

A School Course of Biology

With Suggestions for Experimental and Field Work. By L. J. F. Brimble. Fourth edition, entirely re-written and enlarged in collaboration with Dr. L. M. J. Kramer. Pp. xv+558. (London: Macmillan and Co., Ltd.; New York: St. Martin's Press, Inc., 1957.) 18s. net.

THE transformation of a school text-book, which has been in steady demand since 1940, into what is virtually a new volume should endow it with a fresh lease of useful life. It is not a cram manual streamlined to fit the requirements of some examination syllabus: instead, it sets out bravely to present a representative picture of all forms of living matter as they exist now and have originated in the past, and to describe their structure, functions, organization and inter-relationships, including those with man himself.

The chapters on evolution and heredity, living things and their environment, and man in relation to other living organisms are particularly welcome. In these respects the book merits comparison with the attractive readers put out for use in American high schools; and one hopes that some copies will find their way across the Atlantic. For British teaching practice it covers the ground for the General Certificate of Education (Ordinary Level), in many directions extending far beyond it, for it contains a large amount of miscellaneous information on such topics as the speed of animals, the life-history of the eel, parasitic and saprophytic plants.

The treatment is comparative. Directions given at the end of each chapter for individual and class observations and experiments are more than adequate. Among the many well-chosen illustrations, the drawings by the senior author deserve special commendation for their number, clarity and artistic form. The book contains one or two slips in phrasing, and a few minor errors of fact, which merely serve to show that it is impossible for a single author to be fully informed on every topic receiving mention. By the same token, the boys and girls who will study it should not be expected to remember all the knowledge it contains. R. WEATHERALL

Analytical Microscopy

Its Aims and Methods in Relation to Foods, Water, Spices and Drugs. By Dr. T. E. Wallis. Second edition. Pp. viii+215. (London: J. and A. Churchill, Ltd., 1957.) 25s. net.

REVISED for the first time since its publication more than thirty years ago, this book is virtually new, owing to the accumulation of fresh information and the introduction of new methods.

An account is given of the methods of preparing material for microscopical examination and is illustrated by examples selected almost entirely from problems which have arisen during the career of the author. Analytical microscopy, its aims and methods in relation to food, water, spices and drugs, clearly indicates the unequalled experience of an analyst known to many in industry and medicine.

The immensely practical nature of this work is shown by the varied use of the microscope for solving problems which cannot be successfully tackled by purely chemical means.

The introductory chapter deals with general arrangements for the proper use of the microscope and its accessories, followed by a chapter giving details of preliminary operations which are necessary for the examination of foreign matter (including insects) in

poultry and bird food. The use of surface preparations is described with reference to the microscopical characters of culinary herbs, and the method of sedimentation is illustrated by investigations of water deposits. The process of kneading is explained in connexion with the analysis of flour and other starchy powders, while other chapters deal with elutriation for preserves and the reagents used for the clarification of specimens. Additional preliminary treatment of material is described by some information on 'crude fibre' in connexion with coffee and chicory. Chemical treatments used prior to the examination of pests, occurring as fragments in flour and other commodities, are mentioned. Chemomicroscopy, the micro-morphology of various substances including sulphur, the techniques of sublimation and precipitation—all indicate the extensive scope of this handy volume.

For those wishing to use microscopical measurements, numerical values and quantitative microscopy, the author gives a concise account of the meticulous approach to these subjects. Accurate, well-labelled drawings are a great feature of this book, while valuable numerical data, reagent formulae and an adequate bibliography complete the store of information available to anyone engaged in analytical work using the microscope. S. B. CHALLEN

The Amphibia of Ceylon

By P. Kirtisinghe. Pp. xiii+112+1 plate. (Colombo: P. Kirtisinghe, 2 Charles Circus, 1957.) n.p.

THE Ceylonese Amphibia are presented here in the form of a taxonomic survey, the general subjects of habits, life-history and ecology being almost completely disregarded. This is a disappointing omission in a book with as definitive a title as "The Amphibia of Ceylon" and in one which would have provided scope for speculative treatment of zoogeography, speciation and other aspects of amphibiology. None of these subjects has been given the attention that is required, perhaps because no research in these fields has been attempted by the author. Instead, Mr. Kirtisinghe has restricted himself to a taxonomic treatment. However, it is a compact and nicely produced book and makes a very useful manual for the museum laboratory worker as well as a reliable field book for the collector.

Preceding the main taxonomic section is a historical account of the study of Ceylonese Amphibia in which the author has collated the faunal lists which have been published by earlier devotees to Ceylon's amphibians. In the light of Mr. Kirtisinghe's experience, which has accrued from his position as lecturer in zoology at the University of Ceylon, from his personal collections and from the year spent in England when he devoted a great deal of time to the study of the Ceylon amphibians in the British Museum collections, he concludes that the composition of Ceylon's amphibians can be reduced from the 37 species recognized by Boulenger to 32, with 12 species believed to be endemic. Although his reasons for synonymizing these and other species may be based on sound judgment, they are not always divulged and the reader is kept guessing.

The same style is adhered to throughout the systematic section—division into families with keys to the genera and species, and within each species account there is, first, a synonymy, followed by a figure and detailed description of the adult, and of the larva also where it is known, and range. The illustrations are well executed by competent artists.

A. G. C. GRANDISON