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Frontmatter  
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## *Preface*

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The study of geomorphology is an academic discipline devoted to the explanation of the earth's surface relief and to an understanding of the processes which create and modify landforms. In recent years, geomorphological textbooks have concentrated almost exclusively upon an examination of the detailed processes which take place in the weathering of rocks and the transport of debris as landforms are created and destroyed. An academic journal, *Earth surface processes* even takes its title from this aspect of geomorphology. The study of processes has enabled great progress to be made in geomorphology as process studies lend themselves admirably to measurement and modelling techniques. However, there is also a broader, regional aspect to geomorphological studies which has been rather neglected during the past two or three decades; the disillusionment which many physical geographers felt in the 1950s about the denudation chronology approach led eventually to the virtual abandonment of wider-scale studies.

A plea for more attention to large-scale geomorphology was made by Gregory in *The nature of physical geography* in 1985, but most geomorphologists, with a few notable exceptions, have avoided consideration of geomorphology on a large scale or on a regional basis. One notable occasion when broader issues were discussed was the symposium held by the British Geomorphological Research Group on 'Mega-geomorphology' and published in 1983. It is this background which provoked the author to provide a text which would cover this field of study and hopefully to interest

students of all ages in the broader aspects of geomorphology.

Many geological and geophysical discoveries have taken place in the last two or three decades which are of considerable importance for the study of the large-scale geomorphology of the Earth. A new understanding of the formation and structure of oceanic basins brought a fresh, dynamic approach to the study of geology which must also be reflected in geomorphological investigations and explanations. So, this book begins with the large lithospheric plates, composed of continental and oceanic crust materials. These large fragments of the Earth's crust are then sub-divided into the broad physical regions of the emergent and submergent parts of the Earth's surface. Geomorphology does not stop at the low tide line.

Clearly, an understanding of the location of the continents and oceans on the surface of the earth has great geographical significance in terms of climate, soil and vegetation, but the past history and changing distribution of the lithospheric plates also provides clues for the explanation of many geological, biogeographical and geomorphological features. The theory of plate tectonics provides the most acceptable explanation currently available for the origin, development, distribution and modification of the Earth's major features.

All books are a compromise and this one is no

exception. It would have been easy to bring in more examples of different landforms thus adding to the book's length but not its impact. Its aim has been to introduce students of geography, earth sciences, environmental sciences and biologists to the Earth's major landforms and to stress their importance to all persons interested in an academic study or practical assessment of the physical nature of the Earth's surface. Although the emphasis is upon the broad scale, sufficient detail has been included to highlight the differences between the various provinces and sections which comprise the major sub-divisions of the Earth's geomorphology.

Experience is the best teacher of physical geography and the author's good fortune in being able to set foot on all the major landmasses, with the exception of Antarctica, has helped to develop the eye for country, which is at the heart of geomorphological study. I would like to acknowledge the enlightenment I received from Professor D.L. Linton during my undergraduate studies and for the shared experiences on excursions with many friends and colleagues in the fields of geography and soil science. This book, and others which preceded it would have been impossible without the wholehearted support of my wife, who has endured not only my absences but has also helped significantly in the preparation of the manuscript in readiness for publication.

E.M. BRIDGES

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x      *Acknowledgements*

The most accessible references for further reading in this large subject are given at the end of the text in a bibliographic commentary (pp. 253–5) but the author also wishes to express his grateful thanks for the ideas and sources of information derived from the work of many other people not named individually which have come together in this book. *World geomorphology* origi-

nated as a companion volume to three other books published by CUP; *World vegetation* by Riley and Young, *World climate* by Riley and Spolton and *World soils* by E.M. Bridges. These four books cover basic aspects of the physical environment of interest to all students of geography and environmental science throughout the World.