arthritis, and aging. The reader understands Schmeck's optimism in viewing immunology as the field that may be "lifting the burden of illness from man."

This book is useful either as a reference work or as a short summary of immunology. The glossary and the list of further readings make it especially valuable to a teacher of biology.

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INTRODUCTION TO CHEMISTRY FOR BIOLOGY STUDENTS, by George I. Sackheim. 2nd ed., 1974. "EMI Programmed Biology Series," Educational Methods, Inc., Chicago. 135 p. $2.95 (softback).

This popular programmed text, first published in 1966, is designed to help biology students review or learn quickly and efficiently the basic chemistry essential to an understanding of biologic phenomena. This includes atomic structure, isotopes, electron shells, chemical symbols and formulas, ionic and covalent bonding, electrolytes, acids, bases, salts, pH, enzymes, functional groups in organic compounds, carbohydrates, fats, proteins, and oxidation–reduction reactions. The book is well planned and explains concepts clearly. It avoids unnecessary detail.

An insertion between frames 52 and 53 might have clarified the meaning of numerical subscripts in chemical formulas. And, because enzymes *are* catalysts, frame 139 should contrast enzymes with *other* catalysts, rather than with *all* catalysts. These are minor detractions from an otherwise excellent learning program. This book should enjoy even more success than did its predecessor, in introductory-biology courses in high schools and colleges.

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PHYSICS FOR THE LIFE SCIENCES, by Alan H. Cromer. 1974. McGraw-Hill Book Co., New York. 509 p. $11.95.

According to the authors, the purpose of this introductory college, noncalculus physics textbook is "To give students in biology, pharmacy, pre-medicine, physical therapy, physical education, and the allied health sciences the physics background they need for their professional work." The book is organized into five general topics: mechanics, properties of matter, wave phenomena, electricity and magnetism, and modern physics. At first glance this organization of the book misleads one into believing that it is a very traditional physics book. A more detailed examination reveals that the large majority of the examples used in the text and in the end-of-chapter questions deal with the life sciences. The usual diagram of a lever has its companion diagram of a human arm; an example of a pulley system includes the rigging of a patient in neck traction. The center-of-gravity illustrations include many examples of human beings and other animals in various positions, illustrating the relationship of their centers of gravity to their general stance. Other interesting examples, throughout the book, are included in the sections on (i) scaling, which discusses the sizes of many animals; (ii) energy, which has a paragraph on metabolism and a very enlightening section on the energy required to run; and (iii) fluid flows, which has an explanation of heart and blood pressure. The gases-and-air section discusses the operation of a scuba outfit. The subject of surface tension includes the treatment of water transport in trees, and the topic of evolution is discussed in the area of entropy.

One minor criticism could be raised. The book could better be titled "Physics for the Health Sciences"—as the introductory comment on its purpose suggests. No examples or illustrations are given in the general area of ecology, where applications such as radiation balance, energy flow within ecosystems, and other topics could have been added. Nevertheless, because the examples that are used are simple, straightforward ones that do not require any extensive biologic knowledge, they constitute a