BOOK REVIEWS

The pathogenesis of infectious disease

Professor Mims has achieved a unified presentation of a large and complex subject within 250 clearly written pages. No one with an interest in infectious disease could fail to benefit from either rapid or close perusal of this book. It will deserve to become a classic text.

The following chapter headings indicate sufficiently the style and content: general principles; entry of micro-organisms into the body; events occurring immediately after the entry of the micro-organism; the encounter of the microbe with the phagocytic cell; the spread of microbes through the body; the immune response to infection; microbial strategies in relation to the immune response; mechanisms of cell and tissue damage; recovery from infection; failure to eliminate the microbe; host and microbial factors influencing susceptibility.

Despite its relative brevity the book is crammed with information, and this leads to two criticisms that might be made by professional microbiologists. First, the reader is continually finding brief and fascinating statements that are not attributed and are therefore difficult to follow up, and second, many of the figures could well have been omitted, giving over the extra space to an extended bibliography. For example, figures 12, 15, 18, 25 and 27 take up a lot of space without adding significantly to the lucidity of the text.

These are very minor faults in an admirable book which will be read and re-read by students of all ages.

K. R. DUMBELL

The Shorter Bergey’s Manual of Determinative Bacteriology

Bergey’s Manual of Determinative Bacteriology (8th ed., edited by R. E. Buchanan and N. E. Gibbons) is “meant to assist in the identification of bacteria” and this, the shorter version, brings such assistance to those who require it in a more portable and less expensive form. Like the full manual, the shorter version is a statement of the results of attempts at bacterial classification rather than an account of how to achieve them, and this should be remembered by those who want a bench manual; they will have to look elsewhere for details of methods.

The general plan of the Shorter Bergey’s Manual is like that of the full manual. After two useful and brief introductory chapters, and the dismissal of the cyanobacteria (as we must now call the blue-green algae), the bacteria are subdivided into 19 easily comprehensible groups, about two-thirds of which include bacteria of medical interest. Information on each group is given as a series of keys and tables taken largely from the full manual and “based on the latest thinking on classification”. Needless to say, these thoughts will not please everyone. The series of plates from the full manual is also included, but contains little of medical interest, and the book is rounded off with a useful glossary and index that is detailed, but much shorter than the one from which it was derived. The parts of the large manual that are omitted include etymological notes, extensive descriptions of each species, Skerman’s Key to the Genera, and most of the references. On the other hand, a small amount of new information is incorporated.

The 8th edition is much easier to use than the 7th and a mass of information on the whole range of bacteria is now made readily accessible. However, there is little clue in many of the sections of the anarchy behind the superficially impressive order, despite a general statement
that taxonomy of many groups is still in some confusion. Difficult organisms are still difficult even with the 8th edition.

From a medical viewpoint there are definite areas of confusion. Perhaps the most obvious are concerned with pathogenicity. Thus, staphylococci but not streptococci are noted to include pathogenic species, and while there is fairly detailed comment on the pathogenicity of members of the genus Citrobacter, there is no comparable comment in respect of Salmonella, Shigella, Serratia, Klebsiella, etc., and the genus Acinetobacter is misleadingly stated to consist only of “free-living ubiquitous saprophytes”. The other area of confusion is antibiotic sensitivity. Even in the context of identification rather than chemotherapy, the statement that staphylococci “are usually sensitive to β-lactam antibiotics” requires considerable amplification.

Although the parent text and its offspring share certain problems, few affect the shorter version alone. Indeed, its uncluttered text sometimes yields more information than the original. In this it fulfills its stated purpose admirably.

I. Phillips

Botulism. The organism, its toxins, the disease

A concise and interesting historical introduction is followed by a careful analysis of the complex and confusing literature on the organisms that are grouped within the species Clostridium botulinum types A-G. The spores and their various degrees of resistance to heat, radiation and other deleterious agents are considered in detail with special reference to differences that may be observed in the behaviour of spores of organisms of the same type and between spores of organisms of different types. A short chapter on bacteriophages, bacteriocins and bacteriolysins contains much intriguing up-to-date information. There is a helpful section on the demonstration and isolation of C. botulinum, and the detection of the toxin in food, and there is a very full account of the geographical occurrence of the different types of the organism in soil and sediment, with notes on its occurrence in food.

The potent neurotoxins of types A–G are reviewed in detail and views on the action of the toxins are carefully presented and evaluated. There is a brief but helpful consideration of botulinum toxoids. The chapters on the occurrence of botulism in man, animals and birds are full of interest, and there is a very practical account of the disease in man.

Dr Smith has given many useful selected references after each chapter and he has been able to keep his text succinct and admirably readable. He combines experience with competence and humility, and his authoritative book can be warmly recommended.

J. G. Collee

Anaerobic bacteriology: clinical and laboratory practice

This third edition of a successful book is welcomed. There are major additions that take account of developments in anaerobic methodology and there are good new sections on the non-clostridial anaerobes and the clinical syndromes with which they may be associated. The text in general has been most carefully revised and updated, and the bibliographies at the end of the chapters are splendid.

Dr Willis has a rare facility to write succinctly and in readable style while still taking account of the extensive and confusing literature. At many points he makes very good analyses and gives clear and authoritative guidance.

In the light of our own experience, I would take gentle issue with one or two statements; for example, that gas cylinders with hydrogen and CO₂ mixtures need to be held horizontally to prevent layering, and that all strains of Bacteroides melaninogenicus are sensitive to penicillin. The important point is that there is so much up-to-date and valid information in this book. It is a practical text written with care by a man with much experience of his subject.