Periglacial Geomorphology
Colin K. Ballantyne

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DESCRIPTION

A FASCINATING AND INFORMATIVE EXPLORATION OF PERIGLACIAL PROCESSES, PAST AND PRESENT, AND THEIR ROLE IN LANDSCAPE EVOLUTION

Periglacial Geomorphology presents a comprehensive introduction to the processes that operate in present periglacial environments and discusses the inferences that can be drawn about former periglacial environments from those processes. Organized into six parts, the book opens with the historical and scientific context of periglacial geomorphology and the nature of periglacial environments. Following chapters provide systematic coverage of the full range of topics germane to a thorough understanding of periglacial geomorphology, including:

• The physics of ground freezing and thawing, characteristics of permafrost, and the nature and origin of underground ice

• Characteristics, formation and significance of landforms, sediments, and structures associated with permafrost, permafrost degradation, and seasonal ground freezing and thawing

• Rock weathering in periglacial environments, periglacial processes operating on hillslopes, and the characteristic landforms produced by rock breakdown and slope processes in cold environments

• The operation of fluvial, aeolian and coastal processes in cold environments, and the resulting distinctive landforms and sediments

• The use of relict periglacial features to reconstruct past cold environments in midlatitude regions and the responses of periglacial environments to recent and predicted climate change
Periglacial Geomorphology is an important resource for undergraduate and graduate students studying geomorphology or Quaternary science within the context of geography and geology degree programs. It will be of use to all scientists whose research involves an understanding of cold environments, whether from a geographical, geological, ecological, climatological, pedological, hydrological, or engineering perspective.

About the Author

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