 is recommended for dating.

FS 627. Four charcoal fragments were identified from this sample bag. One fragment each were identified as *Populus* sp., *Picea* sp., *Chamaecyparis* sp., and *Alnus* sp. The *Alnus* fragment, 627.04, is recommended for dating.

FS 633. Four charcoal fragments were analyzed from this sample bag. One fragment is *Picea* sp., one is *Picea/Larix* sp., and two fragments are *Alnus* sp. *Alnus* fragment 633.04 is recommended for dating.

FS 635. Three charcoal fragments were analyzed from this sample, one each of *Betula* sp., *Picea* sp., and *Alnus* sp. The *Alnus* fragment, 635.03, is recommended for dating.

FS 636. Two charcoal fragments were analyzed from this sample, one is an unidentified conifer and one is *Alnus* sp. The *Alnus* fragment, 636.02, possesses inner bark and is recommended for dating.

FS 637. Eight charcoal fragment were analyzed from this sample. Six fragments are *Populus* sp. and two fragments are *Alnus* sp. I recommend *Alnus* fragment 637.05 for dating. Unfortunately, both *Alnus* fragments weigh 0.01g, the minimum weight for AMS, but they meet this lower limit and should be sufficient. All other charcoal fragments available in this sample weigh less than 0.01g.

FS 647. Seven charcoal fragments were analyzed from this sample bag. One fragment is *Picea* sp., one is *Picea/Larix* sp., four are *Betula* sp., and one fragment is *Alnus* sp. The *Alnus* fragment, 647.07, is recommended for dating.

FS 648. Four charcoal fragments were analyzed from this sample. Of them, one fragment is *Alnus* sp., one is *Picea* sp., and two are *Picea/Larix* sp. The *Alnus* fragment, 648.01, is recommended for dating.

Represented Woody Taxa

***Alnus*, alder.** Twenty fragments were identified as *Alnus* sp., or alder – a dicotyledon. On Kodiak, the native alder species is *Alnus sinuata* (Sitka alder), though *Alnus rubra* (red alder) is ubiquitous in the Pacific Coastal Forest biome to the south, and so may be washed onto Kodiak shores as driftwood. Both species of alder are relatively short-lived deciduous trees or shrubs, with *Alnus sinuata* living no more than 25 to 50 years (Darris 2011) and *Alnus rubra* attaining a lifespan of 50 years or less (Pojar and McKinnon 1994:44). While most charcoal fragments cannot be identified to species, many fragments in the KOD-114 assemblage possess scalariform intervessel pitting – a characteristic that may differentiate *Alnus sinuata* from other alders (Friedman 1978:67). In general, alders have a short lifespan, so they make ideal candidates for radiometric dating.

Red alder is cited as a “clean-burning non-crackling firewood” (Arno and Hammerly 1999:161) and “the best possible fuel for smoking salmon and other types of fish” (Pojar and McKinnon 1994:44). On Kodiak, although coniferous driftwood may be preferred for fueling banyas and stoves, when seas were too rough to boat, residents would harvest Sitka alder for heating fuel (Russell 1991:21; who called the alder local to Old Harbor “*Alnus crispa*,” or mountain alder). In my ethnographic interviews, I also found that several Old Harbor residents preferred alder for fueling wood stoves and some used it for smoking fish (although cottonwood was favored). Sitka alder was also used as a red or brown dye for wool and hides (Darris 2011).

***Alnus/Betula*, alder or birch.** One fragment is identified as *Alnus/Betula* or undifferentiated alder or birch. The fragment is clearly deciduous and features such as diffuse pores, uniseriate and homogeneous rays, scalariform perforation plates, and homogeneous rays narrow the identification down to *Alnus* or *Betula*. The primary differentiator between the two genera is the character of the intervessel pits, which on this sample, are too poorly preserved to assess. Please reference descriptions for the individual genera for lifespan and ecology information.

