

# TRIARCH

\*Sustaining Member:  
The National Association  
of Biology Teachers

*... offers*

**Highest Quality**

**Moderate Price**

**Fast Delivery**

**of prepared microscope slides.**

For free catalog also listing live cultures photomicrographic transparencies, and Bausch & Lomb microscopes, write to:

## TRIARCH INCORPORATED

Box 98  
Ripon, Wisconsin 54971

public would also use it as an environmental sourcebook. He has divided it into three sections following a one-chapter introduction to ecologic systems. The sections deal with populations and resources, environmental degradation, and environment and society.

The first chapter does an excellent job of presenting basic ideas of ecologic relationships, dealing in a straightforward manner with materials cycles and food webs, with populations (their regulation and concomitant problems), and with the problems of studying such complex ecosystems as those that contain man's activities.

The first section begins with two chapters—both pessimistic—on the number and distribution of mankind and the environmental and social consequences of attempting to feed the ever-burgeoning numbers of people. This theme is continued in chapters discussing mineral, energy, land, and water resources. The final chapter takes up an example: the relationships among anchovies, birds, and fishermen in the Peru Current.

In the second section a chapter is devoted to each form of pollution: of the air, of fresh water, of the ocean, by ionizing radiation, and by pesticides—the last-named receiving excellent discussion and having a follow-up chapter, equally good, on better methods of pest control. The final chapter goes into the

interrelationships among pollution, weather, and climate.

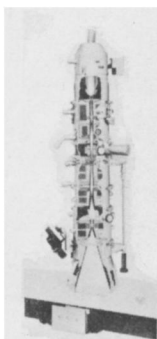
The final section deals with the social problems of environmental changes. Chapters are devoted to urbanization; the economics of rapid growth and the economic consequences of trying to stop it; the effect that laws (or their lack) have on environment; and the politics of ecology. The section closes with a discussion of the social repercussions inherent in attempting to improve the environment without at the same time alleviating present social and economic inequalities between rich and poor. After all, most of the cries about pollution come from the middle and upper classes; the poor, while suffering most from pollution, have far more serious problems demanding their consideration (such as where their next meal is coming from). If the environment is "improved" by indiscriminately taxing the people for this improvement, the poor are proportionately overburdened by the tax. Serious social revolts are foreseen if something is not done. The authors stress that the impact of almost any policy on various segments of the society is almost unknown: our nation has good economic indicators of changes in the quantity of materials but no social indicators of changes in living quality, and they are sorely needed.

The book as a whole is interesting and could be read with ease by a good high-

A UNIQUE HISTORICAL-PHILOSOPHICAL  
APPROACH TO INTRODUCTORY BIOLOGY—

## CONCEPTS OF BIOLOGY: A CULTURAL PERSPECTIVE

Neal D. Buffaloe and J. B. Throneberry,  
both of the State College of Arkansas



Relaying biological science to the rest of man's literary and cultural heritage, this new and innovative text is pervaded by a historical and philosophical perspective.

Part 1 of this three-part text discusses the nature of biology as a science, developed historically. Part 2 treats four conceptual themes—biogenesis, the cell theory, heredity and evolution—in depth. Part 3 deals with the implications of biological science for Man and society. Questions follow each chapter. Copious illustrations throughout. A TEACHER'S MANUAL containing suggestions, questions and answers relating to each chapter is available.  
January 1973, 352 pp., cloth (013-166256-2)



—ALSO—

## MOLECULAR BIOLOGY: AN INTRODUCTION TO CHEMICAL GENETICS

J. M. Barry and E. M. Barry, both of the  
University of Oxford, England

January 1973, 144 approx. pp., paper (013-599514-0)  
cloth (013-599522-1)

For further information, please write to:  
Robert Jordan, Box 74X, College Division,  
Prentice-Hall, Englewood Cliffs, N.J. 07632

## PRENTICE-HALL

school biology student. The sections dealing with economics may be found more difficult because less familiar in secondary schools; even so, the authors have written about economics in a way the thoughtful student can understand. The book deserves a prominent place on the high-school biology classroom bookshelf, seems admirably suited for its purposes as an undergraduate textbook, and should be required reading for any biology teacher who is attempting to relate traditional ecology to current problems.

Elizabeth P. Nuckolls  
Los Angeles city schools

### Genetics

GENETIC EXPERIMENTS WITH BACTERIAL VIRUSES, by D. Peter Snustad and Donald S. Dean. 1971. W. H. Freeman & Co., San Francisco. 65 p. \$2.50 (soft-back).

My colleague Gene Perry and I had prepublication access to this laboratory manual and have used it at Knox College to supplement our introductory course in microbiology; as a source of laboratory information for juniors and seniors in our introductory and advanced genetics courses; and as an aid to students who were doing genetics experiments on their own. The following comments and suggestions are based on this experience.

It is doubtful that many teachers of introductory microbiology will wish to use this manual as the sole source of experimentation. Most courses of this kind also include laboratory experience in bacterial physiology, biochemistry, and classification. Nevertheless, the experiments described by Snustad and Dean on titer determination, burst-size determination, and rII mutant isolation lend themselves especially well to an introductory microbiology course. These exercises illustrate the principles of virus growth and mutation.

