

Enough documentation is provided to lend an air of authenticity to the research, but too little is provided to make *Company of Adventurers* a solid study of the HBC's control of the fur industry in Canada.

This matter of partial documentation creates yet another difficulty. The reader is frequently nonplussed to distinguish between statements of irrefutable fact, expert opinion, and hypotheses and conclusions proffered by the author himself. For the most part, Newman makes such distinctions clear, but too often *Company of Adventurers* demands an act of faith many readers will not be willing to grant.

One wonders if the Company would have had such good faith with similar deficiencies in the balance sheets of its factors.

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CIRCUMPOLAR HEALTH '84, PROCEEDINGS OF THE SIXTH INTERNATIONAL SYMPOSIUM ON CIRCUMPOLAR HEALTH. Edited by ROBERT FORTUINE. Seattle: University of Washington Press, 1985. 508 p., appendix, index. Hardcover. US\$40.00.

This volume contains many of the papers presented in Fairbanks, Alaska, in May 1984, the sixth symposium in a series held every three or four years since 1967. The papers deal with the health of three human populations: the "relocated southerners," "the people who have been here in the circumpolar regions for countless generations . . .," and "the visitors," usually belonging to the workforce whose tours of duty vary from a few days to a season or more. Some papers deal with acclimatization of newcomers, others with cultural adaptations in the original populations.

The settlement of a nomadic people is shown to have resulted in a loss of lung capacity and of leg muscle power, as the long treks between hunting and fishing sites are no longer made on foot. Interestingly, hand grasp is maintained to wrestle with snowmobiles! Subcutaneous fat is increased with a lower calorie output and an intake augmented by the availability of southern foods. Many southern foods contain sugar and are associated with dental caries. There is also increasing recognition of diabetes mellitus in a people who were once thought never to exhibit the condition. The effect of increasing adiposity on cardiovascular health cannot yet be demonstrated, but as this generation ages a comparison with their forebears will become possible.

Family planning is discussed in a paper from Finland, and from Greenland teen-age pregnancy, often ended by abortion, showing a need for improved sex education. The improvement in maternal, stillbirth, and neonatal mortality rates associated with delivery in well-organized hospitals is reported. From Alaska comes a report of Caesarean section rates of 25% for private hospitals compared with less than 10% for the Alaska Native Medical Centre. The value of midwives in maternal care is reported from Finland and Greenland. Unfortunately the improvement in pregnancy outcome is not matched in the mortality rates for infants and children, which remain stubbornly high in Labrador, northern Ontario, Greenland, and Alaska. The Finnish experience may provide guideposts to other countries.

A paper from Iceland on computerized records available for the population includes censuses up to 300 years old. It shows the use of linkage between disease records and relatives more or less close as chosen by the researcher. Dr. Petursdottir mentions particularly a study of breast cancer made using these records and throws out the challenge to those in Canada and elsewhere with immigrant populations of Icelandic origin to compare disease incidence among the migrants with that of their cousins in the homeland, a method that has proved a fruitful epidemiological technique in other contexts.

There are papers on infectious disease — historical for smallpox and tuberculosis in the early 1800s, more recently showing tuberculous damage to the lungs of Inuit in past decades, and current problems,

including the reactivation of tuberculosis. Hepatitis B is the focus of several papers, and the problems posed by prolonged virus survival in cold climates are also addressed.

Environmental contamination by mercury from both natural and industrial sources is considered because the metal accumulates in fish and marine mammals, which are important native foods. It appears that in Greenland a high selenium content in the diet has a protective effect. Radioactive and other contaminants blow north on prevailing winds and cause an "arctic haze." They accumulate in lichens, which are grazed by caribou. These are hunted by humans, and so in this nutritional context we have another example of the "global village" with the Arctic an unintended pollution sink. Happily a more benign aspect of northern diet is presented in a paper on "country food," the fish and game pursued and used locally in Labrador in 1980-81.

