

the history of the opossum since the first settlers in America brought it to the knowledge of Europe, and devotes a chapter to the marsupials of Australia. Other matters dealt with include the opossum in legend and folk-lore, "playing 'possum", prehensile tails, farmyard depredations of the opossum, the fur trade, 'possum hunting, and recipes for cooking "possum and taters".

But it is the account of the embryology of the opossum and the birth and early life of the pouch embryos that makes the outstanding part of the book, and forms a permanent monument to Dr. Hartman's pioneer researches extending over forty years. He was the first to work out and record in detail the extraordinary history of the opossum egg which seems so reluctant to fulfil its destiny. With only thirteen days of gestation available between mating and birth, it dawdles through the first stages of development, making little apparent progress; there is "only a tiny rudiment of the embryo present although half the intra-uterine life has already passed. . . . The transition from delicate vesicle smaller than a pinhead to newborn opossum requires only six days". The photographs illustrating this process are unsurpassed.

This book is natural history as it should be, a combination of field work, laboratory study and literary research that will win Dr. Hartman the admiration of a host of new friends and the hearty congratulations of his many old ones.

L. HARRISON MATTHEWS

#### A Provisional Check-List of the Butterflies of the Ethiopian Region

By Dr. Wallace Peters. Pp. 201. (Feltham: E. W. Classey, 1952.) 45s.

A CHECK-LIST of any group of animals is always a valuable working tool for the student of the group, whether he is a dilettante or earnest collector, a museum curator or taxonomist; to the ecologist and sometimes the physiologist it is a warning, not always heeded. The butterflies of Africa during the past half-century have provided a tremendous field for the development of Darwinian theories of evolution, especially along Poultonian mimicry lines, and a very extensive literature now exists, based on the observations of a numerous band of field naturalists. These naturalists would be horrified to find that there now exist about a hundred and twenty named varieties of *Papilio dardanus*, very few of which have so far been in any way correlated with what is known of the genetics of this astonishing butterfly. The *mihi* cult dies hard among amateur lepidopterists. The author has performed a useful service quite well in bringing together in orderly fashion this index to the scattered and unequal writings of others. This orderliness, however, is often more apparent than real, for there are many fascinating taxonomic problems yet to be unravelled among the butterflies of Africa before a check-list free of pitfalls can be produced. The present one reflects almost too truthfully these inequalities in our knowledge, especially in the Lycaenidae, where, to take only one example, part of Group 1 of the genus *Pentila* (p. 92) is repeated as the genus *Liptenara* on p. 97. Many species are misplaced; yet as only a specialist would know this, the author is perhaps scarcely to blame, for the work is admittedly a compilation. The confusion is no greater than that which reigns in most collections of these insects. The book is well printed, with plenty

of room for corrections—it is not free of misprints and omissions by any means—but it is a little irritating to find the names of so many well-known authors abbreviated in quite novel forms; and it seems a great pity to have wasted one-quarter of the whole on two separate and very elaborate indexes when one plain index is all that is needed.

N. D. RILEY

#### Freshwater and Salt-water Aquaria

By Sir Francis G. W. Knowles, Bt. Pp. 174+11 plates. (London: George G. Harrap and Co., Ltd., 1953.) 12s. 6d. net.

THOUSANDS of people keep an aquarium, both naturalists who delight in the minute observation of the inmates' habits and "those to whom an aquarium is a decorative and amusing piece of furniture for the living room". No laboratory where biology is taught is complete without a battery of aquaria. The author hopes that this book will serve as a guide for the beginner, and a reference work for the accomplished aquarist; his hope should be fulfilled. He first discusses in simple terms the basic principles of successful aquarium-keeping, and then gives clear directions for setting up and stocking both freshwater and marine tanks. But he does more than this, for he gives a large amount of sound biological information about the plants and animals suitable for life in captivity. The chapter on diseases and difficulties, based upon personal experience, will be of special value to the newcomer to the fascinating pursuit of aquarium-keeping.

The book is well illustrated with drawings in the text and good photographs; there is a short bibliography, and a full index.

#### Sotheran's Bibliotheca Chémico-Mathematica

Catalogue of Works in Many Tongues on Exact and Applied Science. Third Supplement. Pp. viii+442. (London: Henry Sotheran, Ltd., 1952.) 42s. net.

THE third supplement to Messrs. Sotheran's "Bibliotheca Chémico-Mathematica" is made up of this firm's priced catalogues Nos. 875, 877, 879, 884 and 896, issued between 1946 and 1952. These have been bound together in one volume, in red buckram, to match the previous volumes in the series. Together, these catalogues cover a wide field in pure and applied science, including the various branches of mathematics, astronomy, physics, chemistry, engineering and geology (but excluding zoology, botany and other biological sciences). The pagination is continuous, and 5,951 items are listed and described. Thus, the new supplement by itself forms a useful work of reference. While, inevitably, there is considerable duplication in the entries, when compared with those contained in the earlier parts of the "Bibliotheca", the compiler, Mr. H. Zeitlinger, states that there are also many not previously recorded. It should therefore be worth while for owners of the previous volumes of the "Bibliotheca" to acquire this supplement, in which the listed works are bibliographically described and annotated by Mr. Zeitlinger, with his usual scholarly care. The prices now asked for the older scientific books of historic interest reflect the fact that, as has become apparent during recent years, there is an increased demand and growing scarcity of such works. This is a publication which, like its predecessors, can be recommended with confidence as a valuable tool for librarians, historians of science and book collectors.