

teacher who would like to have readily available a survey of molecular biology. The book is available in both cloth-bound and paperbound editions. The paperbound edition appears to be quite a bargain, but for school library use the clothbound edition is probably a better buy.

Harold Liebherr  
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**FINE STRUCTURE OF CELLS AND TISSUES**, 3rd Ed., Porter and Bonneville, 196 pp., \$9.75, Lea and Febiger, Philadelphia, 1968.

A collection of beautiful electron photomicrography of various parts of the animal cell with explanatory text. It is an album which the biology teacher can use to vividly show what is usually explained by diagram and words.

**MACROMOLECULES OF LIVING SYSTEMS**, H. S. Rhinesmith and L. A. Cioffi, 164 pp., \$4.75, Reinhold Book Corp., New York, 1968.

A student needing a briefing of a review of the structural chemistry of the molecules in living systems will find this volume of the *Reinhold Science Studies Series* invaluable. Basic atomic architecture is reviewed, and current findings on the large molecules are well portrayed. However, laboratory

methods of synthesis of these molecules are not discussed.

Refreshingly, the work reflects playful familiarity with the subject, and at times bursts out with joviality. At the beginning and end of this work origins of the macromolecules are discussed in a philosophically poetic overtone.

Although this volume is intended particularly for upper classmen in university research, high school teachers using the newer biology curricula might tantalize their better students to broaden their outlook and deepen insights in molecular biology.

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**INTRODUCTION TO NUCLEIC ACIDS**, Eberhard Harbers, 403 pp., \$18.00, Reinhold Book Corp., New York, 1968.

This classic, initially issued in German in 1964, has been revised and updated, and will be a useful reference for biologists concerned with the molecular level.

H. G.

**HORMONES, CELLS AND ORGANISMS**, P. C. Clegg, and A. G. Clegg, viii + 214 pp., \$5.50 cloth, \$1.95 paper, Stanford University Press, 1969.

This is a concise, modern introduction to endocrinology. The authors have made a representative selection of ex-

amples that illustrate some basic themes of endocrinology. About a third of the book concerns itself with hormones and homeostasis and hormones and adaptation to the environment. Emphasis is placed on molecular aspects of hormonal action. The material is presented not simply as a rhetoric of conclusions, but the appropriate experimental work on which the conclusions are based is included where applicable. In the section on gastrointestinal activities, for example, the gastrin controversy is resolved by tracing the experimental evidence from the time of Pavlov through Edkins and Harper to 1964 when the sequence of amino acids in the gastrin molecule was determined. While neither comprehensive in scope nor comparative in approach, this volume is highly recommended as an intelligent man's introduction to endocrinology.

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#### BIOCHEMISTRY AND BIOPHYSICS

**BIOCHEMISTRY**, Abraham Mazur and Benjamin Harrow, 450 pp., \$8.75, W. B. Saunders Company, Philadelphia, 1968.

This textbook is a "stripped-down" version of Harrow and Mazur's *Textbook of Biochemistry*, 9th Ed. Most of the text is drawn verbatim from

