subscripts as V_p, etc. and that they first be described before use in the expression. One consistently gets the impression that the author is tossing scientific words and phrases around without a sufficient understanding of them.

There also appear to be some claims or statements in the book that might cause raised eyebrows amongst scientists specializing in genetics (a specialist in that science could go more in depth on this), which tend to show the author, and her fact-checker (if any!) in poor light. There also are some strange unsourced claims that appear questionable even to a layman; e.g. (p. 2), 'The word *gene* comes from Greek meaning (sic) "to give birth to" '. *The Oxford American Dictionary* says it comes 'from German Gen, from Pangen, a supposed ultimate unit of heredity', which *Webster's* also seems to support. This is a strange error considering that the author elsewhere (p. 60) takes the trouble to supply a dictionary definition for the much less technical *privacy*. Similarly (p. 116), 'Pythagoras in sixth century BC (sic) advised individuals to avoid fava beans, *because he had observed that some people became sick upon eating them*' (emphasis added) – there does not appear to be any authentic record of what, if anything, Pythagoras observed and concluded (though the basic advice to avoid fava beans is widely attributed to him), and such speculations ought not to be presented as facts.

1. Reiss, M. J. and Straughan, R., *Improving Nature? The Science and Ethics of Genetic Engineering*, Cambridge University Press, Cambridge, 2004.
2. Berry, R., *The Ethics of Genetic Engineering* (*Routledge Annals of Bioethics*), Routledge, 2007.

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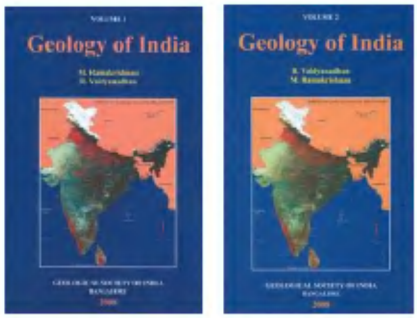

Geology of India. Vols 1 and 2. M. Ramakrishnan and R. Vaidyanadhan. Geological Society of India, P.B. No. 1922, Gavipuram P.O., Bangalore 560 019. 2008. 556 and 428 pp. respectively. Price: Rs 1500 (both volumes).

Geology in Greek means science of the earth. This book is about the science of the earth of India. The earth has a history that goes back to ~4600 m.y. Are there earth materials that go back to ~4600 m.y.? The oldest dated earth materials are ~4200 m.y., and based on current knowledge the oldest dated Indian crust is not older than ~3500 m.y. Geological records of the evolution of India, therefore, date back to ~3500 m.y. (3,500,000,000 years). Much has happened since then, and this book is a compilation of the events and history that has shaped the geology of India. In the preface to the book, the authors have done well to reiterate the following, 'Classical geology is firmly rooted in stratigraphy, in conjunction with structural geology in deformed terrains. Stratigraphy is fundamental for building models of metamorphism, tectonics, and crustal evolution, and is therefore the prime focus of this book'. As stratigraphy is 'unfashionable', there is a need to re-emphasize that stratigraphy lies at the core of geological thought and must be accorded its central place in developing and deepening geo-scientific knowledge of the Indian region.

The book is organized in two volumes, the first of which deals with the Precambrian terrains of India. Volume 1 by M. Ramakrishnan (except for Chapter 1 on Introduction and Physiography and Phanerozoic part of Chapter 2) includes an account of the cratons (Dharwar, Bastar, Singhbhum, Bundelkhand and Aravalli), the mobile belts (Eastern Ghats, Pandyan and Satpura), besides the Precambrian of the Himalaya. Additionally, the Proterozoic sedimentary basins and their evolution have also been dealt with in this volume.

This volume deals with two other aspects, an opening chapter that gives a physiographic account of the Indian subcontinent. This is in keeping with the traditions established in the earlier generation of textbooks on the geology of India by late D. N. Wadia and late M. S. Krishnan respectively, that opened with detailed accounts of the physiography of the Indian sub-continent. The strength of this chapter lies in the many maps that illustrate different assemblages of landforms from the various terrains of India, in addition to several maps of India, illustrating its seismic zones, soils, natural vegetation and its geo-hydrological provinces. A summary of the two-volume book has been provided in the second chapter of Volume 1 entitled 'Geology of India: A synopsis'. This overview provides a useful indication of what to expect from the book. Further, this 58-page chapter provides a summary account of the geology of India that is particularly useful for the non-specialists like, soil and agriculture scientists, civil and hydrological engineers, petroleum technologists, ecologists and environmental scientists amongst others.

