

advocating aggressive efforts to commit oral information to computerized databases before it is lost. Nuttall observes that IK “is a difficult and long enough process to explain and teach in local contexts, where it is vital and real, so how can it be gathered and stored in databases without decontextualising it and depriving it of meaning?” (p. 172). Acknowledging the continual loss, modification, and addition to the stock of IK, Nuttall argues for a re-contextualization of knowledge, to relocate it within appropriate local spheres. Insofar as IK is seen to be important for ensuring that resource use is sustainable, this suggests the importance of an ongoing involvement of local user communities in all aspects of decision making regarding resource use.

With regard to his extensive discussion on indigenous communities’ whaling practices, the author has been careful to distinguish between the actions and beliefs of conservationists, those of environmentalists, and those of advocates for animal rights. However, he is less careful in stating that opposition to the Makah gray whale hunt came from conservationists. In fact, the opposition to the Makah gray whale hunt was voiced overwhelmingly by radical environmentalists (espousing a protectionist position), animal welfare and animal rights supporters, anti-Indian activists, and political opportunists. The author also makes reference to indigenous people as “managers” of living resources (e.g., p. 99). However, despite the use of the term “manager” (or “management”) by some indigenous spokespersons, indigenous people are increasingly at pains to point out that the term “management” is not merely inappropriate (“how can humans manage animals’ behaviour?”) but, according to indigenous values, it is ethically offensive (as it implies human control over nature). Elsewhere the author shows appreciation of indigenous concern about others’ inappropriate use of the term “wilderness” when referring to their homelands—which are anything but untrammelled by human activity, having been fully occupied for millennia.

This book is a useful examination of the ongoing debate regarding sustainable development in the Arctic, although focused mostly upon Greenland and Alaska, where the author has personal experience. The book should appeal to a broad readership of Northerners and northernists, environmentalists, and those with an interest in contemporary indigenous affairs. It is mercifully jargon-free, although it could have benefited from tighter editing, as there are a number of repetitive sections and several incorrect spellings of names (e.g., Chisasibi, Watt-Cloutier, Marquardt, Stenbaek). This reader also regrets the publisher’s choice of very small print for the notes at the end of each chapter.

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RINGED SEALS IN THE NORTH ATLANTIC. Edited by M.P. HEIDE-JØRGENSEN and C. LYDERSEN. Tromsø, Norway: NAMMCO Scientific Publications, 1998. Vol. 1. ISBN 82-91578-04-4. 273 p., maps, b&w and colour illus., bib. Hardbound. NOK 350.00.

The primary goal of this volume was to compile papers that reflect the present state of knowledge on ringed seals in the North Atlantic. However, it also includes information on other ringed seal populations, such as the relict Baltic, Ladoga and Saimaa seals, and studies on ringed seals in the Russian Arctic and the Canadian Western Arctic. The volume covers a wide range of topics, from biology to population assessment, feeding, and contaminants in seal tissues.

A difficulty in trying to construct a unified volume on a particular species from a group of separate papers is that the articles themselves vary in scope and subject matter. It falls on the shoulders of the editors to blend these into a presentable form, by linking them together with a thorough introduction to the subject and outlining the areas where future research is needed.

Of the 13 papers in the volume, the overview paper by Randall Reeves is probably the most useful. It is an extremely thorough summary of the many studies, both past and ongoing, that have been conducted on this important Arctic species. This paper also contradicts a statement in the introduction to the volume, which says that far too little is known about this dispersed and important marine mammal species. In fact, as can be seen in the overview paper, the ringed seal has long been the subject of research by scientists seeking to manage Arctic seal populations in the face of Inuit subsistence harvests. Several previous monographs exist on the species from the Eastern and Western Canadian Arctic. Reeve’s overview paper does an admirable job of summarizing previous work and cataloging new results from research now being done in the whole of the Arctic.

It is inevitable that the quality of the individual papers in such a volume will vary greatly. Of the three papers that summarize the regional status and biology of ringed seals, the review by Christian Lydersen clearly shows that the Norwegians have been very effective at using modern methods to advance our knowledge of the species. Research in Svalbard on captive and free-ranging ringed seals has yielded important new information on behaviour and energy budgets. However, Belikov’s paper on ringed seals in the Russian Arctic reflects the low level of research effort in that area. There is little new information about Russian ringed seal stocks, which are now relatively unimportant in the local economies. Sipila and Hivarinen’s paper on the Saimaa and Ladoga ringed seals suffers from a lack of systematic scientific data and depends on many anecdotal reports. Some intriguing and unexplained statements about large numbers of stillbirths vaguely linked with high levels of pollutants leave the reader wishing for more interpretation and analysis. Judging by the authors’ description, the situation of the apparently endangered

Saimaa Lake population could be well monitored and studied using currently available technology. Yet the results presented in the summary seem to indicate that such opportunities are not yet being pursued.

