

été préférable de les omettre entièrement, puisqu'ils n'apportent rien de très appréciable ? Bien que l'auteur prenne la peine d'indiquer par un signe spécial que la plupart n'ont pas été vérifiés, leur inclusion risque d'induire en erreur le lecteur. Ces mots valent en effet ce que valent leurs sources et l'on y trouve assez souvent des inexactitudes de transcription ou de traduction.

Nous regrettons aussi l'emploi de l'expression *Adgormiut*. Selon Boas, pour les habitants de Cumberland Sound, les "*Aggomiut*" comprenaient les Esquimaux du nord-ouest de la Terre de Baffin et ceux de la partie nord du bassin de Foxe. Mais, comme il le fait remarquer, l'expression peut désigner des groupes différents selon l'endroit où elle est employée, puisqu'elle signifie : ceux qui sont du côté du vent. Ajoutons que, pour les Esquimaux du groupe Iglulik, elle désigne les habitants d'un endroit bien déterminé : Aggu Bay. L'auteur en fait une sorte d'appellation fourre-tout qui englobe des dialectes aussi différents que ceux des Padlirmiut et des Igluligmiut, et qui ne correspond en fait à rien de précis. Certains des mots qu'il attribue aux *Adgormiut* appartiennent à l'un ou l'autre de ces groupes, mais pas à tous.

Ces dernières remarques montrent qu'on est encore loin d'un dictionnaire polydialectal. Un tel dictionnaire serait certes très souhaitable, mais s'il est un jour réalisé, il sera probablement le fruit d'un travail d'équipe. Dans une telle équipe, le P. Schneider pourrait jouer un rôle de premier plan.

Quoi qu'il en soit, ce dictionnaire rendra de grands services à tous ceux qui entreprendront l'étude de la langue esquimaude. C'est un instrument de travail de premier ordre, même si cet instrument requiert une période d'apprentissage avant qu'on puisse l'utiliser à plein rendement. Ceux qui se sont heurtés dans l'étude de la langue aux imprécisions, voire aux contradictions, des divers lexiques dont ils pouvaient disposer sont à même d'apprécier les obstacles auxquels le P. Schneider a dû faire face dans ce travail et d'admirer la ténacité avec laquelle il les a surmontés.

Dans la présente édition, le texte dactylographié a été reproduit photographiquement et les mots esquimaux, à l'exception des mots-clés, ne se distinguent pas de la traduction française. Espérons que les éditions à venir offriront un texte imprimé plus agréable à lire.

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MÉTIS OF THE MACKENZIE DISTRICT. BY RICHARD SLOBODIN. *Ottawa: The Canadian Centre for Anthropology. 1966. 9 x 6 inches, soft cover. 175 pages, including references and tables. \$4.00.*

Richard Slobodin has, as usual, given us a perceptive and well-written account, this time of the Métis. The data on which this study is based were collected over a period of years beginning in 1938. This is the first comprehensive ethnographic account of the Métis to be published and is certainly a most welcome addition to northern literature.

The volume is divided into nine chapters: "Mixed Population," "Regional Distinctions and Community Settings," "Sources of Data," "The Family," "Kinship," "Occupations," "Education," "External Relations," and "Métis Identity." In addition, there are two appendices and twenty tables.

This reviewer can see no reason to argue with Slobodin's treatment of the Métis. It is a straightforward piece of reporting with admirable documentation. The author presents the necessary background information to understand the Mackenzie Métis and then gives his sources of data. Extensive material is given in the following chapters, so that one gets an extremely clear picture of how the Métis really live. This is enhanced by the addition of direct quotations from his field notes. Furthermore, the changes that are occurring in the North can be clearly seen. Slobodin has approached with deep insight and understanding the problem of Métis identity. Of considerable interest is the distinction between Northern or Mackenzie Métis and Red River Métis, detailed in tabular form on page 158.

In summary, one can only say that this is an admirable piece of research and presentation.

