

1996

Book review of 'Himalaya to the Sea: Geology,
Geomorphology and the Quaternary' by John F.
Shroder, Jr. (ed.)

Daniel D. Schelling
University of Utah

Follow this and additional works at: <http://digitalcommons.macalester.edu/himalaya>

Recommended Citation

Schelling, Daniel D. (1996) "Book review of 'Himalaya to the Sea: Geology, Geomorphology and the Quaternary' by John F. Shroder, Jr. (ed.)," *Himalaya, the Journal of the Association for Nepal and Himalayan Studies*: Vol. 16: No. 1, Article 17.
Available at: <http://digitalcommons.macalester.edu/himalaya/vol16/iss1/17>

This Book Review is brought to you for free and open access by the DigitalCommons@Macalester College at DigitalCommons@Macalester College. It has been accepted for inclusion in Himalaya, the Journal of the Association for Nepal and Himalayan Studies by an authorized administrator of DigitalCommons@Macalester College. For more information, please contact scholarpub@macalester.edu.

Himalaya to the Sea: Geology, Geomorphology and the Quaternary. Edited by John F. Shroder, Jr. London, Routledge, 1993. Pp. xxvii + 429. \$130.00

Located along the northwestern sector of the Himalayan continental-collision belt, the Kirthar-Sulaiman transform plate-boundary, and the eastern sector of the Makran oceanic-subduction zone, Pakistan is one of the most tectonically active regions in the world. In addition, topographic, climatic and ecological variation within Pakistan is pronounced, encompassing near-shore deserts, the Indus River delta, arid flood plains, desert mountains, temperate and subalpine forests, and glaciated, high-mountain environments reaching elevations of 8,000 meters. Therefore, Pakistan offers incredible opportunities for geological, geomorphological and ecological research. Furthermore, despite the local tribal politics which have made some areas within Pakistan virtually impenetrable to foreign and Pakistani researchers alike, during the last decade the Government of Pakistan has offered a relatively open environment for foreign and collaborative research. It is therefore not surprising that Pakistan has been the focus of high-quality geological, geomorphological and archaeological research in recent years, and that this research is of interest to geologists and geographers throughout the world. As a collection of papers on the geomorphology and Quaternary geology of Pakistan, **Himalaya to the Sea: Geology, Geomorphology and the Quaternary**, edited by John F. Shroder, Jr., is an important contribution to geological and geomorphological research in general, and specifically to earth science research in South Asia and the Himalaya.

The title of this book, **Himalaya to the Sea**, is somewhat misleading. With the exception of Chapter 2 ("Miocene to Holocene uplift and sedimentation in the northern Himalaya and adjacent areas") only the extreme northwestern sector of the Himalaya located within Pakistan is actually discussed within the book; none of the papers within this volume deal with the Indian or Nepal Himalaya to the east. Nonetheless, the scope of the book is quite broad, ranging from discussions on the glacial geomorphology of the Nanga Parbat Himalaya (Shroder *et al.*, Chapter 6) to discussions on the recently uplifted marine terraces observed along the Makran coast of southwestern Pakistan (Snead, Chapter 16) and the fluvial geomorphology of the Indus River Basin (Flam, Chapter 14). In addition, three chapters (Flam, Chapter 14, Jorgensen *et al.*, Chapter 15, and Snead, Chapter 17) discuss the relevance of geomorphological research to archaeological problems in southern Pakistan. This is an unusual and interesting approach to geological and geomorphological research

within the Himalayan region and South Asia (on which many volumes have been published in recent years), and therefore the collection of papers in this volume will be of interest to earth scientists working in a large number of tectonic, sedimentological and geomorphological environments.

The first chapter in the book, "Himalaya to the sea: geomorphology and the Quaternary of Pakistan in the regional context", written by the editor of the volume, John F. Shroder, is an excellent overview of the geomorphological provinces of Pakistan for both the earth scientist and the layman, though many of the interesting details on the geology and geomorphology of Pakistan are absent. Chapter 2, "Miocene to Holocene uplift and sedimentation in the northern Himalaya and adjacent areas", written by M. E. Brookfield, is a good overview on the tectonics of the Himalayan orogenic belt as determined from examinations of sedimentary foreland and intermontane basins both within and along the flanks of the Himalaya and adjacent mountain systems. Again, many of the details of interest to the earth scientist are lacking in this overview, though Brookfield's discussions on the Miocene tectonic evolution of the Himalaya and adjacent basins puts many of the other papers within the volume into a more complete geologic-tectonic context. Chapters 3 through 17 are detailed scientific papers on a large variety of topics, as indicated in the following list of authors and chapter (paper) titles in the book:

Chapter 1: Shroder, J.F., Jr., "Himalaya to the sea: geomorphology and the Quaternary of Pakistan in the regional context";

