



*Photo: Karsh, Ottawa*

R. C. Wallace, Executive Director, Arctic Institute of North America,  
from November 1951 to January 1955.

## INTRODUCTION

R. C. Wallace\*

**T**HE Arctic Institute of North America is concerned with the prosecution of research in the arctic and subarctic regions of the North American continent and in Greenland. The United States, Canada, and Greenland are represented on its Board of Governors. In the ten years during which the Institute has functioned, it has financed, or helped to finance, 177 projects of research in these northern areas, in a great variety of fields of scientific endeavour. In so doing, it has assisted in building up a corps of younger scientists competent to work in arctic territory. From these younger men much will be expected in the future. For the need is great.

There are other agencies that are responsible for research work in the far north—governmental departments, private corporations, industrial firms. But the Arctic Institute of North America is the only agency that is international in scope. It deals with the problems in their wider scientific importance, unimpeded by national boundaries. Not only is this in the best interests of science; it is also in the best interests of international cooperation. There are common problems of defence in which this northern territory plays a very significant part. Because of this fact, a part of the research work in the Arctic in recent years is on the classified list, and does not appear in the current publications. It is none the less of great importance both from the scientific standpoint and in the national interest.

The Research Committee of the Arctic Institute felt that a review of the present status of arctic research in the various fields of science would now be of value both to the scientific worker and to others who are interested in northern development. It was suggested that there would be great value if the present trends and the future needs were emphasized. The Committee has been fortunate in securing the cooperation of highly competent authorities in the sciences that are represented in this volume. The reader will be impressed with the work that has been accomplished. He will be even more impressed with what yet has to be done. The territory is very large. Much of it is not easily accessible. The season in summer is short. The work is arduous and demands special training. The workers are relatively few. This volume will have served its purpose if it stimulates to more widespread activity in arctic research. What has already been done has added greatly to our knowledge of the Arctic. It has done more; it has made the Arctic more accessible to those who are engaged in the development of its resources, and in the well-being of its people.

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\*Executive Director, Arctic Institute of North America, from November 1951 until his death in January 1955.

The Arctic Institute of North America has already played no inconsiderable part in the encouragement of arctic research. Governmental departments, corporations, and private individuals have assisted the Institute greatly in their work. It is a great pleasure to take this opportunity to express the appreciation of all who are associated with the Institute for the support which has been given so generously. It is the hope of the Governors that, with still wider support, much can be accomplished that the authors of the papers in this volume feel is so urgently needed to be done.

*Dr. Wallace was the moving spirit behind this volume until his death on 30 January 1955. As now completed, it is a tribute to his initiative and leadership.*

#### EDITORIAL NOTE

The papers in this volume have been written during the past three years. Most have been brought up to date, but there are a few which have not been changed since they were completed. No attempt has been made to cover every scientific field in the volume, or to restrict the papers to the same geographical region. The authors were left free to deal with their subjects as they wished, and this has naturally resulted in a wide variety of subject and approach. On behalf of the Board of Governors I would like to express the gratitude of the Institute to all those who have written papers for this volume.

A great many people have given much of their time in advising on the material and providing information for the volume and I wish to thank them for their generous assistance. Special mention must be made of the following: Dr. H. S. Bostock, Mr. T. H. Manning, and Dr. A. E. Porsild, who have studied all the manuscripts; the Deputy Minister of Mines and Technical Surveys, Mr. Marc Boyer, who authorized the preparation of the folding map; Mrs. J. G. H. Halstead, who assisted in the preparation of some of the papers; and Mrs. E. F. Roots, who prepared the index.

DIANA ROWLEY, *Editor*  
Ottawa, November 1955.

