Fundamental Principles of Bacteriology (7th Edition)

A. J. SALLE


Salle's *Fundamental Principles of Bacteriology* was first published some 35 years ago, and the fact that it has gone into seven editions is evidence enough that in its day it was an influential text upon which were reared several generations of students. This makes it all the more sad to have to conclude that with each recent edition its deficiencies have become more pronounced and its worth diminished. The new 7th edition is a textbook which you could value as a repository of intriguing information, yet would frankly hesitate to recommend to students.

It is a peculiarly organized book, oftentimes so arranged that there is repetitive treatment of some topics but glaring omission of others. To find a textbook of bacteriology devoting 14 pages to the classification of yeasts and another 8 pages to the classification of moulds could be considered a harmless eccentricity were it not for the fact that the important bacterial genus *Pseudomonas* is granted 6 lines in a chapter on 'Bacterial and Viral Diseases of Plants' and very little elsewhere. Given the idiosyncratic ordering of the text one would look for compensatory help in the Index. Alas, far from being even satisfactory this proves to be infuriatingly inadequate. One gets the strong impression that the author was never quite sure whether this book was destined to be the companion volume to a laboratory manual or an independent text intended for course work. Intercalatory growth through succeeding editions has served merely to obscure what might have been his original intentions.

The style is unexciting with facts being presented in a strangely staccato fashion. Though each chapter carries a useful list of references, one is constantly mystified how a book of such great size can contain so little information on the precise problem that for the moment interests one. Thus it grieves me to conclude that this work can no longer be recommended to biochemists, who will find many of the more recently conceived textbooks of general microbiology much more appropriate to their needs.

J. G. MORRIS

Chromatography of Antibiotics (Journal of Chromatography Library Volume 1)

G. H. WAGMAN and M. J. WEINSTEIN (Editors)

Elsevier, Amsterdam, 1973, pp. 238, $26.00

The most crucial problem facing workers screening for new antibiotics is that of determining whether the compound which has been found is novel or not. Unlike the majority of other comparative methods, chromatography affords a means of comparing two antibiotics where the unknown compound is in an impure form. For this reason *Chromatography of Antibiotics* is a useful reference book for those working in the field. However, in common with other compendia of information on antibiotics, the book inevitably suffers drawbacks in that (1) many antibiotic substances have been inadequately described in the literature, (2) owing to the continued discovery of new antibiotics the book quickly becomes out of date, (3) since no laboratory will keep reference samples of all the antibiotics described some idea of the nature of the antibiotic under study is required, and (4) although the book covers antibiotics from a wide range of organisms it is by no means comprehensive.

The book consists of a short introductory section in which attempts at systematic classification of antibiotics by chromatographic means are described. This is followed by a chapter on the detection of antibiotics on chromatograms, which, surprisingly, among other methods, describes the use of radioactivity counting for their detection, a technique which is less likely to be of value in the present context than in other areas of bio-
G. The partitioning of cellular resources during balanced growth. Fundamental principles in bacterial physiology. Approximately 4.5 × 10^6 base-pairs of DNA, which replicates bidirectionally starting from a well-defined origin of replication (called ori). The average replication speed is approximately the same along both chromosome arms and the two replication forks meet at the opposite side of the chromosome from the ori (in a region called the terminus, or ter). Niels Ole Kjeldgaard Kjeldgaard’s major contributions to bacteriology include the UV light induction of bacteriophage during his PhD with André Lwoff in Paris, and the study of bacterial growth physiology during his post-doc in Maaløe’s lab. Fundamental principles in bacterial physiology.