

BOOK REVIEWS

OXIDATION-REDUCTION POTENTIALS IN BACTERIOLOGY AND BIOCHEMISTRY

By L. F. HEWITT, Ph.D., B.Sc., F.R.I.C. 6th Edition. Pp. viii + 215. Edinburgh: E. & S. Livingstone Ltd. 1950. 20s.

For the benefit of readers not versed in the subject, the book starts with an easy and clear description of oxidation-reduction processes in terms of electron migrations and the determination by measurement of electrode potentials. The degree of oxidation or reduction of a system is thus gauged and can be graded according to the intensity level. The mathematical part is given in full and can be skipped if too difficult. As the method using oxidation-reduction indicators has many disadvantages in practice, the author has adopted the potentiometric method, for which he describes the simple apparatus he himself uses; it is carefully illustrated by diagrams. Other practical methods described are the measurement of hydrogen ion concentration by the glass electrode, the polarograph and the microspectroscope for the examination of bacteria. The many systems of prime biological importance, metabolic cycles and chain reactions, chemotherapy and antibiotics, and applications to bacterial cultures comprise about half the book. Full references are given with a bibliography of 30 pages. All these descriptions are of intense interest and form a good summary of the general biochemistry of the subject. The book must surely be a help to biologists, bacteriologists and also to biochemists, for it is so easily and pleasantly written.

MEDICAL PROTOZOLOGY

By CECIL A. HOARE, F.R.S., D.Sc. Pp. xv + 334, with 43 figures. London: Baillière, Tindall and Cox. 1950. 35s.

Dr. Hoare has filled a gap in medical literature by writing this handbook on medical protozoology, for it is the only modern British publication which deals concisely with a subject which is becoming more and more important in the curriculum of the practitioner in the tropics. The increasing use of air travel has overcome the natural barriers of time and distance, and has brought tropical disease to our doorstep, so that the publication of this book is opportune. The subject is one that concerns every clinical pathologist in this country and abroad, and Dr. Hoare has succeeded in presenting the essentials in an attractive, easily assimilated manner, illustrated by clear lucid diagrams.

This book will be a perfect boon to the post-

graduate attending a tropical course for in the past he had to delve into bulky textbooks, but its main value will be to the isolated worker in the tropics as an introduction to one of the most fascinating chapters in parasitology. The section on the intestinal protozoa and the trypanosomes is masterly as is only to be expected from an author who has made such contribution to our knowledge of this branch of protozoology. Particular praise must be given to the admirable diagram illustrating the development of the different species of trypanosomes in the tsetse fly.

The only criticism one must make is that the arrangement of the diagrams is such that one's reading of the text is continually interrupted by having to refer to diagrams scattered throughout the book. In a subject whose study is based largely on visual memory, this is a serious handicap and might well be remedied in the next edition. A folding diagram of the most important parasites inserted at the end of the relevant chapter, and arranged that it can be studied whilst one is reading the test, would add considerably to the value of the book.

T.C.M.

THE RAT IN LABORATORY INVESTIGATION

Edited by EDMUND J. FARRIS, Ph.D., and JOHN G. GRIFFITH, JR., M.D. 2nd Edition. Pp. xvi + 542, with 177 figures and 2 plates. London: J. B. Lippincott. 1949. £5 5s. od.

This 2nd edition of a book first published in 1942 has not changed greatly in form or content. It is intended as a work of reference 'for all workers employing the rat in laboratory investigation.' For those who use the rat in their work merely because it is a convenient homunculus, and who are not interested in the rat as a living animal as a whole, it covers most of the ground. The laboratory techniques are treated extensively by authors who have long experience of the white rat, and in some fields, though the book is very uneven, there is considerable information on the results obtained.

Anyone interested in rats as rats, however, will find scant fare. The Wistar Institute, from which this book largely springs, knows more about *Rattus norvegicus* as a laboratory animal, grey or white, than any other place in the world. Yet even the name of the animal is ignored until page 502, where it occurs as *Mus*, and the enormous wealth of Wistar breeding experience is cramped to 17 pages.

As a new edition, only one chapter, that on drug dosages, has been entirely recast; perhaps five have been brought fully up to date, and nine have no