REVIEW

OUR ICE, SNOW, AND WINDS: INDIGENOUS AND ACADEMIC KNOWLEDGE ON ICE-SCAPES AND CLIMATE OF EASTERN CHUKOTKA


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For over forty years, Lyudmila Bogoslovskaya and Igor Krupnik have been collecting oral histories and ethnographic materials that reflect the traditional knowledge and ecological awareness of the Yupik and Chukchi people of Chukotka. Veterans of rigorous field research in Chukotka communities, these two eminent scholars have worked with a number of local experts. Bogoslovskaya and Krupnik have also reached out to a number of ethnologists, climate scientists, and cultural resource managers working at Chukotka-based institutions. The experience of these multidecadal collaborations helped ensure strong Russian participation in SIKU: Knowing Our Ice, an International Polar Year (IPY) project. An unprecedented number of Chukotka researchers have participated in SIKU, of whom the majority worked in and around their home communities, conducting interviews, compiling new and archival photographs, and conducting direct observations of various social and ecological processes.

The results of these efforts appear in the Russian Heritage Institute’s publication Our Ice, Snow, and Winds. Bogoslovskaya and Krupnik are the compilers and editors of the volume, and the authors of several sections. The book identifies twenty-seven other contributors to SIKU and includes their biographical sketches. It also acknowledges over fifty illustrators whose work is included in the volume. The high-quality paper and printing do justice to the generous and stunning visual material the volume contains.

The book is in Russian but provides English versions of the introductory and concluding narratives (pp. 12–13, 334–339). Although it is more conventional for reviewers to conclude with such recommendations, I am compelled to express a desire to see this book available in English in a near future. This work is likely to draw interest from a wide spectrum of readers and especially Arctic residents and scholars of ethnography and climate research.

The main content includes exhaustive vocabulary lists relating to sea ice from several Chukotkan communities, elders’ stories offering detailed cautionary advice on ice-based hunting and travel, documentation of contemporary harvesting techniques, climate data assembled by local observers, and a fine-resolution portrait of the cultural and physical geography of Chukotka’s ice-scapes through time. In addition to the cited literature, the volume includes a list of publications and conference contributions by SIKU participants produced between 2007 and 2012 (pp. 254–256), and a suggested readings list organized under four themes: people and environment of Chukotka, climate change and ecological knowledge among the residents of the Arctic, Arctic ice-scapes and preservation of cultural landscapes, and the International Polar Year 2007–2008.

Overviews of Project SIKU and eastern Chukotka are presented in Part 1 (pp. 15–38). Parts 2 and 3 focus on the cultural and ecological adaptations of indigenous communities of eastern Chukotka. These parts discuss the continuity of intergenerational knowledge of ice, the shifting seasonal cycle as documented and described by community-based observers, and the relationships between...
various ecosystem processes and cultural practices. A reader hungry for ethnographic nuances will be well fed on descriptions of making drinking water on the guts of a freshly harvested walrus, chewing on the stems and leaves of *Rhodiola rosea* to alleviate a dry mouth (Ashkamakin, recorded by Krupnik, pp. 219, 220), and subsisting from the marine “garden” cultivated along the shore of Tkachen Bay (Borovik and Kalyuzhina, pp. 109–113). Natalia Kalyuzhina charmingly narrates the last piece. She provides an ethnoecological manual for *upalovka*—the harvesting of sea peaches, *Halocynthia pyriformis*, around Novoe Chaplino and older settlements where elders and ancestors of current Novoe Chaplino residents lived prior to relocation. Beyond her written contribution, Kalyuzhina is acknowledged for her work with SIKU. While directing the Chukotka regional park-preserve Beringia, which covers the Chukchi Peninsula’s eastern end, Kalyuzhina coordinated community-based observers in such a way that, “they not only made written records but also drew much satisfaction from photographing various environmental phenomena” (pp. 31–32). Land managers can draw valuable insights from this approach.