Due in part to a personal bias, I feel that many instructors of introductory genetics will wish to mix the bacteriophage experiments outlined by Snustad and Dean with those using other organisms. Phage experimentation by large classes entails a good deal of media and stock preparation. One often has to judge whether the man-hours of preparation are counterbalanced by the gain in speed of experimentation. Those of us who teach genetics courses within a 10-week term often are unable to offer certain laboratory exercises with *Drosophila* because of the time factor. I especially recommend the exercises on gene localization by deletion-mapping, spontaneous mutation, and back-mutation for inclusion in your genetics course.

We have found the introductory remarks and directions for experimentation to be excellent. The flow diagrams of laboratory procedures are especially helpful. The suggestions and tips to the instructor given in the appendix should be thoroughly read by instructors and students alike. When the class is large, much of the success of bacteriophage experimentation depends on coordinated activity. With the aid of the authors' tips many of the pitfalls can be avoided.

The manual is excellent for self-study: by following the instruction given in the sections on media and stock preparation the student is readily able to do all of the work himself. In addition, the suggested readings are especially good for undergraduates with little background in genetics. In fact, high-school teachers of advanced biology should welcome these features of the manual.

Finally, those teachers choosing to use this manual will be pleasantly surprised by the cost. It is priced well within student budgets.

B. W. Geer  
Knox College  
Galesburg, Ill.

#### Health Care

**THE BIOLOGICAL IMPERATIVES: HEALTH, POLITICS, AND HUMAN SURVIVAL**, by Allen Chase. 1972. Holt, Rinehart & Winston, Inc., New York. 415 p. \$8.95.

This is a "big" book, not only because of the wide-ranging, scholarly

base on which it stands but primarily because it expresses a truly humane concern for health care. It is directed towards the citizens of the United States but sees them also in the context of a worldwide community. This well-made book is divided into five parts. The first and last orient the reader toward, respectively, current problems of health care and toward a future in which "Pasteur's law of peace, work, and health" may prevail. In between is thoughtful factual analysis and balanced social prescription. Part 2, "Health and the Doctors," is a detailed survey of the four goals of modern health care: protection from preventable diseases and accidents, detection and early treatment of threatening health conditions, care of acute cases, and postcrisis treatment. Part 3, "Health and the Total Environment," views men and women in the perspective of our technology and our cultural myths. It analyzes the kind of world we are living in and its consequences for our health, as well as pointing to needed and possible improvements. Part 4, "The Rational Uses of Human Resources," is an eloquent testimonial to the needs and opportunities for revised standards and directions in the training of medical personnel.

The foregoing does not do justice to the warmth and intelligence, the humor and more than occasional expression of outrage, the extraordinary research and balanced appraisal that vitalize and illuminate every page of what one can only hope will become an influential volume. Does the reader need documentation for the effects of malnutrition on intellectual capacities, on the importance of basic medical research, on racism in medical schools, on the primary causes of death in this country, and so on? It is here—along with an appendix on birth and death rates and a 17-page index. (References to the literature are given in the body of the text.)

The book is recommended to any layman concerned about the context in which he is receiving health care. A teacher concerned about the human uses to which biologic and medical research and technology are being put could well use this as source material. And any student, but especially the premedical student, who is concerned about the protection and nurture of human health must be urged to read *The Biological Imperatives*.

Earl D. Hanson  
Wesleyan University  
Middletown, Conn.

#### Microbiology

**MICROBIOLOGY**, by Michael J. Pelczar and Roger D. Reid. 3rd ed., 1972. McGraw-Hill Book Co., New York. 948 p. \$10.95 (hardback).

The third edition of this well-known textbook follows the organization of



## IN THE FIELD OR...CLASSROOM



LaMOTTE'S unique environmental science equipment helps students make accurate, rapid determinations.

**PORTABLE FRESH WATER ANALYSIS OUTFITS.** For limnology studies and pollution detection projects.

**COASTAL OCEANOGRAPHY EQUIPMENT,** water analysis outfits, sampling equipment and marine chemistry manual.

**PLANT NUTRIENT AND SOIL STUDIES.** Testing equipment and demonstrations include soil analysis, hydroponics and plant tissue testing.

**SAMPLING AND MEASURING APPARATUS** for collecting soil and water samples and for "in situ" measurements.

**OVERHEAD PROJECTION DEMONSTRATIONS.** Project basic chemical reactions with inexpensive plastic stages and reagents.

**REAGENT SYSTEMS FOR STUDENT USE.** Inexpensive packages of test reagents and accessories for soil and water studies.

**SEND TODAY FOR THE PRACTICAL SCIENCE EQUIPMENT CATALOG**

Specifications and prices on Environmental Science outfits, apparatus and paperback handbooks.



**LaMotte Chemical**

EDUCATIONAL PRODUCTS DIVISION

**LaMOTTE CHEMICAL PRODUCTS COMPANY**

CHESTERTOWN, MARYLAND 21620  
PHONE 301 778-3100

Serving science and industry since 1919.