

# ***The Ross Orogen of the Transantarctic Mountains***

by **Edmund Stump**, published by Cambridge University Press, 40 West 20th Street, New York, NY 10011-4211, in 1995, ISBN 0-521-43314-2, \$99.95.

## **Review by Christopher G. Kendall**

All books, even if they are technical texts like this, in some way reflect the inspiration of the people who create them. Some books have more of the soul of the writer in them than others, and this is particularly true of this book by Stump. Unlike many scientific writers who synthesize information about a topic, Ed Stump has not gathered a stable of writers to produce a series of papers for this book but has instead shouldered this task himself, producing a professional, well written and interesting description of the Ross Orogen. Apart from the numerous clear geologic and geographic maps, Ed Stump has included some spectacular photographs of these rocks from Antarctica. He has punctuated the text with informative narratives of the history of the exploration of this geological province. He has managed to bring together nearly all the published and unpublished literature for Transantarctic Mountains, particularly where this had any bearing on an understanding of the Ross Orogen.

This beautiful and readable book will be of interest to geologists who are trying to gain an insight and understanding not only of the geology of Ross Orogen but also of other metamorphic/plutonic rift terrains and their incorporation into a plate tectonic framework, particularly in unraveling the history of older portions of the continental crust. Edmund Stump's enjoyment for Antarctic exploration and his desire to share this with others, particularly his students, shines through this book. It will be used by those who plan to make studies of the Ross Orogen and will always be a source book for those of us who will probably never visit this icy southern continent.

The book is divided into 8 chapters which, apart from an introduction and a final synthesis, are focused on the following geographic regions, namely Northern Victoria Land, Southern Victoria Land, the Central Transantarctic Mountains, Queen Maud and the Horlick Mountains, the Thiel Mountains, and the Pensacola Mountains. Each of these latter chapters contains a geological summary which is followed by a chronological description of the exploration of the area both from a humanistic and geologic perspective. Each chapter deals with the geologic evolution of the geographic area, beginning with the oldest rocks and tracing these terrains from their initiation to their present configuration. The final chapter of the book brings together all these descriptions, showing how the Ross Orogen involves subduction related intrusions of plutonic rocks and the associated metamorphism of the country rock during the final stages of the deformation of this orogen at the close of the Proterozoic and into the late Cambrian to Ordovician.

This book's only weaknesses are that Stump has been overcareful in presenting all sides to a question. Also he has presented few diagrams which have synthesized the geological evolution of Ross Orogen. Generalized cartoons which catch the spirit of the particular by complex evolution of this geological region would have helped guide the reader while reading the book. Should Ed Stump produce a second edition of this volume, I would suggest that he include such diagrams.

The book deals with complex geological concepts but is so written clearly that it should appeal to diverse audiences of geologists and others interested in the earth sciences. Those of you who need information on the Transantarctic mountains, and the Ross Orogen in particular, will find this book important to you. Students who are interested in Antarctic exploration and

gaining a better understanding of plutonism, metamorphism and the relationship of these processes to mountain buildings, will find this book interesting to read. Ed Stump was inspired by his recognition of how special it was to be able to visit such a remote portion of the earth and how lucky anyone is who is able to do this. The book, then, is not only a great and informative text, but is an expression of Stump's thanks to being able to make these visits and his desire to share his experiences with others who have not been so fortunate. Both Dr. Ed Stump and Cambridge University Press should be congratulated for this text.