provided at appropriate places throughout the text.

One of the biggest shortcomings of this book for American geography teachers is the British terminology and the examples of the British landscape that are used. They do not have the same connotation for Americans as they do for British teachers. Likewise, Chapter 5, School Organization, will be of little help to the average American secondary school geography teacher or social studies teacher. Despite these differences, the book has much to offer American teachers as well as geography teachers in other areas of the world who teach in schools patterned after the British system.

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PHYSICAL GEOGRAPHY

Arctic and Alpine Environments. JACK D. IVES and ROGER G. BARRY (eds.). Methuen and Co., Ltd., London, 1974. xviii and 999 pp., figs., maps, illus., tables, refs., glos., index and photos. $85.00.

This book is the first to attempt a really systematic and comprehensive treatment of the high latitude and high altitude environments of the world. It is an impressive, detailed and wide-ranging volume of nearly 1000 pages. Clearly, it is an important contribution to our understanding of cold-climate environments and is particularly useful since it is published at a time when there is concern for the controlled development of the resources of these regions.

The volume is organized around seven major sections, each consisting of several chapters. The first two sections deal with the present and past environments under the headings of climate, hydrology, permafrost and ice cover, paleoclimatology, and history of glaciation. These are followed by sections dealing with the present biota and its development; successive chapters discuss the treeline, vegetation, vertebrates, historical plant geography, and paleoecology and paleozoogeography. The fifth section examines abiotic processes under the headings of geomorphic processes and soils. Then, the final two sections deal with man in cold environments and man's impact on the environment. In all, there are 37 chapters written by 32 specialists. Many of the authors either have some association with the University of Colorado, and INSTAAR in particular, or were associated with the old Geographical Branch of the Federal Government of Canada. Throughout the volume the influence of the editors is strong, both in their choice of authors and topics, and their several contributions. In contrast to many other volumes of edited contributions, therefore, *Arctic and Alpine Environments* appears to hang together well. This is no small feat for a volume of this size and diversity.

It is unlikely, however, that *Arctic and Alpine Environments* will become the definitive reference work on these regions, as the dust cover hopefully claims. Some of the chapters are not the most authoritative statements presently available; for example, the permafrost chapter must be superceded by the North American Permafrost Conference volume of 1973, presented at Yakutsk. More fundamental weaknesses are the lack of attention given to Antarctica and Siberia, the omission of any treatment of pack ice and marine conditions, and the rather general nature of the last section dealing with man's impact on the environment. The latter constitutes only 46 out of the over 950 pages of text.

The book comes equipped with references at the end of each chapter, good clear diagrams, a glossary of terms, 48 pages of excellent black-and-white photographs and an attractive dust cover. Unfortunately, it is all very expensive. It will appear on the shelves of most libraries but only the enthusiastic specialist will consider buying a personal copy. This is a pity since the wealth and relevance of information contained in the work demand a wide distribution. Hopefully, soft-cover editions of the various sections will be published in the near future.

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Structural Geomorphology. JEAN TRICART, trs., S. H. Beaver and E. Derbyshire. Longmans, Inc., New York, 1974.

xiii and 305 pp., photos., maps, diags., biblio. and index. $15.00.

The traditional realm of structural geomorphology comprises the impact of lithology, structure and tectonic history on landforms. Long a prominent aspect of geomorphologic training in continental Europe, the drift of tectonic processual studies into the evolving field of geophysics was accompanied by less emphasis on structure and lithology in both geomorphologic teaching and research. This translation of Tricart's text, first formally published in its French original (following earlier, multigraphed editions) in 1968, provides ready access to a classic in its field. The organization is basic: (a) the distribution of land and sea, in the perspectives of crustal components and relative variations of sea level; (b) development and relief forms of geosynclines and fold belts; (c) evolution of and resulting forms in "old" mountain belts, shields, and subhorizontal sedimentary strata of variable resistance; and (d) the role of faults, fracture lines and vulcanism of various types.

The scope of Tricart's book is broader than either C. R. Twidale's *Structural Landforms* (MIT Press, 1971) or B. W. Sparks' *Rocks and Relief* (Longman, 1971), but its value in teaching is much reduced by two flaws. The translation reads well but the repeated use of French terms or ineffective circumlocutions—where good, commonplace English forms exist—often obscures the meaning. Then, too, the processual theory is badly in need of updating. Already in the mid-1960s it was inappropriate to ridicule continental drift, and grossly to ignore the significance of plate tectonics for continental landforms (by leaving a 1974 translation unrevised) seems inexcusable.

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ENVIRONMENT AND MAN

The Ecology of Natural Resources. I. G. SIMMONS. Halsted Press, A Division of John Wiley & Sons, Inc., New York, 1974. 424 pp., app., biblio., diags., figs., graphs, illus., maps, photos., index and tables. $8.95.

This book is another among a plethora of similar attempts to treat the man/environmental relationships theme from the perspective of resources. Simmons, who is British, strives to emphasize what he calls the "ecological viewpoint." He defines ecology essentially as "...the interaction between living and nonliving components of the biosphere in all their various solid, liquid and gaseous phases where man may play a major role in these systems or no role at all." Moreover, the author recognizes at least three other approaches to the study of natural resources and man's impact upon them but does not include them. These are economic, ethical and ethological.

To achieve his stated goal, Professor Simmons has divided his book into three major parts. Part I deals primarily with nature and resources, focusing mainly on ecosystems, their functions and interactions with and without man, and collectively called the "ecosphere" by Simmons. Part II, entitled "Resource Processes," emphasizes man's use of the world's resources from an ecological perspective. This section treats topics such as idle lands, protected ecosystems and landscapes, outdoor recreation, grazing, water, forestry, food and agriculture, the sea, energy and minerals, and wastes and pollution. Part III, entitled "The Perception of Limits," dwells upon population growth, spatial and social consequences of population/resources interactions, and evaluates concepts of environmental management.

The major shortcomings of the book are primarily in the style of writing. Professor Simmons tends to introduce several ideas consecutively which results in long, drawn-out sentences. He also tends to overuse technical jargon. As a textbook, I find the book's utility limited. It is much too advanced for the beginning college student, whereas a senior-level or graduate student would need a strong scientific background to gain full use of the book.

In conclusion I feel the book makes a contribution by introducing several thought-provoking concepts worthy of the resource manager's consideration. Therefore, for those teaching resource-oriented courses or involved in resource research, the book can serve as a valuable reference.

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