

these articles are good. There is an excellent review of the action of oestrogens by Katzenellenbogen and Gorski, although it is somewhat marred by the primitive techniques used to analyse oestrogen-induced RNA synthesis.

There are three chapters dealing mainly with hormone receptors; that by Hollenberg and Cuatrecasas is a particularly useful introduction to peptide and catecholamine receptorology. One other chapter deals exhaustively with the glucocorticoid receptor and another discusses the evidence for a specific nuclear receptor for thyroid hormones.

Any genetic approach to the problem of hormone action presupposes that hormone-mediated events can be studied in cultured cells. The problems of establishing hormone responsive cells in culture is discussed in two chapters,

one by Armelin (which mentions some of the pitfalls) and a disappointingly brief chapter by Sato. In it he discusses the role of serum in cell cultures and comes to the conclusion that a whole new series of peptide hormones are about to be discovered.

The hardest task in reviewing this book is trying to decide who it was aimed at. Although some of the topics treated have not been reviewed previously, libraries are becoming full of books which serve as a vehicle for yet more reviews on the same topics. It might be more useful to have more shorter reviews with good references so that the reader has enough information to go to the relevant literature if he wishes. This book is, however, good of its genre and provides a relatively painless entry into some of the biochemistry of hormone action.

**Robert Shields**

## Analysing sediments

*Archaeological Sediments: a Survey of Analytical Methods.* By Myra L. Shackley. Pp. 159. (Butterworths: London and Boston, Massachusetts, June 1975.) £7.00.

THIS book is a compendium of methods for the description and analysis of inorganic sediments laid down by wind and water, and for the handling of field and laboratory data. A large part of the book deals with particle size analysis and is a thorough and reliable guide to techniques in this field, but there is very little discussion of experimental errors, and a spurious precision of measurement is recommended, given the sampling strategy proposed. Interpretation of field observations and experimental results receives very little attention, and examples of the use of the methods are presented with uncritical acceptance of their suitability to the problems in hand and of the value of the results. Outside the field of traditional sedimentology, selection of sources and coverage of techniques is erratic, and misleading advice and information appears. In the confused discussion of the relationship between soils and sediments no mention is made of mineral alteration and secondary mineral formation; organic components of sediments, although their study is a separate field, surely require discussion as participants in the processes of sedimentation and postdepositional alteration. Most archaeological sediments are complex mixtures of mineral and organic materials of

diverse origin and history, laid down in intricate interstratification by people and animals as well as by the inanimate agencies, and their study demands a synthesis of methodology derived from many branches of field and laboratory investigation. This book understates the limitations of the contribution its methods can make in deriving information about human environment and behaviour from the deposits left by or related to human activity. It provides a useful short cut to the standard literature of sedimentology, but fails to provide the archaeologist or the scientist working with him with the help in formulation of questions, selection of appropriate techniques and interpretation of results which he badly needs.

**Susan Limbrey**

## Small-scale meteorology

*Climate in a Small Area: An Introduction to Local Meteorology.* By Masatoshi M. Yoshino. Pp. xvi+549. (University of Tokyo: Tokyo; International Book Distributors: Hemel Hempstead, Herts, April 1975.) £16.

PROFESSOR YOSHINO has provided a successful textbook on small-scale climatology, an area which does not lend itself readily to systematic presentation. It is a multidimensional subject in which the range of physical variables—pressure, temperature, humidity, cloudiness, sunshine, rainfall, wind and others—are related to a comparable variety of physical features—hills and valleys, land and sea, rivers and lakes, trees and forests, towns and cities—all of which have effects which

differ according to the broadscale environment and to the geographical zone, season of the year, synoptic weather situation and so on. The subject is at the same time eminently practical and useful but unfortunately general principles do not get us very far and empirical studies for local application need to be made in every part of the world; the literature becomes ever more voluminous as many hundreds of worthwhile studies are published every year. How does one set about reducing such material to a textbook for a university course. Professor Yoshino is one of the few who have tried.

A short opening chapter on terminology is followed by 25 pages of 'History of Research', just enough to remind students that the subject is not a new one. In chapter 3 of 142 pages, climate is related to the surface, flat land, city, forest, seashore, lakeshore, riverbank, including some fundamental boundary layer theory which seems either too much or too little. A chapter of similar length concerns 'topography', here implying mountains, hills and valleys, and its relationship to climatic elements; the next is entitled 'Local Airstreams and Weather' and relates the weather (rather than the climate) with synoptic pattern, local fronts, and local winds, föhn, bora, and the like. The sixth and last shorter chapter is headed 'Local and Microclimate and Nature' which could mean anything but turns out to be just a taste of applied climatology, with geomorphology and plant ecology, and provides a place for a pet subject of the author, wind shaped trees.

A broad qualitative knowledge of meteorology and its basic principles is assumed and just occasionally mathematics finds a place. The Japanese book production is excellent and would do credit to the best English academic publishers although with sufficient minor misprints and infelicities in English to call for a little indulgence. It is a book to be acquired by every specialist library although the inevitable bias towards Japanese climate and Japanese literature makes it unsuitable as a coursebook outside Japan.

I have never taken readily to the textbook, however, which in its anxiety to acknowledge its sources reads at times more like an annotated bibliography. Nearly 1,000 different authors earn some 1,200 references and yet the selection from the much vaster world literature still seems almost arbitrary. A text for students which digests the material and is sparing with the 'credits' can be briefer and cheaper, more cogent, more instructive and certainly not so soon dated, although the scholarship may be less obvious.

**R. C. Sutcliffe**