***Betula*, birch.** Five charcoal fragments were identified as *Betula* sp., or birch. These fragments likely were harvested from a local birch patch, since *Betula papyrifera* var. *kenaica* (Kenai birch) grows on Kodiak as a small to medium sized tree – as well as in shrub form as *Betula nana*

(dwarf arctic birch). The fragment could have been harvested from driftwood, since *Betula papyrifera* (paper birch) and *Betula glandulosa* (resin birch) grow throughout the driftwood source areas (Viereck and Little 1986). Tree birches commonly attain 100 year lifespans (Arno and Hammerly 1999:166). On average, birches are shorter-lived than conifers, although they may live slightly longer than alder trees. For this reason, when presented the choice between datable specimens, I typically recommend *Alnus* fragments over *Betula* fragments. Priscilla Russell (1991:19) mentions that Alaskans often use birch bark as kindling, but that it is also well known for producing hot, long-burning fire. My research on fuel value supported that claim: Kenai birch presents the highest energetic value of any dicot native to Kodiak (Shaw 2012: Table 3).

Chamaecyparis, false-cypress [reclassified as *Callitropsis*, cedar/cypress]. One fragment was identified as *Chamaecyparis*, or false-cypress. The only species native to the Northwest Coast and southeast Alaska is *Chamaecyparis nootkatensis*, or Alaska yellow cedar, which has been recently reclassified as *Callitropsis nootkatensis*. The range of Alaska yellow cedar extends from the Cascade Mountains of Oregon and Washington up through southeast Alaska, where it flourishes in boggy, coastal settings as well as high elevation biomes. The trees prefer wet to moist soils and, with lifespans of 1,000 to 1,500 years, are the longest-lived conifers in the region. Alaska yellow cedar inner bark was prized for clothing, mats, and related goods, and the wood was used to form tools, such as bows, paddles, and masks (Pojar and MacKinnon 1994:43). Like western redcedar, yellow cedar is rot-resistant; both cedars were found as driftwood on Kodiak-area beaches and used for barabara and kayak construction (Russell 1991:16-18).

Picea, spruce. Nine charcoal and wood fragments were identified as *Picea*, or spruce. *Picea sitchensis* (Sitka spruce) is the only conifer found on Kodiak and has spread into the northern third of the archipelago within the last 1,000 years (Heusser 1960). Two other species of spruce are found in northern and interior Alaska: *Picea glauca* (white spruce) and *Picea mariana* (black spruce) (Viereck and Little 1986), though it would be unusual for *Picea glauca* or *Picea mariana* to wash up on Kodiak-area shores. Sitka spruce commonly reaches ages of 400 to 700 years old, so I rarely recommend spruce fragments for dating (Arno and Hammerly 1999:56, 67-74). Spruce, however, is one of the highest quality fuelwoods available to Kodiak residents (see Shaw 2012: Table 3) and is frequently found in Kodiak-area charcoal assemblages (Shaw 2008).

Picea/Larix, spruce or larch/tamarack. Five charcoal and wood fragments were identified as *Picea/Larix* - genera which include spruce, larch, and tamarack. The fragments exhibit features such as resin canals, tracheids, piceoid cross field pits, nodular end walls, and indentures. These features narrow the identification to spruce or larch/tamarack. In live stands, spruce and larch trees can be easily identified as distinct taxa. In microscopic samples, however, a single feature differentiates the two taxa - the bordered pits on the radial section tracheids (Bartholin 1979). Unfortunately, these fragments are too small or too poorly preserved to assess the character of the bordered pits. The distribution and maximum ages of spruce was previously discussed; larch is found in interior Alaska as *Larix laricina*, also called tamarack, and may live up to about 180 years (USDA, NRCS 2022).