Part 4 examines the efforts of climate scientists conducting multiyear monitoring and collection of instrumental data on ice conditions, air temperature, and precipitation. Their observation and measurement logs cover periods of fifteen years or more. These data document emerging patterns of change and draw regional and circumpolar continuities within the Arctic ice and weather systems. Victor Struzhikov, who has been manning the Uelen Research Station since 1988, summarizes his observations of the northeastern end of the Chukchi Peninsula (pp. 300–307). Igor Zagrebin—a geographer with broad interdisciplinary experience in Chukotka—contributed his observations in the Provideniya region from 1997–2011. The analysis of this data by the noted Russian climatologist Boris Vdovin appears in Part 4 (pp. 276–286). Zagrebin’s records of ice conditions in Emma Bay and Provideniya Bay between 2006 and 2009 are featured in their entirety (pp. 309–323), followed by Krupnik’s synthesizing commentary (pp. 324–327). Krupnik contextualizes Zagrebin’s data relative to historical climate records and compares it to the data collected by the Yupik and Chukchi observers for similar periods. Readers can examine the consistency of information and also the differences in the approaches of indigenous observers and other climate monitors. Rather than characterizing ice exclusively in the context of meteorological phenomena, the indigenous scholars and community-based observers Alexander Borovik, Victoria Golubtseva, Arthur Apalyu, Vyacheslav Nuvano, Elizaveta Dobrieva, and Boris Alpyrgin, among many other contributors, demonstrate the inherent connections between the seasonally cycling landscapes and human activity—the central point of *Our Ice, Snow, and Winds*. 
Donald Holly’s latest contribution to the prehistory and history of northeast North America is *History in the Making: The Archaeology of the Eastern Subarctic*. The title includes the words “history” and “archaeology,” which is appropriate for its contents. Holly weaves the history of anthropological and archaeological research into his descriptions of the prehistory of the region. He also provides an overview of the history of the region itself, including the late prehistoric and historic First Nations peoples and the non-Native settlers of the region. In six chapters, the reader learns about the physical and biological environment of Labrador, Newfoundland, and the adjacent American and Canadian Northeast and how that environment provided challenges and opportunities for human occupation.

Chapter 1, *The Lookout Tree*, reviews previous research in the region and the intellectual and theoretical positions and biases of pioneer archaeologists and anthropologists. Biographical details of researchers and their theoretical positions and contributions are woven throughout the book as prefaces to the chapters describing culture history. Chapter 2, *Driftwood*, describes the importance of wood for coastal peoples and how old wood has befuddled the regional culture chronologies. Paleoindian and Archaic occupations of the region are described. Chapter 3, *Tuckamore*, describes this botanical phenomenon and the difficulties it presents for archaeologists surveying and excavating in the region. Holly details the Paleoeskimo movement into the region occupied at the time by well-established Maritime Archaic people. Chapter 4, *Wildfire*, describes the discovery and excavation of important Late Paleoeskimo Dorset sites such as Port aux Choix and Phillip's Garden. The social relations between Paleoeskimo peoples and Amerindians are examined and analyzed, as is the decline and eventual disappearance of Dorset culture. Chapter 5, *The Giving Tree*, begins with an overview of ethnographic information about the important spiritual role of trees in the Subarctic. The presence of the Norse in Greenland and at L’Anse aux Meadows in northern Newfoundland is presented in the context of trade in metal goods, influences on local peoples, and the arrival of Neoeskimo Thule culture into the Northeast Subarctic. Chapter 6, *The Forest for the Trees*, summarizes the intellectual history of research in the region, emphasizing that “similar historical processes recurred again and again” (p. 153). Historical event and process are the subjects of “generalizable inquiry, albeit at different scales.”

This book makes several important contributions. First, it provides an up-to-date summary of northeastern subarctic prehistory. Second, it provides a guide to the positions and changing interpretations by northern scholars about causes and effects in the region’s culture history. Every topic presented takes the form of a few paragraphs that summarize long-standing interpretations of the archaeological record followed by discussion of more recent revisions. I enjoyed the presentation of various interpretations. Third, Holly examines field evidence for its adherence to contemporary excavation standards. He notes when previously excavated sites or site surveys were...
done using traditional methods and how careful attention to stratigraphy on notoriously shallow or disturbed sites yields better data for interpretation in the modern era. Finally, Holly writes about social process throughout the book. Prehistory is not just the movement of Ramah chert, or iron, or walrus tusks; prehistory is about people and their social organizations, technologies, and beliefs.

