

The section on human ecology emphasizes the social and economic aspects of solving environmental problems. Benefits vs. risks of nuclear energy are the subject of another section; here, in typical AEC fashion, an Oak Ridge Laboratory worker minimizes the problems of thermal pollution and the release of radioisotopes, and other articles also skirt these issues. The concluding section gives interesting practical examples of classroom sessions in ecology, environmental studies in high-school chemistry, and air and water pollution.

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POPULATION, RESOURCES, ENVIRONMENT, by Paul R. and Anne H. Ehrlich. 2nd ed., 1972. W. H. Freeman & Co., San Francisco. 482 p. \$9.50.

The world environmental scene is changing rapidly, and the Ehrlichs have reflected these changes in the second edition of their monumental work. This is actually more than an updating: most of the topics previously covered are treated here with greater depth and breadth, and the documentation (criticized in the first edition) has been expanded and improved. The appendices are useful.

The book is one of the most nearly complete and up-to-date works of its kind. It should certainly be available in the classroom and the school library.

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IN DEFENSE OF EARTH: INTERNATIONAL PROTECTION OF THE BIOSPHERE, by Lyn-ton K. Caldwell. 1972. Indiana University Press, Bloomington. 295 p. \$8.50.

Caldwell's view of problems of the environment is methodical and sensible. His book deals with the origins of the situation in which we find ourselves and with the political and social ramifications.

Some sections are tedious, but this is forgivable in view of the encompassing nature of Caldwell's research. He offers some civilized answers.

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CONSIDER THE PROCESS OF LIVING, by William H. Eddy, Jr., Gonzalo S. Leon, and Robert C. Milne. 1972. Conservation Foundation, Washington, D.C. 130 p. \$5.95 (softback).

The authors say "this book is concerned primarily with engendering a perspective of the planet." Strikingly illustrated with 125 color photographs,

the book shows how our need for air and water is woven into the meanings of earth and energy. "Everything in balance but nothing at rest . . . always on the way to become something else . . . not a thing but a process—itself in procession": this is the theme of the book, which is written in simple language and has a good selection of appropriate quotations. It prompts a thoughtful consideration of the "possibility of hope" for the future of life. This is a worthy addition to the secondary-school library.

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GENETICS, EVOLUTION, RACE, RADIATION BIOLOGY: ESSAYS IN SOCIAL BIOLOGY, by Bruce Wallace. 1972. Prentice-Hall Inc., Englewood Cliffs, N.J. 239 p. Hardback; price not given.

Nonscience majors, particularly, should find this book informative and stimulating. The editor has chosen some excellent literary selections to introduce each topic; then he provides one or more essays on the subject. The reader is not burdened with detailed, textbookish information; rather, he is presented with just enough facts to make the literary selections and the essays understandable. I found the sections on genetics and radiation biology particularly good. This book should fill a need in many courses that attempt to present biology in a topical, relatively untechnical way.

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Genetics

CYTOGENETICS: AN INTRODUCTION, by Edward D. Garber. 1972. McGraw-Hill Book Co., New York. 271 p. \$7.95.

This textbook is an excellent introduction to the interrelated fields of cytology and genetics. The physicochemical changes in nuclear structure are taken as the basis for the interpretation of heredity. The first two chapters offer standard explanations of chromosomes in the familiar phenomena of mitosis, meiosis, and fertilization. Particularly fine are the following chapters, which elucidate the problems of unusual chromosomes and of intrachromosomal and interchromosomal aberrations. Chromosomal behavior is further analyzed in the chapters on aneuploidy and euploidy. Chapters on the intricacies of mammalian cytogenetics and speciation complete the book. The selection of materials to illustrate principles is weighted in favor of the older, classical work of the cytogeneticists, as is evidenced by the references given at the end of each chapter. This is justifiable, inasmuch as

the book is an introduction, not a research publication.

A student using the book in a cytogenetics course or as a supplement in related studies should have a background in Mendelian principles and molecular genetics. The book is suitable for undergraduates and graduate students in an introductory course; or it could be used as a basic source in medical genetics, plant- or animal-breeding, or mammalian genetics. The illustrations are very good. The book is clearly and interestingly written, concise, and broad in scope. It is highly recommended.

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HEREDITY AND DEVELOPMENT, by John A. Moore. 2nd ed., 1972. Oxford University Press, New York. 272 p. \$2.95 (softback).

This edition devotes nine chapters to genetics and four to embryology. Much of the material on genetics is an excellent historical review. Moore is meticulous in his identification of problems, hypotheses, and the kinds of data available. He develops, step by step, evidence for the support or rejection of the hypotheses. However, his style is rather dull. His chapter on human genetics is the most interesting. Here he provides excellent lists of autosomal dominants and recessives and probable X-linked traits—lists of a kind that are difficult to obtain. The diagram of the pathways in phenylalanine metabolism and the phenotypic effects resulting from inhibition of various enzymes in the series is excellent.

The four chapters on embryology deal almost exclusively with frog and salamander development. Nearly all the diagrams and plates are found in the first chapter, with a minimum of narrative; the major portion of the discussion is found in the three succeeding chapters. This necessitates annoyingly frequent referral back to the illustrations, in order to follow the discussion. I would have liked some comparative discussion of bird and mammal development, even though frog embryology is perhaps more completely understood.

Much good material is found in this edition of *Heredity and Development*. It should be useful in high-school and college introductory-biology courses.

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A DICTIONARY OF GENETICS, by Robert C. King. 2nd ed., 1972. Oxford University Press, New York. 337 p. \$4.95 (softback).

This book retains the format and principal features of the first edition (1968). In the second edition as in the