Populus, poplar/cottonwood/aspens. Seven fragments were identified as *Populus*, a genus which includes poplars, cottonwoods, and aspens. In the Kodiak Archipelago, both *Populus trichocarpa* (black cottonwood) and *Populus balsamifera* (balsam poplar) may be found along river valleys and other low-lying areas in the south (Peteet and Mann 1994; Viereck and Little 1986). *Populus tremuloides* (quaking aspen) has a natural range that is largely confined to

central Alaska, though input into the rivers that flow through western Alaska is possible. Microscopic analysis cannot differentiate *Populus* species, but certain species may be more likely candidates based on site location and ecology. *Populus* trees typically grow fast and achieve a maximum lifespan of 200 years (Burns and Honkala 1990); for this reason, they are preferable to conifers for dating, but are longer lived than other Kodiak-area hardwoods like alders and willows. Cottonwood is a preferred wood for smoking fish in the Kodiak region, because it creates a slow-burning, smoky fire and lends a good flavor to the fish (Russell 1991:20).

Salix, willow. One fragment was identified as *Salix*, or willow. While this fragment cannot be identified to species, willows in Alaska are generally short-lived and are less likely than conifers to incur the old wood effect. Willow species in Alaska may be found as prostrate/creeping shrubs, bushes, or small trees, and rarely exceed 50 years in age (Arno and Hammerly 1999:142). Species currently found in the Kodiak region include: *Salix alaxensis* (feltleaf willow), *S. barclayi* (Barclay willow), *S. bebbiana* (Bebb willow), *S. glauca* (grayleaf willow), *S. planifolia* Pursh ssp. *pulchra* (diamondleaf willow), *S. reticulata* (netleaf willow), and *S. sitchensis* (Sitka willow) (Viereck and Little 1975).

Tsuga, hemlock. Three fragments were identified as *Tsuga*, or hemlock. *Tsuga* is represented by two species in Alaska and the Pacific Northwest: *Tsuga heterophylla* (western hemlock) and *Tsuga mertensiana* (mountain hemlock). Today, western hemlock is a dominant species in the Pacific coastal forest, growing from low elevations up to 3,500 feet, and lives up to 500 years (Arno and Hammerly 1999:75-79). Mountain hemlock, as its name suggests, primarily grows from 3,500 to 6,000 feet, and has a maximum lifespan comparable to western hemlock (Arno and Hammerly 1999:80-85). Interestingly, neither *Tsuga* species' range includes Kodiak, so this specimen from KOD-114 may have arrived as driftwood from southeast Alaska or the Kenai Peninsula, in which case the fragments are most likely western hemlock.

Unidentified fragments. As is typical with any project, several Ing'yuyq site charcoal and wood fragments were not able to be identified to genus and are instead labeled "unidentified wood" or "unidentified conifer." The unidentified wood specimens are extremely poorly preserved and no diagnostic features are apparent, so they are not preferable samples for radiocarbon analysis. The unidentified conifer fragments also exhibit cellular anatomy in fair to poor condition, but vessels typical of "hardwoods" are not observed. No fragment labeled "unidentified conifer" exhibited spiral thickenings, so these were not derived from *Pseudotsuga menziesii* (Douglas fir) or *Taxus* (yew) trees, but most other coniferous species found in coastal Alaska and the Northwest are possible candidates (e.g., *Picea*, *Tsuga*, *Chamaecyparis*, *Pinus*, *Thuja*, *Abies*, etc.).

SUITABILITY FOR DATING

The most suitable fragments for dating are those derived from a short-lived genus, twig, or bark, and which also meet the minimum weight mandated by the chosen AMS lab. As mentioned previously, DirectAMS requests a minimum charcoal weight of 10mg (0.01g) and a minimum unburned wood weight of 20mg (0.02g) (DirectAMS 2022). I have recommended one fragment for dating from each of the eighteen KOD-114 samples, as detailed in Table 2. All recommended fragments meet or exceed the minimum weight guidelines established by DirectAMS.

As expected, the most prevalent short-lived genus in the KOD-114 assemblage is alder, which makes an excellent dating sample. I have recommended alder for dating in fifteen out of the

eighteen KOD-114 samples, as indicated in Table 2. For the remaining three samples, I recommend a spruce fragment (600.20), an undifferentiated alder/birch fragment (608.01), and a spruce twig (612.04). It is worth discussing the pros and cons of submitting these three fragments for dating, since they all are potentially problematic.

