Bacteriology as it does not satisfactorily cover the other areas of microbiology. Only two pages are devoted to mycology and five pages to virology, of which only one sentence is devoted to animal viruses.

These shortcomings do not however, seriously detract from the usefulness of the manual as a laboratory guide for the beginning student or technician. Unlike most manuals of this nature, the questions following the exercises do not provide the student with time consuming busy-work but with student initiated in-depth thought. As a review manual of techniques or as an introduction to the area of bacteriology, this manual comes highly recommended.

William E. Walker
Department of Microbiology
University of Illinois
College of Medicine
Chicago, Illinois

THE ECOLOGY OF SOIL BACTERIA, Gray and Parkinson, 681 pp., $21.75, University of Toronto Press, Toronto, Ontario, Canada, 1968.

This volume contains 35 contributions presented at an international symposium held in 1966. Brief discussions after each of the six groups of papers are included and indices of authors, microorganisms, and subjects have been added. The topics of the six groups of 3 to 10 papers each are: environment, methods, physiology, taxonomy, growth, and rhizosphere bacteria. The book is a companion volume to "The Ecology of Soil Fungi."

Each of the 35 papers contains a well-balanced treatment of selected aspects of a specific field. Under the physiology group, for example, are essays on energy production and consumption; syntheses of enzymes, antibiotics, and probiotics; chemolithotrophic reactions; cellulose decomposition; and pesticide degradation. The aspects discussed in each essay are timely and significant. Papers selected from this volume could well serve in junior or senior year courses in microbial or soil ecology. The entire book will be valuable to all persons engaged in teaching, research, or development in soil science.

Eugene D. Weinberg
Department of Microbiology
Indiana University

A PROGRAMMED INTRODUCTION TO MICROBIOLOGY, Stewart M. Brooks, 100 pp., $4.25, The C. V. Mosby Company, St. Louis, 1968.

Templates and all to conceal answers until the right moment cannot, however, conceal the clear impression that the approach used in this book is nothing more than mnemonic device for microbiology. What is involved is a series of blanks in sentences, the answers to which are in the margin. The reader covers the answers and hopefully supplies his own, checking later.

There is no question that most of the elemental knowledge of microbiology is there, but it leaves a strong taste of memorization which is more than is warranted.

MEDICAL TECHNOLOGY 1. LABORATORY EVALUATION OF HEMOSTASIS, Marjorie S. Sirridge, 163 pp.; 2. PRINCIPLES OF STEROID ANALYSIS, Sidney L. Dale, 137 pp.; 3. ANTI-MICROBIAL AGENTS, Loyd W. Hedgecock, 232 pp., Lea and Febiger, Philadelphia, 1967.

This series of three monographs attempts to provide a set of background information and techniques to give medical technologists a better understanding of their work. This series is written in a clear, albeit detailed style and makes a great contribution to the professional character of medical technologists. Volumes 1 and 3 would be useful to high school teachers engaged in investigatory type laboratories or seeking sources of student project research activities of a simple and practical nature. Volume 2, although superbly done for the level of understanding of medical technologists and the facilities available to them, is hardly useful to the high school teacher pressed for time, energy, and technical apparatus.

All three volumes provide the details so necessary for either the technologist or the high school student who want to know exactly what normality, what volume, what size test tube, what temperature, etc., to run a particular procedure. The lack of such detail in many textbooks or even research papers puts the burden on the high school teacher who must ferret out the details of the procedure. Even with the precise detail given, the three volumes provide a host of research project possibilities easily found by an alert, inquisitive teacher, or student.

The first volume treats of hemostasis, the normal body mechanisms all of which function so that blood is confined to the vessels in which it circulates.

Volume 2 deals with the biogenesis and metabolism of steroids so that students acquire a genuine background to the procedures for testing these important compounds today. The presence or absence of male hormones, female hormones, and adrenal cortical hormones in the blood and urine of men or women in health and disease is an exciting area of study and a necessary component of excellent medical diagnosis. Gonane, the nucleus of cholesterol, bile acids, estrogens, androgens, and adrenocortical steroids in man is the chemical threshold of much modern research from the contraceptive pill to atherosclerosis.

Volume 3 deals with a range of topics of significance in microbiology and includes well-documented information on the structure and behavior of a variety of antimicrobial chemical agents from the triethylene glycol sprays for air sterilization to the mercurial compounds for skin surface sterilization. Another section treats in comprehensive fashion the action on microbes of such physical agents as temperature and radiation. Section IV is a rather concise treatment of antimicrobial chemotherapy drug resistance by protozoans and bacteria and their sensitivity.

Despite a lack of imagination, mediocre reproductions of diagrammatic figures and a few typographical errors, the three volumes should be in every good library.

Alfred Novak
Stephens College
Columbia, Missouri