

*scandiacus*). In contrast, photographs of narwhal (*Monodon monoceros*), ringed seal (*Pusa hispida*) and wolverine (*Gulo gulo*) were conspicuously absent, although Lynch provides an entertaining tale of missing the shot on this last species (p. 48), which many of us who drag a camera around can relate to. Finally, there is only one photograph of an insect in this book, despite their critical importance to Arctic terrestrial ecosystems.

To be fair, however, the book is not intended as a catalogue of all Arctic wildlife. For those unfamiliar with Arctic plants and animals, this book provides a stunning look at a sufficient variety of species to satisfy your interests. For those who have been in the Arctic, this book will probably whet your appetite to see what else Lynch has produced.

There are certainly a lot of coffee-table books out there on the Arctic, many of which have equally impressive photographs. What set this book apart for me was the personal anecdotes that Lynch used, which clearly highlighted his intense, palpable love and experience with this region, as well as his solid, accessible blending of scientific facts and theories to help explain why so many of these animals merit our awe, attention, and action. I recommend this book for those who wish to learn and see a little more about wildlife of the Arctic, and it would clearly make an excellent gift for friends and family interested in this part of the planet.

Mark L. Mallory  
Environment Canada  
Canadian Wildlife Service  
Box 1714  
Iqaluit, Nunavut X0A 0H0, Canada  
mark.mallory@ec.gc.ca

**POLAR BEARS IN NORTHWEST GREENLAND: AN INTERVIEW SURVEY ABOUT THE CATCH AND THE CLIMATE.** By ERIK W. BORN, ANNA HEILMANN, LENE KIELSEN HOLM, and KRISTIN L. LAIDRE. Copenhagen, Denmark: Museum Tusulanum Press, 2011. Originally published in Danish and Greenlandic in 2008. Meddelelser om Grønland 351; Man & Society 41. ISBN 978-87-635-3168-9. 232 p., maps, colour and b&w illus., references, appendix. Hardbound. €40, DKK300, US\$52.

The past decade has seen increasing concern over climate change in Arctic regions, and effects on polar bears have been a topic of significant interest and debate. There has also been an increased acceptance of the value of local ecological knowledge and recognition of the role that northern resource users play in wildlife management. Local subsistence hunters have extensive knowledge of the wildlife species they depend on, and this knowledge, which complements the quantitative data typically collected, can be of significant value to managers and biologists. With *Polar Bears in Northwest Greenland*, the authors provide a comprehensive and interesting summary of Inuit knowledge about bears, bear hunting, and climate change.

The book, originally published in Danish and Greenlandic, has four main sections (Introduction; Materials, Methods and Background; Results; Discussion), plus a comprehensive reference list and an appendix. The Introduction describes the rationale for the study. Polar bear harvests have increased since the 1990s, corresponding to major environmental changes, particularly in sea ice extent and duration. The authors recognized the importance of collecting local observations to better understand the relationships between bears, hunting, and environmental change, and a survey of local hunters was conducted. The objective (p. 13) was “to gather as much information as possible about the hunters’ observations of climatic and physical changes in the environment, and how these changes have influenced the polar bear catch.” Detailed information on the geographic and seasonal distribution and age and sex composition of harvested bears was also collected. The Introduction also contains a review of the role of local knowledge in studies of Arctic wildlife, including relevant studies of polar bear knowledge in both Canada and Greenland. The authors use the term “local knowledge” to describe the information collected, but note other terms used in the literature, such as “traditional ecological knowledge” (TEK) or Inuit *Qaujimagatuqangit* (IQ).

The next section describes the methods used, including the selection of interviewees, travel to the various settlements, the interview process, data analyses, and statistical methods used. Interviews with 72 experienced hunters of the Qaanaq and Upernavik municipalities were conducted in February 2006 under the auspices of the Greenland Institute of Natural Resources (GINR), the Inuit Circumpolar Council (ICC), and the Department of Fisheries, Hunting and Agriculture (Government of Greenland). The questionnaire, included as an appendix, would be of value to other researchers planning similar studies on polar bears or other Arctic species. Also included is a substantial section of background information on physical and climate features of the region, polar bear hunting techniques, hunting regulations and management, and a summary of recent environmental changes. This information provides important context to help readers interpret the survey results.

The most extensive section of the book (pages 28–199) summarizes the results. Descriptions of the interviewees (average age, hunting experience) in the two municipalities are followed by a detailed breakdown (by municipality) of the interviewee responses to the survey questions. The results are summarized in the text, in figures (graphs and charts), tables, and a number of high-quality colour maps. The survey results provide considerable information on bear distribution, behaviour, and ecology, hunting and traveling techniques (and their changes over time), and climate change. Quotations from surveyed hunters are included throughout the section, allowing the reader to read many of the important observations in the knowledge holder’s own words (translated, with notes added by the authors for additional clarification). The authors succeeded in their goal of providing “a reasonable balance between the need to

generalize information without excluding the most interesting details” (p. 13).

