

able to initiate parthenogenetic development. It may be hoped that the remarkable phenomenon of ovarian atresia, the data on which are fully summarized, will throw some light on the conditions of activation of cleavage.

As is natural in a subject which has only recently been submitted to experimental analysis, the value of the book lies more in the questions which it raises than in any answers it may suggest; as the author states, "this is a book of interrogation, not explanation". It will be extremely valuable to those few who are already working in this field, and one may hope that it will lead to an increase in their number.

C. H. W.

The Principles of Bacteriology and Immunity

By Prof. W. W. C. Topley and Prof. G. S. Wilson. Second edition. Pp. xv+1645. (London: Edward Arnold and Co., 1936.) 50s. net.

It is not possible in a short review of this book to deal in any detail with the very extensive revision which has been carried out so successfully by the authors. Whole chapters have been rewritten and rearranged in order that the results of the very rapid advances which have taken place in bacteriology during the last few years could find their place. It is only necessary to read such chapters as those dealing with antigen-antibody reactions and virus immunity and to note the extensive additions which have been made in chapters on the Streptococci, *Brucella*, etc., to have some idea of the magnitude of the task undertaken and so thoroughly carried out.

The book has always been a really valuable work of reference, and we feel that the new edition will give it an even higher place in bacteriological literature. It will be more than a mere book of reference.

Part IV, which deals with applications of bacteriology to medicine and hygiene, will, we hope, be read by many who are not specialists in bacteriology. It might be considered as a thoroughly up-to-date textbook dealing with the practical problems of disease in man and the lower animals. To many of us this will be the most valuable, though perhaps not the most interesting, part of the book.

It is a book which every worker on the subject of bacteriology should possess and read and re-read. Our only criticism is that it is too bulky to read comfortably in an easy chair. We heartily congratulate the writers on the production of this excellent second edition.

J. M. BEATTIE.

The Animal's World

By Prof. Doris L. Mackinnon. Pp. xv+272. (London: G. Bell and Sons, Ltd., 1936.) 7s. 6d. net.

Too often the spoken word is lost. It was in response to many written requests by listeners to a series of broadcasts on simple biology in which Prof. Mackinnon took part that this entrancing book came to be written. As she explains in her modest preface, the author leans more to things zoological than botanical, and it is only when animals and plants become interdependent on one another that plant biology is introduced—hence the title.

Prof. Mackinnon has that rare combination—a wide and exact scientific knowledge with a facile and sympathetic pen. How animals move in air, in water, on land; how they breathe and why; how they talk to one another; what the world looks like through their eyes; why honeysuckle smells sweeter in the evening; why the heart beats; these and a hundred other questions she answers in the simplest and most direct language, such language that a child can understand and yet a grown-up can enjoy and learn from all the time.

Some of the most interesting chapters are on the senses of animals, especially those which deal with hearing and the ways in which animals communicate with one another. In connexion with the latter, an interesting example of the use of the microphone is given.

The book is profusely illustrated with many photographs of outstanding interest and beauty. In addition, there are drawings and diagrams which help to explain the text. There is also a comprehensive index.

G. M. V.

British Grasshoppers and their Allies:

a Stimulus to their Study. By Dr. Malcolm Burr. Pp. xvi+162+6 plates. (London: Philip Allan and Co., Ltd., 1936.) 6s. net.

THE sub-title of this little booklet expresses very neatly its purpose as a stimulus to the study of British Orthoptera, and there can be no question that it will serve the purpose in an admirable way. Although there are thirty-one species of Orthoptera and Dermaptera on the British list, they remain one of the most neglected groups of insects, and the distribution of the different species, to say nothing of their habits and ecology, are most imperfectly known. Determination of the recognized British species, and of such few as may be expected to occur in the British Isles, is very easy with the aid of short descriptions and figures of outstanding characters. Distributional maps are given for each species, but they serve mostly to show the lamentable paucity of records. General remarks at the beginning of the book, and scattered throughout its text, contain a host of suggestions for studies, both valuable scientifically and mostly easily carried out by any serious amateur naturalist.

The booklet, which is compact, well produced and cheap, should rapidly find its way into the pockets of field naturalists, with the desired stimulating effect on the accumulation of knowledge about this sadly neglected, but in many ways fascinating, group of insects.

B. P. UVAROV.

Aquariums and Fishponds

By A. Laurence Wells. (Warne's Information Series.) Pp. 64. (London and New York: Frederick Warne and Co., Ltd., 1936.) 1s. 6d. net.

HERE are the main principles of fish-keeping and of the plants and animals suitable to an aquarium. Let it be square; cover the bottom with sand, then loam, and plant it with carefully sterilized vegetation.