

first book certainly proves that he can write with humour and understanding. Vilhjalmur Stefansson suggests in his Foreword that the next book by Robert Jack could perhaps be one contrasting Icelanders at home in their North Atlantic republic with the Icelandic pioneers on the prairies of Canada. Let us hope that the author will comply.

SVENN ORVIG

AYORAMA

By RAYMOND DE COCCOLA and PAUL KING with illustrations by James Houston. *Toronto: Oxford University Press, 1955, 9 x 6 inches; vii + 316 pages; illustrations. \$4.00.*

The Copper Eskimo and the peoples to the east of them around Queen Maud Sea, had virtually no contact with European culture until early in the twentieth century, when the first independent traders appeared in the region. Since that time there have been few cultural changes until the last 15 years; during this period, the Copper Eskimo like all Canadian Eskimo have experienced great difficulties. To appreciate the cultural problems and the difficulties of administration, it is essential that the people in the south have objective accounts of the Eskimo and their way of life. However, few white people know the Eskimo well enough to give satisfactory accounts.

Father Coccola travelled as a missionary for 12 years with the Eskimo living around Coronation Gulf, Queen Maud Sea and particularly in Bathurst Inlet. In 'Ayorama', Eskimo for "it can't be helped", he has written, in collaboration with Paul King, a sensitive account of a people he knows intimately. The picture he draws is of Eskimo hardly affected by European civilization. Although they use a rifle and visit the trading store two or three times a year with their fox pelts, they essentially retain their old customs. The author says little about the impact of the trading companies, the missions and his own work, and the federal government, and only describes by inference the work of the Royal Canadian Mounted

Police. The story that emerges is, however, one that has already been written many times for other Eskimo groups—the continuing threat of starvation, infanticide, polygamy, wife sharing, shamanism, and above all murder and manslaughter. The Copper Eskimo have always held life cheaply and the author mentions twenty-five cases of death where killings were suspected. Although at first this seems a large number for a population of less than 500, Rasmussen tells a similar story and Father Coccola does not, in fact, mention all the murders that have occurred in this century in Bathurst Inlet. From his account, one might believe that the killings are still occurring, but many of his stories are from the past and have been reported by the police. The author retells the story of the Radford and Street murders in 1912 but unfortunately his informant told him little that was not already generally known.

'Ayorama' is attractively presented with sketches by James Houston. It is doubtful if this book will have great value as an anthropological document because there are alterations in the factual accounts which limit their usefulness, but it makes a fine story and shows the Eskimo in a sympathetic light. When Father Coccola wrote the book it was already a story of the past, and the last year has brought even greater changes.

J. BRIAN BIRD

GEOGRAPHICAL DISCOVERY AND EXPLORATION IN THE QUEEN ELIZABETH ISLANDS

By ANDREW TAYLOR. *Ottawa: Queen's Printer, 1955. 9½ x 6½ inches; vii + 172 pages; plates, maps. (Canada. Department of Mines and Technical Surveys. Geographical Branch. Memoir 3). \$1.00.*

Mr. Taylor's purpose, as stated in the introduction to this memoir, is to "summarize the geographical discovery and exploration of the Queen Elizabeth Islands as an introduction and aid to other investigations in the area." This he has set about with great thoroughness and

has produced a valuable work of reference dealing with all expeditions to the Queen Elizabeth Islands from the problematical Norsemen to the voyage of the *St. Roch*. After an introduction describing briefly the extent and nature of the area, he proceeds to summarize the work of each expedition in turn, and for all the longer voyages a track chart is included. The major and minor works dealing with the expeditions are listed at the end of each description, and the references collected together in an altogether admirable bibliography which is undoubtedly the most valuable part of the book.

Another excellent feature is the listing of subjects dealt with in appendices to the main reports—geology, botany, etc.—and in many cases an assessment of the information on specific topics contained in the actual narrative. Thus it is of considerable value to the potential user to know that Parry's narrative of his first voyage is strong on accounts of optical phenomena but perhaps a little weak in geographical description, or that scientific information is hard to find in Peary's narratives but that he expresses himself at length on ice navigation. In fact this type of appraisal might well have been extended to more of the expeditions.

There is a real need for a work of this kind, and up to the present there has been nothing to fill it except P. D. Baird's "Expeditions to the Canadian Arctic" published in the *Beaver* in 1949. This has the advantage that it covers the whole Canadian Arctic, but its summaries, though good, are very short, and only the main reports of each expedition are listed. Moreover it stops at 1918, whereas Mr. Taylor brings his account up to the Second World War. A work of reference, however, cannot afford factual errors, and unfortunately this one is marred by a considerable number of small inaccuracies and omissions in the text and maps, which greatly reduce its value to workers in other fields who wish to save themselves the time of checking every fact to the original documents.

