An Introduction to Environmental Biophysics

Campbell's experience in teaching environmental biophysics has served him well in producing this introductory textbook. When I first looked at it I was under initial negative reaction, due to the fact that it seems to be forever deluged with new "Introductions to..." that we re very much a basic set of core ideas and principles. Reflecting back to my own days as a student, however, I began to get a different perspective as I progressed through the book. Instead of having to go to a half dozen different sources for necessary background material, here I found a fairly adequate package of requisite groundwork concepts. Temperature, moisture, wind, radiation, and heat, mass, and momentum transfer were all treated sequentially in the first six chapters, each topic proceeding logically from its most basic level to one that gives the student some capacity to appreciate the type of research that is occurring today in the forefront of many different phases of this conglomeration field called environmental biophysics.

The second half of the book is even more interesting than the first, for it is here that Campbell gets into the more applied aspects of the basic principles treated in the first half. Chapters 7, 8, and 9, for instance, introduce us to the responses of animals, humans, and plants to the various types of environments they may encounter, while Chapter 10 describes exchange processes in plant canopies. Specific numerical examples and sample problems illustrate the principles described and give the student an opportunity to more fully grasp the methods of their application. An Appendix deals with terminology and units employed in the text and also contains some tables of much used atmospheric properties. Making the book a surprisingly self-contained unit. I am sure that many instructors will find it a helpful adjunct to teaching courses in the area of environmental biophysics and that it will be equally well received by their students.-S. B. IDSU, U. S. Water Conservation Laboratory, ARS, USDA, Phoenix, AZ 85040.

Effects of Pollutants on Aquatic Organisms

This book contains nine lectures by participants in an April 1975 seminar at Liverpool University. According to the Preface, the intent of the series is to "outline the state of the art" of the experimental approach into the subtle influences of the more important substances currently considered to have significant effects on aquatic organisms. This objective was reasonably well fulfilled, although it can be debated whether all of the substances reviewed are genuinely the more important ones; devoting two chapters to petroleum hydrocarbons seems excessive when compared to the importance of other topics on aquatic life. Nevertheless, the book is a surprisingly self-contained unit. I am sure that many instructors will find it a helpful adjunct to teaching courses in the area of environmental biophysics and that it will be equally well received by their students.-S. B. IDSU, U. S. Water Conservation Laboratory, ARS, USDA, Phoenix, AZ 85040.

Reclamation and Use of Disturbed Land in the Southwest

This publication resulted from a symposium "Disturbed Land Use and Reclamation in the Southwest" held in Arizona in January 1975. Its purpose is to "contribute to an understanding of the constraints, alternatives and techniques in reclamation of lands disturbed by mining, and to present latest results of major research efforts in disturbed land reclamation in the southwest." The book is divided into six parts: "I. Mining Reclamation and Land Use Planning;" "II. Constraints in Disturbed Land Reclamation;" "III. Mining and the Environment;" "IV. Mining and the Amenities;" "V. Revegetation Techniques;" and "VI. Plant Species for Disturbed Lands." Each part consists of a brief summary by the editor, followed by five to seven papers authored by individuals active in these fields. Most authors were employed by universities, federal or state agencies, industry, or professional consultants, and viewpoints of these organizations prevail. Most papers refer specifically to land disturbance in the Southwest U.S., although many principles discussed have application in other regions.

The subject matter covered in this book is rather extensive, as indicated by the titles of the various parts listed above. This is one of the few publications on reclamation that devotes this much space to constraints. The major points in this part are concerned with policy and planning activities related to the reclamation of disturbed lands in the Southwest. With a few exceptions, the technology of reclamation is confined largely to papers in the last two sections. Generally those papers concerned with policy and planning were without bibliographies and presented a minimum of experimental data, while those concerned with the technology of reclamation presented more data and literature citations.

The coverage of the subject of reclamation in the Southwest is sufficient to provide the reader with a good superficial knowledge of the major problems and suggested solutions. Since there is some duplication of subject matter in the five to seven papers in each part, collectively between the papers the title of each part is adequately described.

This publication is recommended for those who are seeking an overview of disturbed land reclamation problems, especially for arid regions such as the Southwest U.S. Many seldom-discussed problems in planning and policy are brought up, and some novel methods of study are outlined. Although papers concerned with development of reclamation technology contain considerable data, those active in this field will find that most of the data presented have been published elsewhere since January 1975. Consequently the publication will probably be best suited for students, administrators, planners, and others who are seeking a comprehensive view of the entire subject. Organization, format, and printing all meet high standards.-J. F. POWER, Agricultural Research Service, U. S. Department of Agriculture, Mandan, ND 58554.