

management. Serious questions are raised about the suitability of at least two key members of the shipboard support team for participation in a yearlong oceanographic science cruise. Science is portrayed as having been short-changed not only at the hands of a lonely sea captain and a rather unpredictable ship's doctor, but also by at least one public relations-driven science manager. Although the benefits drawn from the cruise are enumerated in an appendix, the reader may have trouble discerning a hard-and-fast "Science Plan," which one would have thought to have been paramount in setting schedules and resolving on-board disputes over competing scientific priorities.

The readership for this book is likely to be limited primarily to members of the greater oceanographic and polar research community who may remember and appreciate the described people, events, and issues. Readers interested in visiting South America might also find some useful information and inspiration, although we suspect that many regions visited by the author are no longer considered "remote" by modern travelers. The book may also be of interest to undergraduates considering a career in oceanography who might appreciate quick reviews of the progress achieved over the past 40 years in describing and understanding oceanographic processes. Overall, however, the appeal of the book probably lies in its paralleling of a last anachronistic effort to do "big" global oceanographic science with a young man's fitful and uncertain start of a career. Wadhams' melancholy rumination on that career in a postscript cannot help but stimulate the reader's own introspections.

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THE NORTHERN WORLD AD 900–1400. Edited by HERBERT MASCHNER, OWEN MASON and ROBERT McGHEE. Salt Lake City: The University of Utah Press, 2009. ISBN 978-0-87480-955-8. x + 349 p., maps, b&w illus., index, 26 contributors. Hardbound. US\$55.00.

The chapters in this edited volume, apart from brief introductory and concluding chapters by the editors and a summary by James Jordan exploring the relationship between Arctic climate and landscape during the centuries under question, are grouped into four sections. The first, "Social Change in the Western Arctic," contains three papers documenting the apparently dramatic population interactions and movements that took place in Alaska and adjacent areas during this period and exploring their possible causes and implications for events elsewhere in the Arctic. The next section, "The First Thule," deals with the nature, timing, and causes of the expansion of the Thule culture from Alaska into the Canadian Arctic and Greenland, exploring

various issues from the perspectives of biological anthropology, archaeology, and technology. The third section, called "The Last Dorset," contains chapters that explore the age and nature of the most recent Dorset occupations in three regions. The final section bears the dramatic title "Regional Interactions, Population Movement, and the Clash of Cultures." It contains a chapter that explores the disappearance of Dorset from Newfoundland and their replacement there by Recent Indian groups and three chapters that postulate contact between the Dorset and the Norse and explore the nature and effects of such contact. The issue of contact between the Dorset and the Thule comes up in several chapters in each of the last three sections. In a short review, it is impossible to comment adequately on all the interesting content of many of the chapters. I will concentrate on two themes: climate change and its effects, and chronology.

One of the concerns that lay behind the choice of those particular centuries as the focus for this volume was the issue of climate and its effects on human populations, particularly the so-called Medieval Warm Period. Many of the authors challenge previous uncritical assertions of climate change as the driving force behind major changes in the archaeological record, especially the Thule migration. However, in circumstances where a particular change appears to have occurred essentially simultaneously over a broad geographical area, only an equally widespread or pervasive phenomenon, such as climate change, can be plausible as a cause. Thus, M.A.P Renouf and Trevor Bell speculate in their chapter that the synchronicity of the Dorset population collapses across Newfoundland may ultimately have been due to climatic warming, but that the proximate cause was the abandonment of the vital Phillip's Garden site at the crossroads to Labrador. Similarly, Herbert Maschner and his five co-authors conclude that interactions between climate and oceanic productivity during this period, combined with developments in boat technology, led to dramatic changes throughout the archaeological record of the Western Aleutian region, the Kodiak region, and the northern Northwest Coast region. However, most of the chapters posit non-climatic factors as the ultimate cause for many of the most important changes in the archaeological record during this period.

It is not surprising that in a volume focusing on a specific period of time in the past, interpretations of chronological data figure prominently in many of these chapters. For example, in exploring whether climate change can serve as a plausible explanation for a particular transformation in the archaeological record, it is necessary to determine the precise chronological relationship between a particular change in climate and that transformation in order to ascertain whether a cause-and-effect relationship can have existed between them. The plausibility of invoking climate change as an explanation for a particular transformation in the archaeological record is further enhanced if the transformation took place simultaneously over a very broad area, since a widespread change would be less consistent with other possible explanations such as diffusion of ideas

