

INTRODUCTION: DENE PREHISTORY AND THE AHTNA TERRITORY OF ALASKA

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ABSTRACT

The theme of this collection of papers is the peopling of Alaska and migration to the more temperate latitudes of North America from the perspective of the Copper River and Upper and Middle Susitna River watersheds in Southcentral Alaska. This is indigenous Ahtna and Dena'ina territory, and it borders on that of the Tanana, Upper Tanana, Tanacross, and Eyak to the north. The perspective is multidisciplinary in the tradition of the four-field approach to anthropology. The papers discuss glacial geology, archaeology, geolinguistics, and ethnography and oral tradition. Along with genomics research, no other than a syncretic approach will lead to an understanding of when and how Alaska and the rest of North America were first inhabited.

BACKGROUND

The archaeology of the Copper and Middle Susitna watersheds is not well known. The area is a difficult one in which to do archaeology. It is rugged, with some of the highest mountains in North America; the rivers are swift, cold, and not easily traveled; and the lowland areas have dense boreal forest vegetation with numerous bogs. There are few roads, at least compared to midlatitude areas of North America. Fieldwork is generally confined to the three summer months, and it often requires expensive air support. Though there have been a few large-crew siege-style archaeological excavations, they are rare, and archaeological survey has largely been relegated to alpine tundra where walking is easy but sites generally lack stratified context (cf. Reininghaus, this volume).

Whereas the physical terrain is difficult for archaeologists, the grammatical terrain is difficult for linguists. Karen Rice (2000:1) states:

Athapaskan languages are often thought of as the ultimate challenge by linguists interested in issues of morphosyntax, and linguists working on those languages are alternately admired and pitied. The languages have notoriously complex verb morphology...

Only a small handful of linguists work on Dene languages. However, Ahtna and Dena'ina verb-stem morphology, noun lexicon, and place name inventory is among the best in North America thanks largely to the work of James Kari (this volume) and a few others.

Ethnohistory and documentation of oral traditions regarding origin stories is also fairly complete thanks to the pioneering work of Frederica de Laguna and Catharine McClellan (Simeone et al., this volume) and many others, and with more recent contributions including those by Ahtna and Dena'ina elders.

ALASKA DENE ORIGINS

When asked how long their people have been in Alaska, modern Dene elders and culture bearers will answer "forever." If "forever" means their ancestors were among the first humans to occupy these watersheds, then that is true. The perspective is derived from oral tradition; it should be understood, however, that oral tradition is not simply positivism, postpositivism, or any other form of scientific or historical approach spoken in an indigenous language.

Dene origin stories are their own thing, usually not tied to a specific time other than the general “distant time stories,” and rendered in narrative. Origin stories portray events that shaped the culture, events that are allegorical to the scientist but literal to culture bearers.

In this volume, Simeone, Justin, Anderson, and Martin summarize some of the Ahtna oral tradition that bears on the occupation of Southcentral Alaska. For example, Glacial Lake Atna and Glacial Lake Susitna (Smith, this volume), two large proglacial lakes sometimes merging as one, figure prominently in Ahtna mythology. In one version of an origin story, Raven, known as Saghani ggaay in Ahtna, creates Ahtna land after flying over a large body of water, Lake Atna, following a white swan he has fallen in love with and wants to marry. The swan is a strong flier and Raven cannot match her. He tires and falls behind. Raven creates land on which to rest, and that land becomes Ahtna homeland. The Dena’ina have a similar theme in which Raven falls in love with a snow goose and follows her too far out onto the ocean. He tires, and a whale helps him back to land (Kalifornsky 1991:92–95).

Decanting of Glacial Lake Atna through one or more of the known spillways would have been a dramatic geologic event, and lowering of the lake level would likely have been detectable on a yearly basis, exposing high hills as islands or peninsulas and eventually “creating” land. That the cause of this mysterious event was attributed to Raven is in keeping with a pattern of indigenous origin stories. Fundamental forces that exist as spirits (e.g., Gujun, “The Father of the Animals,” and K’unkda Jelen, “The Mother of Everything Over and Over,” in Dena’ina) create the animals and animal society. Then one animal, Raven, the creator, prepares the way for humans. As rendered in Raven mythology, the Ahtna, or perhaps proto-Ahtna, were present at the time of Lake Atna, whenever that turns out to be.

Simeone, Justin, Anderson, and Martin (this volume) further describe a mythology that accounts for the occupation of Ahtna land in terms of clan origin stories. These are place-based stories and, like the origin story above, also not specified in time. From the standpoint of Ahtna tradition, when these events happened is not as important as that they happened. History is thought of as three episodes: the time the animals could talk, the coming of the campfire people, and the coming of the whites. No other large-scale divisions of time are made. Clan origin stories define the geographic space of Ahtna and Dena’ina territory and thus are a claim for ownership. In a second pa-

per, Simeone, Anderson, Martin, and Justin describe the structure of traditional Ahtna leadership in the past and subsequent impacts of American colonialism.

