

BIOLOGY TODAY

Biology Today. CRM Books, Del Mar, California, 1972, 1020 p., illus., \$14.95. (72-176334).

This product of CRM Books and 54 distinguished "contributing consultants" is a trendy introductory text with attractive aspects. Multicolored illustrations abound, and the fold-outs showing the "central dogma," and mitochondria-chloroplasts are very dramatic. Albert Szent-György's introduction is beautiful. Chapters on the drug scene, human sexual behavior, and elementary psychology are more detailed than in most biology texts. Because of these strong features, the book must be taken seriously, and one must ask, "Are the major areas of modern biology clearly and coherently presented to a college freshman? Are the illustrations used to maximum advantage?"

Biology Today is another *Big Book*. The 45 chapters which cover the spectrum of biology phenomena are quite up-to-date, although certain omissions (e.g., peroxisomes) are puzzling. The writing is generally smooth and even quite slick, although often terms are introduced without adequate definitions. Many examples are unusual and beautifully illustrate major topics, such as the *Andira* tree and associated bees used to introduce population interactions. In-depth treatment of special topics is neatly handled in numerous "interleaves." Each chapter tends to stand as a separate unit, with the inevitable consequence (as in most symposium volumes) that coverage is uneven and general principles which should unify chapters are submerged. The book is many parts, but not really a whole. Blatant errors ("the Australian zoologist Karl von Frisch") are rare, at least in the text proper.

The expensive illustrations, designed to capture student interest, are always somehow related to the chapter in which they occur, and in some chapters they are quite helpful. But many figures are never cited in the text, and seem to have been included mainly on aesthetic grounds. The artists' impressions (speed trip, rapidly dividing bacteria, Buffon's "centers of creation") decorate but hardly educate. Again and again, the cryptic figures and their legends introduce terms or concepts which are not explained in either the accompanying text or the glossary. Clarity is often sacrificed for a stunning visual impression: the diagram of fermentation is squeezed onto

one-third of a full-page mauve-pink painting depicting oozing grapes; the fruit overpowers the molecules. Few of the photographs are sullied with labels so that for many of the micrographs, a student will have to guess which structure is cited in the terse legend. Although the color photographs are usually superb, quite a number of the electron micrographs are muddy and at least one is employed twice with inconsistent magnifications.

This book is outstanding in its packaging, but as a clear, integrated treatment of biological principles, it falls short of several others already well-established in the market. The many unusual and original features suggest that a tighter *second* edition could be a major contender.

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PESTICIDES

Environmental Toxicology of Pesticides, edited by Fumio Matsumura, G. Mallory Boush and Tomomasa Misato. Academic Press, New York and London, 1972, 637 p. illus. (72-82044).

This book, which is the product of a joint seminar between the United States and Japan, brings into focus the difficult and complex task of defining the field of environmental toxicology of pesticides. Perhaps the title is too broad for the material covered, but this cannot be seriously criticized since the field is still rather ill defined.

The text is divided into eight parts, each part represented by three to four papers. The introductory papers deal with general patterns of pesticide usage in the highly industrialized nations of Britain, Japan, and the United States. Much of the information is presented in tables and figures allowing easy extraction for comparative purposes. It is unfortunate that the seminar did not include information from less developed nations since large quantities of pesticides are currently being exported to these areas.

The remaining portions, with the exception of the last which concerns the design of new pesticides, deal more specifically with

chemical compounds and their behavior in the environment. The papers range from specific research reports such as "Residue Analysis of Organomercury Fungicides Sprayed on Rice Plants" to much broader interests such as "Factors Related to Bioconcentration of Pesticides." The papers are generally well referenced with numerous tables and figures.

This book has much general and specific information useful to students and researchers interested in the interactions of pesticides with the environment. A section dealing with the impact of pesticides on the beneficial anthropod fauna would have made this book more complete.

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METALLIC CONTAMINANTS

Metallic Contaminants and Human Health, scientific editor Douglas H. K. Lee. Fogarty International Center Proceedings No. 9, Academic Press, New York, 1972, 241 p., illus., \$7.00 (78-187864).

The book has major sections on mercury, lead, and cadmium and shorter sections on six other metals. Fluorides are considered in some detail; nutritional and analytical considerations of metals are reviewed briefly.

Comparison with *Critical Reviews* was made for the section on cadmium by Fassett. *Critical Reviews* makes a stronger case for cadmium being the cause of Itai-Itai disease than does Fassett and does not support his statement that new cases have not appeared since 1955. Fassett gives a "not-proven" verdict on the relation of cadmium to hypertension. Apparently this work is not considered in *Critical Reviews* (neither volume has an index). Considering the shorter space available the present volume comes out of the comparison well.

I noted a few errors, most serious being the omission of Tables 1 and 2 giving the production figures and sources of mercury (p. 17). Tables 1 and 2 in this section refer to hydrosphere studies (p. 21). A major weakness is the lack of overlap. Chapter 2 details