

POLISH SPITSBERGEN EXPEDITIONS 1957-1960: SUMMARY OF SCIENTIFIC RESULTS. Edited by K. Birkenmajer. *Warszawa: Wydawnictwa Geologiczne, 1968.* 9½ x 6¾ inches, 466 pages, 215 illustrations. c \$5.50.

In the course of the Third International Geophysical Year and in the following two years of the International Geophysical Cooperation Poland organized a series of expeditions to Spitsbergen in the Hornsund region where a wide scientific program both in the geophysical and physiographical disciplines was realized. These expeditions were the first scientific expeditions organized and sent from Poland on so large a scale, and were a serious enterprise both from the scientific and from the organizational point of view.

The series of IGY and IGC expeditions had been preceded by a short reconnaissance in 1956. Its aim had been to establish the place for the base of the subsequent expeditions at Isbjörnhamna on the north coast of the Hornsund Fiord, near its entrance. In 1957 the expedition carried out initial surveys in meteorology, glaciology, magnetism, geomorphology, geology, botany and zoology. This expedition built a station there which was the base first for a wintering group of ten men in 1957/1958 and then for subsequent summer expeditions. During the winter 1957/1958 geophysical investigations were first carried out. Further investigations concerned the ionosphere, radioactivity of the atmosphere and precipitation; ozone and carbone dioxide; polar aurora; propagation of radio-waves, and astronomical and geological research. During the summer seasons 1959 and 1960 physiographical surveys as well as some of the geophysical disciplines, mainly glaciology and meteorology were continued.

Eighty-eight persons took part — some of them several times — in the series of Polish expeditions from 1956 to 1960. These expeditions used their own transport: S/S *Baltyk* made six trips to Spitsbergen, and S/S *Ustka*, M/S *Koral* and M/S *Jantar* one voyage each.

The publication under review deals with some of the results of the investigations, that is, the results of the physiographical research. Although it appears eight years after the termination of the expeditions it is a valuable contribution summarizing Polish work done in Spitsbergen in such fields as: hydrology, botany, zoology, geomorphology, glacial morphology and geology. Moreover this publication includes descriptions of the program, organization and course of the

expedition as well as of the technical problems involved. The mountaineering activities of the participants are also described. The book comprises twelve chapters and contains author and subject indexes.

Chapter I consists of two papers. In the first of them the leader of the expeditions, S. Siedlecki, discusses their program, organization and course. He also lists the participants in each expedition. In the second paper technical problems of the expeditions are dealt with in detail by J. Pruchnicki. It might be interesting to note that the station, most of its furnishings, technical and personal equipment as well as food had been produced in Poland. All of these items proved to be satisfactory under Spitsbergen conditions. Some of the equipment, for instance glacier boots, turned out to be excellent.

The short chapter II contains the results of hydrological and hydrographic observations made on the tundra in the Hornsund region by J. Kuziemski and S. Rakusa-Szuszczevski. The results of botanical investigations are fully presented in chapter III by A. Srodon and M. Kuc. Chapter IV gives the results of zoological investigations, with most interesting ornithological observations made by B. Ferens.

The results of the research in geomorphology and glacio-morphology are presented in three extensive chapters V, VI and VII which take up one third of the whole volume of the book. In chapter V a summing-up of geomorphological investigations is given. These investigations were made in the north of Hornsund Fiord by a group headed by a Jahn, with S. Szczepankiewicz, Z. Czeppe, H. Piasecki, L. Szerszen and J. Czerwinski. This group did quantitative as well as qualitative research on periglacial and other geomorphological processes. The results of the work done south of Hornsund by another periglacial group led by J. Dylik with L. Dutkiewicz, T. Klatka and J. Jersak have been given in chapter VI. Finally certain findings concerning problems of glacial geomorphology have been presented in chapter VII by J. Szupryczynski, S. Jewtuchowicz and S. Baranowski.

