

investigations of the Bering Sea from 1979 onward, and in the design of such large-scale modern air-ice-ocean projects as the Marginal Ice Zone Experiment (MIZEX).

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POLLUTION AND HYDROGRAPHY IN THE ARCTIC OCEAN

THE ARCTIC OCEAN. The hydrographic environment and the fate of pollutants. Rey, L. (editor, assisted by B. Stonehouse). 1982. London, Macmillans. 433 p, illustrated, hard cover. ISBN 0 333 31017 9. £33.75.

Arctic science has long suffered from the absence of a body equivalent to the Scientific Committee for Antarctic Research (SCAR), which would further its interests within the international community of scientific unions. Because of east-west tensions it is almost impossible at present to envisage such a body taking shape. However, an independent and somewhat idiosyncratic effort to form a committee of this kind was made in 1979, when Professor Louis Rey set up the Comité Arctique International (CAI) with headquarters in Monaco. Membership of CAI is by invitation only; it has no affiliations with world scientific unions, and its role so far has been mainly limited to organizing conferences on various aspects of Arctic research. The conferences themselves are unusual in that their papers too are presented by invitation only, while Professor Rey is adept at wheeling-on international celebrities to provide introductory speeches. The impression of a small, closed club is inevitable.

However, out of such an ambience a good product has appeared. *The Arctic Ocean* comprises the edited proceedings of a conference held by CAI at the Royal Geographical Society headquarters, Kensington, in 1980. The editors have done a good job of welding together disparate contributions into a coherent book. Following celebrity contributions (a foreword by HRH Prince Philip and an introduction by Lord Hunt), the opening chapter by Louis Rey is an entertaining history of circum-Arctic settlement and exploration. The rest is almost two books, interesting two kinds of reader. The first half adds up to an excellent description of the hydrographic, climatic and ice environment of the Arctic Ocean, in which such distinguished contributors as E. L. Lewis, Knut Agaard, Torgny Vinje, Sylvain Joffre, Norbert Untersteiner and H. H. Lamb give readable accounts of the air-ice-ocean system. This is the first time that such material has been gathered together in book form, and I recommend it highly as an introductory text for anyone interested in the physical environment of the Arctic Ocean.

The second half, a more specialized account of Arctic biology and of the effects of oil and chemical pollution, is less successful. For example the single most important review chapter, by R. C. Clark and J. S. Finley on the occurrence and impact of petroleum on Arctic environments, is strong on the results of the 1974-75 Beaufort Sea Project and more recent US work, but tends to ignore the careful work of the Canadian Arctic Marine Oilspill Programme (AMOP) over the last few years. Other chapters on aerosols and airborne pollutants, Arctic marine ecosystems, and the biological consequences of oil and chemical pollution give a rather patchy picture which suggests (probably correctly) that our understanding of the pathways taken by pollutants is still meagre. This is perhaps a salutary reminder that, though the purely physical research of the earlier papers may give a coherent picture and attract the mega-bucks, it does not by any means yield all

the answers we need to Arctic problems. The less glamorous and more painstaking studies of chemistry and biology are vitally important for our understanding of how the Arctic responds to present disturbance by man, and how it will respond in the future.

This book can easily be read and understood by non-specialists; I recommend it to anyone whose interests touch on the Arctic.

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DEVELOPMENT CONFLICTS IN NORTHERN QUEBEC

CONFLICT IN DEVELOPMENT IN NOUVEAU-QUEBEC. 1983. Ludger Müller-Wille (editor). McGill Subarctic Research Paper No.37. Montreal, Centre for Northern Studies and Research, McGill University. 222 p. Soft cover.

This monograph is a product of a Canadian–German project on ‘Ethnicity Problems in Ontario and Quebec (1981–84)’ supported by the Volkswagenwerk Foundation and directed by the editor, Dr Ludger Müller-Wille. Published simultaneously in identical format by Marburger Geographische Schriften, Heft 89, Im Selbstverlag des Geographischen Instituts der Universität Marburg, it contains eight papers which variously discuss aspects of economic development and native peoples (primarily Inuit) in northern Quebec, Canada. The research centred particularly on the impact of the James Bay and Northern Quebec Agreement (JBNQA), signed in 1975 by native peoples, Hydro Quebec, and the provincial and federal governments. Three of these papers are in French, four in English, and one – Müller-Wille’s introductory paper – is in German. Like many other readers I must rely on the brief English abstracts for part of my understanding of this work.

Müller-Wille discusses contacts and conflicts between Inuit and Euro-Canadians (Quebecois) in northern Quebec (Nouveau-Quebec), addressing issues of land claims, cultural sovereignty, and economic potential and expansion. Political and economic aspects of these issues are taken up in papers by Carole Dufour and Benoit Robitaille in French, and Clifford Hastings in English. Dufour provides a very detailed summary of mineral exploration activities over the past thirty years in northern Quebec, suggesting that Inuit participation has been virtually non-existent. She argues that government policy must provide incentives to encourage indigenous peoples to participate in the development of non-renewable resources. Robitaille discusses political and economic changes in northern Quebec that have reshaped the livelihoods of indigenous peoples, in particular mining activity, hydroelectric power, transportation and the JBNQA. He also raises the important issue of future development policy if northern Quebec Inuit consolidate their growing political ties with Inuit in the rest of Canada. Hastings’s paper is a comprehensive historical review and analysis of the growth in federal and provincial interest in northern Quebec. He argues that non-renewable resource exploitation has been the overriding interest of both levels of government.

In a very interesting paper Monika Orzechowska examines, in English, the conflicts and problems in the practical application of wildlife research in northern Quebec. A useful appendix documenting the Inuit renewable resource harvest from 1973–78 includes a dietary analysis. The remaining papers address the issue of cultural sovereignty and Inuit toponymy (geographic place-names). Martyne Michaud, an anthropologist working for