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PROCEEDINGS OF THE SYMPOSIUM ON THE ARCTIC HEAT BUDGET AND ATMOSPHERIC CIRCULATION. EDITED BY J. O. FLETCHER. *Memorandum RM-5233-NSF. Santa Monica: The Rand Corporation, 1966. 8½ x 11 inches. 567 pages, 154 text figures. \$4.00.*

This report of a symposium held at Lake Arrowhead, California, 31 January to 4 February 1966, is a document of great scientific importance. While it is true that many of the papers published have also appeared in journals, or closely resemble other papers from the same authors, the collected *Proceedings* bring together in very convenient form the best series of studies of arctic climatology ever produced. One regrets that some of the most important titles are repre-

sented by abstracts or briefs only (for example, that by Mintz and Arakawa on numerical simulation of global climate). One welcomes as strongly the inclusion of a brilliant series of studies by scientists from the Main Geophysical Observatory and the Arctic and Antarctic Scientific Research Institute of the U.S.S.R. For the first time, one can put North American studies alongside Russian to weigh differences and similarities of approach. A strong convergence of results and research methods is at once obvious. The Rand Corporation and the National Science Foundation are to be congratulated on a fine job, as is J. O. Fletcher, the editor.

The *Proceedings* begin with a series of papers on the interaction of climate and the arctic heat budget. The main object of enquiry here is the stability of past and present high-latitude climates in the light of new knowledge about the heat budget. Budyko and Fletcher (the pioneer in 1952 of North American floating stations in the Arctic basin) present reviews of the heat balance. Both papers examine changes in the budget that might occur if the permanent pack disappeared (which Budyko says is quite possible). Fletcher gives plausible budgets for both ice-free and "ice-in" arctic conditions. He finds, as might be expected, that greatly increased snowfall, and hence continental glaciation, would be a likely accompaniment of ice-free conditions. There follow papers by Mitchell (on stochastic modelling of air-sea interactions and climatic fluctuation), Girs (on the heat balance of the Soviet Arctic), Borisenkov (on atmospheric circulation), Müller (on the Axel Heiberg glaciers), Putnins (on Greenland), and Bloch (on sea-level changes and the polar albedo). The ensemble is an impressive examination of high-latitude climatic instability.

The second section is devoted to the quantitative evaluation of the heat budget itself. Untersteiner deals convincingly with the thermal regime and mass budget of the sea ice, and Wittmann and Schule follow him with a most impressive study, basically in map form, of the ice itself: a huge volume of data is condensed into a most reasonable space in their diagrams. Doronin, Marshunova, and Chernigovskiy follow with thorough studies on the characteristics of the heat and radiative exchanges, interspersed with a review by Badgley of the heat budget at the surface of the Arctic Ocean. Vowinckel and Orvig speculate as to possible changes in the radiative exchanges (a subject they cover more thoroughly elsewhere), and Businger treats the momentum and heat transfers in the boundary layer. The latter chapter has little special relevance to

arctic conditions, being a broad survey of the field in general.

This question of relevance arises again in Section III, which deals with circulation models for the atmosphere. The papers by Yudin, Leith, Kasahjara, and Washington belong in a symposium on numerical weather prediction or on the general circulation: they are out of place in this context, because they do not bear directly enough on high-latitude circulation. On the other hand, Rakipova's study of the influence of arctic ice on zonal atmospheric temperature distribution is a splendid illustration of the growing body of climatic theory, most of it of Russian origin. Berkofsky and Shapiro present an investigation (dynamical in nature) of the effects of high-level heating on large-scale circulation of the lower atmosphere that is again rather remote from the main body of the report.

The remainder of the report deals with atmosphere-ocean interactions and models of oceanic circulation. Here, the paper by Coachman on supercooling during sea-ice formation is thorough, concise, and important, as is Farmer's theoretical study of time-dependent motion on long-term scales in a polar ocean. Bjerknæs' study of the effects of equatorial ocean temperature anomalies on atmospheric motion is a little remote from the main business at hand.

In addition to the formal papers, there are reports from several working parties discussing future fields of research. This is a favourite tactic for such symposia, and presumably pleases the sponsor. For me, however, the real surprise and pleasure in reading this book came from the fact — rare enough to astonish — that an *invited* symposium produced so many good and original papers.

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WHOOPIING CRANE POPULATION DYNAMICS ON THE NESTING GROUNDS, WOOD BUFFALO NATIONAL PARK, NORTHWEST TERRITORIES, CANADA. BY N. S. NOVAKOWSKI. *Canadian Wildlife Service Report Series, Number 1. Ottawa: Department of Indian Affairs and Northern Development, 1966. 11 x 8½ inches, 20 pages, illustrated. \$0.50.*

This first number in a new series of Canadian Wildlife Service publications reports the results of twelve years of observations on the vital breeding area, the habits, and the population biology of one of North