

This book, far from being devalued by recent events, offers one last comprehensive look over the shoulder at the Arctic in the eighties — the work done in assessing the impacts of specific development proposals, which is impressive, and the work still undone, which is, in some basic respects, extensive.

A benchmark for the look ahead into the 1990s is the recent report on the Gulf Oil Beaufort Sea drilling proposal by the Inuvialuit's Environmental Impact Review Board. In addition to recommending against the drilling request, the board indicates that a rethinking of responsibilities, liabilities, and preparedness is required. At the same time, a federal department has warned that a federal environmental review of the drilling proposal may still be called for to answer outstanding questions on fisheries and sea mammals. Thus our look at environmental reviews of the 1980s suggests it is time, high time, to assess where we've been and where we're going with respect to reviews in the 1990s.

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**A VICTORIAN EARL IN THE ARCTIC: THE TRAVELS AND COLLECTIONS OF THE FIFTH EARL OF LONSDALE 1888-89.** By SHEPARD KRECH III, with a biographical introduction by J.V. BECKETT. Seattle: University of Washington Press, 1989. 207 p., 8 colour plates, 150 black and white illus., notes, index, bib. Hardcover. US\$35.00.

In February 1888, Hugh Cecil Lowther, the Fifth Earl of Lonsdale, set out on a 15-month-long journey that took him across a significant portion of northwestern Canada and Alaska. Although the lure of "sport," primarily hunting, and the chance to test his manhood were part of Lonsdale's motivation, escaping from personal scandal and financial difficulties seems to have been the primary reason for his journey. As was customary with aristocratic Victorian travelers, Lonsdale collected artifacts and souvenirs from the native people he met along the way. Although many important items have been lost, a significant collection of 200 items remains in the British Museum. This book documents both the Earl's travels in the Arctic and the remaining museum collection.

The book has three parts. Part I is an introductory biographical essay on Lonsdale by J.V. Beckett, which places "The Yellow Earl" in social and historical perspective. His arctic sojourn was only one interlude in the very active, diverse life of the man who led one of the most powerful aristocratic houses in England for over 60 years. As a young man, Lonsdale lacked good sense in financial matters and acquired a reputation as a social rake. When his indiscreet involvement with actress Violet Cameron reputedly earned him a second reprimand from Queen Victoria, the trustees of his family's estate, already concerned about his spendthrift tendencies, decided he needed to go abroad. Although he was always a flamboyant and sometimes controversial personage, Lonsdale returned from his arctic adventures a more mature individual. He became more actively involved in the financial fortunes of the Lonsdale estate. He held several important civic posts. And most importantly, he became deeply involved in sports ranging from fox hunting to automobile racing. He is particularly noted for his central role in the development of modern British boxing.

Part II takes up the narrative of Lonsdale's journey. Author Shepard Krech introduces this section with an astute discussion of Lonsdale as the Victorian Traveler. He focuses on Lonsdale's presentation of self and particularly the Victorian view of "the Other — people whose culture is different from the traveler's own" (p.23). Here Krech addresses both some of the contradictions between Lonsdale's diary and letters and some of his insensitive comments

about the native people he encounters. Krech skillfully uses these comments to tell us more about Lonsdale the man and the society from which he came. Despite his prejudices, Lonsdale proved an able, adaptive, and fearless traveler.

The journey itself is presented in segments, with each segment followed by excerpts from Lonsdale's diary and letters, many written to his wife, describing his travels in greater detail. Thus, his trip began with passage to New York by steamer, continued to Montreal, Ottawa, Winnipeg, and Qu'Appelle Station by train, then proceeded by sleigh, boat, and foot to Fort Chipewyan, Fort McPherson, Liverpool Bay on the arctic coast and back, then went overland to the Porcupine River, by boat down the Porcupine and the Yukon rivers to Russian Mission, overland by dog team to Nushigak and then Katmai, and finally by steamer to Kodiak. Along the way Lonsdale met the whole range of native people living in the areas through which he traveled. His descriptions of them are uneven: toward the end of his journey, he tells us much less about what he is seeing and doing than at the beginning. His most detailed, and probably his most valuable, information concerns the Inuvialuit (MacKenzie Eskimo), with whom he went on a beluga whale hunt. Historic black and white photographs from many of the locations Lonsdale visited, taken at roughly the same period as his journey, illustrate this section and give the reader a visual sense of what he saw.

