

all other possibilities of lithification and rhythmicity enhancements. The geochemical aspects, mainly the distribution of minor elements with limestone-marl layers are described none too well. In spite of some of these shortcomings, the book forms an important document of an impressive research. All those geologists who are interested in diagenesis should acquire this volume.

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**NORTH AMERICA AND ADJACENT OCEANS DURING THE LAST DEGLACIATION.** Editors: W. F. Ruddiman and H. E. Wright, Jr. The Geological Society of America Inc., Colorado, 1987, 501 pages.

During its geological history, the surface of the earth has undergone a series of changes depending on the vagaries of the weather and other geological processes both local and those arising from the solar system. The records of the recent period of these happenings, the Quaternary, is best preserved on our planet. Glacial and interglacial stages form sharp climatic changes the earth was subjected on which depended the origin and development of life itself. The most recent of these was the last major glaciation at about 18,009 years Before Present (B. P.). The North American continent was covered with the Laurentide Ice sheet. The melting of this huge ice sheet started about 15 Ka. B. P. and the erosive power of this ice sheet can be evaluated from the records it left in the north American continent. This period known as the Late Wisconsin Interglacial is the topic covered in this book in all facets of a detailed multidisciplinary scientific study carried out by over a thousand individuals from countries all over the world, notably from those in North America.

The book consists of twenty-one chapters, excluding introduction and these are under five sections (i) North American ice sheets: chronology and disintegration (ii) Ice core and other glaciological data (iii) The non-glacial physical record on the continent (iv) The biological record on the continent and (v) Analysis and summary. Starting from the physical parameters like the earth's orbital elements, eccentricity, tilt and precession, their relationship to the stable isotope records of the deep sea sediments and the deduced ice sheet rhythms, the book goes on into lake records from north America, into the records contained in the Greenland ice sheets and those from the sediments of the northern oceans. It then presents results from the rivers, vegetational histories and the human adaptation patterns in response to deglaciation. Radiocarbon provided the main chronological tool. Finally, the Atmospheric General Circulation Model usage to simulate the climatic pattern during the deglaciation is given.

In summary, this volume gives the most complete account of the disintegration of Laurentide ice sheet during the late Wisconsin interglacial beginning 18 Ka BP and the transition to Holocene. For scientists pursuing palaeoclimatology both from oceanic and continental records this book is a valuable reference. Though expensive, for the pocket of an individual scientist, this is a must for the Libraries of Universities and Research institutions where climate studies are pursued.

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