

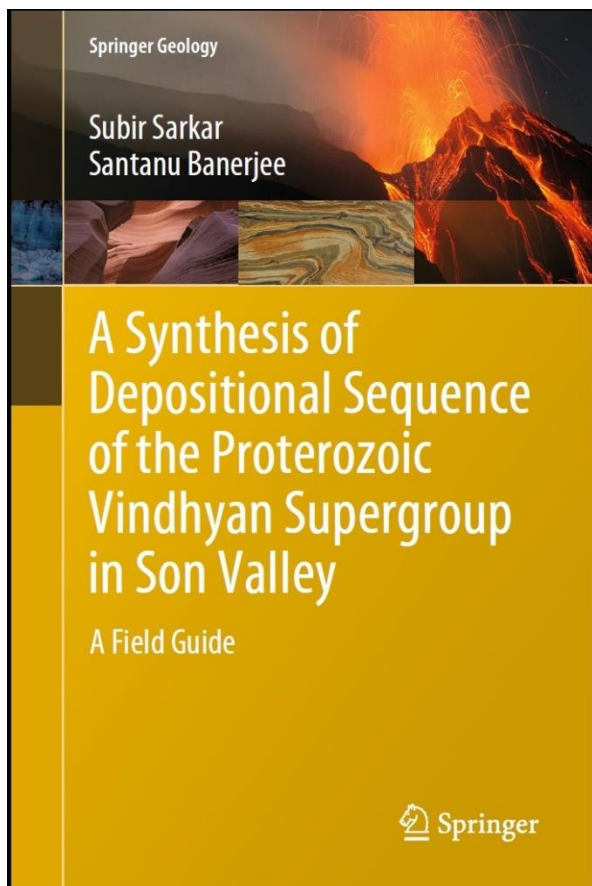
BOOK REVIEW

A Synthesis of Depositional Sequence of the Proterozoic Vindhyan Supergroup in Son Valley: A Field Guide

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Field geology involves making observations, recording data from exposures and analyzing them to depict some inferences. In an unknown territory this process may be guided by experienced field leader/s. But what about the field trips in such a terrain without a skilled person? Under such circumstances a field guide becomes useful, if available. The Vindhyan Supergroup is the thickest Precambrian sedimentary succession of India and the duration of its deposition is one of the longest in the world. Therefore, it is believed to contain valuable information on the evolution of the atmosphere, climate, and life on our planet. Proterozoic Vindhyan Basin grabs geologist's attention for its extraordinarily well exposed sedimentary succession, easy accessibility and being a treasure house of sedimentary structures. However, there are only a few field guides published so far on Vindhyan rocks. Among them the book by Bhattacharyya, Chanda and Bose (1986) covering the upper Vindhyan of Maihar exclusively is out of print. The other one by Kumar and Gupta (2002) focuses on Precambrian biogenic structures. It holds an overall good coverage but lacks deeper insight in different important aspects of stratigraphy and sedimentology. The present field guide sets significant emphasis on stratigraphy, facies analysis, palaeogeographic shifts, event deposits (seismites, tsunamiites, tempestites and tidalites) and microbial mat structures. The book contains detailed route maps, geological maps and plenty of color photographs (total 75) besides hand-sketches, tables and several illustrations showing wide variations in sedimentary structures (including those related to microbial activities on siliciclastic deposits). The book covers, in detail, both the lower and upper Vindhyan rocks; also both northern and southern flanks of the basin with adequate sedimentological detailing and different facets of stratigraphy. This 188-page yet pocket-sized book is easy to carry during field investigations. Moreover, it is also available as an e-book.



The book consists of five chapters with references at the end of each. Chapter 1 introduces the Vindhyan Basin and describes its geological background keeping focus on outcrop distribution, lithostratigraphy, age, tectonics and biotic as well as volcanic records within the Vindhyan rocks. Chapter 2 discusses on facies and palaeogeography in relation to different formations of the Vindhyan Supergroup and also puts light on sequence stratigraphic framework of the Vindhyan succession. Chapter 3 describes seven selected traverses through the outcrops of Vindhyan Supergroup covering all the formations stretched from west to east of the basin; offering a gamut of Vindhyan stratigraphy to the readers. Each traverse includes several stops to visit every possible nearby outcrops to

examine the broad characteristics of each of the constituent formations. Chapter 4 deals with several selected well-exposed sections, each of which is based on a special focus providing detailed facies analysis of carbonate and siliciclastic successions, description of event deposits like seismite and tsunamiite. It also provides unique variations in stromatolite morphology within a carbonate formation and distribution pattern of different architectural elements within a fluvial outcrop. Coordinates of all the locations mentioned within chapters 2, 3 and 4 have been provided at the end of each. Chapter 5 provides a compact yet comprehensive synopsis on the variability of microbial mat structures preserved within the siliciclastic deposits of Vindhyan Supergroup.

My overall impression regarding the book is first-rated that deserves to be a bestseller. I believe this well-planned and well executed field guide would be very useful to the students, researchers, academicians and professionals related to sedimentology for field visits in this area. The book should also appeal to the non-specialist who wants to visit/traverse the impressive and vivid Vindhyan rocks on their own.

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