

diversity in Arunachal Pradesh followed by Sikkim, Mizoram and Meghalaya. Sub-tropical semi-evergreen forests are observed in eastern part of Arunachal Pradesh with high diversity. Temperate mixed forests are least disturbed in many states as they occur in higher altitudes away from human habitation. Riverine forests have average species diversity. Thus, species diversity observed in this region indicates that it has a unique phylogenetic, geographic and ecological history that has shaped contemporary biodiversity. Overall rate of endemism declined from tropics to sub-tropics, temperate and alpine zone.

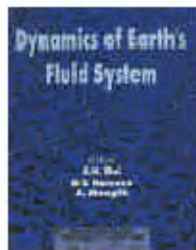
Twelve chapters in this book are well framed, systematically and meaningfully arranged, and lucidly written with numerous references to date. A brief introduction to landscape ecology, satellite remote sensing and geoinformatics (chapters 1–5) helps the reader to familiarize with the basics of these disciplines and how best these can be applied to biodiversity conservation, management and planning. The schematic representation through flowcharts and colour maps/photos are very informative and appealing. State-wise list of endemic species, economically and medicinally important plant species are very useful and informative. Methodology adopted in sampling, image classification, landscape analyses, computation of disturbance and biological indices which are presented in the ninth chapter impart new directions and approaches to biodiversity research. Intra- and inter-chapter linkages provide a complete state of development. Tenth and eleventh chapters give comprehensive picture of the biodiversity status in all north eastern states with landscape analysis, variation in diversity in spatial scales, interpretation of situations, illustrations and synthesis of a complex phenomenon of bioprospecting for defining ecological zones required for biodiversity conservation. This book provides a basic technical and scientific introduction to an important scientific activity, so that readers will understand better the need for spatial and temporal analyses in addressing the problem of conservation and sustainable management of ecosystem, and stimulate discussion on the potential of GIS and RS for inventorying and monitoring of variation in biological diversity.

This book is informative and well written and offers a fine compilation of useful,

practical information and serves as a ready reference to practising ecologists, conservation researchers, managers, planners and policy/decision makers.

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**Dynamics of Earth's Fluid System.** S. N. Rai, D. V. Ramana and A. Manglik (eds). Oxford and IBH Publishing Co. Pvt. Ltd., 66 Janpath, New Delhi 110 001. 2002. 291 pp. Price: Rs 875.

Fluids are present in the earth at different levels, in different forms and scales. While groundwater is the most important fluid in the shallowest parts of the earth's crust, oil and gas floating on hot water migrate at a couple of kilometres deep inside the earth to be collected at structures obstructing their flow. Most dominant and massive is the fluid in the outer core with its regular heat loss by convection producing plate motions, earthquakes and geomagnetic fields. In addition, fluids leading to mineralization and development of ore deposits also fall within the purview of the book. The editors tried to explain the dynamics of the fluids through deriving differential equations, offering analytical and numerical solutions for them and providing examples of their application in selected cases. Processes controlling the groundwater movement and fluid motions in the core are not normally available in a single book. The exercise of consolidating the dynamics of fluids into a single vol-

ume is indeed a difficult task, as they are controlled by divergent differential equations with very little in common in their solutions. The editors should be congratulated on these grounds.

The book is divided into seven sections and 19 chapters, authored by nine scientists. While nine chapters amounting to 40% of the volume of the book were authored by the editors themselves, 30% of the material was supplied by Singh and Reddy on the basics of elasticity and mathematical details of modelling.

Rai has dealt with the modelling of groundwater flow, Ramana has explained heat and mass transport modelling, and Manglik and Gupta have authored the chapters related to dynamics of the fluid core. Most of the material presented is collected from the published works of the respective authors. While the derivation of the equations is lucid and complete, additional care should have been taken to elaborate the utility of the equations, data needed for their solutions, and the approaches involved.

The chapter on plate tectonics by Gupta Sarma is quite informative, even to a beginner. The chapters on elasticity and faulting, and fluid mechanics are useful to a wider readership. The chapters on reservoir-induced seismicity and volcanic constructs appear to be isolated from the book.

More care should have been taken in editing the material, particularly since both the printing and get-up are excellent. For example, the first paragraph on page 3 gives the impression that the book is all concerned with the fluid core, although its scope is clear right from the preface. This would, probably, be the case if chapters 3.1 and 3.2 were deleted from the book. It appears to me that the editors should have explored an alternative title that should have reflected its dominant thermal structure component. Avoidable typographical errors can be located on several pages (e.g. p. 200, ... of length and l the other...).

The book may be useful to geophysicists working on the thermal structure of the earth and in groundwater modelling. It is recommended for libraries and institutions.

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