

The book (proceedings) seems more suitable as an institutional library acquisition than as a personal acquisition.

MS received October 13, 1977

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## Quaternary Stratigraphy of North America

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Edited by W. C. Mahaney  
*Dowden Hutchinson and Ross*,  
512 p., 1976  
\$27.50

Reviewed by R. J. Fulton  
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A friend in thumbing through this book commented that it appeared similar to a bottle of Canadian wine: the label suggests great things but the contents do not live up to the label. The Quaternary stratigraphy of North America is a big subject and this book certainly does not cover it completely.

The preface says that emphasis is on summarizing research completed following publication of "Quaternary Research of the United States" and on new research. However a considerable amount of the material was included in the above mentioned volume and most of the post 1965 information presented has already been published elsewhere. It appears that emphasis was placed on obtaining contributions from big names who would attract attention and sell the book rather than on going after new work and work from critical areas that might have added pieces to the puzzle that has already been blocked out.

The Canadian financed symposium at which these papers were presented would have been an excellent opportunity to pull together recent Canadian Quaternary Stratigraphy and to show how it related to the more fully exposed United States work. However only six of the 24 papers concern Canada and as an example of an omission, important work done in the past 10 years in the strategically located Hudson Bay Lowland is not even mentioned.

The book contains papers on the following areas:  
Eastern Arctic Canada - Andrews and

Miller; St. Lawrence Lowlands and Great Lakes (2) - Gadd and Terasmae and Dreimanis; Northern New England - Coates; Midwest United States (4) - Black, Wright, Johnson and Ruhe; North Central United States - Moran *et al*; West Texas and Eastern New Mexico (2) - Reeves and Hawley *et al*; Sierra Nevada - Birkeland *et al*; Colorado Plateau and Front Range (3) - Karlstrom, Madole and Mahoney and Fahey; Western Wyoming-Richmond; Washington-Easterbrook; Southwestern Canadian Prairies-Stalker; Central Canadian Rockies - Rutter; Alaskan Panhandle and adjacent British Columbia - Miller; and Alaska - Péwé. Three other areas - Atlantic Provinces, Southern New England and Western Ohio - are included but regrettably are only covered by abstracts. One of these (Grant - Atlantic Provinces) does contain a list of references so that it can be used as an entry to the stratigraphy of the area.

In general each paper starts with a brief history of the development of Quaternary history in the area under consideration, presents the stratigraphy as it is currently understood, provides regional correlations and closes with comments on specific problems, controversies or suggestions for future work. Several papers, in addition to describing the local stratigraphy, include discussions of some of the correlation techniques used (Andrews and Miller - amino acid diagenesis, Wright - vegetation colonization and Birkeland - relative age criteria for correlating moraines).

The quality of the papers is variable, several are excellent, one or two are mediocre and a couple are bad but in general they convey the necessary information in an understandable form. As already mentioned much of the information presented has been in the literature for years but in at least one case (Rutter - Central Canada Rockies) new information is presented. Most of the authors made good use of this opportunity to pull together published information and to enlarge on current problems or controversies so that even though much of the information may already be available these papers provide useful summaries and updates.

Despite my personal disappointment that there was not more emphasis on the Canadian part of the North American continent and that more new information was not presented, I feel that this is a well

edited and presented book that is well worth reading. Many papers contain numerous references making the book a fairly complete bibliography for the areas covered. It provides a general review of the Quaternary stratigraphy of classical areas such as the Sierra Nevada, Northern Rockies, Southern Canadian Prairies, Great Lakes and Illinois and also of other important areas such as Eastern Canadian Arctic and Atlantic Provinces. It is unfortunate that other critical or classical areas such as the Yukon and James Bay Lowland were omitted.

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## Recent Foraminifera

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By Esteban Boltovskoy and Ramil Wright  
Dr. W. Junk b. V. Publishers,  
*The Hague*, 1976, 512 p.

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This book presents a well written account of research on Recent foraminifera. Emphasis is on ecology and working methods with systematics and physiology of the living organism of secondary importance. The text has been updated from the 1965 Spanish edition and the addition of new material can be judged from the 750 post-1965 references of the total 1600.

The subject matter is presented in 18 chapters, six of which involve ecology of foraminifera. On the offshore continental shelves the major criterion governing the distribution of species is the water temperature. As a result, the boundaries of the biogeographical provinces based on foraminifera reflect the major current systems; i.e., cold water currents extend the provinces of cold water faunas towards lower latitudes and warm currents have the opposite effect. The authors demonstrate the relationships of faunas to the regional oceanography in a world map of benthonic foraminiferal zoogeography and throughout the text with a frequent use of examples of