Understanding origin stories and indigenous perspective is a powerful tool and, when combined with the techniques of science, creates a more nuanced understanding of Alaska prehistory.

GEOLINGUISTICS

Rigorously documenting place names has been an academic passion of James Kari’s, and it has been a significant part of his lifelong body of work in Alaska Dene linguistics. Without these data, place name geography would be lost with the death of elders who knew the places, the names, and the system for naming places.

The peopling of this part of Alaska occurred in the Late Pleistocene and early Holocene. In the area in question, Smith (this volume) summarizes the available glacial evidence around Glacial Lakes Atna and Susitna. The glaciers, of course, are highly dynamic; they stabilized, advanced again, and retreated in a giant cryogenic stutter step driven by nonanthropogenic climate change. Proglacial lake levels rose during warm periods of enhanced melting and lowered during colder periods. The resulting proglacial strandlines are evidence of the lake levels early peoples encountered, but dating the strandlines has proven problematic due to erosional activities (wave action of rising lake levels can obscure lower strandlines) and isostatic adjustment, among other geologic processes. Complicating proglacial lake dynamics are the numerous spillway events. As lake levels rose due to glacial melting during warm episodes, water spilled out, down-cutting deep valleys and partially draining the lakes in a geologically short time.

Spillways, notably the Tyone Spillway, figure prominently in Kari’s Dene geolinguistic analysis. That analysis depends on a number of principles unique to Dene place naming. First is a principle Kari refers to as *Lex Loci*, literally “law of the place”: in this instance, the rigorous rules of forming Dene place names. For example, one of the creeks flowing into the Kenai River on the Kenai Peninsula is *Shlatnu* (*shlat+nu*). The “-nu” suffix means creek or river, and the stem “*shlat-*” means ‘little’—little creek. The mouth is *Shlatnukaq’* (*shlat+nu+kaq’*) with *-kaq’* meaning ‘mouth of the creek,’ in this case where it flows into the Kenai River. Farther upstream a ridge parallels the creek and is called *Shlatnu Yits’a* (*shlat+nu+yits’a*), ‘little creek

ridge.' With few exceptions, streams (*-nu*), their mouths (*-kaq'*), and parallel ridges (*yits'a*) are named this way, with each root, of course, being unique and affixes slightly varying with the language. This, among several other place naming principles Kari describes, is a persistent pattern in Alaska and western Canada Dene territory.

Kari also points out that Dene place names have temporal durability. Place names are a cognitive map integral to long-distance travel, particularly winter travel over frozen rivers, lakes, and bogs, and are rooted in survival. Moreover, local place names are a form of identity for oneself and one's clan. It would be unthinkable to change a place name, because that could affect travel and identity.

Dene place names tend to be highly descriptive of landforms or events that occurred at those landforms. Consequently, most place names describe the geologic landscape at the time of naming, the time of first occupation by Dene. One cannot rule out that other cultures occupied a place before a Dene group, as happened in Cook Inlet, where a Riverine Kachemak culture occupied river basins before the Dena'ina. In that case, no Kachemak tradition place names survive, with the possible exception of Ggasilahtnu, the name of the Kasilof River.

In the Copper and Susitna River watersheds, Ahtna place names describe geologic conditions as they would have occurred at the time of Glacial Lakes Atna and Susitna. For example, the Tyone River is now a small stream, but the Ahtna name, Nilben Na', means 'lake level surges' (Kari 2014:1543; Kari, this volume), suggesting it was named at the time the Tyone spillway was rapidly decanting Glacial Lake Atna. In other words, the geologic environment is dynamic, but the place name system is not, and therefore it becomes a kind of linguistic historical geology from the distant past. Date the spillway event, and you date the time the proto-Dene watched it happen and named it. Unfortunately, the dates for Glacial Lake Atna are not yet secure, but Smith (this volume) summarizes current data. When geologic proglacial lake dating is more secure, we will have a better understanding of the early Dene presence in this part of Alaska.