The primary audience for this book will be professional archaeologists and students looking for a contemporary summary of the prehistory of the eastern Subarctic. Faculty may wish to use it as a reader for classes in North American archaeology, either as the main text or as a supplemental area overview. Finally, anyone with an interest in northeastern archaeology will want to read the book to learn about Newfoundland and Labrador. The book is clearly written, using nontechnical language. Holly has an easy writing style, weaving together complex information from a variety of sources. The reference section is robust, making it a wonderful starting point for further reading.

There are a few quibbles. There is no table or graphic of culture history over time and space, which would be helpful for nonspecialists in the area to get a big-picture overview. There is some odd language from time to time, which may reflect deficient copyediting. In one case, there is either text missing, or no period at the end of a sentence, leaving the reader to wonder what the author meant. The map of the study area has the scale bar labeled in meters, rather than kilometers. There is no table of figures at the front of the book. The price for a clothbound book of less than 200 pages at $70 seems high, but is in line with what current production and marketing costs require.

Overall though, anyone with an interest in the Arctic and Subarctic should have History in the Making in their library. Holly has produced a comprehensive, current, and compelling synthesis of the archaeology of the eastern Subarctic, providing both a critical history of research and interpretation and a description of our current understanding of that research.
In 1890 and 1891, a talented Englishman named Edward J. Glave (1862–1894) made two exploratory trips from Chilkat Inlet into southwest Yukon Territory on trade routes that were not known to the outside world. Between 1890 and 1892, Glave published twelve magazine articles offering the first detailed observations of the Native people of the Southwest Yukon Territory. *Travels to the Alsek* is a beautifully produced collaborative book that was first conceived by John Ritter, director of Yukon Native Language Centre. Ritter notes that, “The Glave articles constitute an important reference source for students of Yukon history, and we’ve long needed to have them out and available in an accessible form.”

Glave gave special attention to the recording of Native place names with his Tlingit and Southern Tutchone guides.

Throughout my letter I have retained the native names of geographical points wherever I could learn them. In my opinion this should always be studied. The Indian names for mountains, lakes, rivers are natural landmarks for the traveler whoever he may be; to destroy these by substituting words of a foreign language is to destroy the natural guides. You ask for some point and mention its native name; your Indian guide will take you there. Traveling in Alaska has already sufficient difficulties, and they ought not to be increased by changing the picturesque Indian names. Another very good reason why these native names should be preserved is that some tradition of tribal importance is always connected with them. These people have no written language, but the retention of their native names is an excellent medium through which to learn their history (p. 77).

Each segment of the 1890 and 1891 trips is presented as a facsimile of the magazine article with Glave’s sketches, photographs, and footnotes for clarification. The articles from the 1891 journey are supplemented with notes, vocabulary, drawings, and native sketch maps from Glave’s 1891 field journals preserved in the Alaska and Polar Regions Collections and Archives at the University of Alaska Fairbanks. Each route segment is scored on color relief maps and landsat photographs that show place names from four or five sources in fonts of contrasting colors (e.g., Glave’s names, recorded Tlingit or Southern Tutchone names, official place names, and names from overlapping primary sources such as the 1869 Chief Kohklux map obtained by George Davidson or from the notes of Aurel Krause in 1880–81). Doug Hitch provides detailed discussions of the geography and landscape changes for each segment, relating Glave’s narrative with first-hand observations of geographic features.

The book is dedicated to two important contributors to Southern Tutchone and Tlingit language materials: Jimmy Kane (1885–1983) and Marge Jackson (1913–2013). It includes several articles written by Julie Cruikshank that provide context on Edward Glave and on inter-cultural relations of the 1890s in Alaska and the Yukon. The book features 112 illustrations and 85 maps with extensive captions of Glave’s photographs, his sketches, and engravings made from his photographs. There are many stunning landscape photographs by Wayne Towriss, some of which
are historic/contemporary comparisons taken at similar locations. A chapter titled “Glave the Scientist” by John Ritter, Jeff Leer, and Doug Hitch presents number-keyed images of Glave’s notes with transcriptions in tabular form. Topics of this chapter are place names, personal names, Tlingit word lists and ethnonyms, the first known Southern Tutchone word list, and a detailed interpretation of a native-drawn sketch map, “the Athabaskan’s Valley.”

