

As a whole, the book is well produced, clearly printed and well illustrated, and contains useful lists of references. The contributions from many experts in famous laboratories are authoritative and make this a valuable and helpful book.

H. WILMAN

INTRICATE LANDSCAPE

The Study of Landforms

A Textbook of Geomorphology. By R. J. Small. Pp. 486. (Cambridge University: London, July 1970.) 90s; \$14.50.

THIS textbook on geomorphology is interesting for its selective content and methodological intentions. It makes no attempt to give a comprehensive range of landform studies and many aspects such as vulcanism, mountain building, continental drift and deltaic deposition, which most authors would consider fundamental to the subject, are deliberately omitted. These omissions have allowed space for greater detail on topics such as the cycle of erosion, slope development, planation surfaces and periglacial landforms, which are treated at commendable length for an introductory text.

The aim is to present methodological and observational problems in a way that reveals the intricacies and uncertainties of landform analysis within a framework of reality based on local knowledge or fieldwork. Thus the volume is geared closely to the detailed working out of a few examples situated, except in the sections on tropical and sub-tropical landforms, chiefly in southern Britain, the Isle of Arran, the Grands Causses of southern France and the Val d'Hérens in Switzerland. In the author's view, a real knowledge of a few areas, which may or may not contain all the so-called "typical" landforms, is infinitely preferable to a wider and vaguer knowledge of many examples.

The effect on the text is strikingly apparent. Of the 200 illustrations, more than fifty deal with southern England. Some of the typical landforms given are excessively parochial and seem to be dragged in because they are readily accessible to fieldworkers from southern schools and colleges. Thus for Jura-type relief we are taken to east Hampshire where the present relief results from river-erosion working on a surface of marine planation and etching out valleys in the Tertiary sediments preserved within the chalk synclines, leaving the resistant chalk ridges upstanding. Undoubtedly, these regional case studies ensure that the text is very illuminating on certain aspects of geomorphology for anybody well acquainted with or living or doing fieldwork in southern Britain. Other readers may find some chapters overcrowded with unimportant localities and rather meaningless geological horizons. None will carp at the author's emphasis on accurate observation and measurement, but some may wonder, to misquote Kipling, "what do they know of England who only England know?"

The text, which is designed for advanced work in schools and introductory courses in colleges and universities, is well produced, praiseworthy free of textual errors and enhanced with crystal-clear diagrams. The general standard of exposition is high but, almost inevitably, the complexities of landform analysis induce occasional uncertainties. For example, the gentle dip of Cotswold strata used in arguments on outlier formation is contradicted in a diagram; the solution rate of all gases does not increase with temperature; Davis did not consider "stage" as length of time; the "classic" work of Deperet on raised Mediterranean shorelines has, alas, proved illusory. Further, the bibliography, which will be useful to university students, will remain inadequate as long as fine, recently revised summaries of geomorphology by W. D. Thornbury and B. W. Sparks are omitted.

ROBERT P. BECKINSALE

Short Notices

The Prehistory of Africa. By J. D. Clark. (Ancient Peoples and Places.) Pp. 302+48 plates. (Thames and Hudson: London, July 1970.) 50s.

AFRICA is unique among continents, as far as is known, in having a human prehistory which extends back as much as two and a half million years or even more. There are still many gaps in the record, particularly in the early stages of man's physical and cultural evolution, but so much material has been recovered in the past ten to fifteen years, that it is good to have this readable and up to date review of current knowledge about the evolution of toolmaking and the sophistication of human societies in Africa. Students will benefit most from the volume: it contains abundant references to books and original papers for further reading, and is well supplied with photographs, maps and line drawings of tools ranging from the most primitive Oldowan to Neolithic industries. Anybody without some previous archaeological background may, however, find the book hard going; it is a pity that there is no glossary of terms, no complete geological time scale, no explanatory drawing of human skeletal anatomy, and no description of the methods of radiocarbon and potassium/argon dating.

A Field Guide to Rocks and Minerals. By F. H. Pough. Pp. xv+349+46 plates. (Constable: London, July 1970.) 35s.

THIS book is in two parts; part one gives a brief instructive account of mineral properties and classification, indicating the rock types in which the better examples might be found—this is the only mention of rocks and the book is therefore not a field guide to them. The second part is concerned solely with mineral descriptions and more than 250 types are identified; most of them are illustrated, many in colour. The descriptions commence with the native elements, progressing through the non-silicates to the silicates. As a field guide the book would be of limited value, because it would not aid mineral identification—it contains no determinative tables of recognizable properties, such as hardness, crystal, form, colour and streak, which might have been expected from the title. It is, however, a useful reference book for the collector and is a convenient (12×19 cm) size.

Interacting Macromolecules: The Theory and Practice of their Electrophoresis, Ultracentrifugation and Chromatography. By J. R. Cann. (Molecular Biology: an International Series of Monographs and Textbooks.) Pp. ix+249. (Academic: New York and London, June 1970.) 117s.

THIS is a useful and timely offering, which deals crisply with the theory of transport of macromolecules in rapid association-dissociation equilibrium. As the author acknowledges in his preface, the work of Gilbert and his group in Birmingham has been responsible for opening a new dimension in sedimentation analysis, as well as partition chromatography and free-boundary electrophoresis. Many of the original papers lie buried in that musty cellar of the literature, *Proc. Roy. Soc.*, and the field as a whole has until now been nowhere properly reviewed. Equilibrium methods such as sedimentation equilibrium and osmotic pressure have, however, not been included. The all-embracing title is therefore misleading, but readers interested in the application of transport theory will find the book a good investment. There is a chapter by Goad, which gives a Fortran program for the calculation of parameters from boundary profiles.