

## BOOK REVIEWS

### ATLAS OF GRANITISATION TEXTURES AND PROCESSES, 1993.

S.S. Augustithis, Theophrastus Publications S.A., Greece, pp.viii + 105 (Part-I) and 378 (Part-II)

This is another magnum opus by the author of atlases who has specialised in rock textures and established a laboratory of textural analysis. The visual impact of these atlases is tremendous as "*seeing is believing*". These atlases are very popular with teachers and students because they eliminate the need for laborious descriptions which are no substitute for illustrations.

The author's pet theme is granitisation or the metamorphic-metasomatic origin of all granitic rocks. He does not believe in the 'granites and granites' paradigm of Read since he feels that to differentiate between granitic rocks using elements and isotopes is like classifying human beings on the basis of sugar content in their blood. The extreme position advocated by him that all granitic rocks are non-magmatic is in tune with that of earlier giants like Drescher-Kaden, Erdsmannsdörffer, Barth, Ramberg and Reynolds of the European School. This view has few takers in recent years with explosion of knowledge on the TTG suites and other granitic suites of the Precambrian terrains which support their juvenile origin, albeit with a modest contribution from crustal sources in some instances. Nonetheless the steadfast adherence to a hypothesis reflects the indomitable courage of conviction of the author. Since many hypotheses have come full circle, what is taken lightly today may turn out to be a fashionable hypothesis of tomorrow. In this lies the strength of the author's unshakable faith in the transformists's school of thought.

This valuable atlas is divided into two major parts. These two parts contain selected articles on granitic processes and microstructures, which illustrate the author's point of view. All through the volume the author's dictum has been that the solution to granite problem lies in the detailed analysis of microscopic textures and structures, which is inappropriately described as petrofabric analysis, a term which has a narrower and more specialised connotation. The author also conjures up uncanny parallelism between comparative anatomy and petrology, and compares geological evolution with biologic evolution in the sense of Darwin. He also expresses his strong views on the origin of Rapakivi, orbicular and gronophytic textures and discounts the theory of anatexis for the origin of granite. He also disagrees with the "*phenomenon of convergence*", meaning the derivation of similar end products through different processes such as magmatic and metamorphic.

The second part of the volume is an improved version of his earlier atlas published by Elsevier in 1973. This part covers a wide spectrum of granitisation processes in 27 chapters and 378 pages, such as crystalloblastesis, tectonoblastesis, endoblastesis, xenoliths, symplectic, synantectic, graphic, perthitic and Rapakivi textures, accessory and radioactive minerals, tectonic influences, intrusive character and metallogenesis in relation to granitisation. Throughout this part also the author is unwavering in his adherence to the granitisation hypothesis with textural evidences as paramount.

The atlas is beautifully printed on art paper with black and white illustrations bringing out greater clarity and contrast. However, with rare exceptions, the references are of the

sixties vintage. This might send a wrong signal to the readers that granitisation as a reigning hypothesis had lost its case some three decades ago. While the author fights valiantly for its revival, the book remains as a vertiable storehouse of textures and microstructures of rocks, which is a petrologist's delight and a geologist's invaluable reference manual. For this enormous value alone this book deserves to adorn the shelves of geological libraries.

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**GEOLOGICAL SURVEY OF INDIA, SPECIAL PUBLICATION NO.27,  
ON KILLARI EARTHQUAKE; 1995.** Edited by M. Ramakrishnan, B.S.R.  
Murthy, K.D. Viswanatham and L. Harendranath, 261p, Price Rs. 126/-

The above publication is a collection of papers presented at the workshop organised by the Geological Survey of India on 24-12-93 at Hyderabad on the "30th September 1993 Killari Earthquake, Maharashtra".

The publication carries 28 papers out of which 15 are by GSI. It contains the details of field work and analysis carried out by the GSI and other organisations like the NGRI, AMD, IMD, CGWB, ISRO etc. The topics covered include the study of earthquake effects on buildings and structures, study of ground features including surface manifestations of the earthquake-faulting, isoseismals, geologic and tectonic framework of the region based on studies carried out in the past, hypocentral location of the earthquake using Indian network of stations, source mechanism, microearthquake investigations, locations of aftershocks and their tectonic implications and composite fault plane solutions.

There is a good deal of material presented on multi-disciplinary geophysical studies carried out after the earthquake in the affected region such as gravity and magnetic surveys, resistivity surveys, magnetotelluric surveys, geothermal surveys, Helium and X-ray measurements, study of palaeomagnetic, geothermal and ground water regime in the region and studies on smoke and gas emanations reported after the earthquake.

There are seven papers on lineament studies carried out using remote sensing techniques to study the regional tectonic framework. There has been an attempt to delineate the crustal structure and the tectonic set up of the region based on multidisciplinary studies.

Most of the papers contain preliminary results due to the expediency with which workshop was organised, while many field investigations were still going on. The paper by NGRI summarises the multidisciplinary studies carried out by various groups and brought out earlier as a special volume by the Geological Society of India in 1994 (Memoir. 35).

However, the publication gives valuable information collected by different organisations in the country on such an important event. It will be of immense help to all those engaged in the study of the seismotectonics of the Peninsular Shield and Earthquake Engineering.

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