In my own ethnogeographic research I have promoted the use and analysis of sketch maps. Glave’s highly refined 1892 sketch maps are juxtaposed with historic maps, modern maps and photographs. The Mount Glave area presentation (pp. 213–220) is a pleasure to study. Glave also solicited native sketch maps, some of which he annotated. Doug Hitch’s analysis of one native sketch map south of Kluane Lake (pp. 292–296) is particularly thorough and shows how accurate geographical detail can be matched between sketch and modern maps, by drawing upon the layers of data and illustrations the editorial team have assembled.

The organization of the book makes this a most informative reference work. The toponymic and linguistic scholarship and the use of historic and contemporary photography and cartography is outstanding. Travels to the Alsek will be the major geographical/historical reference work for this part of the world.

As Julie Cruikshank notes in the introduction, Glave had a brief but remarkable career. In the 1880s, Glave spent six years as a junior officer with Henry M. Stanley in the Congo. After his two trips in Alaska and Yukon, he returned to Africa where he died after writing several articles about Belgian atrocities in the rubber trade in the Congo River Lake district. Cruikshank writes, “These materials amply demonstrate the impressive observational and analytical abilities of a young man, not quite thirty, who did not have the benefit of academic training.”
Iñupiaq Ethnohistory is a compilation of nine previously published seminal articles by the late social anthropologist Ernest S. Burch, Jr. These essays pertain to Iñupiaq notions of being and the social, political and economic conditions of Northwest Alaska in the nineteenth century. While the Iñupiat are the focus of this collection, various essays also describe and draw comparisons between other northern cultural groups, including the Koyukon and Gwich’in Athabascans and Caribou Inuit. Editor Erica Hill’s introduction identifies the structural-functional underpinnings of Burch’s work and outlines the key debates it contributes to, such as socio-political organization of small-scale societies, warfare, human ecology, exchange systems, and ethnohistory methodologies. Pinpointing the major influences in Burch’s work, Hill explains that many of the essays persuasively apply sociologist Marion J. Levy’s classificatory approach, in which “analysis proceeds from the definition of an empirical referent, or ‘unit’ ” (p. ix). Hill supplements each chapter with further readings pertaining to theoretical discussions of the essays, thereby demonstrating the continued relevance of Burch’s writings to northern anthropology and beyond. All of this makes Iñupiaq Ethnohistory not only a comprehensive introduction to Iñupiaq history and culture but also to Burch’s impressive body of work.

The book is laid out like a classic ethnographic monologue. Following an essay that positions Burch’s approach to investigations, each chapter addresses a common anthropological theme, including: cosmology and belief, exchange systems, kinship, political and social relations, and economic strategies and conservation. In Chapter 1, Burch details how he came to research and write historical ethnography or “ethnographic reconstruction” and the approaches he developed. Admitting that his own preconceptions initially blinded him to the value of Native historians, Burch explained that he learned about Iñupiaq warfare and the Dinai Kutchin (Dihaj Gwich’in) people from Iñupiaq accounts. These accounts were often corroborated by Iñupiaq historians of different villages and supported in historical documents. This convinced Burch to take Native accounts seriously and verify them through the same rigorous system of oral sources and written documents that he applied to his own analyses. Add on Burch’s use of Levy’s classificatory approach, which defines and then describes an empirical concept, and you have the signature method that served Burch so admirably for decades.

Following the methodology essay is “Eskimo Worldview,” the most general article of the collection, which gently introduces the reader to Inuit societies and Burch’s work. This essay offers a review of Inuit cosmology including appropriate treatment of souls and bodies after death, and a discussion of spirits and taboos. Seventeen figures of masks and spiritual objects that are housed in museums supplement this chapter although the essay does not directly refer to them. Chapter 3, “The Nonempirical Environment of the Arctic Alaskan Eskimos,” outlines the various beings that populate Iñupiaq landscapes, influencing settlement patterns,
transportation routes, and harvesting locations. Burch organized these beings into three categories, including: those shaped like people, those shaped like animals, and those with no shape. Driven to understand how Iñupiat converted to Christianity so quickly—within 20 years—Burch explored the history of missionaries in Chapter 4. He reconstructed the social, economic, cosmological conditions of Northwest Alaska at the turn of the twentieth century that led to widespread Iñupiat adoption of Christianity, between 1890 and 1910. While socioeconomic scarcity and syncretism carved a path for immediate conversion, charismatic Alaska Native missionaries also played a major role in converting Iñupiat.

