

Book Reviews

Emmett Wright
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BOTANY

HOW FLOWERS WORK—A GUIDE TO PLANT BIOLOGY

by Bob Gibbons. 1st ed. 1984. Bradford Press Ltd. Distributed in the U.S.A. by Sterling Publishing Co., Inc. (2 Park Ave., New York, NY 10016). 160 pp. hardback.

The title of this book is somewhat misleading because within 160 pages it attempts to cover most of the major topics—cells, morphology, reproduction, ecology, etc.—that one would normally expect to find in a college level general botany course. Due to its breadth of coverage, it is not surprising that many of the topics are glossed over and without sufficient depth.

This book does tie together various botanical concepts, and I believe that it can help the reader gain a better overall perspective of the field of botany. It contains many excellent photographs and illustrations to go along with the text. It also provides many unique examples to demonstrate certain concepts. Particularly good examples are found in the chapter on plant reproduction.

In my opinion, the use of this book as a supplement to a regular textbook could enhance the teaching of a general botany course or a botany unit in a general biology course. It also provides an interesting general review of plant biology for the biology teacher with little botany training.

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ENVIRONMENT

INTRODUCTION TO ENVIRONMENTAL STUDIES

by Jonathan Turk. 2nd ed., 1985. CBS College Publishing (383 Mad-

ison Avenue, New York, NY 10017). 330 p. softback, price not listed.

This revised edition is a well written introductory textbook on environmental science for nonmajors at the college level. It also appears suited for use as a textbook for advanced high school courses in science, although the limitations of a softbound book should be considered. This book has value as a reference for teachers with limited background in the subject. In this regard, the case studies presented in many chapters dealing with specific environmental problems could serve as useful springboards for discussion in the classroom.

As expected in an introductory textbook, a wide range of topics are covered, but are not dealt with at length. In general this is not a problem, but I think the book would have benefited by lengthier discussions of some issues, for example: acid precipitation and the ecological effects of war. I was especially disappointed that no mention of nuclear winter was made in the text. In spite of this shortcoming, complex subjects that are covered, such as nuclear fission, are dealt with in an accurate and understandable way.

This edition has been reorganized and revised fairly extensively. The sequence of topics is presented in a more logical manner, highlighted by many new photographs and illustrations. Questions given at the end of each chapter have been restructured, and many encourage higher-order thinking. The suggested reading list at the end of each chapter has also been updated and improved.

Overall, I think this work would be an excellent textbook for an introductory environmental science course, especially for college students who are nonscience majors.

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GENERAL

EXPERIENCES IN BIOLOGY

by Penelope H. Bauer, Michael Magnoli, Armand Alvarez, Dorothy Chang-Van Horn and Delilah Gomes, 2nd ed., 1985. Laidlaw Brothers, Publishers. (River Forest, IL) 672 p.

This book is another in a long series of biology encyclopedias. It is hard to find a page that doesn't introduce a

new term. Each new term is set off in italics and is followed by a phonetic spelling to aid in its pronunciation. The authors have been thorough in their coverage of the subjects. Each section is highlighted with many excellent colored photographs and illustrations. Each chapter contains a section called "Find out by doing" which provides "hands on" experiences in biology. These are not as much discovery type activities as they are activities designed to verify what students have already been told.

The basic format of each chapter is tell them what you are going to tell them, tell them, and tell them what you told them. The chapter starts with a list of educational objectives, followed by the text and ends by reviewing the important ideas. Each chapter is terminated with a series of review questions designed to test recall and rote memory. No formal thinking is required.

The authors end each unit with short, extremely generalized section "Pros and Cons", a few paragraphs on careers and a short section on computer programs adaptable for use. An extensive glossary is included.

The text is complemented with a laboratory manual in which the stu-

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