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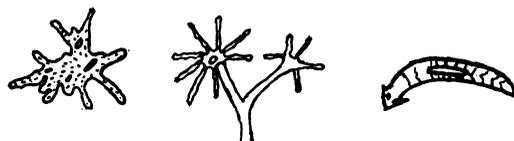
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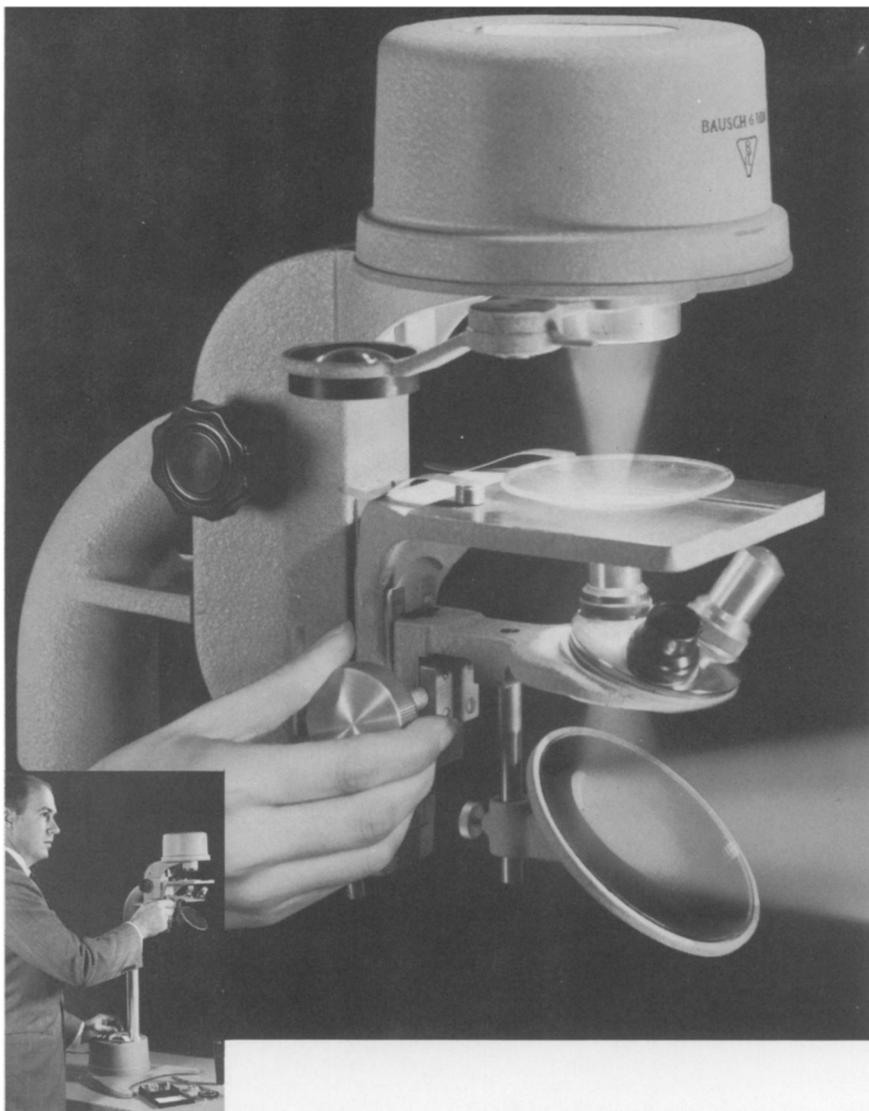
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the same authors' larger volume. Separate chapters on circulation, respiration, kidneys, biochemistry of tissues, nutrition, vitamins, hormones, and immunochemistry, however, have been omitted from their latest work. What remains still is an excellent textbook. A chapter on cellular organization, first appearing in the Ninth Edition of the more comprehensive book, has been included in this one. There is evidence of up-dating and some additional material has been inserted. For example, short descriptive paragraphs of newer techniques employed in the study of the tertiary structure of proteins has been incorporated into the "Proteins" Chapter. Several pages are devoted to the method applied by the Nobel prize-winner Khorana for the synthesis of polynucleotides. The contents include chapters on the chemistry and the more important metabolic pathways of proteins, lipids, carbohydrates, and nucleic acids. There, also, are chapters on enzymes and biological oxidations. The book is suitable for undergraduate biochemistry courses. "Biochemistry: a brief course" would be a better buy in a paperback edition, especially when you consider that you can get essentially the same material, and the eight additional chapters indicated above (almost 200 pages), for only twenty-five cents more.

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BASIC BIOCHEMISTRY, Max E. Rafelson, Jr. and Stephen B. Binkley, 383 pp., \$9.95, The Macmillan Co., New York, 1968.

In their introduction, the authors indicate that this book was designed to be concise and selective, rather than comprehensive. They have attained this objective, for the book is one-half or less the length of the major standard biochemistry texts. It is attractive, in format, well indexed, and easy to read. Included are brief descriptions, illustrated with many good diagrams, of compounds and reactions covering a biochemical spectrum adapted particularly well to courses in medical schools. Following a few introductory pages on acids, bases, and buffers, the text treats the following topics: the chemistry of the main classes of biochemical compounds (carbohydrates, lipids, proteins, and nucleic acids and nucleo-proteins); enzymes and energy transfer; the metabolism of the main classes of biochemical compounds; and vertebrate blood, with its roles in gas transport and the regulation of pH.

To the teacher of biology with a good background in biochemistry, this book might be useful for refreshing and updating his store of information. It could also be used for quick reference on