
Fluvial Processes in Geomorphology. *Luna B. Leopold, M. Gordon Wolman,* and *John P. Miller.* W. H. Freeman and Company, 660 Market Street, San Francisco 4, California. 1964. xiii+522 p. 180 il. 48 tables. $10.00.

This new, full-length text in geomorphology is devoted entirely to the processes at work in streams and to the channels and hillslopes produced by these processes "based on the concept that river and hillslope processes provide the central theme of geomorphology". The significance of climate in the overall process of denudation occupies a full chapter, as does the subject of rock weathering. Subsequent chapters deal with the actual processes associated with streams: the nature of drainage systems, transporting and deposition of stream load; the relation of velocity and discharge to load; the nature and origin of composition of floodplains, the size and shape of river channels, and the form and steepness of hillslopes. The usual topics found in geomorphology books, descriptions of the stages in the stream or land cycles and stream deposits such as alluvial fans and deltas, do not appear in this book.

As they frankly point out, the authors do not attempt to make all topics complete, but include nothing which they have not checked in their own personal field and laboratory work. Thus, those armchair myths which have too often been requoted are lacking. Wherever possible, analyses of processes are presented quantitatively, simple graphs and mathematical equations being used wherever they would seem to aid in comprehension.

This book will be of value, not only to the geomorphologist, but to the student of nonmarine stratigraphy, the river biologist, the hydraulic engineer, the specialist in soils mechanics, and to the educated layman interested in the dynamics of how streams work. It is not an easy reading book, but a solid survey of the details of the many physical, chemical, and dynamic processes at work in streams.

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