The first few chapters on basic principles—biolo, immunology, induction, and relationship to mycoplasmas—are plain sailing. Furthermore, the account of the association of cell wall-deficient bacteria (CWDB) with renal disease is often plausible, much of the work having been published before. Unfortunately, all this is the calm before the storm. All hell is let loose as the chapters on the relationship of CWDB to various other diseases unfold. Tuberculosis, sarcoidosis, leprosy, a variety of skin diseases, recurrent aphthous stomatitis (RAS), Whipple’s disease, Crohn’s disease, various gonococcal infections, septicaemias, rheumatic carditis and uveitis come in for consideration. It all adds up to a proverbial quagmire of, for the most part, unbelievable observations. How have the authors isolated or detected the organisms? Have CWDB been induced by the culture process? Do they really exist in the tissues? What is the evidence that they cause disease? These are questions I found myself asking constantly as I read through the various chapters, and I was not helped by illustrations which, often, are awful. At the end I was no wiser but a lot sadder. How could fellow microbiologists perpetrate so much that is poorly written, sometimes irrelevant and usually uncritical. The chapters on RAS and rheumatic fever don’t deserve such criticism and the studious and well written chapter on the relationship between CWDB and mycoplasmas provides one spark of hope. This was a subject of the greatest contention not long ago but doesn’t seem to be any more. Hopefully, in another decade it will be possible to say the same for the relationship of CWDB to disease. Maybe the advent of better bacteriology, e.g., the use of monoclonal antibodies, will help to resolve the mess in which those working with CWDB find themselves. Is the book worth buying? Obviously, many ought to be deterred by what I have written. However, for those who are developing an interest in the field and need references before doing something about it—and something needs to be done—it could be valuable; but not otherwise.

D. TAYLOR-ROBINSON

The destruction of the bacterial spore


The high resistance of the bacterial endospore to most inimical agents is the main factor governing the application of sterilising processes. This book provides a welcome source of information on the complex behaviour of spores exposed to stress from physical and chemical agents.

Current knowledge of spore structure and the physiology of sporulation, activation and germination is covered briefly in the first chapter, to provide the background to the topic. The following chapters give detailed quantitative information on the effects of the well established sterilising methods of moist heat, dry heat and ionising radiation; other agents are covered under the headings of ultraviolet radiation, liquid phase antibacterial agents, vapour phase bactericidal agents, hydrostatic pressure and combined treatments, the last being a topic of increasing interest. The final chapter deals with the recovery and revival of injured spores, which is important in the assessment of sterilising processes. The most pertinent data and associated references are assembled into tables and each chapter has an extensive list of references. The complexity of the subject makes an ideal grouping of topics difficult to achieve and it is, therefore, perhaps inevitable that information relevant, for example, to the low temperature steam and formaldehyde process is distributed between the chapters on the vapour phase, liquid phase and combined treatments.

The evolution and application of sporicidal processes in different fields has caused the associated terminology to become confusing. Definitions and descriptions of the use of these terms are therefore welcome. There are, however, traps for those unfamiliar with inactivation kinetics in the treatment of the mathematical aspects of some of these terms because, unfortunately, a number of errors have crept in. Some examples are: Lnk (not k, p. 36) should be used in the Arrhenius plot, k is normally 2.303/D (not 1/D, p. 40) and printing D = U/(log N_o — log N_u) would be less liable to misinterpretation than the form used (D = U/log N_o — log N_u, p. 40, p. 92 and, for similar equation, p. 116).

It is however, valuable to have so much information from the literature of bacteriology, food
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science, pharmacy and radiation biology assembled in one book. Those involved in the development and control of sterilisation processes should find it worthwhile to have this book readily available.

J. G. SHOESMITH

Anaerobic infections

The decade since the first edition of Dr Willis’ monograph has seen an exponential growth in understanding of anaerobic infections. Dr Willis and his team have played a central role in the educational process and this completely re-written edition is particularly welcome. The increased recognition of the importance of non-sporing anaerobes is reflected in a change of emphasis in the new edition.

Much of the material in this short book with its direct, often telegraphic style is presented in tables and graphs. There are six chapters dealing with anaerobic genera of clinical importance, diseases due to anaerobes, methods of culture, diagnosis of anaerobic infections, media and methods, and gas-liquid chromatography (GLC). The summary of anaerobic infections draws attention to the wide variety of endogenous infections with non-clostridial anaerobes in the head and neck, lungs, genital tract and other soft-tissue sites as well as in the abdomen. The chapter on culture methods stresses that a well-controlled anaerobic jar system is entirely adequate for routine diagnostic microbiology and gives advice on anaerobic cabinets for laboratories with sufficiently heavy workloads to justify their use. The clinical indications of anaerobic infection, the collection and transport of specimens and the laboratory approach to the isolation and identification of anaerobes are outlined briefly with most emphasis on the early recognition of the presence of anaerobes rather than specific identification that may take several days. The chapter on media makes this an invaluable handbook for the diagnostic laboratory, although some workers may be less enthusiastic about neomycin as the preferred selective agent for non-clostridial anaerobes. The last chapter gives a realistic indication of the role of GLC in the diagnostic laboratory for direct examination of specimens and as an aid to identification of purified isolates.

Unfortunately, the chapter on classification provides a contrast between an excellent outline of the clinically significant clostridia and a rather outdated description of the Bacteroidaceae. Species of the B. fragilis group are still referred to as “subspecies” and all pigmented bacteroides are regarded as “B. melaninogenicus”, which perpetuates the emphasis upon pigment production as a key characteristic. Space is wasted by devoting six pages to very simple diagrams and then repeating the information in dichotomous keys or tables. The inclusion of Campylobacter jejuni is also surprising; neither its laboratory requirements as a microaerophile nor its role in disease bear any relationship with the anaerobes. These criticisms notwithstanding, this monograph will find a welcome place amongst the “bench handbooks” in the diagnostic laboratory.

B. I. Duerdothen

Fungal infection in the compromised patient

This is a book on systemic fungal infections, and as only species of Histoplasma, Blastomyces dermatitidis, Coccidioides immitis and Paracoccidioides brasiliensis are usually regarded as capable of infecting the normal healthy person, the vast majority of mycoses are opportunistic. Since they are not only described but lavishly illustrated in a steadily increasing number of textbooks, the worth of this book lies in accounts of defective immunity in infections with fungi, the value of serological tests in diagnosis, and the preferred treatments of the various authors.

In the chapter on aspergillosis it is stated that “Allergic complications of spore inhalation, such as asthma, extrinsic allergic alveolitis or allergic bronchopulmonary aspergillosis, rarely