or migration. The nature and effects of cultural contacts are also explored extensively in this volume, and in those cases, the precise chronological relationship between the archaeological remains of the two cultures must be ascertained. Cultural changes attributed to such contacts must be contemporaneous or slightly younger to be plausibly the effects of cultural contact. However, the papers in this volume exhibit surprisingly diverse approaches to dating, especially to radiocarbon dating. Owen Mason presents all his chronological data in all their complicated and confusing detail, allowing the reader to assess and evaluate his chronological interpretations. In contrast, many of the researchers exploring possible culture contacts between the Dorset, Thule, and Norse in the Canadian Arctic and Greenland adopt a different approach. The three chapters by Robert McGhee, Martin Appelt and Hans Christian Gulløv, and Patricia D. Sutherland all contend that extensive cultural contacts took place in the eastern part of the Canadian Arctic and Greenland, but support their arguments with only a small subset of the available radiocarbon dating evidence from their sites or regions. Because these researchers are each applying different criteria in selecting which radiocarbon dates to present and which to omit, their resulting chronological inferences are difficult to evaluate and impossible to compare. I cannot help but find it significant that in chapters exploring two other regions in the eastern part of the Canadian Arctic (by Claude Pinard and Daniel Gendron, and by James Savelle, Arthur S. Dyke, and Melanie Poupart), stylistic analyses combined with far less selective analyses of radiocarbon dates demonstrate that previous assertions of Dorset-Thule contact or contemporaneity in those regions have been incorrect.

The intended audience for this volume is clearly archaeological scholars familiar with the Arctic and the history of research there. Some of the chapters are more polished and convincing than others, as is to be expected in an edited volume of this kind. A strength of this volume is its bringing together of these different researchers' approaches and conclusions. However, it clearly took a long time to come together. For example, a footnote in David Morrison's chapter explains that it was submitted before, and therefore could not take account of, relevant data presented in a conference paper in 2006. In light of that long gestation, the lack of a truly integrative or contemplative summary chapter by some senior scholar not otherwise involved in the volume represents a missed opportunity. The seven-page "Epilogue and Concluding Thoughts" chapter, written by two of the volume's editors, essentially just summarizes the individual chapters without comparing or evaluating them. The editors even appear to misquote a key conclusion of one chapter: on page 341, they cite Savelle, Dyke and Poupart as documenting "'Dorset-influenced' Thule houses," whereas in fact, on p. 225–226 and 230, these authors discuss and reject putative Thule-influenced Dorset structures. Readers of this volume are largely left to their own devices to explore the relationships between the conclusions of individual chapters, just as if they had been published independently

in journals. However, for graduate students looking for research projects, close comparison of the chapters will yield many examples of differences of opinion between the researchers that could be explored profitably through new field research, theses, and dissertations.

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TRADITIONAL INUIT SONGS FROM THE THULE AREA, VOLUMES I and II. By MICHAEL HAUSER. Copenhagen: Musculanum Press, University of Copenhagen, 2010. ISBN 978-87-635-2589-3. Vol. I: 827 p.; Vol. II: 732 p. + CD-Rom, colour and b&w illus., references, index. Hardbound. US\$173.00.

The two-volume work, *Traditional Inuit Songs from the Thule Area*, provides a thorough study of Inuit music from this region of North Greenland. Volume 1 covers the format and terminology of traditional Greenlandic songs, the use of patterns in the music to trace the origins of the Inuit in Greenland and Canada, and the method of recording the songs in both film and audio. Volume I also includes a substantial reference section. Volume 2 comprises the complete transcripts of Danish ethnologist Erik Holtved's song collection from his fieldwork among the Inughuit, the northernmost Greenlandic Inuit, during the 1930s and 1940s. Analysis of the transcripts includes musical notation of the songs and English translations of the lyrics. An accompanying CD has recorded examples of throat singing and drumming patterns.

The author, Michael Hauser, an ethnomusicologist at the Royal Academy of Music, Copenhagen, shares his expertise in transcribing music not previously scored and analyzing musical patterns that are not typically Western in their tonality. Hauser's transcriptions and analysis of the Inughuit songs allow him to focus on objective and measurable aspects of the music, such as tonal and rhythmic patterns, the use of motifs in the songs, and the occurrence and distribution of different song forms and melody types.

Both volumes discuss traditional Inuit songs in depth, primarily Inughuit songs from the Thule area, but also songs from the Ummannaq and Upernavik areas of West Greenland, from Baffin Island, and from the Copper Inuit. These volumes present for the first time the incredible field recordings made by Erik Holtved in 1937. Hauser has notated the recorded songs in their full length—with drum accompaniment and the texts or singing syllables used—and each song is accompanied by his analysis of a representative stanza. Hauser himself recorded approximately 350 traditional Inuit songs in 1962 and another 240 in 1984. These recordings too are transcribed and analyzed in the volumes, in the same manner as Holtved's. Each volume is