Part III focuses on Lonsdale's collection in the British Museum. Here again, Krech's insights into both Lonsdale and Victorian attitudes and collection practices enhance the reader's understanding and appreciation of the collection. Equally important for this material, collected by a nonscientist, is the rich comparative and contextual information Krech brings to bear on each piece. After an introductory section, the majority of this part consists of detailed discussion of each artifact group. In presenting the 200 items in the collection, Krech divides the material into nine categories: Tools for Manufacture and Preparation, Hunting Equipment, Fishing Tackle, Clothing and Bodily Decoration, Vessels and Containers, Transportation, Artifacts of Ritual, Ceremony, and Play, Tobacco, and Curios.

The text is very readable without skimming on the detail in the descriptions that makes such commentaries so valuable when, like these, they are well done. Good quality color plates of selected artifacts appear at intervals throughout the text. Part III concludes with black and white photographs of the remaining items. Detailed chapter notes, an extensive and appropriate bibliography, an index, and a useful concordance of catalog, registration, and figure numbers complete the book.

I recommend this book to anyone with either a professional or avocational interest in the history, ethnography, or material culture of the northwestern Arctic. The accounts of Lonsdale's travels and collection are very interesting by themselves, but the biography of Lonsdale, as well as the additional commentary on his social context and the pervasive attitudes of the era in which he lived, significantly enhance our appreciation and understanding of Lonsdale's journey and his collections. I found myself with but two regrets upon completing this book, one major and one minor. The major regret is that so many valuable specimens that Lonsdale collected have been lost — the skin clothing pictured on page 16, the Inuvialuit kayak, the collection of snowshoes from all across the northwestern Arctic, and many other items would all be invaluable assets to any museum's arctic collection today. The minor regret is that the book contains no picture of Lonsdale's long-suffering wife, his "little bod" to whom he wrote many of his letters.

*A Victorian Earl in the Arctic* is well put together, with good quality paper, binding, and photographic reproduction and no significant typographical errors. Although its larger-than-average size and many illustrations suggest a coffee table format, its contents have considerably more meat than is often found in such volumes. Krech has taken material that could have been little more than light-weight stuff and turned it into a substantial, readable contribution. In short, the book is handsome but not opulent, scholarly but not pedantic. Krech and the University of Washington Press have made

a valuable addition to the literature on travel and material culture in the North.

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WINTER; AN ECOLOGICAL HANDBOOK. By JAMES C. HALFPENNY and R.D. OZANNE. Boulder: Johnson Publishing Co., 1989. 273 p. Softbound. Price not indicated.

"Winter" has so many different meanings, depending on latitude and biome: warm and wet, cool and misty, cool and rainy, cold and snowy, cold and dry. This book, with such a general title, is clearly intended as a textbook, so it is disappointing to find it so restricted in geographic and climatic coverage to a part of the southern Rocky Mountains. It is a frustrating book to read. We certainly need more attempts to explain "winter" to the general public, but not like this. There is some good information in the book, but the average reader would be hard pressed to separate it from the numerous errors, misinterpretations and sloppy editing.

A few examples: On p. 20 we learn that "There are three species of weasels in North America: the short-tailed weasel, the long-tailed weasel, and the ermine." (Whatever happened to the least weasel?) A couple of sentences later we read, "A weasel in its white color phase is commonly called *ermine*." (This is not a *colour phase* but a winter *pelage*; besides, we were just told that *ermine* was one of the three species of weasels.) A few sentences more and we read, "Those [weasels] in northern regions expend energy to make two color changes each year. Southern weasels may also perceive winter but the selective pressures are low enough that they do not respond with a color change." This implies that southern weasels do not expend energy in a *moult*, which, of course, they do, just as the northern individuals do.

On p. 39 the table of selected Inuit and Indian names for different types of snow is full of misspellings and has the two languages garbled and partly interchanged. A probable cause is that the present authors cite, as one source, Williams and Major (1984), a publication that was itself riddled with errors and misspellings.

In the discussion of strategies for coping with winter, I looked in vain for any coverage of the exciting studies by C.W. Aitchison on the metabolism and physiology of winter-active subnivean invertebrates.

Throughout the book there is an inordinate attention paid to hibernation as a mammalian adaptation to "winter" conditions. The classic work by Hagmeier and Stultz (1964) clearly showed that mammalian torpor is an adaptation to environmental heat and dryness, not cold and snow. On p. 76 we read that ". . . sheep and white-tailed deer" have "large feet" and this prevents them from breaking through snow crusts. The situation is not so simple. *Ovis dalli* and *Ovis canadensis* as well as *Odocoileus virginianus* have more flotation than does *Cervus canadensis* but much less flotation than *Rangifer tarandus* (Telfer and Kelsall, 1984). In other words, sheep and white-tailed deer are less liable to break through a crust than wapiti, but much more liable to break through than caribou. Telfer and Kelsall (1984) summarized their findings by writing ". . . white-tailed deer have compensated behaviorally for limited morphological adaptation to snow . . ." On p. 79-80 the discussion of the phenological critical periods of small taiga mammals is mangled. On p. 85, 280 km does not equal 448 miles!

