

muskoxen in zoos and on game farms are limited but have steadily increased in North America since the pioneering efforts of John J. Teal in Vermont in the 1950s. The wool of muskoxen, termed *qiviut* by the Inuit, is a very fine, exceptionally warm fiber and has sparked interest in the potential of raising muskoxen on a commercial basis. The author sets out to condense in written form many years' experience of working with captive muskoxen, particularly four years spent with the Musk Ox Development Corporation (MODC), established in 1964 in Fairbanks and currently located in Palmer, Alaska. This book is intended as a down-to-earth guide to feeding, handling, raising, breeding and managing muskoxen in captivity, and as such it is largely successful.

Muskox Husbandry is well organized into twelve chapters and six appendices. The longer chapters are devoted to handling, facilities, veterinary care, calving and weaning, while shorter chapters describe basic muskox taxonomy and ecology, feeding, mating, determination of pregnancy, *qiviut* collection, animal identification and transportation. The chapters on facilities and animal handling, calving and weaning are particularly strong, reflecting Groves's knowledge of muskox behaviour. The author emphasizes throughout that captive muskoxen are tamed wild animals, not domesticated livestock bred for many generations to be docile. They must be worked with intensively when young to become manageable; otherwise they can become difficult and sometimes dangerous. Groves describes in some detail the ways in which muskoxen respond to various situations and offers many insights into methods of gently manipulating their behaviour. After several years' experience working with captive muskoxen at the University of Saskatchewan, we often found ourselves nodding in agreement at common experiences and observations.

Unique and useful plans for pens, pastures, feeders and barn layout are included in the chapter on facilities. Muskoxen tend to worry fences, particularly during the breeding season, and pens intended for mature males must be strong enough to withstand the charge of a 350 kg bull. More than one pickup truck has been relegated to a wrecking yard following a lost argument with an ill-tempered muskox bull! There are suggestions for erecting fences on permafrost, arrangement of chutes and pens for mating, weaning, weighing and intensive handling. The chapters on calving and weaning are detailed and leave the reader well prepared for these important events. Groves believes that the key to having tractable muskoxen is intensive training of young animals, and she describes specific methods of bottle feeding, halter breaking and maintaining gentle but firm control of their behaviour. She has had unique success in maintaining control of mature males outside the breeding season.

The chapters on feeding, veterinary care and pregnancy determination could have been stronger had they been written by someone with a more specialized knowledge of these areas, but the information presented is accurate and provides a good starting point for those interested in keeping muskoxen. Common health problems in captive muskoxen have included wounds from fights, parasites, heat stress, worn teeth and some infectious diseases. Although calving problems are rare, newborn muskoxen are prey to some

serious diseases in captivity. Scouring (diarrhoea) has been a frequent cause of neonatal mortality in several captive muskox herds. As Groves clearly describes, calving and the early postnatal period are critical times, requiring considerable care and attention if calves are to survive the first few weeks of life.

At times we felt that the focus of the book was rather heavily weighted toward the management and handling used at one particular facility. A greater experience of muskoxen kept at other facilities would have broadened the book's scope somewhat. It was a bit surprising that there was little mention in the book of the economic aspects of muskox husbandry. For someone considering muskoxen as a source of *qiviut* and profit, a basic discussion of costs and revenues would have made a useful addition. The MODC operation, a non-profit cooperative, is the largest and longest-running commercial muskox operation in North America, and the author must be aware of the difficulties of realizing financial gain from *qiviut* sales. Groves points out early, however, that the book is primarily a summary of her four years' experience with the MODC herd, and it is consistently apparent that her focus is on the delights and frustrations of working with these unique animals rather than on the economic bottom line.

"If not needed to feed calves, the milk is good in coffee and makes excellent yogurt and ice cream" (Chapter 8, Calving). Groves's writing is easy to read. Her style is straightforward and peppered with unusual observations and inventive suggestions. The writing is sometimes chatty and the book could have been more rigorously edited; some sections might have been condensed. The figures and tables are simple and easily followed, and the text is printed in large, legible type on acid-free paper. The book is well indexed and referenced, contains lists of equipment suppliers and notes where expertise on specific areas of muskox biology may be found. The appendices and text summarize essential but previously scarce information on the use of vaccines and other drugs, commonly measured blood chemistry values and feed requirements of muskoxen.

As a practical guide for those interested in keeping muskoxen, this book can be warmly recommended and is well worth the price. The book is not intended as a general text on the biology of muskoxen, but Groves refers the reader to useful sources at the end of each chapter. *Muskox Husbandry* will find a welcome home on the shelves of muskox owners, veterinarians and anyone interested in the biology of muskoxen.

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THE INUIT AND THEIR LAND: THE STORY OF NUNAVUT. By DONALD PURICH. Toronto: James Lorimer and Company, 1992. 176 p. Softbound. Cdn\$16.95.

The creation of Nunavut is the culmination of a dream of the Inuit in the Central and Eastern Arctic. Donald Purich, director of the Native Law Centre at the University of

Saskatchewan, offers one of the more concise stories of this new territory in our federal system. One of the objectives of the book is "to sensitize Canadians to the major issues Canada will have to face as Canada's Inuit work towards building Nunavut" (p. 5). For Purich, Nunavut is an important development in our federal process because he associates it with building "a pluralistic society in which Aboriginal people play an important role" (p. 4).