- Fragment 600.20 (*Picea* sp.) – Upon analysis of twenty fragments, the only identified genus was spruce. This fragment may be submitted for AMS with the usual caveats of dating long-lived conifers and a healthy skepticism when interpreting age ranges. As an alternative, I could examine another 20 wood fragments, but there is no guarantee I will find a more suitable candidate for AMS.
- Fragment 608.01 (*Alnus/Betula* sp.) – This undifferentiated alder/birch fragment would normally be a very good candidate for dating, but it was full of invasive rootlets, which may be difficult to extract. The only alternative is an unidentified conifer fragment that barely meets the minimum weight requirement. All other fragments in this sample fail to meet the minimum weight requirement.
- Fragment 612.04 (cf. *Picea* sp. twig) – This spruce twig has ten annual rings and should be a solid AMS candidate, but it has been vitrified – a combustion process which results in a “glassy” cellular anatomy. I plan to discuss the datability of this fragment with DirectAMS. If it is not a desirable fragment from their perspective, a *Salix* (willow) fragment (612.06) from the same sample will make a very good substitute.

Table 2. KOD-114 charcoal/wood fragments selected for radiometric analysis

Catalog No.	Weight (g)	Material	Identification	Common Name
600.20	0.08	wood	<i>Picea</i> sp.	spruce
602.03	0.32	charcoal	<i>Alnus</i> sp.	alder
608.01 or 608.02*	0.26 0.01	charcoal	<i>Alnus/Betula</i> sp. unidentified conifer	alder/birch unidentified conifer
610.01	1.62	charcoal	<i>Alnus</i> sp.	alder
612.04 or 612.06*	0.38 0.04	charcoal	cf. <i>Picea</i> sp. twig <i>Salix</i> sp.	spruce twig willow
613.01	0.29	charcoal	<i>Alnus</i> sp.	alder
614.01	0.21	charcoal	<i>Alnus</i> sp.	alder
616.01	0.25	charcoal	<i>Alnus</i> sp.	alder
620.01	0.43	charcoal	<i>Alnus</i> sp.	alder
624.02	0.13	charcoal	<i>Alnus</i> sp.	alder
625.01	0.26	charcoal	<i>Alnus</i> sp.	alder
627.04	0.19	charcoal	<i>Alnus</i> sp.	alder
633.04	0.11	charcoal	<i>Alnus</i> sp.	alder
635.03	0.07	charcoal	<i>Alnus</i> sp.	alder
636.02	0.15	charcoal	<i>Alnus</i> sp.	alder
637.05	0.01	charcoal	<i>Alnus</i> sp.	alder
647.07	0.10	charcoal	<i>Alnus</i> sp.	alder
648.01	0.07	charcoal	<i>Alnus</i> sp.	alder

*will discuss best choice with DirectAMS

Thank you for the opportunity to contribute to the KOD-114 Ing'yuq site project. If you require any further information, please do not hesitate to contact me.

Best regards,

A handwritten signature in black ink that reads "Jennie D. Shaw". The signature is written in a cursive style with a large initial 'J' and a distinct 'S'.

