Microbiology. Louis P. Gebhardt and Dean A. Anderson. Mosby, St. Louis, ed. 2, 1959. 476 pp. Illus. $5.75.

Principles of Microbiology. Walter W. Krueger and Karl R. Johansson. Saunders, Philadelphia, Pa., ed. 2, 1959. xxiv + 563 pp. Illus. $6.75.

Texbook of Microbiology. William Burrows. Saunders, Philadelphia, Pa., ed. 17, 1959. xxxiii + 954 pp. Illus. $14.

The titles of these books are to some extent misleading, for the books are not primarily concerned with microbiology as a general field, but rather with certain parts of it. Burrows and also Krueger and Johansson, for instance, consider microbiology to be the study of organisms closely involved in man's activities, and the treatment of Gebhardt and Anderson follows the same pattern. This point of view not only eliminates from microbiology the study of many of the more interesting bacteria, fungi, and protozoa but leaves us without a name to apply to the study of microbial forms of life generally. It must be admitted, however, that this loose use of the term *microbiology* is not restricted to these authors, for there is at present a very strong tendency to use *microbiology* rather indiscriminately, particularly as a substitute for *bacteriology*—a tendency which not only ignores the etymology of the terms but also abolishes any real distinction in meaning between them.

The second edition of *Microbiology*, by Gebhardt and Anderson, does not differ significantly from the first in the organization of the material, although several chapters have been rewritten and much new material has been added. The first third of the book is devoted to general topics in bacteriology and has been increased about one-third in this edition. The chapters on historical development, microbial genetics, antibiotics, and immunity have been rewritten and enlarged. The second section, dealing with applied microbiology, has been less extensively rewritten, and the final portion, which is concerned with infectious diseases, is but little changed.

This book was written for classes composed of students in nursing, home economics, pharmacy, or sanitary science. It requires no knowledge of other biological sciences or of chemistry and introduces relatively simple concepts in logical sequence. Wherever possible, the authors have tried to use a historical approach, and for the most part, they have succeeded. Indeed, *Microbiology* is outstanding among textbooks of elementary bacteriology in its use of historical material. It might be less than satisfactory for students majoring in some branches of biology, but for the audience for which it was written, it should serve as a satisfactory textbook to accompany lectures on elementary and applied bacteriology.

In the second edition of *Principles of Microbiology*, W. W. Krueger has been joined by Karl R. Johansson, as junior author. Students using this book will need some knowledge of chemistry to comprehend the chapters on the physiology of microorganisms, but no previous work in the biological sciences is required. The first part of this book, which deals with the general principles of bacteriology, is clearly and logically written; the only chapter which the average student might find difficult is that on heredity. The part dealing with the applications of microbiology is of the same high standard, adequately covering industry and agriculture as well as the fundamentals of food, water, and sewage bacteriology. The final part is a discussion of some of the more common infectious diseases of man. Primary emphasis is on the elementary epidemiological, pathological, and immunological aspects, but the microorganisms causing these diseases are dealt with cursorily. Consequently, this part drops below the level of excellence of the rest. Nevertheless, this textbook should serve excellently to introduce students to bacteriology (or microbiology) and might even be suitable as an introduction to the general subject of biology.

A new edition of *Textbook of Microbiology*, by Burrows, is always a notable event in the field of bacteriology, for this has been an outstanding text and reference book for more than 50 years. This edition, like many of its predecessors, is the result of much revision and extensive rewriting and has been brought up to date in most of the sections that have not been completely rewritten. As in the 16th edition, Burrows has had the collaboration of R. J. Porter and J. W. Moulder, who wrote the excellent chapters on parasitology and bacterial metabolism, respectively. About half of this book is devoted to the general principles of bacteriology and immunology, the other half to the agents of infectious disease. About as much space (250 pages) is given to the pathogenic bacteria as is given to the spirochetes, the parasites, the rickettsiae, the viruses, and the pathogenic fungi.

The few errors that I noticed were in the discussion of infectious agents more commonly associated with animals than with man. The paragraph on immunization against *Clostridium chauvoei* is about 40 years out of date; the section on *Pasteurella multocida* should be made current and should include some information on human infections. The work done on listeriosis during the last few years has not been considered, and consequently the importance of listeriosis as a disease of man is grossly underrated, the number of known cases being several hundred, rather than 20, as is stated. These are trifling errors, however, in a book which can be thoroughly recommended as the best textbook on the immunology and microbiology of infectious diseases of man published in the United States today.

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New Books

Jewish Medical Ethics. A comparative and historical study of the Jewish religious attitude to medicine and its practice. Immanuel Jakobovits. Philosophical Library, New York, 1959. 409 pp. $6.

Logical Positivism. A. J. Ayer. Free Press, Glencoe, Ill., 1959. 463 pp. $6.75.

Man's Great Future. Erwin D. Canham, Ed. Longmans, Green, New York, 1959. 204 pp. $4. Condensed from the 50th anniversary edition of *The Christian Science Monitor.*

Organic Chemistry. Donald J. Cram and George S. Hammond. McGraw-Hill, New York, 1959. 727 pp. $8.50.

Properties of Matter. F. C. Champion and N. Davy. Philosophical Library, New York, ed. 3, 1959. 350 pp. $10.

Recent Progress in Oxytocin Research. B. Berde. Thomas, Springfield, Ill., 1959. 119 pp. $4.75.

Second United Nations International Conference on the Peaceful Uses of Atomic Energy, Proceedings. vol. 14, *Nuclear Physics and Instrumentation*, 500 pp.; vol. 18, *Waste Treatment and Environmental Aspects of Atomic Energy*, 635 pp.; vol. 22, *Biological Effects of Radiation*, 562 pp. United Nations, New York, 1959.

A Textbook of Surgical Physiology. R. Ainslee Jamieson and Andrew W. Kay. Livingston, Edinburgh, Scotland; Williams and Wilkins, Baltimore, Md., 1959. 631 pp. $11.