

has not changed very much since then, the appearance of a second edition is a good indication of the continuing demand for this excellent treatise.

The author has taken account of the important advances made in our knowledge of the subject during the twelve years since this book was first published, and has revised the text and brought it up to date. Thus, to the introduction has been added a brief account on the immunology of parasitic infections; the section on nematodes was rearranged, and that on protozoa rewritten. As the result of these changes the size of the book has increased by more than 200 pages, and one can foresee the time when it will be too bulky for a single volume.

Because new readers might not be familiar with the first edition, an indication of its contents may be given. In the first three chapters an account is given of the fundamental aspects of parasitism—its nature and host-parasite relationships. Parts 2 and 3 are devoted to helminthology, part 4 covers the arthropods, while the fifth part deals with the protozoa. In the case of economically important species, the descriptions include—in addition to taxonomy and morphology—their life cycle, effects on the hosts, control and treatment. There are two appendices: one dealing with anthelmintics (by T. E. Gibson), the other on chemical control of arthropods (by W. N. Beesley).

Random sampling of the text revealed a few minor errors and omissions: thus in the account of the Trypanosomatidae the author has ignored the revision of *Crithidia* and the creation of the genus *Blastocrithidia*; in the case of *Toxoplasma* it should have been made clear that only a single species (*T. gondii*) is valid.

The author can be congratulated on bringing together in one volume this mass of knowledge relating to the parasites of domestic animals, a formidable task which could be achieved only with the wide experience and capacity for work possessed by Dr Lapage.

The book is well printed and adequately illustrated; it is provided with an ample bibliography (38 pages) and a useful index. Its price—for a book of that volume—is by present standards not excessive. C. A. HOARE

VEGETATION AND SOILS

Vegetation and Soils

A World Picture. By S. R. Eyre. Second edition. Pp. xvi + 328 + 32 plates. (London: Edward Arnold, 1968.) 45s.

It is again a pleasure to review Dr Eyre's useful and versatile book now in its second edition. The text, which includes topics other than those indicated by the title, is a source of interest and information for students of many disciplines.

Although basically a treatise on vegetation as a world system, the author succeeds in showing the correspondence of this phenomenon with soils. A limited number of alterations have been made to the original script especially in relation to various soil processes and properties. It has to be noted, however, that there is still a lack of data on some important aspects of the subject. For instance, undocumented, general references to evaporation, transpiration and precipitation in forests take no account of valuable work on these activities being conducted by university departments of forestry in this country. Perhaps, too, quantitative evidence should be quoted where cause and effect are invoked or implied.

These minor criticisms apart, the book remains commendable for its comprehensiveness as well as for its meticulous, if repetitive, attention to detail. The application of the geographer's systematic approach to complex soil situations makes simplified explanations adequate for the general student of soils if perhaps not entirely satisfactory to "pure" soil scientists. In this regard, the author

is very successful in his resolution of the British vegetation—soil complex into a classical structure and function relationship. The indigenous forest, herbaceous, heath and bog species are clearly shown to have their soil counterparts and vice versa, and there are well-qualified explanations for anomalous features. It is quite an achievement to be able to comprehend pattern and trends in our ecosystem considering Britain's latitudinal range, isolation from the continental land mass, degree of glaciation and human influence, agricultural and industrial.

The claim that the book provides a world picture is fully justified. There is a new extended bibliography to go with the admirable figures, plates and maps. It is certainly now more a work of reference instead of the introductory text originally intended by the author.

W. S. WILSON

AFRICAN EVOLUTION

Background to Evolution in Africa

Edited by Walter W. Bishop and J. Desmond Clark. Pp. x + 935. (Chicago and London: The University of Chicago Press, 1967.) \$27.50; 247s.

THE publication of the proceedings of the month long Wenner-Gren Symposium on a subject as complex as "Systematic Investigation of the African Later Tertiary and Quaternary" is an event of unusual importance to African Studies.

The editors, Walter Bishop and Desmond Clark, pay warm tribute to the characteristic excellence of the foundation's organization (inspired by its director of research, Lita Osmundsen) which made possible the three successive eight day seminars at Burg Wartenstein on palaeontology, stratigraphy and archaeology. Each was restricted to twenty scientists, while continuity was simultaneously provided by a small group from among their number which was present throughout.

The aim of the symposium was to review the work accomplished during the previous ten years or so in the wide spectrum of scientific disciplines related to the study of man and the evolution of culture. More particularly it was to re-examine the definitions and agreed pattern of nomenclature which have been the subject of some uneasiness ever since the first Pan-African Congress on Prehistory in 1947 attempted standardization. This problem has proved only slightly less intractable than on previous occasions. The palaeontological seminar understandably had no doubts about the vital need for expansion of palynological studies and for closer collaboration between research workers in such a vast field, where isolation, in the three main fossiliferous provinces, has militated against the creation of an internationally acceptable framework, adaptable for the widely different fields of study.

The seminar on stratigraphy unanimously pressed for the adoption, for African Quaternary studies, of a code comparable with that used in North America, which rigorously separates rock units as material entities from time-stratigraphic units of rock. The group insisted also on sharp definitions, including reference to existing accessible type sections. These recommendations had such manifest advantages that controversy was virtually absent.

The third seminar, which debated the archaeological considerations, with a view to recommending further revision of the terminology used in Africa, ran to 450 pages of important background papers (exceeding in length the two previous seminars taken together), followed by forty pages devoted to discussions on terminology, and to the symposium's specific recommendations.

In spite of Desmond Clark's hopes that African archaeology can eventually be placed on the "same precise basis of definition as, for example, geology" it is fairly clear