Jennie D. Shaw
Paleoethnobotanist, Owner

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Project	KOD-114; Ing'yuq Site; OHAHP								
Location	Sitkalidak Island, Kodiak, Alaska								
PI	Hollis Miller								
Organization	University of Washington								
SALIX No.	22-02								
Analyst	Jennie D. Shaw								
Sample No./ FS No.	Unit	Column Sample	Depth (cmb)	Sample Wt (g)	>8 mm Wt/count	4-8 mm Wt/count	2-4 mm Wt/count	<2 mm Wt (g)	Context
600	18	4	50	39.05	9.97g/19	4.64g/57	3.17g/>100	21.02	Wood layer; east wall profile; largely unburned wood frags; sediment clumps.
602	18	6	50-54	85.65	5.88g/21	12.36g/>100	9.09g/>100	23.65	From base pit #1 in Stratum C; south profile; rocks removed from total sample weight=35.30g.
608	19	12	21	16.14	0.31g/1	0.03g/4	0.75g/?	3.64	Charcoal & quartz pebble; east wall profile; rocks removed from total sample=11.53g; rootlets present.
610	19	14	39-40	20.55	1.63g/1	0.81g/27	2.97g/?	13.84	From base of excavation - below wood layer - Strat F; many rootlets.
612	5	16	7-9	93.23	2.55g/6	2.39g/70	5.00g/>100	35.22	From top charcoal layer; east wall; rocks removed from total sample=46.64g.
613	13	17	10	87.89	0.94g/6	2.73g/72	4.16g/>100	33.78	From 2nd charcoal layer; just below orange brown sed layer; east wall; rocks removed from total sample=45.91g; many rootlets.
614	13	18	22-29	99.22	1.65g/6	4.15g/70	8.83g/>100	70.43	From "finger" between sods; level 5; east wall; rocks removed from total sample=13.90g; many rootlets.
616	3	20	40-44	54.74	0.25g/1	1.17g/40	7.29g/>100	44.35	From next cultural layer below black pit; southern half of unit wall; rocks removed from total sample=1.27g; many sediment clumps.
620	3	24	68-70	316	1.74g/7	23.5g/45	3.30g/>100	19.17	Salmonberry seeds, charcoal and rocks from near bottom of excavation in deep midden (not bottom of midden); rocks removed from total sample=287.45g; significant faunal material.

Project	KOD-114; Ing'yuq Site; OHAHP								
Location	Sitkalidak Island, Kodiak, Alaska								
PI	Hollis Miller								
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SALIX No.	22-02								
Analyst	Jennie D. Shaw								
Sample No./ FS No.	Unit	Column Sample	Depth (cmbs)	Sample Wt (g)	>8 mm Wt/count	4-8 mm Wt/count	2-4 mm Wt/count	<2 mm Wt (g)	Context
624	6	28	17-18	69.29	4.06g/18	7.71g/	8.78g/>100	37.93	From between top two shell & bone midden lenses; east wall; rocks removed from total sample=10.38g; significant unburned wood & sediment clumps.
625	6	29	38-42	28.14	0.34g/2	1.01g/45	1.78g/>100	9.75	From within thick shell midden (Level 6); northern end unit wall; rocks removed from total sample=7.65g; faunal material=7.50g.
627	7	31	31-34	14.99	1.48g/5	1.86g/48	1.46g/?	5.99	From near bottom of pit in SW corner; south wall; rocks removed from total sample=4.12g.
633	4, 11	37	20-23	107.36	1.90g/9	5.13g/?	12.25g/>100	57.98	Feature 2; from top of densest blade feature fill and 10 cm below CS#36; north wall profile; rocks removed from total sample=29.82g.
635	4, 11	39	39-43	34.84	0.81g/6	3.72g/121	5.09g/>100	20.07	Feature 2; from base of pit feature; north wall profile; rocks removed from total sample=5.44g; fauna & rootlets present.
636	17	40	26-32	25.8	3.14g/9	2.95g/56	4.07g/>100	12.34	north profile; rocks removed from total sample=3.18g; fauna present.
637	17	41	52-56	41.89	0	0.19g/6	1.86g/?	35.40	from NE unit corner under rock-filled pit; north wall profile; rocks removed from total sample=41.07g; fauna present.
647	14	51	59-61	77.00	1.60g/6	1.90g/53	2.24g/>100	65.6	from beneath burned earth; south wall profile; rocks removed from total sample=12.49g.
648	14	52	24-30	82.05	0	0.55g/17	9.19g/?	61.67	towards SW corner; south wall profile; rocks removed from total sample=15.08g.