Chapter 2: Brookfield, M.E., "Miocene to Holocene uplift and sedimentation in the northern Himalaya and adjacent areas";

Chapter 3: Holmes, J.A., "Present and past patterns of glaciation in the northwestern Himalaya: climatic, tectonic and topographic controls";

Chapter 4: Cronin, V.S., and G.D. Johnson, "Revised chronostratigraphy of the late Cenozoic Bunthang sequence of Skardu intermontane basin, Karakoram Himalaya, Pakistan";

Chapter 5: Owen, L.A., and E. Derbyshire, "Quaternary and Holocene intermontane basin sedimentation in the Karakoram mountains";

Chapter 6: Shroder, J.F., L. Owen, and E. Derbyshire, "Quaternary glaciation of the Karakoram and Nanga Parbat Himalaya";

Chapter 7: Hewitt, K., "Altitudinal organization of Karakoram geomorphic processes and depositional environments";

Chapter 8: Gardner, J.S., and N.K. Jones, "Sediment transport and yield at the Raikot Glacier, Nanga Parbat, Punjab Himalaya";

Chapter 9: Khan, M.J., and N.D. Opdyke, "Position of the PalaeoIndus as revealed by the magnetic stratigraphy of the Shinghar and Surghar Ranges, Pakistan";

Chapter 10: Quade, J., T.E. Cerling, J.R. Bowman, and M. Asif Jah, "Palaeoecologic reconstruction of floodplain environments using palaeosols from Upper Siwaik Group sediments, northern Pakistan";

Chapter 11: Rendell, H.M., "The palaeoclimatic significance of the loess deposits in northern Pakistan";

Chapter 12: Papastamatiou, D., and C. Vita-Finzi, "Decreased tectonism of the Sui Dome";

Chapter 13: M. A. Ali Beg, "Surface soils and Indus River sediments";

Chapter 14: Flam, L., "Fluvial geomorphology of the Lower Indus Basin (Sindh, Pakistan) and the Indus Civilization";

Chapter 15: Jorgensen, D.W., M.D. Harvey, S.A. Schumm, and L. Flam, "Morphology and

dynamics of the Indus River: implications for the Mohen Jo Daro site";

Chapter 16: Snead, R.J., "Uplifted marine terraces along the Makran coast of Pakistan and Iran"; and

Chapter 17: Snead, R.J., "Geography, geomorphic process and effects on archaeological sites on the Makran coast".

Because of the detailed and focused nature of most of the papers within this volume, **Himalaya to the Sea** is certainly more valuable as a reference book for earth scientists presently conducting research in the Himalayan region or within the Indian subcontinent than it is as a general reference book for the non-geologist and those interested in aspects of the Himalaya and Indian subcontinent other than geomorphology and Quaternary geology. Even within the geological sciences, this volume is specifically geared towards those interested in the Late Miocene through Recent geological and geomorphological evolution of the Himalayan orogen and adjacent sedimentary basins. Therefore, despite the excellent quality and interesting subjects of the papers presented within **Himalaya to the Sea**, this book is perhaps more useful in a university library than on the bookshelf of an individual interested in the Himalaya, India and Pakistan in general.

Daniel D. Schelling
Earth Sciences and Resources Institute
University of Utah

Himalayan EcoSystem. Edited by Dr. D. N. Tewari. International Book Distributors, Dehra Dun, 1994. 355 + iv pp. ISBN 81 7089 211 2

Anyone familiar with the Himalayan region will be aware of the vast range of habitats and ecosystems encountered, largely due to the climatic variability experienced in the region. The varying altitude of the Himalayan region gives a large range of temperatures (resulting in sub tropical to Alpine conditions), diurnal fluctuations, and rainfall. The southern Himalaya experience a monsoonal climate, particularly in the eastern end of the range, whilst the northern areas of Ladakh and Tibet are semi arid cold deserts. In addition to climatic variability, there is also a great diversity in the type and extent of human modification of the natural environment, an issue which is very topical.

Tewari has collated 20 papers from eminent researchers working in the multidisciplinary area of Himalayan environmental management. The focus is

towards forest ecosystems, reflecting the primary natural vegetation type of the region, and the editors' and contributors' interests. Anyone looking for a classical approach to ecosystem science, such as energy flows, nutrient cycling, the production of organic matter and systems analysis, will be disappointed. Tewari has used the term ecosystem in its widest sense. The majority of the volume concentrates on management/conservation issues, and initiatives to involve local communities in ecosystem management. Whilst the content may not be exactly what is expected from the title, it does allow for wide ranging and interesting papers.

After a brief preface which outlines some of the principal features of the region, and problems experienced by it, the initial 2 papers examine the forest types of the Indian Himalaya. Tewari and Singh do this