

parents and others for enhancing learning and encouraging the habit of reading, both in school and at home.

Harry McAnarney
Kansas State University
Manhattan, KS 66506

EVOLUTION

THE EVOLUTION OF LIFE

ed. by Linda Gamlin and Gail Vines. 1987. Oxford University Press (200 Madison Ave., New York, NY 10016). 256 p. \$35.00 hardback.

This book's major strength lies in 300 full-color photographs. They are exceptionally sharp, biologically instructive and accompanied by effective captions. All biologists will enjoy seeing familiar things in brilliant new perspectives through these photographs.

The opening chapters deal with the basics of evolution, genetics and classification. These are followed by chapters treating the major groups of organisms, chapters on the chemistry and origin of life and cell structure, and a concluding series of chapters treating development, energy and waste management, temperature control, coordination, movement, senses, defense strategies and reproduction. This organization is effective in highlighting a number of topics usually spread through other chapters.

The book's major shortcoming lies in the unevenness of its coverage and the mixture of three types of text: general discussion, highlighted supplementary particulars, and photo and diagram captions and explanations. These could have been more effectively integrated. The book had four advisors, 12 principal contributors, two editors and no authors. While this may bring a diversity of expertise, it may also have contributed to the book's unevenness.

The 120 full-color diagrams are well designed and quite useful. In some cases diagrams' effectiveness are reduced by color-coding parts and processes with too many colors rather than providing additional labels.

The most effective use of this book is likely to be as supplementary reading in high school and introductory college biology courses and it is highly recommended for that purpose. Additionally, many biologists might want a coffee-table copy for their home or office. The book is a delight to browse through and will cer-

tainly attract attention wherever it is displayed.

Elwood B. Ehrle
Western Michigan University
Kalamazoo, MI 49008

GENERAL

GHOSTWRITING AND OTHER ESSAYS

by Eugene Garfield. 1986. ISI Press (3501 Market St., Philadelphia, PA 19104). 540 p. \$35 hardback.

This book is Volume 8 of Garfield's essays, originally published as "Current Comments" in *Current Contents*, a weekly citation index. The volume collects Garfield's 1985 essays.

Information scientist Garfield admits that his choices of "editorial" topics are colored by random events of his life. From his foundation of citation analyses and information retrieval, which form the basis for many of the essays (including several on the 1984 Nobelists), in this volume he skips into such areas as allergies, dry-cleaning, water chlorination, the uses of celery and the evolution of shorthand.

"What I do enjoy particularly is to investigate those areas of human activity that affect most of us, yet somehow we take for granted," he writes.

He confesses that he chose to highlight the ghostwriting essay in his title because ghostwriting is analogous to the work of the information worker: "A ghostwriter serves as messenger of another's thoughts, and thus facilitates communication."

He describes the continuum of authorship with many examples, concluding that if ethical behavior is adhered to, "each of us can use the full spectrum of editorial assistance in clear conscience."

Garfield's personable and personal style is clear and information-dense. People involved in science, history and information recovery will find the 51 essays fascinating reading and completely referenced.

Jillyn Smith
Utah State University
Logan, UT 84322

SCIENCE FAIRS

SCIENCE FAIR PROJECT INDEX 1981-1984

ed. by Cynthia Bishop and Deborah Crowe. 1986. The Scarecrow Press Inc. (52 Liberty St., P.O. Box 656, Metuchen, NJ 08840). 692 p. \$47.50 hardback.

Few good reference books exist that assist students and teachers in developing science fair projects. This book is one of the more useful.

Science Fair Project Index 1981-1984 provides an excellent index to a wide range of actual projects and experiments in science. Designed for use by students in grades five through twelve and teachers involved with science fairs, this book provides the often needed reference to literature for developing science fair projects.

Perhaps one of the handiest assets of this book is that most of the magazines referenced therein are those typically found in school libraries and teachers' collections (e.g., *The American Biology Teacher*, *Science and Children* and *Science Teacher*). Science students who are typically frustrated by the lack of appropriate resource literature on their project topics will find this book extremely helpful in developing their projects.

Subject headings are arranged alphabetically. The "see" and "see also" reference to either preferred or related subject headings make this index book "user friendly." The topics covered are timely and should provide even the more advanced science students with a useful beginning resource to literature relevant to their study.

At a price of \$47.50, this book may be cost-prohibitive for many individual teachers. If, however, you are involved with science fair projects and invest a considerable amount of time in helping your students find support literature for their projects, this book may be a great value for the dollar. It is strongly recommended for K-12 school libraries and would be most useful to the junior and senior high science teacher as a desk reference.

Ron Hughes
Kansas State University
Manhattan, KS 66506

APE BEHAVIOR

APES OF THE WORLD. THEIR SOCIAL BEHAVIOR, COMMUNICATION, MENTALITY AND ECOLOGY by Russell H. Tuttle. 1987. Noyes Publications (Mill Road at Grand Ave., Park Ridge, NJ). 421 p. \$55 hardback.

This book is distinguished by three interesting features, two of them commendable and one less so. On the plus side, it provides a remarkably current summary of great ape biology supported by a most exhaustive listing of references. On the debit side is its steep price—probably confining most of the sales and distribution to li-