Project	KOD-114; Ing'yuuq Site						<i>*AMS recommendation</i>
Location	Sitkalidak Island, Kodiak, Alaska						
PI	Hollis Miller						
Organization	University of Washington						
SALIX Project No.	22-02						
Analyst	Jennie D. Shaw						
Charcoal Fragment No.	Bag No.	Date ID	Size	Frag. Wt (g)	Condition	Identification	Comments
600.01	600	3/28/2022	>8mm	0.93	fair	Unidentified conifer	unburned wood; adhering sediment & rootlets
600.02	600	3/28/2022	>8mm	0.56	fair	Unidentified conifer	unburned wood; adhering sediment & rootlets; tracheids present
600.03	600	3/28/2022	>8mm	0.39	fair	<i>Picea/Larix</i> sp.	unburned wood; adhering sediment & rootlets; tracheids present
600.04	600	3/28/2022	>8mm	0.69	fair	Unidentified conifer	unburned wood; adhering sediment & rootlets; tracheids present
600.05	600	3/28/2022	>8mm	0.38	fair	Unidentified conifer	unburned wood; adhering sediment & rootlets
600.06	600	3/28/2022	>8mm	0.34	fair	Unidentified conifer	unburned wood; adhering sediment & rootlets; tracheids present
600.07	600	3/28/2022	>8mm	0.60	fair	Unidentified conifer	
600.08	600	3/28/2022	>8mm	0.37	fair	Unidentified conifer	spiral checking
600.09	600	3/28/2022	>8mm	1.11	poor	Unidentified conifer	
600.10	600	3/28/2022	>8mm	0.69	poor	Unidentified wood	crumbled when fractured
600.11	600	3/29/2022	>8mm	0.19	fair	<i>Picea</i> sp.	unburned wood; adhering sediment
600.12	600	3/29/2022	>8mm	0.21	fair	Unidentified conifer	unburned wood; adhering sediment
600.13	600	3/29/2022	>8mm	0.19	fair	Unidentified conifer	unburned wood; adhering sediment
600.14	600	3/30/2022	>8mm	0.60	poor	Unidentified conifer	unburned wood; adhering sediment; very friable
600.15	600	3/30/2022	>8mm	0.24	poor	Unidentified conifer	unburned wood; adhering sediment; very friable

Project	KOD-114; Ing'yuq Site						<i>*AMS recommendation</i>
Location	Sitkalidak Island, Kodiak, Alaska						
PI	Hollis Miller						
Organization	University of Washington						
SALIX Project No.	22-02						
Analyst	Jennie D. Shaw						
Charcoal Fragment No.	Bag No.	Date ID	Size	Frag. Wt (g)	Condition	Identification	Comments
600.16	600	3/30/2022	>8mm	0.20	poor	Unidentified conifer	unburned wood; adhering sediment; very friable
600.17	600	3/30/2022	>8mm	0.10	fair	Unidentified conifer	unburned wood; adhering sediment
600.18	600	3/30/2022	>8mm	0.02	fair	Unidentified conifer	unburned wood; adhering sediment
600.19	600	3/30/2022	>8mm	0.04	fair	Unidentified conifer	unburned wood; adhering sediment
600.20*	600	3/30/2022	4-8mm	0.08	fair	<i>Picea</i> sp.	unburned wood; spiral checking
602.01	602	3/24/2022	>8mm	0.91	good	<i>Picea</i> sp.	
602.02	602	3/24/2022	>8mm	0.19	good	<i>Alnus</i> sp.	occasional biseriate rays
602.03*	602	3/24/2022	>8mm	0.32	good	<i>Alnus</i> sp.	
608.01*	608	3/24/2022	>8mm	0.26	poor	<i>Alnus/Betula</i> sp.	full of rootlets - not advised for AMS; all 4-8mm fragments are unburned wood and 0.01g or less
608.02	608	3/24/2022	2-4mm	0.01	fair	Unidentified conifer	no other 2-4mm fragments of sufficient weight
610.01*	610	3/24/2022	>8mm	1.62	good	<i>Alnus</i> sp.	
612.01	,	3/22/2022	>8mm	1.29	fair	cf. <i>Tsuga</i> sp.	pith present, vitrified, mangled
612.02	612	3/22/2022	>8mm	0.39	fair	cf. <i>Tsuga</i> sp.	vitrified, many features obscured
612.03	612	3/22/2022	>8mm	0.21	good	<i>Picea</i> sp.	11 rings
612.04*	612	3/22/2022	>8mm	0.38	fair	cf. <i>Picea</i> sp.	vitrified twig, pith & bark present, 10+rings, fungal hyphae
612.05	612	3/24/2022	>8mm	0.17	fair	Unidentified conifer	partially vitrified
612.06*	612	3/24/2022	>8mm	0.04	good	<i>Salix</i> sp.	
613.01*	613	3/21/2022	>8mm	0.29	good	<i>Alnus</i> sp.	

