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FUNDAMENTALS OF ENTOMOLOGY by Richard J. Elzinga, 2nd ed., 1981. Prentice-Hall, Inc. (Englewood Cliffs, NJ 07632). 422 p. \$19.95.

The relatively short time between editions (three years) indicates the popularity of this introductory entomology textbook. A comparison with the first edition indicates about one-third more material. Most chapters have some additional information and slight revisions. A new chapter includes the topic of parasitic insects and the final section on making insect collections has been expanded to a full chapter. The glossary has also been expanded.

The coverage includes chapters on arthropod body plans, external and internal insect anatomy, development, behavior and ecology, social insects, insect relationships with plants and man, and classification as well as the new parasite and insect collection chapters. The study questions included with each chapter seem to be the same as in the first edition. The liberal use of blackand-white photographs, including several electron micrographs, adds to the quality. Tables, figures, and diagrams are clear and useful to the neophyte entomologist. The use of tables of major families of each order of insects included with the keys to the families in the classification chapter is a useful addition. These tables include adult and larval diets as well as habitat in some cases.

The book will find its greatest usefulness in introductory entomology classes, but will be a useful reference to the general biology teacher at any level.

Paul M. Daniel Miami University Oxford, Ohio

## **BIOCHEMISTRY**

by Lubert Stryer. 2nd ed., 1981. W.H. Freeman and Co. (660 Market Street, San Francisco, CA 94104). 949 p. Price not given.

Stryer's book is a college-level text of superb quality. This text is more up-to-date, especially in the area of nucleic acids, than other biochemistry texts of similar content and level. Although its size at first appears overwhelming, the length is not unusual for texts of this nature. Fortunately, it is well organized and so lucid in its writing that most students should have no trouble in assimilating and using its information.

It consists of five parts: conformation and dynamics, which demonstrates the relationship between the three-dimensional structure of proteins and their biological activities primarily through an analysis of hemoglobin; generation and storage of metabolic energy, which treats cellular respiration and photosynthesis; biosynthesis of macromolecular precursors; information which covers the storage, transmission, and expression of genetic information; and molecular physiology, which synthesizes the interaction of information, conformation, and metabolism in physiological processes through a discussion of immunoglobulins, mechanisms of motility, hormone action, membrane transport, and excitable membranes.

Functional aspects have been related to cellular structure where appropriate through electron micrographs. Graphs based on research data have been clarified and are easily understood. Illustrations are, for the most part, excellent. A good example is one that demonstrates the structural basis for the diminished

affinity of myoglobin and hemoglobin for carbon monoxide. The only weak area may be in the problems at the end of each chapter; many are at a level that some students conceivably may lack the required skills and background for working them without becoming unduly frustrated.

Stryer's book is highly recommended for undergraduate and graduate college courses in biochemistry. It is also highly suited for high school libraries especially where there is a strong chemistry program.

William R. Bowen University of Arkansas at Little Rock

## History and Philosophy

A NATURALIST ON A TROPICAL FARM

by Alexander F. Skutch. 1980. University of California Press (2223 Fulton Street, Berkeley, CA 94720). 405 p. \$16.95.

This interesting, readable book is a delightful personal account of the author's life on a farm in southern Costa Rica. The unpretentious language along with the format of the text should make it a welcome and useful source of information about tropical farm life.

The format is highly effective—ranging from a thorough, yet simple, description of the farm and its surroundings in the initial chapter, through a month-bymonth description of climatic and biotic variation over the course of a year, to a warm personal description of some of the unique flora and fauna of the region. Especially praiseworthy is the author's explanation of the social and cultural conflicts he encountered while attempting to operate his farm in a preservation/conservation manner that was quite different from local custom.

Another high point of the book is the excellent black-and-white photographs by Dana Gardner. The pictures are carefully positioned to effectively support the text material.

This book would be a welcome addition to any library or high school reference shelf. Its humanistic approach to describing the natural history of a tropical farm is as valuable as the factual knowledge it presents.

Scott Charlton Lebanon High School Lebanon, Ohio