Indeed, Nunavut will be an important part of the Canadian mosaic. It will constitute one-fifth of the area of Canada, the largest political jurisdiction in confederation. It is made up of about 21 000 people, more than 80% of whom are Inuit. There would be three official languages in the territory, Inuktitut, English and French. There are no trees or highways in the regions, and Iqaluit, with approximately 3500 residents, is the largest of about 30 communities. A decentralized governmental process with strong regional organizations is likely to characterize the government of Nunavut in order to "make it easier to hire qualified Inuit personnel for government functions" (p. 11).

According to Purich, there are very good reasons for creating Nunavut. Culturally, Inuit traditions go back 3000-4000 years. These people have devised a particular lifestyle enabling them to survive in an extreme environment. Through Nunavut, they could preserve part of that lifestyle. Historically, after contact with southern Canadians in this century, a great deal of political alienation has developed, alienation from Ottawa as well as from Yellowknife. Nunavut would bring the public decision making closer to home. In addition, there are psychological reasons for Nunavut: "the Inuit remain convinced that Nunavut can make a difference to Inuit social conditions" (p. 61).

There are also strong arguments opposing Nunavut. For example, a divided territory would weaken the NWT's voice in Canadian affairs; a divided territory would weaken the voice of aboriginal peoples in the region. There are also disputes over the boundary of Nunavut, claims by the Dene and by the Cree from Saskatchewan. And of course there is concern over the cost of establishing a new federal territory. One estimate is that it would cost an additional 10% to operate two territories instead of one, and there would be an initial cost of over \$500 million to set up the new government.

In two chapters, "Nunavut and Aboriginal Rights" and "Inuit Land Claims," Purich provides the context for the Inuit situation in the Eastern and Central Arctic. In terms of the right to self-government, Nunavut could represent a "breakthrough" for aboriginal peoples — it may be the "first Aboriginal government to have provincial-type powers" (p. 116).

In regard to land claims, the Inuit will retain 352 000 km² of the total Nunavut area, approximately 1.9 million km². They will also have sub-surface rights on 36 257 km². In addition, they will receive \$580 million compensation (in 1989 dollars) and a percentage of royalties from resource extraction in the Nunavut area. There will also be joint management boards to oversee "land-use planning, environmental impact assessments and wildlife management" (p. 133).

The basis of the Nunavut land claim agreement is a complex 371-page (double-spaced) document. Problems with

interpretation will be very involved, especially with overlapping jurisdictions in the region. For example,

Because the Inuit have used offshore waters, especially ice zones permanently contiguous to the land, many of the provisions of the agreement apply offshore. These include those parts of the agreement dealing with wildlife, wildlife compensation, conservation, land use planning and resource sharing (p. 135).

For the Inuit, however, the trials and tribulations of Nunavut will be worth it. They see Nunavut as "a process of negotiation and community consultation, out of which a new territory and eventually province will arise" (p. 13). Thus, Nunavut is the beginning of a public government in which the Inuit will run the show. Nunavut will be self-government for the Inuit.

The only problem I found with the book was the lack of notes. There are no footnotes or endnotes, which may be the publisher's way of economizing. If economy is the reason, I would propose it be done differently. Tracking some of the excellent sources of, for example, direct quotes requires a bit of time.

Nunavut, then, is more than simply redrawing the political boundaries in the North and in Canada. From a southern perspective, it can be viewed in two ways. It can be seen as a huge part of Canada with resource potential, occupied by a small number of people, most of whom speak a strange language. Or Nunavut can be seen as an important and distinctive part of Canada — one of the challenges in any new Canadian federalism. For those who take the latter view, Donald Purich's book conveys a great deal about the importance of this distinctive region of Canada.

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BOOKS RECEIVED

ALWAYS GETTING READY, UPTERRLAINARLUTA: YUP'IK ESKIMO SUBSISTENCE IN SOUTHWEST ALASKA. Photographs by JAMES H. BARKER. Text by JAMES H. BARKER, with the assistance of ROBIN BARKER. Seattle: University of Washington Press, 1993. ISBN 0-295-97235-1. 144 p., maps, b&w illus., bib. Softbound. Price not given.

ARCHEOLOGY OF THE FROBISHER VOYAGES. Edited by WILLIAM W. FITZHUGH and JACQUELINE S. OLIN. Washington, D.C.: Smithsonian Institution Press, 1993. ISBN 1-56098-171-7. xvi + 271 p., maps, b&w illus., bib., 4 appendices, glossary, index. Hardbound. US\$45.00 + 2.25 p&h.

CANADA'S COLD ENVIRONMENTS. Edited by HUGH M. FRENCH and OLAV SLAYMAKER. Montreal: McGill-Queen's University Press, 1993. ISBN 0-7735-0925-9. xxii + 340 p., maps, b&w illus., refs., index. Hardbound. Cdn\$45.00.

CONVERSATION INUIT/INUKTITUT UQARIURSAUTIT. LEVEL 1. By DOLORES ORTIZ, in collaboration with LUISA KANARJUAQ. Sainte-Foy: Les Presses de L'Université Laval, 1993. (Available from Les Presses de L'Université Laval, Cité Universitaire, Sainte-Foy, Quebec G1K 7P4.) Text in French