For those engaged in the disciplines of geology, stratigraphy and palaeontology, presentation of the data and synthesis follows a natural division – the Precambrian and the Phanerozoic. The Precambrian includes all the records from the beginning of the earth until ~540 m.y., a time when important changes took place in the evolutionary history of life forms on the earth. Volume 2 by R. Vaidyanadhan (except for the Deccan Traps part of Chapter 9) includes chapters on the Paleozoic, Mesozoic and Cenozoic succession(s) of the various geological provinces of India. Further, there are chapters that are India-centric and highlight some of the significant and special aspects of the Phanerozoic geology of India. These, expectedly, include a chapter each on the Gondwana super-group, Deccan Volcanic Province and associated Inter-trappean Beds, Siwalik Group, and one that deals with the geology of offshore basins, an aspect that has merited much attention in the past few decades in view of India's oil exploration, and the significant oil and gas discoveries. In conformity with Volume 1, a large number of maps, sections, diagrams and field illustrations and

charts support the text. Herein lies the strength of these two volumes.

The conventional approach of presenting stratigraphy in terms of its sequence, lithology, life and broad correlation has been adopted. As pointed out earlier, new data of the past few decades have been synthesized and supported by suitable charts, maps and stratigraphic logs. Stratigraphic synthesis usually feeds into palaeogeographic and palaeotectonic reconstructions in a geochronological framework. Also, stratigraphic synthesis helps in the development of new insights that facilitate and enable the framing of new questions. This aspect, which should have been the highlight of such a volume, has been underemphasized and needs to be addressed in future editions.

Stratigraphy has to be suitably supported by multidisciplinary (structural, petrological, geochemical, sedimentological, palaeontological and geo-chronological) datasets. It is also not uncommon that synthesis of these datasets leads to the recognition of a lack of convergence in the results. Several examples of such diverging results exist, and efforts ought to have been directed in this book to illustrate examples of how the re-evaluation of conflicting datasets leads to the resolution of stratigraphic problems related to the geology of India. Such specific case-histories highlighting debatable issues help in developing critical thinking amongst the postgraduate students.

This two-volume book fulfils a long felt need – that of a well-suited textbook for postgraduate courses in geosciences in the subject area of stratigraphy. With the growing incorporation of modern approaches in stratigraphic analysis, at a global scale, it is of some importance that accounts of the geology of India are increasingly based on new multi-disciplinary data. Such an approach will also be of immense value for the integration of the regional geology of India with that of the South, South East Asian, and Asia-Pacific region. In conclusion, it is hoped that these issues will receive the attention of the authors in subsequent editions of the book.

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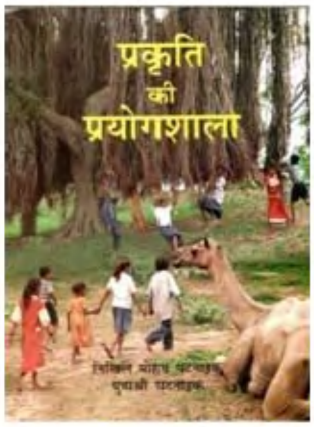

Prakriti Ki Prayogshala (in Hindi). Nikhil Mohan Patnayak and Pushpshri Patnayak. Vigyan Prasar, A-50, Institutional Area, Sector-62, Noida 201 307. 2008. 119 pp. Price: Rs 85.

This book is a Hindi translation of the original book *Exploring Nature* in English. It has been translated and edited by B. K. Tyagi, Anurag Sharma and Navneet K. Gupta. This little treatise supplements the school education about nature, by training students in an informal setting.

The book contains several interesting and exciting easy-to-do experiments. These experiments explicitly explain the various complicated concepts and phenomena of nature to students and inspire them to love and explore nature and its constituents. For middle-school students and their teachers, it is a resource book of simple activities aimed at learning nature in a play-way manner.

Nature is all fascinating and is calling us to be a part of it by coming out of the concrete jungles. In fact, we are an integral part of nature and our survival is dependent on it.

The easy-to-do experiments in the book are able to inculcate scientific reasoning, thinking and scientific temper among the students while boosting their creativity and imagination through participation, direct observations and drawing inferences.

The book is a motivational tool that can transform the young minds as nature lovers through exploration, inquiry and learning about nature by do-yourself activities; thus nurturing the future conservators of nature.

The authors have succeeded in explaining the various complicated natural things and phenomena in a simple and lucid language which an average student can understand. The illustrations by Brij Kishore Jain are good; the simple line drawings make the experiments easier for the students.

The most important fact about this book, which I liked, is that no expensive and sophisticated materials and apparatus are required to conduct such experiments. Rather, it uses materials which are inexpensive and easily available at home and in the neighbourhood. This makes the scientific pursuit and experiments affordable to the poor students. As the book is well-written in simple Hindi, it is best suited to the students of Hindi-medium education or anyone who is comfortable with Hindi.

The experiments described in the book can be done by students individually or in a group, with or without the help of a teacher. These do not need any sophisticated laboratory or apparatus, but an inquisitive and creative mind to make the best out of what is easily available at home.

The book is certainly a treasure of knowledge about nature for the young minds and is worth reading for every middle or high-school student.

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