Chapter VIII comprises the results of geological investigations. In an extensive paper K. Birkenmajer gives a synthesis of the effort of the ten-person group of geologists working in the regions of the Hornsund Fiord and the Van Keulen Fiord on all the geological formations. The most notable contribution to these investigations was given by K. Birkenmajer whose range of interest was especially wide.

Chapter IX presents the results of the

Polish mountaineering achievements gathered by R. W. Schramm. In the succeeding chapter K. Birkenmajer speculates upon and suggests new geographical names for the series of hitherto unnamed physiographical objects in the Hornsund region of Spitsbergen; and in the short chapter XI J. Pruchnicki sums up the attention the Polish Spitsbergen Expeditions received by the novelists, and reviews the documentary films devoted to the research work and life of the expedition members. The last chapter, XII, is a compilation of the full bibliography of the research papers and the popularized publications that have been based on the work done by the Polish Spitsbergen Expeditions. The author of this chapter, K. Birkenmajer divided the 399 items of the bibliography into 23 subchapters.

The abundance of graphic supplements adds to the value of the book. Besides numerous maps, sketches, geological sections, diagrams and tables it contains also a hundred and twenty-eight well-chosen black and white photographs. The book has been edited and published only in English in a limited edition of 537 copies. The chief editor, K. Birkenmajer, deserves special appreciation for his careful editorial work. One can only desire that the rest of the results of the Polish research in Spitsbergen will be presented to us in a similar form.

S. Baranowski
J. Szupryczynski

THE YUKON ECONOMY: ITS POTENTIAL FOR GROWTH AND CONTINUITY. Compiled by D. W. Carr and F. W. Anderson. Ottawa: D. Wm. Carr & Associates Ltd., 1968. 8½ x 11 inches, 346 pages, tables and maps. \$3.50.

This report is Volume 1, the Final Report, in a very valuable series of 8 volumes, on the potential growth and viability of the Yukon economy. The present volume, which includes a significant amount of material extracted from the preceding volumes, was prepared for the Department of Indian Affairs and Northern Development and the Government of the Yukon Territory.

In order to assess the potential economic growth of the Yukon, the authors have organized the report into four stages. The first stage provides a perspective on the new environment for economic growth in the Yukon and the northwest region. It includes an analysis of the Yukon in a national and regional perspective, its historical setting in the northern region and the new philosophy of economic development in the northwest.

The second stage provides a comprehensive analysis of the economic potential of the resources and industries of the Yukon. The third stage of the report examines the basic development services of power and transportation which act as the major determinant of the growth potential of the Yukon economy. The final stage attempts to assess the economic environment for potential growth and the possibilities for strength and viability in the Yukon economy to 1985.

Clearly, the authors have achieved their objective by providing the reader with an overall understanding of the potential economy of the Yukon with a primary focus on new economic development there rather than on the reorientation of past developments. The new economic development philosophy or attitude advocated by the authors throughout the report is that Federal and Provincial policies should be coordinated in order to act as a positive stimulant to development.

I think it must be concluded that this thorough and enlightening report constitutes a significant contribution to the literature on northern development and it will be of great assistance to researchers who have a concern for the potential economic development of the Yukon. Furthermore, if one wishes to acquire a total historical perspective of the economy of the Yukon and the northwest region, I would strongly recommend, in conjunction with this report, K. J. Rea's critical work entitled *The Political Economy of the Canadian North*. Dr. Rea's book examines the changes in attitudes by private investment, and the local, territorial, and federal administration in the north up to the early 1960's.

P. M. Koroscil

HUNTERS OF THE NORTHERN ICE. BY RICHARD K. NELSON. Chicago: University of Chicago Press, 1969. 429 pages, illustrated, 6¼ x 9¼ inches. \$8.50.

This book is an important addition to polar literature. Although for the most part restricting attention to northwest Alaska, and more especially the Wainwright area, the reader with geographical, biological or ethnographic interests will discover a wealth of well-presented data, and perceptive, sound analysis. For a text so replete with substantive technical detail, a delightful style of prose in places suggests that the writer was more than objectively involved with investigating the subject matter, and fortunately the reader shares this enrichment.