HIGH GRADE METAMORPHIC ROCKS: Khondalites and Charnockites from Visakhapatnam, Eastern Ghats Granulite Belt, India by A.T. Rao and E.N. Dhanamjaya Rao.
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The book 'High Grade Metamorphic Rocks -Khondalites and Charnockites from Visakhapatnam, Eastern Ghats Granulite Belt, India' is a delight to read. I found the book interesting in view of the fact that these high grade granulites with complex polymetamorphic history continue to attract the attention of petrologists from world over. A.T. Rao and E.N.D. Rao's book opens with a succinct preface that gives an overview of what's out there on the subject. The contents of this book are spread in 25 sections. They deal with the complexities of exotic sapphirine – bearing, prismantinite and hognomite – bearing cordierite rocks in a rigorous way. A useful bibliography (from Aftalion to Yoshida) and an index conclude the volume. This book will be of interest to active researchers and scientists focusing on metamorphic petrology, geochemistry and geochronology of the Eastern Ghats Mobile belt having a stretch of 1000 km long and 300 km wide region. Let me focus on some high points of this book.

The first few chapters are conventionally devoted to introduce the reader about the broad subdivision of the Indian subcontinent and scope of metamorphic study in the Precambrian Indian Peninsula. They provide a balanced account of the geology and geochronology of the Eastern Ghats Granulite Belt. The authors have attempted to effectively relate metamorphism and geochronology to comprehend tectonometamorphic events.

Metamorphosed rocks commonly suffer deformation. In next few chapters, authors discuss about metamorphism, microstructures and deformational studies over a range of P-T conditions and on all scales. Several field photographs and photomicrographs of deformed/ folded/ layered rocks inserted throughout the text are worth appreciating.

In the subsequent chapters, the authors focus on the broad criteria for recognizing 'parent rocks' or 'protolith' affiliation of recrystallized

metamorphic rocks. They attempt to classify the metamorphic rocks according to the chemical variation found in the khondalites, leptynites, sapphirine-bearing granulites, cordierite gneisses, calc-silicate granulites.

The remaining chapters pick up a traditional theme of employing interplay between metamorphism, microstructures, deformation, and pressure-temperature-time (P-T-t) studies. Earth evolution is largely the result of dissipation of Earth's heat through time. The study of pressure-temperature-time variation in rock record is apparently the key to envisage how lithosphere responds in terms of energy and material. Tracking the P-T-t history of individual rocks in tectonic belts and comparing such histories among different belts helps to understand the tectonic processes that have shaped Earth's lithosphere. These chapters lack some of the recent data and do not contribute to any new information to our gaps in knowledge.

Some of the photographs in black and white are printed so dark that details are hard to make out. Limited colour photomicrographs of textures deserve more clarity. The overall presentation is clear and concise, the illustrations are useful.

The reviewer has visited parts of this terrain and studied extensively the spectacular textures in the high Mg-Al granulites. It is with this backdrop I can say that 'High Grade metamorphic Rocks -Khondalites and Charnockites from Visakhapatnam, Eastern Ghats Granulite Belt, India' will appeal to the students, seasoned practitioners and to anyone who cares for the splendid heritage of rocks that conceal extraordinary potential information in them.

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