Pruitt (1966a [not 1970, as cited here]), in a study of the mammals of Low Arctic tundra in northwestern Alaska, introduced a "Snow Index" that agreed with species and populations of small mammals found on the same study plots in subsequent summers. Because a tundra snow cover affects small mammals not only by affording some insulation from the supranivean thermal and wind environment but also by giving protection from predation and by governing, to

some extent, subnivean photoperiod and quality of light, I concluded that the SI expressed ". . . a rough approximation of the relative ecological values for small mammals of total amount of cover, its thickness and its density." Marchand (1982) misrepresented this SI by implying it was devised only to describe a direct relationship between snow density and insulation value. Marchand then inserted some hypothetical numbers in the SI and showed it did not model the insulative value of a snow cover. SI was not introduced as doing so. He attempted a transfer from an area of windswept arctic tundra to an area of temperate-zone forest in Vermont, U.S.A.!

Marchand's misrepresentation of the purpose of SI is now further compounded by Halfpenny and Ozanne on p. 81. These present authors have changed the name of my "Snow Index" to "Stability Index," say that it does not model subnivean temperature stability, and repeat Marchand's numbers and his erroneous statement of the original description. This entire sequence first by Marchand and now by Halfpenny and Ozanne is a specimen of what Stefansson (1928) called "the standardization of error" and will make a good example for classes in the logic of science.

The discussion of the disappearance of the caribou of East Greenland (not the "western coast") is completely distorted, even though Degerbøl (1957) is correctly cited. The present authors state (p. 67), "In the fall of 1899, large herds of caribou existed along the western coast of Greenland. These caribou had been there for as long as we have records. When the Scandinavian fishermen returned to the coast in the spring of 1900 all the caribou were gone." In actual fact, Degerbøl stated that the caribou had been found in the Scoresby Sound region of East Greenland only in 1891-92 by the Danish Ryder Expedition. The Swedish Nathorst Expedition saw only a few herds in 1899, and then in 1900 the Andrup and Kolthoff expeditions did not see any animals. These arctic exploring and mapping expeditions were hardly "Scandinavian fishermen!" And, of course, caribou still exist in "western Greenland," although, as Vibe (1967) clearly demonstrated, there are great fluctuations in numbers in complicated responses to climatic changes. He also elaborated on the extirpation of the caribou of East Greenland (actually Northeast Greenland). A recent detailed history of all the Greenland caribou populations (including local extirpations) is in Meldgaard (1986).

On p. 107 the authors imply that "neatsfoot" oil refers to moose feet, forgetting that "neat" is an old word referring to cattle.

In the discussion of winter reduction of body mass in some large mammals no mention is made of such reduction in small mammals (e.g., shrews), where it is known as Dehnel's Phenomenon, or of Mezhzherin's (1964) explanation of it as an adaptation to winter, or of the extensive studies by Hyvärinen and his students on the physiology and histology of the phenomenon.

On p. 153 we read again the old folktale that caribou use their antlers to scrape away snow from their forage, even though neither Pruitt (1966b) nor Bubenik (1975) could find actual examples. On p. 175 we learn that spruce branches ". . . all slope downwards" (they don't) and on p. 180 we learn that ". . . it does not get dark in the polar regions" (it does).

I am particularly concerned about some of the information, or lack of information, regarding human activities in winter. The discussion of the importance of moisture loss through clothing is inadequate. There is no mention of the absolute necessity of moisture-permeable (e.g., felt or duffel) footwear and the types of ski bindings they require. Windchill is discussed in the erroneous terms of "equivalent temperature" instead of the widely used and more accurate statements of heat loss in  $W \cdot m^{-2}$ . The acronym WET is used for "windchill equivalent temperature." This is a poor pedagogical mnemonic device because it tends to generate confusion between evaporative cooling and true windchill.

Moreover, even if one wanted to calculate "WET," one could not get a correct answer using Figure 96. Falconer's (1968) nomogram showed wind velocity in miles per hour across the top with the equivalent in knots across the bottom. The nomogram, now presented as Figure 96, has wind speed in miles per hour across