and—applications presentation would be excellent for the beginning biology major.

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BIOLOGY: LIVING SYSTEMS, by Raymond F. Oram. 1973. Charles E. Merrill Publishing Co., Columbus, Ohio. 798 p. Hardback; price not given.

This high-school textbook shows the influences of traditional biology and BSCS biology. The author, who teaches at the Peddie School, in New Jersey, and his major consultants—Paul Hummer, of Governor Thomas Johnson High School, in Maryland, and Robert Smoot, of the McDonogh School, also in Maryland—have aimed this textbook at the college-bound student. Their product is an attractive, tightly edited volume, well endowed with colorful photographs and drawings. Many of the illustrations will be familiar to the experienced biology teacher.

The 30 chapters are filled with the facts and concepts of biology that have become the accepted course of study in grade 10. Although the chapters are said to be arranged from the "simplest to the most complex levels of biological organization," the author points out that the chapters may be rearranged according to the desires of the biology teacher. But, as many teachers know, the "simplest biological organizations" are not necessarily the easiest to comprehend; and the first six chapters deal with the Krebs cycle, ATP, nucleic acids, and the light and dark reactions of photosynthesis, among other things. Chapters 7–14 give the facts of reproduction and genetics, from the cell to man, as well as evidence for evolution. With this unusual arrangement of the biology program, the Hardy–Weinberg rule is taught during the first semester, before the classification of organisms (chapters 15–18) is considered. Animal physiology and a little plant physiology are then presented (chapters 19–24). At the end of the book, after a chapter on behavior, is a section on ecology and man's effect on the ecosystem. The appendices are a classification of "living systems" and a 25-page glossary.

Each chapter has a statement of the goal of the chapter. This may appeal to teachers who are being asked to write behavioral objectives of their courses. Examples of such goals are "You will gain an understanding of the basic characteristics of life common to all living things" (chapter 1), "You will gain an understanding of the process of photosynthesis" (chapter 6), and "You will gain an understanding of gene expression, combination, and location on the chromosomes and how these factors affect offspring phenotype [*sic*]" (chapter 9). Besides in-chapter questions, each chapter has a summary, followed by a set of questions under the heading "Evaluating Your Ideas." Then there is a section called "Extending Your Ideas"; for the most part this consists of library activities. Extensive suggested readings are given for each chapter; these should help teachers to assess the level of operation of *Biology: Living Systems*.

Although the text does not indicate the actual kinds of scientific exploration high-school students may undertake as part of this biology program, one of the accompanying laboratory manuals can be used: *Laboratory Biology: Probing Levels of Life* and *Laboratory Biology: Investigating Living Systems*. The latter, designed for schools with modestly equipped labs, contains one third of the first-named manual's investigations. Annotated (teacher's) editions of the textbooks and the manuals are available, as well as an evaluation program that makes use of spirit-duplicating masters.

In the hands of a discerning teacher, this book and its adjuncts could be helpful in presenting a modern program in biology. However, a teacher who expects to "cover the text" will find such a diversity of topics that only a select group of students will be able to run the full track in a year's time. *Biology: Living Systems* should be examined carefully by biology teachers who are considering the adoption of a new high-school biology book.

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Zoology

THE WORLD'S VANISHING BIRDS, by Cyril Littlewood and D. W. Ovenden. 1973. Arco Publishing Co., New York. 63 p. $5.95 (hardback).

Cyril Littlewood, who wrote the text, is director of the Youth Service of the World Wildlife Fund. D. W. Ovenden did the beautiful illustrations.

The book gives a pictorial record of 60 rare and endangered birds. It also includes brief life-history accounts, together with distribution maps. The birds are listed by geographic region: Africa and Asia Minor, the Americas, Asia, Australasia, Europe, and the oceans and islands.

Any biologist or naturalist would enjoy owning this book.

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LABORATORY STUDIES OF CHICK, PIG AND FROG EMBRYOS, by Ray L. Watterson and Robert M. Sweeney. 3rd ed., 1973. Burgess Publishing Co., Minneapolis. 213 p. $6.95 (softback).

This manual is intended for the introductory vertebrate-embryology labora-