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

William H. Yongue, Jr.  
Virginia Polytechnic Institute  
and State University  
Blacksburg

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 Hum-  
mer, of Governor Thomas Johnson High  
School, in Maryland, and Robert Smoot,  
of the McDonogh School, also in Mary-  
land—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 biol-  
ogy 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 accord-  
ing to the desires of the biology teacher.  
But, as many teachers know, the "sim-  
plest 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 photo-  
synthesis, 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 (chap-  
ters 15-18) is considered. Animal physi-  
ology and a little plant physiology are  
then presented (chapters 19-24). At the  
end of the book, after a chapter on be-  
havior, is a section on ecology and  
man's effect on the ecosystem. The ap-  
pendices 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 lo-  
cation 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 "Extend-  
ing 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 lat-  
ter, 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 avail-  
able, 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 pro-  
gram 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 ex-  
amined carefully by biology teachers  
who are considering the adoption of a  
new high-school biology book.

Jack Fishleder  
University of California  
Berkeley

### 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, to-  
gether 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 en-  
joy owning this book.

William R. Thaggard  
R. W. Groves High School  
Garden City, Ga.

LABORATORY STUDIES OF CHICK, FIG 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 intro-  
ductory vertebrate-embryology labora-