Project	KOD-114; Ing'yuuq Site						<i>*AMS recommendation</i>
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PI	Hollis Miller						
Organization	University of Washington						
SALIX Project No.	22-02						
Analyst	Jennie D. Shaw						
Charcoal Fragment No.	Bag No.	Date ID	Size	Frag. Wt (g)	Condition	Identification	Comments
614.01*	614	3/21/2022	>8mm	0.21	fair	<i>Alnus</i> sp.	adhering rootlet removed
616.01*	616	3/21/2022	>8mm	0.25	good	<i>Alnus</i> sp.	
620.01*	620	3/21/2022	>8mm	0.43	good	<i>Alnus</i> sp.	
624.01	624	3/21/2022	>8mm	0.14	good	<i>Tsuga</i> sp.	
624.02*	624	3/21/2022	>8mm	0.13	fair	<i>Alnus</i> sp.	
624.03	624	3/21/2022	>8mm	0.19	fair	<i>Alnus</i> sp.	adhering rootlet
625.01*	625	3/21/2022	>8mm	0.26	good	<i>Alnus</i> sp.	fungal hyphae
625.02	625	3/21/2022	>8mm	0.08	fair	<i>Alnus</i> sp.	
627.01	627	3/16/2022	>8mm	0.36	good	<i>Populus</i> sp.	
627.02	627	3/16/2022	>8mm	0.69	good	<i>Picea</i> sp.	5 annual rings
627.03	627	3/16/2022	>8mm	0.14	good	<i>Chamaecyparis</i> sp.	15+ rings
627.04*	627	3/16/2022	>8mm	0.19	good	<i>Alnus</i> sp.	
633.01	633	3/16/2022	>8mm	0.07	good	<i>Picea</i> sp.	
633.02	633	3/16/2022	>8mm	0.43	fair	<i>Picea/Larix</i> sp.	vitriified, many features obscured
633.03	633	3/16/2022	>8mm	0.07	fair	<i>Alnus</i> sp.	fungal hyphae
633.04*	633	3/16/2022	>8mm	0.11	fair	<i>Alnus</i> sp.	
635.01	635	3/15/2022	>8mm	0.33	good	<i>Betula</i> sp.	
635.02	635	3/15/2022	>8mm	0.09	good	<i>Picea</i> sp.	
635.03*	635	3/15/2022	>8mm	0.07	good	<i>Alnus</i> sp.	
636.01	636	3/15/2022	>8mm	0.38	fair	Unidentified conifer	friable w/adhering sediment
636.02*	636	3/15/2022	>8mm	0.15	good	<i>Alnus</i> sp.	4 rings; inner bark present
637.01	637	3/14/2022	4-8mm	0.05	fair	<i>Populus</i> sp.	
637.02	637	3/14/2022	4-8mm	0.02	fair	<i>Populus</i> sp.	