Tobacco smoke is the most frequently inhaled pollutant, and its deleterious effects are noted in students in Alaska and among Inuit in Canada. It is also reported as a factor in low birth weight and infant morbidity and as a precursor of fatal house fires. There are more entries in the index under alcohol than for any other topic. This reflects the recognized importance of this substance in the etiology of trauma (Jaw Fractures in Greenland), death due to house fires (Manitoba), the fetal alcohol syndrome, mental health problems, and in relationship to suicide. There are papers on strategy and management for both prevention and treatment of alcohol abuse and a plea for the involvement of community elders and of recognition and respect for local traditions.

Papers on health care, sickness care, and the delivery of services show increasing concern with native involvement. The Alaskan program for training and using Eskimo girls as community health aides shows one way of outflanking traditional professional boundaries. A Manitoba report shows the value of special premedical studies for native students seeking to qualify as doctors. The need to improve schools and transport, which may contribute more than direct employment of medically trained personnel, is recognized, as is the value of native involvement in policy-making and administrative areas, as well as in service delivery.

Technically the book is well produced, the print is legible, the illustrations show clearly the points we are to recognize, the tables are well laid out. Is the volume more than a souvenir for those who attended the symposium? It is a good overview of the type of health research going on in the polar regions. It gives names and addresses for workers in the field, sources of further information for those who wish to follow ideas and techniques reported. There are contributions from a dozen countries and many disciplines, showing opportunities for the application of ideas in fields different from those reported. Individual papers have references, which allow access to the field of study and draw attention to organizations active in the field.

Many individuals working in the North will wish a personal copy; many more will consult the book in the libraries of institutions whose staff may go to the North or who work with those already there. Most of the reports are from areas where cost is not an overwhelming obstacle to the delivery of top quality services, but poorer countries with sparsely populated areas, problems with the logistics of health care, and different climatic hazards will also be interested in much of the material presented.

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POPULATIONS AND BREEDING SCHEDULES OF WADERS, CHARADRII, IN HIGH ARCTIC GREENLAND. By HANS MELTOFTE. *Meddelelser om Grønland, Bioscience* 16:1-43, 1985. Softbound. No price indicated.

Waders include the bird families Charadriidae (sandpipers) and

Scelopacidae (plovers). They dominate the avifauna of high arctic tundra of Greenland with eleven regularly breeding species, including nine for which these high latitudes are the primary breeding range. Their seasonal cycles and breeding abundance and success are affected by a variable and short growing season, by patterns and timing of snowmelt, and by the sparse and spatially discontinuous vegetation. The objectives of Meltofte's monograph are to review the annual phenology and populations of waders in high arctic Greenland and to examine the environmental factors that influence these. By and large these objectives are successfully met, using a highly descriptive treatment.

Meltofte carefully chose fourteen study sites (for three of these he was the primary investigator). Twelve of these are in northeastern Greenland, one is on the northern end, and one on northern Ellesmere Island. Other high arctic sites in the Canadian arctic archipelago and in northern Eurasia had comparably accurate census data but were not considered because there was little or no species overlap with the Greenland sites. In some respects this is an understandably restrictive sampling criterion; however, Meltofte thereby lost the opportunity of writing a more synthetic review of high arctic waders.

A strength of this monograph, and of the original research papers reviewed by Meltofte, is the painstakingly collected information on the waders themselves. In contrast, information on the vegetation and physical environment of habitats is parsimonious, not very quantitative, and generally glossed over. As a result, descriptions of habitat are of a very general nature.

Meltofte makes some effort to discuss the quantitative relationships among wader species. For example, he notes that among the fourteen study sites the abundances of dunlin and sanderling and of ruddy turnstone and knot are "highly correlated," with correlation coefficients (r) of 0.64 and 0.76 respectively. Although these are statistically significant relationships, they account for only <58% of the variation, and hence are relatively weak. Overall, this section on species abundance would have been greatly strengthened by a more quantitative approach; in particular the species \times site data matrix was suitable for investigation using multivariate statistics. This might have revealed species interrelationships more clearly than the more simple approach used.

The most important environmental variable affecting breeding phenology was snowmelt in early June, while breeding densities were best correlated with snowcover at about this time. These simple explanations are intuitively reasonable. Again, however, the actual correlation coefficients ($r = -0.36$ and 0.45 respectively) were weak. This indicates that the situation is too complicated to be satisfactorily resolvable with an analysis as simple as the one used. More detailed habitat data is required, as is a statistically more sophisticated analysis.