Since it is necessary to back up accusations of inaccuracy with evidence, here are some examples: In the account of Austin's expedition (1850-1) the sledge journey of Lieutenant Browne down the east coast of Prince of Wales Island is omitted from both text and map.

Krabbé of Kellett's expedition is said, in the text, to have made a sledge journey in 1854 to "make a depot at Cape Russell, the most westerly point of Melville Island, from which he crossed M'Clure Strait to inspect the *Investigator* at Mercy Bay." (p. 53). This should read Russell Point, the most easterly point of Banks Island. The map, correctly, shows no such visit to Cape Russell.

The northernmost point attained by Kane's party in 1854 is given in the text as Cape Constitution, but the map shows a track extending all the way to Hall Basin.

Sverdrup's second in command is given as Isachsen (wrong) on page 6 and as Baumann (right) on page 69. On the latter page he tells of Baumann's visit to Peary aboard the *Windward*, but on page 88 he attributes the same visit, wrongly, to Bay. (And is it not rather exaggerating Peary's hospitality on this occasion to say Baumann was "cordially received"?). A rather odd impression of the anatomy of Peary's feet is given in the same two references to this visit. On page 69 we are told that Peary "was fortunate in suffering no more than a frozen foot. . .", and on page 88 that he had eight toes amputated!

The map on page 128 suggests that Corporal Anstead sledged right round Axel Heiberg Island in 1929, which is incorrect, although Corporal Stallworthy did so in 1932 in the search for Krüger.

Mr. Taylor has, on the whole, been admirably impartial in his text, but there are one or two sins of omission which are a little misleading. In dealing with the vexed question of the "eider duck shelters" in Jones Sound he goes in great detail into the theory that they are proof of Norse settlement in the area, but gives only a footnote to the objections to this theory. Nor does he mention that Baffin, having discovered the entrances

to Smith, Jones, and Lancaster sounds on his fine voyage in 1616, reported on his return that they were all enclosed bays and that there was no hope of a passage in this area.

These and other factual errors and omissions undoubtedly damage the book as an actual source of information, but do not affect its value as a bibliographical reference, in which respect it is first class.

MOIRA DUNBAR

MAN IN A COLD ENVIRONMENT

By A. C. BURTON and O. C. EDHOLM.

London: Edward Arnold; Toronto: The Macmillan Company of Canada, 1955. $8\frac{1}{2} \times 5\frac{1}{2}$ inches; xiv + 273 pages; maps, charts, and tables. \$5.00.

This book is greatly superior to most of those published in this field or any other field of physiology. The authors, besides being among the most active and best known workers in the subject of physiological and pathological effects of exposure to low temperatures have taken the time and the trouble to visit, personally, most of the laboratories working in the same sphere of interest in Canada, the United States and Great Britain; they were able to watch their immediate colleagues in action and discuss *in situ* the work in progress down to the finest details of technique and meaning, details that never appear in a satisfactory manner in the standard scientific papers. They were also able to have personal discussions with their colleagues "working in Scandinavia, Germany, Yugoslavia etc." The result is that the vast amount of information, compiled from other authors and presented in this book, is completely understood, assimilated, unified, and faithfully expressed. This book is, however, more than a well digested review: the latter is supported and preceded by a thorough exposé of all the fundamental problems involved, accompanied by a limpid discussion of the physical and physicochemical ideas necessary to understand how the cascade of experimental facts that are presented later are related to the problems to be solved—how all those little grains

of sand fit into the skyscraper under construction.

What is the purpose of this book? It attempts to give a unified presentation of the problem of man in low temperatures. In addition, it discusses certain aspects of the problems which have scarcely been touched on before "particularly those of tolerance when heat balance is not possible, the state of hypothermia, general and local, the pathology of cold injury, and resuscitation from cold."

All through this book, one feels that there is a well conceived general plan. The reader is first presented with the historical and physical background necessary to understand the problems, through chapters entitled: "Homeothermy and history", "The problem of the homeotherm, the heat balance and physical laws", "The thermal insulation of the air", "The thermal insulation of the clothing or fur", and "The thermal insulation of the tissues of the body". These chapters are not a mere shadow of material more thoroughly discussed in text books on physics and physical chemistry; they are original in concept and structure, understandable without any concession to the truth, clear without eliminating the necessary details, and are easy and interesting to read. This is true for all the following chapters in which the biological implications are explained and discussed under the titles: "The possibilities of maintaining a thermal steady state in the cold, and how Arctic animals do so", "The estimation of the thermal demand of the environment", "Vascular reactions to cold", "The metabolic response to cold", "Acclimatization to cold" (by far the longest chapter due to the popularity and importance of the subject, and hence of the great amount of work reported), "Hypothermia and resuscitation", "Local cold injury", and "Problems for future research". References are given at the end of each chapter, and the thirteen chapters are followed by an Author Index and a Subject Index.

So much for the general plan and development of the whole idea. As far as