Chapter 5, “Modes of Exchange in North-west Alaska,” perhaps best exemplifies the virtues of Burch’s use of Levy’s empirical classification scheme. Simply by defining and then describing forms of property and the ways property was accumulated, divided, inherited, and exchanged among Iñupiat, Burch undermined the position that sharing or “generalized reciprocity” was the only form of material exchange among hunter-gatherer societies. The precision that Burch brought to the concepts he used pays off in this chapter. Strictly defining the kinds of relationships involved in particular exchanges, Burch was able to identify that in multifamily villages, people distinguished between intrafamily and interfamily exchange relations. Based on this conclusion, he proposed an explanation of why previous accounts of hunter-gatherers missed forms of exchange other than sharing; most were working in single, local-family communities. Chapter 6, “Marriage and Divorce among the North Alaskan Eskimos,” outlines various forms of conjugal relationships including co-marriage, which Burch argued was not scandalous, as it so often is portrayed, but part of a complex and ordered system. Chapter 7, co-authored with Eliza Jones, Hannah P. Loon, and Lawrence D. Kaplan, explores the ethnogenesis of the Kuuvaum Kañjağa’miut of the upper Kobuk River. The authors used archival documents, ethnography, placenames, and linguistic data to argue that the Iñupiat peacefully assimilated the Koyukon Athabascans over a short period of time between 1860 and 1880.

It is a pleasure to read how Burch used historical ethnography to understand fundamental caribou herd biology in Chapter 8. Relying on the same ethnohistorical approach that he applied to understanding human histories, Burch traced caribou herd histories and their changes over 150 years, emphasizing “the complex nexus of interactions between caribou, reindeer, wolves and people as a historically changing system of relationships” (Krupnik in Burch 2012: ix). Burch proposed the existence of four caribou herds in Northwest Alaska at the middle of the nineteenth century, including: Andrefsky River, Nulato Hills, Seward Peninsula, and Western Arctic herds. He posited that each herd suffered a crash in the latter part of the nineteenth century, leaving only the Western Arctic herd, which survives today. The final essay critiques the commonly held assumption that indigenous North Americans are in harmony with their environment and questions whether the relationship such people have with their environment changed after European contact. Citing overharvesting examples among Iñupiat and Caribou Inuit, Burch analyzed Inuit subsistence strategies in terms of cognitive aspects, which he categorized into rational, nonrational, irrational, and arational action—a system of classification again borrowed from Levy. No doubt these compelling case studies add nuance to the assumptions about indigenous conservation practices, but the applied framework seems to overstep what can be known. Classifying individual choices and actions based on rationality presumes knowledge of the motivation of individuals—information I do not believe ethnohistorical methods can reconstruct.

This minor critique aside, the collection of essays adds up to more than the sum of its parts with the help of Hill’s editorial direction. No doubt each essay forcefully conveys Iñupiat life in Northwest Alaska around the early nineteenth century. Burch’s “thick description” leaves the reader with an intimate sense of the possibilities that an individual of this time and place may have confronted or chosen. But in addition to his methodical description of Iñupiat lives, Hill brings together essays that reveal Burch’s underlying project. This collection clearly shows that Burch spent over 40 years seeking hard facts to dispel misinformation about small-scale societies in general and Iñupiat culture in particular. Almost every essay begins by identifying a stereotype or generalization that is then refuted by the conclusion. In this collection, Burch contested the notions that without a written language a society cannot have history, that Euro-American missionaries were responsible for converting the majority of Iñupiat to Christianity, that sharing is the only form of exchange among hunter-gatherer societies, that Eskimos

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traded wives, that Athabaskan and Iñupiaq groups either avoided or fought each other, that contributions to animal biology are beyond the scope of anthropological approaches, and that indigenous North Americans lived in harmony with their environment. The most widespread generalization that he refuted time and again through his methodological approach was that oral histories and indigenous accounts of history are unreliable. Perhaps the fact that these claims, for the most part, are unchallenged today reflects just how successful Burch was at achieving his aim.

**REFERENCE**

Burch, Ernest S.