ARCHAEOLOGY AND GENOMICS

Anthropologists have generally assumed a northwest-to-south movement of Asians into North America. (Genomics do not support any migration to North America other than one from Asia.) For Northern Dene, however, the place with the greatest linguistic diversity

is the Kaska- and Tutchone-speaking areas in Northern British Columbia (Boraas 2007:34; Kari 1996). Based on the principle that the most linguistically diverse language of a language family has had the greatest time to evolve and therefore would be the oldest, Northern British Columbia would be the Northern Dene linguistic homeland. It is also the area where the oldest stream suffixes (*-tu*) occur (Boraas 2007:35–36; Kari 1996; Kari, this volume) and is thus a second indication of Northern Dene homeland. Based on these principles and traditional stories (for example, the Dena'ina Telaquana Mountain Story [Kalifornsky 1991:72; Rooth 1971:68–70]), Boraas (2007:36) proposed that Dene moved from Northern British Columbia in two directions: east to populate the northern Canadian boreal forest and northwest toward Alaska, moving down the Tanana River, branching to occupy the Copper River and Upper Susitna watershed, and then branching again into the Kuskokwim piedmont and down into the Mulchatna River, Lake Clark, and Lake Iliamna areas and finally across Cook Inlet to the Kenai Peninsula. The problem with this scenario is accounting for Dene occupation of Northern British Columbia in the first place.

From a genomic standpoint, all northern Dene (Athabascans) in Alaska and boreal forest Canada, as well as all Northern Algonquin speakers, belong to the same genomic unit, Northern North America (NNA) (Moreno-Mayar et al. 2018). All other indigenous North and South Americans are part of the Southern North America genomic group (SNA). Inuit and Yupik belong to the ancestral Paleo-Eskimo or Eskimo-Aleut group. The Old One (Kennewik Man) is within the Dene/Athabaskan and Algonquin (NNA) genomic group (Sheib et al. 2018) and at approximately ~9000 years old is the oldest presently known representative. Confounding the issue is the Dene linguistic isolate Ket of Siberia and the genetic ancestry of North and South Native Americans. Recent analyses (Moreno-Mayar et al. 2018:206) of the Upward Sun River (USR) child burials from the Tanana Valley suggest the founding population of Interior Alaska, ancestral Native Americans and Siberians, diverged between 36,000 and 24,500 years ago. In terms of migratory routes, from a linguistic/genomic standpoint, Dene either came down the Pacific coastal route and crossed the coastal range into interior British Columbia or came by way of an interior route (Potter et al. 2018; Wygal and Krasinski, this volume) into the Yukon and Northern British Columbia linguistic homeland and then backtracked, presumably as the ice-free corridor became more hospitable.

Sites in the vicinity of Trapper Creek, Alaska, have been excavated for a number of years by Wygal and Krasinski (this volume) and have proven to be particularly informative about Dene origins. Trapper Creek is located near the confluence of where the Chulitna River and Montana Creek flow into the Susitna River. In ethno-historic times, the middle Susitna River was one of seven concentrations of Dena'ina culture (the others were the Tyonek-area villages, Mulchatna, Lake Clark, Iliamna Lake, Kenai/Kasilof watersheds, and the Eklutna/Knik area). The most productive Trapper Creek area site is located on top of an esker and has characteristics of an interior "lookout" where early hunters made and modified stone tools presumably while looking for game animals.

Wygal and Krasinski (this volume) show that early sites in the middle Susitna are younger than those in the largely unglaciated Tanana Valley to the north. The Susitna/Copper River early sites are also younger than sites south of the Late Pleistocene Cordilleran and Laurentide ice masses. Therefore, as it stands now, neither the Susitna nor the Copper watersheds were the route to the coast for early migrants of the hypothesized coastal migration route to the North America once called the "Kelp Highway" by Erlandson et al. (2015). Wygal and Krasinski raise the question of whether a coastal route was a migration route at all. It is true that more sites documenting a coastal migration would make the Kelp Highway migration route hypothesis more viable. But there is no reason to throw it out just yet because changes in sea level and tectonic movements have likely left much of the archaeological evidence underwater. Studies analyzing ^{10}Be as a proxy to estimate when coastal mountains were habitable by humans indicate coastal deglaciation was occurring in the vicinity of 18.1 ± 0.2 ka (ca. 18,100 cal BP), exposing islands and peninsulas that could have been used by early migrants (Darvill et al. 2018).

DISCUSSION

Erin McKittrick (2009) and Bretwood Higman's two-year, 4000-mile coastal trip from Seattle to the Alaska Peninsula by walking, skiing, and packraft anecdotally demonstrates that the coastal route did not necessarily involve a generation- or decades-long journey. Granted, their journey was not intended to replicate the Kon-Tiki-style gear or techniques of ancient travelers, but they did make the trip under human power, as the ancients would have done. Numerous individuals have traveled from Fairbanks

to interior British Columbia entirely under human power in a year or two. We should be prepared to accept the possibility that some movements into Alaska from Asia or through Alaska into North America were accomplished in terms of years, not generations, and some of these events may be difficult or impossible to detect archaeologically.

