

duction to *Bacteria and Their Ecobiology* does achieve its distinct purpose.

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MICROBIOLOGY AND HUMAN DISEASE, by George Wistreich and Max Lechtman. 1973. Glencoe Press, Beverly Hills, Calif. 814 p. \$13.95. With instructor's guide, 206 p. (softback), and laboratory exercises (2nd ed.), 252 p., \$5.95 (softback).

The authors' statement in the foreword needs some qualification. "*Microbiology and Human Disease* is not written for the specialist, but for the student who is in need of a broad foundation in microbiology, and who wants to obtain some insight into the role microorganisms play in health and disease," the authors say. But that portion of the book (about 60%) in which are found the principles of microbiology (structure and function, genetics, growth, metabolism, immunology, and so on) is certainly less comprehensive and is severely simplified in comparison with the well-known works of either Stanier et al. (*The Microbial World*, 3rd ed.) or Davis et al. (*Principles of Microbiology and Immunology*). It is doubtful that a student can get a "broad foundation in microbiology" from this textbook without substantial supplementary reading. Perhaps with this in mind, the authors have provided a bibliography of about 300 references, including original papers and other textbooks, arranged in the order of the relevant chapters, at the back of the book and in the instructor's guide. To their credit, the list is quite a good one.

The text is generally well illustrated and indexed, and it contains a 17-page glossary of medical and microbiologic terms. Unfortunately, there are several errors. In the middle of the book there is an atlas of color plates; at least 10 of the 93 figures, many of which depict the results of diagnostic tests, are either mislabeled or misordered. A photograph of a common high-speed refrigerated centrifuge (p. 387) is labeled an "ultracentrifuge." These are examples of items potentially confusing to students. More regrettably, the statement (p. 58) that "The term *fermentation* should never be used in reference to any microbial process, unless the process is performed under anaerobic conditions," is quite misleading. Have the obligately fermentative but facultatively anaerobic lactic acid bacteria recently come into disfavor for providing us with pickles, sauerkraut, cheese, and yogurt?

The sections on disease, including chapters on medical protozoology and helminthic diseases, are written in a manner quite as simplistically dogmatic as is the rest of the book but are certainly more detailed with respect to clinical diagnosis, treatment, and control than are comparable sections in

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either of the two textbooks mentioned earlier.

The laboratory manual is addressed to students in applied medical sciences (as might very well have been done with the textbook). The exercises are more numerous than necessary (which is good) and appear to be workable and clearly explained. Again, emphasis is on medicine and pathogens—not really on general microbiology. For example, the only enrichment medium suggested is nutrient agar. Isolation of organisms from nature is not seriously considered.

Books like this one fail to demonstrate that the fields of microbiology and medicine offer many ideal systems in which one might study some of the fundamental properties of life. They fail to present the essentially investigative approach of the sciences; that is, they fail to examine data and hypotheses critically. Medical technologists need this approach every bit as much as do doctors and potential research scientists.

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Statistics

BIOSTATISTICAL ANALYSIS, by J. H. Zar. 1974. Prentice-Hall, Inc., Englewood Cliffs, N.J. 620 p. \$15.95 (hardback).

The author has produced an introductory, comprehensive coverage of biostatistics in 328 pages. The 292 additional pages are devoted to an appendix of mathematical and statistical tables and the like. Most methods necessary for statistical analyses of biologic data are included in the text. As usual, however, the book contains more material than can be mastered by students in an introductory course in statistics.

The book is well written and easy to read. Numerous examples using biologic research data are provided. I consider it one of the better biostatistics books available for use as a textbook and for reference.

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Textbooks

INTEGRATED BIOLOGY, by L. Hill, D. Bellamy, and I. C. Jones. 1973. Harper & Row, Inc., New York. 267 p. \$6.95 (softback).

With the great diversity of introductory general-biology textbooks available, it is difficult to find one showing sufficient difference to stimulate interest. *Integrated Biology*, originally written in England by Hill, Bellamy, and Jones, was edited by Paul Paolini to better fit the format of a single, one-semester biology course as commonly offered in American institutions. The