The Results section ends with a detailed description of the polar bear harvests reported by the survey participants. The interviewees reported a total of 588 different harvest events, involving 754 individual bears, between 1952 and 2005 (ca. 60% from 1991–2005, ca. 35% from 2001–05). An extensive summary of these harvests, including age/sex composition, geographic and seasonal distribution, and hunting methods (dogsleds versus skiffs), is presented in tables, charts, and maps.

The text concludes with a brief Discussion, which reiterates the study objectives and adds additional context to the results. The authors summarize available information on the status of the two hunted polar bear populations (Kane Basin and Baffin Bay) and caution, on the basis of reported catches, that both populations may be subjected to over-exploitation. They also discuss the value and advantages (and disadvantages) of collecting local knowledge, noting, for example, that the study provided qualitative data that could not be collected using other methods and that can supplement quantitative data collected during biological research. Born et al. conclude by recommending that local observations “be collected systematically through a long-term monitoring system established locally to provide supplementary information on trends in distribution and local density of polar bears” (p. 214).

Overall, this impressive volume is an important contribution to our knowledge of polar bear ecology and distribution. It is well-written and edited and free of jargon, and the printing and reproduction quality are excellent. I found no errors of fact or omissions of important material. The book is well documented, with 93 references (English, Danish, and Greenlandic) on a variety of relevant subjects, including polar bear ecology and status, use of local knowledge in research and management, Greenlandic culture and harvesting techniques, and climate change. There are a total of 119 tables and 37 figures (charts and maps) in addition to a number of high-quality colour photos of bears, hunting techniques, local landscapes and communities, prey items (e.g., pagophilic seals, walruses) and successful predation events.

Born et al. provide a detailed and informative account of the distribution, biology, and harvesting of polar bears and the effects of recent climate changes on the species and the subsistence hunt. I highly recommend this book for researchers and managers involved with polar bear conservation. The information contained here is also of value to many other interested parties and is not limited to those with an interest in polar bears or Inuit harvesting. For example, the reports on climate change observations are of general interest and valuable both to researchers in a wide range of disciplines and to laypersons.

*Jeff W. Higdon*  
45 Pilgrim Avenue  
Winnipeg, Manitoba R2M 0L3, Canada  
*Jeff.Higdon@gmail.com*

SIKU: KNOWING OUR ICE. DOCUMENTING INUIT SEA-ICE KNOWLEDGE AND USE. Edited by IGOR KRUPNIK, CLAUDIO APORTA, SHARI GEARHEARD, GITA J. LAIDLER, and LENE KIELSEN HOLM. Dordrecht, Germany: Springer, 2010. ISBN 978-90-481-8648-8. xxxi + 501 p., 38 contributors, maps, b&w illus., appendixes, colour plates, index. Softbound. US\$49.95.

This ambitious book comprises 20 contributed chapters. Its five co-editors enlisted 38 authors to examine comparative Inuit sea-ice knowledge. Credit the International Polar Year (IPY) 2007–2008 for stimulating these extensive efforts. Two geographical emphases emerge: central Beringia, featuring about 15 communities on Russian and North American sides of the Bering Strait; and eastern or Atlantic North America, featuring a like number of communities distributed between Canada and Greenland (Fig. 1.1, p. 6). Here we find abundant evidence for the caution that the Arctic defies generalizations. Instead of one-size-fits-all explanations, the Arctic is better viewed as awesomely varied sets of site-specific, dynamic, and complex relationships and processes. In that sense, Carl Benson’s observation that “ignorance of the Arctic is an infinite resource” rings true. Filling circumpolar spatial gaps in local knowledge of sea ice would likely take forever and require infinite resources.

However gratified we should be that indigenous knowledge of Arctic sea ice has attracted this significant assault on ignorance, my admiration for this emphasis is tinged with regret. Funding for dozens of research projects during IPY 2007–2008 was generated in reaction to perceived risks to communities and their locally based knowledge systems. Those risks were in turn linked to concerns over global climate change. The overview (Chapter 1) credits mounting alarm over anthropogenic causes for trends in baseline environmental conditions with funding for the collective Sea Ice Knowledge and Use (SIKU) Project. Sea ice, like the polar bear, has recently assumed bellwether status. Together, these two icons can be simplified in non-Arctic residents’ minds to symbolic shorthand for the health of the Arctic as a whole. “Ice” as a first-order heading with second-order subheadings fills nine columns in the book’s Index (p. 484–488), but “Climate Change” earns second place for index entries by occupying one and one-half columns of heavily page-referenced entries (p. 481). Must urbanized, Western societies deem ecological and cultural systems to be threatened with collapse before they merit support for trans-disciplinary studies? If so, the achievements in SIKU represent “salvage ethnography” to a regrettable degree (cf. Henshaw, Chapter 19, p. 440).

Any review of Krupnik et al.’s book is hard pressed to convey the full extent to which its many contributors have enriched the subject of sea ice knowledge and use (Table 1.1, p. 18–22 summarizes administrative origins, personnel, and funding sources contributing to this volume). To make sense of this enrichment, I suggest that readers new to Inuit uses of sea ice open the book first to the concise Epilogue (Bravo, Chapter 20, p. 445–452). Reading this last chapter first may