

thinking and discussion among the young on out-of-school family and community problems.

Because of the range and complexity of the problems discussed this book cannot be digested quickly nor reviewed comprehensively. But it is well worth studying from cover to cover. D. J. WEST

## FOSSILS FOR THE NATURALIST

### Fossils

By Prof. H. H. Swinnerton. (The New Naturalist: a Survey of British Natural History.) Pp. xiv + 274 + 25 plates. (London: William Collins, Sons and Co., Ltd., 1960.) 30s. net.

THE volumes of Collins's New Naturalist Series are delightfully produced books, splendidly illustrated and written by acknowledged authorities. They make ideal presents, and are a delight to possess. It is also true that most naturalists are born collectors; and these books are eminently collectable. But these facts do not alone explain the success of the series. It succeeds because these books are mostly written by naturalists for naturalists. They appeal to the faculties of wonder and delight in Nature which (rather than the spirit of curiosity and the pure desire for knowledge) are the particular characteristic of the naturalist. The present volume, the forty-second of the Series, is no exception. It is in the direct line of descent from Hugh Millar and is a naturalists' book and not just another popularization of science.

Prof. H. Swinnerton's approach to his subject is historical in two different senses. He is most successful in conjuring up pictures of the successive extinct faunas and floras in which the animals and plants are brought vividly before us as living things in their changing natural environments. We follow in separate short chapters the evolution of the main phyla of plants and animals, first in the Palaeozoic, then in the Mesozoic and finally in the Cainozoic. At the same time, by a series of cleverly interwoven digressions, we learn of the history of the growth of palaeontology, and our interest is cunningly sustained by stories of the lives of many of the collectors and research workers whose discoveries he describes. It is all very well done, and the book is eminently readable.

All this being said, it is the more unfortunate that an unqualified welcome cannot be given to this book which at first sight seems so well to fill an obvious gap in the New Naturalist Series. It is not that the vividness of the reconstructions of the geological past is often obtained by the presentation of detail the conjectural nature of which is not made sufficiently apparent. Nor, since the book is not intended for palaeontologists, does it matter much that a number of names used are out of date, as are also some of the ideas (for example, the derivation of *Caninia*, *Palaeosmilina* and *Dibunophyllum* from 'Zaphrentis' in the Lower Carboniferous, and other ideas about the evolution of corals and graptolites). The pity is that there are a number of confusions of matters of some importance.

Thus it is regrettable that the graptolite zooid is described as possibly not unlike a hydroid polyp, while the dendroid graptolites are said to be comparable with *Cephalodiscus*. It is also unfortunate that the old classification of the East Anglian crags in the Pliocene is retained, especially as confusion is created by the remark that the deposits underlying

the Cromer Forest beds have been shown to be of Pleistocene age. This particular confusion is worse confounded by the caption to plate 21, "Marine Fossils of the Quaternary", which illustrates both crag and Eocene fossils. Presumably for Quaternary, Cainozoic should be read. Other confusions are of serpulite (*Salterella*) with *Serpula*, the alleged presence of *Archaeocyathus* in Scotland and the inclusion of the reindeer in a list of extinct animals.

The illustrations are, with one or two notable exceptions, well chosen and well reproduced. However, there are several illustrations where a number of fossils are represented on very different scales without any indication of the relative or absolute size of the specimens. Finally, it is necessary to say that there are far too many misprints, and that these chiefly affect the descriptions of the plates (at least fourteen corrections required). S. SIMPSON

## THE FIRST DECADE OF DDT

### DDT

The Insecticide DDT and Its Significance. Edited by Paul Müller. Vol. 2: Human and Veterinary Medicine. By W. J. Hayes, Jr., S. W. Simmons and E. F. Knipling. Edited by S. W. Simmons. (Lehrbücher und Monographien aus dem Gebiete der Exakten Wissenschaften, Chemische Reihe, Band 10.) Pp. 570. (Basel und Stuttgart: Birkhäuser Verlag, 1959.) 66 Swiss francs; 66 D.M.

THIS second volume of a series on DDT contains three contributions by American authorities on insecticides and their use: "Pharmacology and Toxicology of DDT", by W. J. Hayes, jun.; "The Use of DDT Insecticides in Human Medicine", by S. W. Simmons, and "The Use of DDT in Veterinary Medicine", by E. F. Knipling. The first two of these are almost equal in length and comprise about 400 pages of the book, each concluding with a list of some 600 references; the shorter veterinary section has about 200 references.

Dr. Hayes deals first with clinical, pathological and physiological aspects of DDT toxicity as observed in animals. Human toxicity risks are then discussed from data on experimental and accidental intakes by man, on workers handling DDT, and in relation to DDT residues accumulating in water, in milk or in foodstuffs derived from treated animals or vegetable sources. This is summed in terms of administrative policies for toxic residues in general in consumable goods. DDT is safe when used as recommended. Hazards to domestic mammals, birds and insects (bees notably) and to various forms of wild life from medical and veterinary usages of DDT form concluding chapters to the section.

The contribution by Dr. Simmons (also editor of this volume) is not merely about DDT for the control of arthropods of medical importance. It is valuable and noteworthy for its emphasis, well illustrated graphically, on the effects of vector control by DDT on the incidence of the diseases concerned. Much of this part of the work is about mosquito-borne infections and mainly on malaria control, arranged geographically. Other chapters are on other biting flies, houseflies, lice, fleas, triatomid bugs and on the mites and ticks. The acarines are less susceptible to DDT than the insects. It seems scarcely justifiable, in view of general experience and what is recorded in the relevant text, that, for example, scabies and