The discussion section is highly readable and reveals a great deal about the autecologies of the waders that are considered; hence I found this section to be quite enjoyable.

Overall, I found Meltofte's monograph to be an interesting and informative work. I recommend it highly to anyone interested in avian ecology at high latitudes.

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VILLAGE JOURNEY: THE REPORT OF THE ALASKA NATIVE REVIEW COMMISSION. By THOMAS R. BERGER. New York: Hill and Wang, 1985. x + 187 p. Notes, appendix, map, photos. Hardbound. Cdn\$22.95.

Widespread apprehension about the impact and future of the 1971 Alaska Native Claims Settlement Act led the Inuit Circumpolar Confer-

ence (ICC) in July 1983 to request a review of the act by Thomas R. Berger, with his deserved reputation of sympathy to natives gained from his Mackenzie Valley pipeline inquiry and legal defence of native rights. This report of his review commission is written both for the ICC and other aborigines and for politicians and the larger public. Included in the review are two sections with photographs: the first details life on the land (subsistence) indicated from the hearings, while the second notes the hope held by the people for the hearings that took place in a variety of circumstances in 60 villages.

Berger discusses the promise of the 1971 act to bring the Alaska natives into the American mainstream and to use the land to improve the economic conditions. The settlement gave 10% of Alaska (44 million acres), including surface and some sub-surface rights, to village corporations and 12 regional corporations controlled by native shareholders born before the 1971 act came into force. Shares could be traded only after 1991. There would be additional compensatory payments over 11 years. This settlement, which was negotiated by leaders and not subject to popular consultation, seemed generous according to non-natives, but not to Alaskan natives. It has failed expectations. Lack of training, administrative and legal burdens, undercapitalized village corporations, and the imposed corporate structure jeopardized not only the political and social autonomy of Alaskan natives but also their rights to the land, which was to be the bedrock of economic development. Noting that improved social services resulted not from the settlement but from federal programs, Berger suggests that new ways are needed to strengthen the subsistence way of life.

Subsistence is not poverty. Canadians call it the traditional economy. Berger stresses it involves the land, production, distribution and sharing of the produce. Despite intrusion of Western socio-economic institutions and laws, the subsistence culture continues. Though attempts have been made to restore it, such as in a 1980 Conservation Act, whaling and caribou commissions, and migratory bird agreements, the settlement and imposed legal structure threatened subsistence activities. Berger states land is the focus of the cultural conflict. Noting that Europeans justified taking the land on the basis of discovery (articulated by Chief Justice John Marshall) and the profit motive, at more than one point he outlines the historic treatment of American natives, including the imposition of a corporate model, which he speculates was knowingly incompatible with the tribal and subsistence way of life. Subsistence was threatened by transformation of resources into a commodity. The corporate model has unravelled: those born after 1971 have no shares; most regional corporations have lost money and are in debt, thus putting in jeopardy legally alienable land assets (in contrast to outside Alaska, where native land is in trust); cash-poor natives are tempted to sell shares after 1991, as did the Manitoba Metis or Oklahoma Osages.

Interests of corporate shareholders may not be the same as native concerns. Alternatives such as non-profit corporations and cooperatives contain weaknesses, threatening the land as well. For Berger the solution is to transfer the corporation's land to tribal government, thus preventing sales of land or loss through bankruptcy. In the Lower 48, tribal government has been sanctioned by courts (since Marshall) and federal law. Natives have high hopes that tribal government will protect their interests better than the 1971 act and state government. Corporations could be dissolved; self-government and subsistence, including renewable resource management, could secure the way of life.

While Berger shows cultural conflict and the land in relation to subsistence, some problems occur. He suggests the settlement has meant the Alaska map has been coloured by the land reserves, but nowhere in the report is there a map showing areas reserved to various corporations or federal conservation areas. He says there is no study indicating the economic value of subsistence, yet studies made during the Mackenzie Valley inquiry might have been extrapolated to Alaska: he used demographic research on the Kaminuriak caribou herd in Canada. In presenting his solution, Berger makes brief reference to the James Bay Agreement and the COPE Agreement in Canada's Western Arctic; more detail might have given readers a better view of alternatives to 1971. Readers might also have liked to know reasons for the