

And of all the properties of the Earth which have been traced through geological time, the most significant and important is undoubtedly the geomagnetic field as recorded in the Earth's rocks, for our whole modern view of the Earth as an internally dynamic body ultimately stems from the establishment of continental drift as a viable hypothesis, largely as a result of palaeomagnetic study. Naturally enough perhaps, the conceptual end results of palaeomagnetism—continental drift itself, sea floor spreading, geomagnetic dynamos, and the like—have attracted more than their fair share of attention from “popular” writers. On the other hand, palaeomagnetism *per se*, the foundation of the modern view, has received almost none.

To redress this imbalance somewhat, Strangway has written this introductory book which covers, in a simplified yet coherent and eminently readable way, all of the topics one would expect to encounter in a book on basic palaeomagnetism and rock magnetism. In reading it I could not help but reflect, somewhat sadly, that North America has a definite edge over Europe when it comes to producing books at this level. It is, I suspect, largely a question of public need. With more than two thousand universities and colleges, a system of higher education which tends to the non-specialist, a high school situation in which one in three seniors studies Earth science, and a noticeably more scientifically literate population, there is a large market for this sort of book in the United States. It will sell proportionately far less in Britain—which is a pity, and certainly no reflexion on its quality nor on the achievement of its author.

PETER J. SMITH

STATISTICAL MECHANICS

Elementary Statistical Mechanics

By G. A. P. Wyllie. (Hutchinson University Library.) Pp. vii + 148. (Hutchinson: London, June 1970.) 35s boards; 15s paper.

THIS book is a simplified version of a lecture course, delivered over several years, by the author at the University of Glasgow. The standpoint of E. T. Jaynes, regarding the quantitative measure of information, is used to establish the canonical distribution as the least informative description of a system whose exact constitution and average energy are proscribed. The book is elementary in the sense that it requires only a knowledge of mathematics at first year university level and an elementary knowledge of quantum mechanics.

A large range of physical problems is covered which some readers may welcome. But I would have welcomed more time spent on the fundamental theory even at the expense of a restriction of the applications. A student reading the book, with no previous knowledge of the subject, will probably find it difficult to decide which is the basic theory. It was particularly irksome to find that there are no equations or subsections in the book numbered, the latter even being difficult to find on the page. There are some problems scattered throughout the text but no collections of problems at the ends of the chapters.

J. E. HEBBORN

SPECIALIZED CRUSTACEANS

The Taxonomy, Morphology and Ecology of Recent Ostracoda

Edited by John W. Neale. Pp. ix + 553. (Oliver and Boyd: Edinburgh, 1969.) 220s.

DURING the latter part of the nineteenth century and the early part of this century, the Ostracoda shared in the

great outburst of attention that was paid to the world fauna. Then interest flagged. To the geologist, partly as a result of the economic pressures on stratigraphic studies, fossil forms continued to be studied intensively, but to the zoologist the stigma of “too small and highly specialized” became attached. Of recent years there has been a resurgence of interest. The palaeontologist, particularly in relation to palaeoecology, has ventured into the fields of functional morphology and ecology of recent ostracods, while a number of zoologists, though starting from different concepts, have converged onto the same interests. This renewed interest among workers scattered over the world has stimulated international meetings, and this volume constitutes the papers presented at a very successful symposium held at Hull during July 1967.

The title of the book gives an indication of the range of papers, which extend from such fields as numerical taxonomy through detailed morphological studies to distributional ecology. The editor has not only achieved a logical grouping of the papers but has also added clear and valuable summaries of the discussions which took place at the meetings and a most helpful general index as well as a separate index to genera and species. The papers are not all in English, but one would not expect this with the publication of an international symposium which one hopes will have an international circulation.

Naturally the standards of the papers vary, but are in general high. To criticize the volume is to criticize the work of experts, and it must always be remembered that the approach of the palaeontologist differs from that of the zoologist so that it is always possible for the one to criticize the work of the other. It does seem a pity, however, that no papers are included on some of the recent work on marine planktonic groups, though no doubt this is a reflexion of the interests of those present at the meeting. As Kilenyi points out, the approach to his paper on ostracod distribution tends to be more palaeoecological than ecological and this is also true of other ecological papers included. Fortunately for the zoologist there are exceptions to this as, for example, the work of Whatley and Wall (southern Irish Sea) and Williams (Anglesey coast) where, among other factors, the authors establish specific association with species of algae. A zoologist may find the work of a geologist lacking where Adamzek only uses *Cyclastropo hendersoni* as a standard for the carapace of a filter feeding ostracod and ignores the other Asteropidae, let alone the Cytherellidae. On the other hand, the geologist may wonder what use Rome's exquisite work on the caudal furca is when he will not find traces of this structure in his fossils.

This volume is in no way a textbook, but to the newcomer to the group it forms a guide to present trends in research, and to the general zoologist or palaeontologist it shows the growing relationship of studies of this group to other fields. Above all, the specialist ostracodologist will find it a unique source of a large number of important papers on new developments in his subject. E. J. ILES

PEDIGREE OF THE VERTEBRATES

Cytology and Evolution

By E. N. Willmer. Second edition. Pp. x + 649. (Academic: New York and London, June 1970.) 257s.

THIS book, welcomed in its first edition as a scholarly treatment of a field into which few had ventured, now reappears under the same title but with its range substantially modified. It still opens with an account of the basic cell types revealed by tissue culture, and of their possible relation to the course of early metazoan evolution. In the second half, however, there is now a thorough