will not take the place of a textbook, unless the instructor devotes more time to lecturing than he should in a field course. Yet to require a student to purchase both a textbook and this manual might be questioned.

A sampling of half of the manual's pages revealed that 60% of them are forms on which data are to be recorded; and 82% of these are printed only on one side of the sheet. Moreover, although numerous small sketches are fitted in pleasingly without use of additional pages, it might be debated whether a utilitarian and mostly expendable book should be encumbered with full-page photographs of primarily decorative value. In days of criticism of high educational costs publishers need to be admonished to fit their own costs—and their prices—to the purpose of the product.

Haven Kolb
Hereford High School
Parkton, Md.

PHOTOGRAPHING WILDLIFE, by Jean-Marie Baufle and Jean-Philippe Varin. 1972. Oxford University Press, New York. 157 p. $15.00 (hardback).

The authors are wildlife photographers from Europe. They have combined a text describing the art of wildlife photography with excellent wildlife photographs. The reproductions, in color and black and white, on glossy paper, give the book a quality like that of Sierra Club books. The text treats of the selection of photographic equipment and the techniques used in photographing wildlife, with many practical suggestions. Throughout the book it is evident that the authors have followed their own advice: a photographer must know his subject and its environment intimately in order to make fine photographs. A glossary of technical terms and an appendix listing the world's parks and preserves are included.

This book deserves a place in the school library. It will give the budding wildlife photographer much information and fine examples. Those not interested in photography will have the opportunity to enjoy a beautiful book.

Harold G. Liebherr
Nicolet High School
Milwaukee, Wis.

TEACHING SCIENCE IN AN OUTDOOR ENVIRONMENT, by Phyllis Gross and Esther P. Railton. 1972. University of California Press, Berkeley. 188 p. $2.95 (softback).

This is a guide to science activities outdoors. Most of the suggested supplementary guides for use with various activities were written specifically for parts of California, but there are a number of activities that would be useful elsewhere. Introductory chapters are "Philosophy of Learning," "Where to Go," and "Getting Ready." The last-named chapter is worth reading by anyone charged with organizing a school field-trip.

William Kastrinos
Educational Testing Service
Princeton, N.J.

Evolution

THE EVOLUTION OF INSECTS, by Philip S. Callahan. 1972. Holiday House, New York. 192 p. $5.95 (hardback).

This readable account of insect evolution—a topic new to juvenile literature—is in the same style and format as Callahan's *Insect Behavior* and *Insects and How They Function*. The book is profusely illustrated with excellent charts, diagrams, and black-and-white photographs.

Discoveries leading to the ideas of natural selection, speciation, and uniformitarianism are reviewed before the author presents evidence for the evolutionary relationships among insects. The evidence used by Callahan is contemporary as well as geologic, behavioral as well as morphologic. His discussion of the insects of Florissant Fossil Beds National Monument, Colorado, is particularly well done. The book culminates in a timely discussion, "Why Study Evolution?"; here Callahan argues in favor of academic pursuits—a matter of some interest in view of the vogue of "relevancy" and the revival of antievolutionary sentiment.

The book is highly recommended to secondary-school readers who have a reasonable grasp of the major insect orders.

A. C. Haman
University of Northern Iowa
Cedar Falls

WALLACE AND NATURAL SELECTION, by H. Lewis McKinney. 1972. Yale University Press, New Haven, Conn. 212 p. $12.50.

McKinney does an excellent job of depicting the role of Alfred Russel Wallace in the elucidation of natural selection. History, according to McKinney, has not afforded the full glory due Wallace. He shows the influence Wallace's pre-1858 work had on both Lyell and Darwin. McKinney suggests that Lyell's discussion of Wallace's 1855 paper on the species problem influenced Darwin; this conclusion is based on Darwin's letters and notes. McKinney asserts that Wallace had rejected the Lamarckian notions of evolution, whereas Darwin had accepted these ideas—couched in explanations that were inadequate. This suggests that Darwin really did not fully understand what Wallace wrote. If it had not been for Lyell's persistence, Darwin might have dismissed Wallace's work completely.

McKinney suggests that Darwin was

fully aware of Wallace's work and was shocked by the fact that Wallace articulated the importance of natural selection with a precision that Darwin had been struggling for 20 years to attain. According to McKinney, Wallace was never consulted on the matter of presenting a joint paper with Darwin. He saw no page proofs and heard nothing of the matter until the paper was printed.

This book depicts the interaction of personalities during the historical development of the theory of evolution and natural selection. In addition, professional historians will find the references very useful. It brings to light a whole series of communications among Lyell, Darwin, Wallace, and others; and these should prevent textbook authors from dismissing A. R. Wallace as a young explorer who fell upon natural selection by chance. Perhaps Wallace will now be given the share of glory McKinney says he deserves.

David H. Ost
California State College
Bakersfield

Human Behavior

SCIENCE, THE BRAIN, AND OUR FUTURE, by W. R. Klemm. 1972. Pegasus Publishing Co., New York. 190 p. Softback; price not given.

Many scientists believe brain research has moral and social applications. To help us understand this, Klemm explains the fundamentals of the brain—the neuron, the nerve impulse, the processing of sensory information—and then discusses the brain in relation to sleep, dreaming, learning, memory, emotions, diseases, and drug-taking. Recent discoveries, as well as classic experiments, are discussed briefly. The moral and social significance of these discoveries is emphasized, and the final chapter is entitled "Where Do We Go from Here?"

This book, written for the BSCS "Science and Society" series, is well written in nontechnical language. The author's careful explanations and his insights should interest the advanced high-school student. An appendix of popular articles on the nervous system is included.

Karen Brelsford
Indiana University
Bloomington

SEX AND THE SINGLE CELL, by Dolores E. Keller. 1972. Bobbs-Merrill Co., New York. 123 p. Price not given.

The tone of this refreshing book is indicated by the dedication: "To Martin and six former cells, Steven, Kevin, and Wendy." The text is simple enough for readers who are unfamiliar with basic biology, yet comprehensive enough to challenge readers who think they know all about sex. The photographs and sketches are exceptional, and they complement the text extremely well. One of the better chapters is "Sex, Single Cells and Society": biologists often ignore the impact that research in reproduction may have on society.

Sex and the Single Cell is one of the best science books I have read for some time.

Donald E. Mason
Mitchell High School
Colorado Springs, Colo.

A NEW WORLD IN THE MORNING: THE BIOPSYCHOLOGICAL REVOLUTION, by David P. Young. 1972. Westminster Press, Philadelphia. 217 p. $3.25.

This book reviews some aspects of research that impinge on human behavior and considers some social and ethical questions that derive from new scientific findings. The eight chapters reintroduce some familiar issues: the rapidity of change, the possibilities and dangers of new drugs, research on brain mechanisms, tissue culture and some of its implications, and speculation on the future.

Except in the chapter dealing with Young's specialty—cell cloning—most of the ideas presented have been discussed better in many other publications. And, although Young's style is light, he does not really provide insights into significant scientific and social issues. There