Landforms and Geology of Granite Terrains

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Granite is exposed over more than 15% of the continents, implying that it’s significance to the Earth’s surface is comparable to that of the carbonates. Landforms and Geology of Granite Terrains is devoted to this phenomenon and provides a comprehensive explanation of the landforms and landscapes developed on granitic rocks and forms. Whereas existing literature in the field predominantly deals with karst landscapes, this book is specifically focussed on granitic terrains.

Landforms and Geology of Granite Terrains provides detailed considerations of the forms, major and minor, well-known and not so familiar granitic terrains, developed over large areas of the continents. It comprises interpretations which are of general significance in the analysis and understanding of the landscape and includes many theories in the context of granite landforms. The importance of structure, including crystal stresses, and the value of etching of subsurface initiation, multi-stages or two-stages development, neotectonic forms, solution forms is emphasized as well as the antiquity of some forms and surfaces (inherited forms). Morphogenetic forms are placed in perspective and comparison is made with similar forms in other rock types.

This work is intended for geologists, geomorphologists, geographers and mining engineers and can serve both as a practical guide for professionals and as a textbook for university courses. Author, location and subject indices are included.

 ABOUT THE AUTHORS

Charles Rowland Twidale obtained his Doctoral degree in Geology from the University of Bristol (1957) and Honoris Causa by the Complutense University of Madrid (1983). At present he is Visiting Fellow at the University of Adelaide, South Australia, and Honorary Professor of the University Institute of Geology “Isidro Parga Pondal” of the University of Coruña. He has worked on geomorphology subjects in many parts of the World, among which: North America, Australia, Africa, Spain and Portugal, developing specific ones on structural geomorphology, granitic geomorphology, eolian deposits in desert areas and etching processes in continental and marine environments, developing models of landscape evolution in intraplate continental areas, publishing numerous papers in the most prestigious journals of geomorphology and numerous books on granitic geomorphology or landscape evolution. In the specific subject of this book, he is one of the best world specialists on granitic geomorphology.

Juan Ramón Vidal Romání (1946) obtained his Doctoral degree in Geology from the Complutense University of Madrid (1983). He is a Professor in Geodynamics at the University of Coruña and Director of the University Institute of Geology, “Isidro Parga Pondal”. He has worked on granitic geomorphology and on its relation to the particular characteristics of landscapes, like glacial, coastal and continental landscapes, either in past or present climates. He has developed new research methods for cosmoergic chronology, erosive granite surfaces, granitic pseudokarst processes and for the genesis of the granitic forms. By field work in Argentina, Australia, Madagascar, Portugal, Spain and North African countries, he has become a specialist in the interpretation of the origin of granitic forms in relation to their geodynamic environment.

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