BIOLOGICAL PHYSICS, by D. C. S. White. 1974. Halsted Press (605 Third Ave., New York 10016). 293 p. $11.75 softback.

Biological Physics is an attempt to bridge the gap between introductory physics and biology. The author indicates that the book is "... basically a biological book dealing with the necessary physics." Unfortunately, biologists will probably find the book difficult in spite of many informative examples.

The chapters comprise a collection of topics on various physical phenomena of direct importance to biologists. Three introductory chapters deal with mathematics, including calculus and vectors. However, some prior knowledge of differential and integral calculus would be helpful for tackling the rest of the book. In addition to subjects covered in elementary physics courses other topics of special interest to biologists are covered, such as radioactivity and its effects on living organisms, and energetics with examples and applications to biological systems. The chapter on deformation of solids is particularly informative and presents material on bone and connective tissue seldom found even in biophysics books.

Details, such as units and dimensions that can be confusing to biologists are carefully explained, and the illustrations, with the exception of x-ray diffraction patterns, are all simplified line drawings. In general, the illustrations are used to describe the physical phenomena rather than biological applications.

Throughout the book the treatment of physical principles and mathematical formulas is concise and straightforward, but the format is more reminiscent of a physics textbook than a presentation oriented specifically to biologists. The approach seems to be one of using biological examples to illustrate the physical principles rather than using physical analyses to clarify and explain biological phenomena. This may be a problem of integration of material. Transitions between the biological and physical aspects of a system are often abrupt. In most chapters in-depth discussion of biological application is presented after a thorough discussion of the physics and mathematics. An approach more easily understood by the biologist would have been a concurrent development of physical and biological applications.

The book should prove useful as a supplementary textbook for physics or as a quick reference book. If *Biological Physics* had been published a few years earlier it would probably have been the best integrative biology and physics textbook available. However, a number of good introductory physics textbooks for biology and medical students have been published recently. A biologist interested in the application of physics to biology should examine a number of

these textbooks to select the one most useful for his purposes.

Robert D. Allen
West Virginia University
Morgantown

INTRODUCTORY STATISTICS FOR BIOLOGY, by R. E. Parker. 1973. Institute of Biology's *Studies in Biology* no. 43. Crane, Russak & Co. (347 Madison Ave., New York 10017). 122 p. $4.75 softback.

Sometimes good things come in small packages, and this book is an example. In 87 pages of clearly written text, Parker manages to convey the essentials of a large part of modern statistical techniques. Naturally, within this narrow compass, some topics must be omitted or treated very lightly. This is true here of experimental design, grouping, exact Poisson distribution, and—with the exception of rank correlation—the entire field of nonparametric analysis. Within the "classical" area of statistics, however, treatment is fairly complete and quite comprehensible. Some numerical examples are given in the text, but much of this material is handled through the extensive discussions toward the solution of end-of-chapter problems. Five useful tables are included.

This book would provide a sound beginning for anyone from upper high

school through college senior level who wishes to develop a working knowledge of statistics for the biological sciences and who does not have or want a thorough mathematical and theoretical background. It is also recommended to prospective authors as a paragon of brevity. Finally, it is for these days a rarity, in that it is nearly free of typographical errors; I only found two.

Werner G. Heim
Colorado College
Colorado Springs

LEARN TO SEE, ed. by Susan Meiselas. 1974. Polaroid Foundation (Cambridge, Mass. 02139). 142 p. $3.00 softback.

This sourcebook is composed of selected examples of student efforts at the art of photography. It may be used in preparing individualized or group teaching materials using photography both as a tool and a motivating force for teaching language skills, social studies, art, reading, science—a scope of subjects limited only by the imagination of the teacher.

The book presents 101 teaching and study projects drawn from the work of teachers around the U.S. and includes information ranging from the most elementary to that which appears almost professional. The projects are designed