Project	KOD-114; Ing'yuq Site						<i>*AMS recommendation</i>
Location	Sitkalidak Island, Kodiak, Alaska						
PI	Hollis Miller						
Organization	University of Washington						
SALIX Project No.	22-02						
Analyst	Jennie D. Shaw						
Charcoal Fragment No.	Bag No.	Date ID	Size	Frag. Wt (g)	Condition	Identification	Comments
637.03	637	3/14/2022	4-8mm	0.03	fair	<i>Populus sp.</i>	
637.04	637	3/15/2022	4-8mm	0.02	fair	<i>Populus sp.</i>	
637.05*	637	3/15/2022	4-8mm	0.01	good	<i>Alnus sp.</i>	
637.06	637	3/15/2022	4-8mm	0.01	fair	<i>Populus sp.</i>	
637.07	637	3/15/2022	2-4mm	0.01	good	<i>Populus sp.</i>	
637.08	637	3/15/2022	2-4mm	0.01	good	<i>Alnus sp.</i>	all other fragments <0.01g
647.01	647	3/14/2022	>8mm	0.30	good	<i>Picea sp.</i>	
647.02	647	3/14/2022	>8mm	0.23	good	<i>Picea/Larix sp.</i>	
647.03	647	3/14/2022	>8mm	0.26	good	<i>Betula sp.</i>	6 rings
647.04	647	3/14/2022	>8mm	0.18	good	<i>Betula sp.</i>	
647.05	647	3/14/2022	>8mm	0.39	good	<i>Betula sp.</i>	
647.06	647	3/31/2022	>8mm	0.12	good	<i>Betula sp.</i>	
647.07*	647	3/31/2022	4-8mm	0.10	good	<i>Alnus sp.</i>	14 rings
648.01*	648	3/10/2022	4-8mm	0.07	good	<i>Alnus sp.</i>	
648.02	648	3/10/2022	4-8mm	0.03	good	<i>Picea sp.</i>	
648.03	648	3/10/2022	4-8mm	0.04	good	<i>Picea/Larix sp.</i>	character of bordered pits not visible
648.04	648	3/10/2022	4-8mm	0.03	good	<i>Picea/Larix sp.</i>	character of bordered pits not visible

APPENDIX F:
Radiocarbon Dating Report
DirectAMS



Report: **2746-046997-047005**

31 May 2022

Customer: 2746
 Hollis Miller
 University of Washington
 Department of Anthropology
 314 Denny Hall, Box 353100
 Seattle, WA 98195
 USA

Samples submitted for radiocarbon dating on 20 April 2022 have been processed and measured by AMS. The following results were obtained:

DirectAMS code	Submitter ID	Sample type	Fraction of modern		Radiocarbon age	
			pMC	1 σ error	BP	1 σ error
D-AMS 046997	OHAHP 602.03	charcoal	99.12	0.27	71	22
D-AMS 046998	OHAHP 610.01	charcoal	99.11	0.26	72	21
D-AMS 046999	OHAHP 614.01	charcoal	99.60	0.28	Modern	
D-AMS 047000	OHAHP 620.01	charcoal	96.59	0.25	279	21
D-AMS 047001	OHAHP 624.02	charcoal	98.22	0.24	144	20
D-AMS 047002	OHAHP 625.01	charcoal	97.94	0.23	167	19
D-AMS 047003	OHAHP 635.03	charcoal	97.96	0.27	166	22
D-AMS 047004	OHAHP 636.02	charcoal	98.67	0.26	108	21
D-AMS 047005	OHAHP 647.07	charcoal	98.48	0.21	123	17

Results are presented in units of percent modern carbon (pMC) and the uncalibrated radiocarbon age before present (BP). The results relate only to the sample material submitted and the portion analyzed. All results have been corrected for isotopic fractionation with an unreported $\delta^{13}\text{C}$ value measured on the prepared carbon by the accelerator. The pMC reported requires no further correction for fractionation.

11822 North Creek Parkway N, Suite #107, Bothell, WA 98011
 Tel (425) 481-8122 – www.DirectAMS.com