This volume is not intended to be the final all-inclusive statement on the subject of Native American origins, one of the most dynamic themes in anthropology. Missing, for example, is a comparison of modern genomics of the area with ancient genomics as it bears on population movements. There is much more to be done, but this collection is an extremely important contribution to the question of when and how humans populated Alaska and moved into more temperate latitudes. Embedded in the story of the precontact occupation of Alaska are principles of adaptation, resilience, and climate change that are not only noteworthy in and of themselves but also as guidelines informing present times.

REFERENCES

- Boraas, Alan
 2007 Dena'ina Origins and Prehistory. In *Nanuset ch'u Q'udi Gu: Before Our Time and Now: An Ethnohistory of Lake Clark National Park and Preserve*, edited by Karen K. Gaul, pp. 31–40. National Park Service, Anchorage.
- Darvill, C. M., B. Menouos, B. M. Goehring, O. B. Lian, and M. W. Caffee
 2018 Retreat of the Western Cordilleran Ice Sheet Margin During the Last Deglaciation. *Geophysical Research Letters* 45:9710–9720.
- Erlandson, Jon M., Todd J. Braje, Kristina M. Gill, and Michael H. Graham
 2015 Ecology of the Kelp Highway: Did Marine Resources Facilitate Human Dispersal From Northeast Asia to the Americas? *Journal of Island and Coastal Archaeology* 10(3):392–411.
- Kalifornsky, Peter
 1991 *A Dena'ina Legacy: K'tl'egh'i Sukdu*, edited by James Kari and Alan Boraas, Alaska Native Language Center, University of Alaska Fairbanks.
- Kari, James
 1996 A Preliminary View of Hydronymic Districts in Northern Athabaskan Prehistory, CA973K1996c. *Names* 44: 253–271.

- 2014 Ahtna Place Names Lists and Maps, version 3.3. AT973K2014, Alaska Native Language Center, University of Alaska Fairbanks.
- McKittrick, Erin
- 2009 *A Long Trek Home: 4000 Miles by Boot, Raft, and Ski*. Mountaineers Books, Seattle.
- Moreno-Mayar, J. Víctor, Ben A. Potter, Lasse Vinner, Matthias Steinrücken, Simon Rasmussen, Jonathan Terhorst, John A. Kamm, Anders Albrechtsen, Anna Sapfo Malaspinas, Martin Sikora, Joshua D. Reuther, Joel D. Irish, Ripan S. Malhi, Ludovic Orlando, Yun S. Song, Rasmus Nielsen, David J. Meltzer, and Eske Willerslev
- 2018 Terminal Pleistocene Alaskan Genome Reveals First Founding Population of Native Americans. *Nature* 553(7687):203–207.
- Potter, Ben A., James F. Baichtal, Alwynne B. Beaudoin, Lars Fehren-Schmitz, C. Vance Haynes, Vance T. Holliday, Charles E. Holmes, John W. Ives, Robert L. Kelly, Bastien Llamas, Ripan S. Malhi, D. Shane Miller, David Reich, Joshua D. Reuther, Stephan Schiffels, and Todd A. Surovell
- 2018 Current Evidence Allows Multiple Models for the Peopling of the Americas. *Science Advances* 4(8):1–9.
- Rice, Karen
- 2000 *Morpheme Order and Semantic Scope: Word Formation in the Athapaskan Verb*. Cambridge Studies in Linguistics, 90. Cambridge University Press, Cambridge.
- Rooth, Anna Birgitta
- 1971 *The Alaska Expedition 1966: Myths, Customs and Beliefs Among the Athabascan Indians and Eskimos of Northern Alaska*. CWK Geerup, Lund, Sweden.
- Scheib, C. L. , Hongjie Li, Tariq Desai, Vivian Link, Christopher Kendall, Genevieve Dewar, Peter William Griffith, Alexander Mörseburg, John R. Johnson, Amiee Potter, Susan L. Kerr, Phillip Endicott, John Lindo, Marc Haber, Yali Xue, Chris Tyler-Smith¹, Manjinder S. Sandhu, Joseph G. Lorenz, Tori D. Randall, Zuzana Faltyskova, Luca Pagani, Petr Danecek, Tamsin C. O’Connell, Patricia Martz, Alan S. Boraas, Brian F. Byrd, Alan Leventhal, Rosemary Cambra, Ronald Williamson, Louis Lesage, Brian Holguin, Ernestine Ygnacio-De Soto, John Tommy Rosas, Mait Metspalu, Jay T. Stock, Andrea Manica, Aylwyn Scally Daniel Wegmann, Ripan S. Malhi, and Toomas Kivisild
- 2018 Ancient Human Parallel Lineages within North America Contributed to a Coastal Expansion. *Science* 360 (6392):1024–1027.