

home: the loss of all of Wallace's Amazonian collections by fire aboard ship was similar to the fate of Sir Stamford Raffles' collections made in the Far East some 25 years earlier. Every collector will certainly sympathize with Wallace when he writes, "With what pleasure had I looked upon every rare and curious insect I had added to my collection! How many times, when almost overcome by the ague, had I crawled into the forest and been rewarded by some unknown and beautiful species! How many places which no European foot but my own had trodden would have been recalled to my memory by the rare birds and insects they had furnished to my collection! How many weary days and weeks had I passed, upheld only by the fond hope of bringing home many new and beautiful forms from those wild regions; every one of which would be endeared to me by the recollections they would call up, which should prove that I have not wasted the advantages I had enjoyed and would give me occupation and amusement for many years to come! And now everything was gone, and I had not one specimen to illustrate the unknown lands I had trod or to call back the recollections of the wild scenes I had beheld!"

A serious student of the history of biology will prefer to read the original works, but the book provides a fascinating evening of browsing through events that led to important theoretical developments.

William V. Mayer
University of Colorado

TWENTIETH CENTURY DISCOVERY, by Isaac Asimov. 1969. Doubleday & Co., New York. 178 pp. \$4.95.

Another survey by a prolific and skilled author, who attempts here to highlight some outstanding developments of this century: insecticides, with emphasis on Carroll Williams' work on hormones; investigations of the origin of life, featuring Calvin and Miller; nuclear physics, astrophysics, and radio telescopes; and space travel. While all these are important, one is struck by omissions in the treatment of certain topics and the exclusion of others.

The book is well written and replete with anecdotes and data. It should be exciting reading for the beginner in science and the nonscientific reader.

Paul Klinge
University of Indiana

HUMAN BIOLOGY

A LABORATORY MANUAL FOR GUYTON'S FUNCTION OF THE HUMAN BODY, by George G. Armstrong, Jr. 2nd ed., 1969. W. B. Saunders Co., Philadelphia. 276 pp.

The 30 laboratory exercises in this workbook will be of interest only to

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teachers who use the third edition of Guyton's *Function of the Human Body* as a textbook in human physiology; it is doubtful whether its specific correlation with the Guyton text permits its use in human-physiology courses based on other texts.

With the wide choice of experimental animals available for similar experiments, one wonders why the author felt it necessary to sacrifice a dog for the demonstration of the regulation of arterial blood pressure. Other than this unfortunate choice of laboratory animal, the exercises seem well planned and less demanding of expen-

sive equipment than most. The medical bias is to be expected in a course in human physiology.

If you'd like more information, simply write to Stansi Scientific Division of Fisher Scientific Company, Department C, 1231 North Honore Street, Chicago, Illinois, 60622.

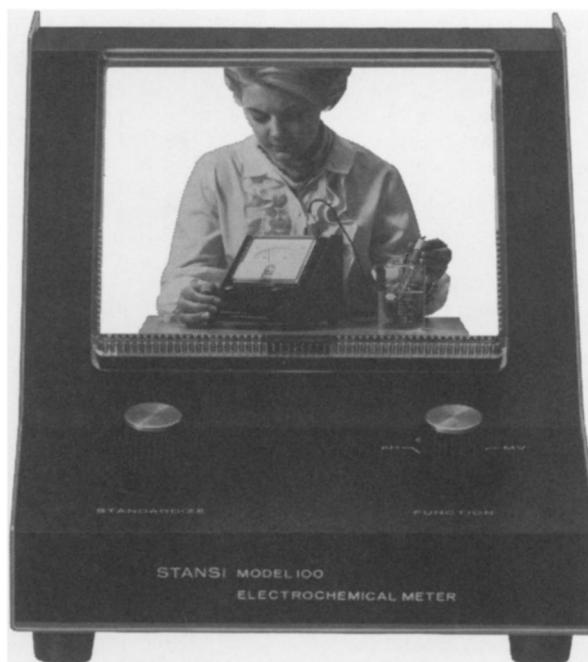


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William V. Mayer
University of Colorado

REVIEW OF GROSS ANATOMY, by Ben Pansky and Earl Lawrence House. 2nd ed., 1969. The Macmillan Co., New York. 494 pp. \$12.00, hardbound; \$7.95, paperback.

