Geology and Tectonics of India: An Overview. M. N. Balasubrahmanyan. Memoir No. 9, International Association for Gondwana Research, Department of Natural Environmental Sciences, Kochi University, Akebono-cho 2-5-1, Kochi 780-8520, Japan. 2006, 204 pp. Price Rs. 750.

The book is divided into thirteen chapters comprising Archaean to Quaternary geology of India. It describes a variety of aspects like geophysics, stratigraphy, general geology, geochemistry and tectonics of different cratons and mobile belts of India. However, chapter on northeast India has not been included in the book.

The first chapter presents a concise picture of different tectonic elements of the Indian crust. The basin classification given in the book is not complete, some important Precambrian basins, like Aravalli and Delhi basins, are missing in the list. The second chapter is on geophysics, which includes the work of different geophysicists. The chapter describes gravity, magnetism, DDS, seismic and tectonic stress and thermal studies of the Indian shield. There is no mention about palaeomagnetism and AMS characteristics of the Indian shield. Chapters three and four are focused on the geology and tectonics of South India. This could have been merged into one. Chapter four entitled 'The granulite province'. One explores the granulite plutons of North India in this. In Rajasthan, granulites are outcropping in a large area from Bhinai, Gyangarh to Sandmata and further south in the Aburoad region. These are also present in the Eastern Ghats region of India. Nevertheless, both chapters give detailed account of geology and tectonics of southern India explicitly. Chapter five describes Singhbhum craton and Chotanagpur gneissic terrain. There is a detailed discussion on the age of Singhbhum rocks in comparison with other aspects of the craton. Evolution of Chotanagpur Granitic Gneissic Complex is described in great detail. Chapter six provides a good overview of the geology and tectonics of the Bastar and Budelkhand craton.

Chapter seven on western India presents inadequate inputs on the geology and tectonics of the region. Description of the Aravalli region is based on Gupta *et al.* (1980) of GSI. Since then, several new data are available on this region. As a consequence, the tectono-stratigraphy has been significantly revised. The Malani volcanic section describes a confusing statement regarding the age of magmatism. There are references of the 1680 Ma age of emplacement of Ajmer granite, which has nothing to do with the Malani rocks. Chapters eight and nine give details about Purana and Gondwana basins, which are concise and encompass all aspects. The chapter on Deccan volcanism is brief. The Deccan as a big K–T event in terms of tectonics of India and requires a detailed comment. However, the author took into account of the non-plume origin of Deccan volcanism. A detailed description of Himalayan evolution is made in the eleventh chapter. A number of figures, stratigraphic and other tables are used to explain the Himalayan tectonics. The northeast part of Himalaya is also included in this chapter.

A separate chapter (twelve) on the Cenozoic formation of India has been included. However, descriptions of Paleozoic and Mesozoic formations of India are completely missing. The development of Mesozoic basins in Kutch and western Rajasthan constitutes important tectonic elements of the western Indian shield. The story of tectonic evolution is incomplete due to this. A separate chapter on Quaternary geology deserves appreciation. This gives an idea about the development of present-day geomorphology and major tectonic features of India.

Barring some shortcomings, the attempt to present an overview of geology and tectonics of India is significant. The book gives a brief and synoptic insight about the geology and tectonics of India.

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Birds of Two Worlds: The Ecology and Evolution of Migration. Russell Greenberg and Peter P. Marra (eds). The John Hopkins University Press, 2715, North Charles Street, Baltimore, Maryland 21218-4363, USA. 2005. 466 pp. Price: US $110.

Movement, as the authors say, is the hallmark of avian life and this is exemplified by migration. This is the regular movement of some species of birds between breeding and wintering sites. The study of this field started with understanding migratory routes and has now gone on to become a multidisciplinary field that is amply reflected in the breadth of topics covered in this book.

This book is the Proceedings of the Third International Meeting on Bird Migration hosted in 2002 by the Smithsonian Institution, USA. The first such meeting was held twenty-five years ago, when 50 bird ecologists got together to discuss important unanswered questions in bird-migration ecology. This volume examines cutting-edge findings in bird ecology and the evolution of migratory birds. It is divided into seven parts, each of which deals with a thematic trend: evolution of migratory systems, adaptations for two worlds, biogeography, connectivity, behavioural ecology, population ecology and migration itself. The book is a compendium of 32 research articles in the form of chapters and each article is written by a leading researcher in the field. Some chapters in the book are mostly reviews that assess previous work done and point to new directions for further research, while others are based on long-term field research. Needless to say, there is much information here that can be useful to ornithologists, wildlife researchers and serious bird-watchers.

One of the main threads of the book is understanding of the evolution of migratory systems and the biogeography of migrants. Researchers have used fossil records and molecular information to suggest where and when migration evolved. Studies have examined various characters of extant migrants to predict the kinds of species that are likely to evolve to be migrants. Two chapters hypothesize that long-distance migrants actually evolved in the tropics, contrary to popular belief; and it might take some time for it to sink into many of us that the migratory birds arriving here in winter are not 'visitors'! Researchers have suggested and used novel methods of examining biogeography of migrants – by tracing the phylogeography of the parasites of migrants, by examining trace elements and stable isotopes and even by the use of radio-telemetry using the International Space Station. One of the most exciting chapters in the book includes the findings of a 35-year radio-telemetry study on *Catharus* thrushes. Using heart-beat and wing-beat sensors in the radio-transmitters, scientists followed, using cars and air-