The two papers on catches of ringed seals in the Canadian and Greenlandic Arctic by Reeves et al. and Tielmann and Kapel are useful compilations of data available from fur records kept in both countries. Neither paper goes into the rising costs incurred by the Inuit in hunting ringed seals. The cost of operating machinery and buying modern equipment has had a major negative impact on the overall harvests of seals in the last two decades. The drop in the value of pelts after the anti-seal hunting campaigns, directed at the harp seal industry in the 1960s–70s, further reduced revenues in the already cash-precarious Inuit hunting economy. These changes threaten the livelihood of the full-time Inuit hunters, who are aging and not being replaced by younger Inuit. Hunters remain the main providers of food for the Arctic communities.

Much of the past and recent work on ringed seals has included deriving population estimates from aerial counts. Survey sampling methods have been standardized to some extent largely through the efforts of Canadian researchers in the 1970s and 1980s. Of the three papers dealing with regional population estimates, Kingsley's analysis for the large Baffin Bay area provides the most interesting approach. His calculation of ringed seal abundance is based on (1) direct counts from aircraft and (2) the use of a "top down" model, estimating the number of ringed seals consumed by a given bear population. The two methods appear to give similar estimates. At first glance this is extremely encouraging, but some caution must be used in assessing these results. Many of the factors used to derive estimates of ringed seal numbers in the bear consumption model have yet to be verified by actual data. The same weakness applies to the direct population estimates. Arbitrary adjustments, such as the doubling of seals counted on the ice to account for animals missed during the survey, allow the modeler great flexibility in adjusting his figures according to his own inclination. The arguments can easily become circular and really do not yet provide independent proof that the population estimates of ringed seals are valid.

The remaining four papers are diverse in nature. Kingsley's paper on the failure of reproduction in a group of ringed seals sampled along the Beaufort Sea coast west of Banks Island provides a very interesting insight into the complexity of interpreting age-specific mortality and reproductive data. He reaches a very important conclusion: that reduction of reproduction and subsequent recovery to "normal" levels depends on changes in individual animals' body condition and reproduction status, as well as on shifts ("turnover") within the population. As we begin to evaluate the still unstudied ringed seal populations living in the vast areas of consolidated pack ice in the Arctic, such complicated dynamics will be encountered in such a fluid and less structured habitat.

The remaining three papers fall into the category of data reports and "tidying up" of unpublished results. Netting and tagging results from Greenland reported by Kapel et al. show that ringed seals move between districts in Greenland and sometimes travel long distances. No patterns of movements are discussed, so the results are of limited interest in showing anything new about ringed seal ecology. The paper by Siegstad et al. on the diet of ringed seals is essentially a catalogue of prey species, which does not add any novel or substantial insights into ringed seal feeding ecology. Heavy metal analyses of ringed seal tissues are reported for Greenland ringed seals by Dietz et al. Results are similar to those of studies elsewhere and provide an addition to the overall database.

Scientists interested in this species and other Arctic marine mammals will find this book a useful addition to their reference material. However, this relatively expensive volume is not a book for non-specialists or those with only a casual interest in Arctic marine mammals. With the exception of the overview paper, the articles deal with specific regions and disparate topics. The book is, however, a good compendium of recent studies on the species and contains some ideas on where future research efforts might be directed.

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THE HILLSIDE SITE, ST. LAWRENCE ISLAND, ALASKA: AN EXAMINATION OF COLLECTIONS FROM THE 1930s. By DON E. DUMOND. Eugene, Oregon: University of Oregon, 1998. University of Oregon Anthropological Papers No. 55. vi + 199 p., maps, b&w illus., bib., 29 plates. Softbound. US\$15.00 + s&h.

St. Lawrence Island lies in the northern reaches of the Bering Sea, near the strait of the same name where North America and Asia make their closest approach. Archaeological sites in coastal areas bordering the Bering Sea bear witness to a variety of marine hunting cultures that occupied those shores over the past few thousand years. Standing at the crossroads between continents, and at a gateway to the high Arctic, St. Lawrence Island has long been of interest to archaeologists in their search for clues to the development of Eskimo (or Inuit) culture. Included in the St. Lawrence Island alumni are some of the pioneers of Arctic archaeology, including Henry B. Collins, Jr., James L. Giddings, Otto Geist, Froelich Rainey, Hans-Georg Bandi, and James A. Ford.

Among the artifacts that have been found in frozen house remains and middens at archaeological sites on St. Lawrence Island are elaborately decorated pieces fashioned