This account of human anatomy begins with the head and neck and ends with the lower extremities. The procedure, in each unit, is from the surface



A new face on classroom pH

proximally, except that the skeleton is considered early in each unit. Usually the right-hand page carries illustrations and the left-hand page carries the text. The latter is not restricted to anatomical description: it may include brief statements of function and clinical matters.

The illustrations, by Pansky, are representational to semidiagrammatic pen-and-ink drawings; a few are in color. The drawings—about 1,000 of them—are supplemented by about 50 x-ray pictures.

The *Review* is designed primarily for medical students and others in the health professions who need to make quick visual reference to the details of gross anatomy; but it should also be useful to a much larger audience.

Arnold B. Grobman
Rutgers University

MOLECULAR AND CELL BIOLOGY

AN INTRODUCTION TO THE STRUCTURE OF BIOLOGICAL MOLECULES, by J. M. Barry and E. M. Barry. 1969. Prentice-Hall, Inc., Englewood Cliffs, N. J. 190 pp. \$4.95.

This up-to-date, highly readable addition to the publisher's "Biological

Science" series of paperbacks is strongly recommended as a source of sound but not overly specialized information in the field of biochemistry. Although the title emphasizes molecular structure, functional aspects of biochemistry are stressed throughout. For instance, in the discussion of the symmetry of molecules the authors take up matters ranging from enzyme action to the specificity of the taste sensation in man, and from present-day problems to speculation about the origin of life.

Important biochemical methods are explained simply, yet with detail adequate for real comprehension. In particular, the chapters on structural principles, carbohydrates, and lipids include materials that are significant to biologists but are not described with comparable clarity in other common references. A chemistry teacher might recommend the book to students who wish to relate principles of organic chemistry to the problems of living organisms.

In their introduction, the authors say the book is based on their experience in teaching first-year biologists at Oxford. Perhaps this background of use in classes accounts in large part for the effectiveness of the writing, the apt choice of examples, and the clarity and simplicity of the illustrations. The whole is a compact, useful, enjoyable description of molecules now known to be basic to the processes of life.

Ingrith D. Olsen
University of Washington

EXPERIMENTAL CELL BIOLOGY, by William R. Bowen. 1969. The Macmillan Co., New York. 264 pp. \$4.95.

LABORATORY EXERCISES IN CELL PHYSIOLOGY, by Roger H. Trumbore. 1969. C. V. Mosby Co., St. Louis. 158 pp. \$4.25.

Experimental Cell Biology is a textbook and laboratory workbook, combined. It presupposes little, if any, previous experience in biology and therefore begins with the use of the microscope (observing a wet mount of the letter "e" and the cell walls in a piece of cork). To measure energy, students burn peanuts to heat a quantity of water in a simple calorimeter. After that, the students move into a study of cell energetics. The volume ends with mention of meiosis and mitosis and a cursory look at the role of the nucleus in *Acetabularia* development. Many of the "experimental" activities do not require laboratory performance; all that is needed is the ability to fill in blanks. The repetition of many exercises the student has performed in high school, coupled with a terse text and the emphasis on factual information and nomenclature, reduces the value of this book for those interested in truly experimental proce-

dures. The cursory textual coverage would need to be supplemented extensively.

Laboratory Exercises in Cell Physiology is designed to be used in conjunction with the author's text *The Cell: Chemistry and Function*. Background information is given in places where the text is weak; otherwise, little is provided. The first six experiments have to do with the techniques and tools of cellular physiology, including use of the spectrophotometer, radioactive isotopes, and determination of cell characteristics. The last nine experiments involve the use of these tools and techniques in a specific situation, such as measurement of cell growth or transport across a cell membrane. The workbook format includes a considerable number of pages of simple graph paper.

Unlike the volume reviewed above, this one presumes a certain familiarity with biology and has much less the appearance of an introductory general biology laboratory book. These two books, differing markedly in content, exemplify the instructor's choice of divergent approaches to the teaching of cell biology to college undergraduates.

William V. Mayer
University of Colorado

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