ease management by the use of chemicals (fungicides, nematocides, and antiviral agents) and by the manipulation of environment, associated microbiota, physical factors (heat and radiation), and host genes. The book stresses the need for a more holistic approach to crop protection. Several authors emphasize the importance of developing data on economic thresholds because of their significance in implementing strategies of disease management in our agroecosystems. The development of descriptive and predictive models of crop production, in which disease management is a part, is presented as one approach for obtaining maximum benefits for the producer, the consumer, and the public. A rare discussion of the involvement of international organizations in disease management is included. The final chapter is, appropriately, concerned with the education of future disease management practitioners.

A folksy treatment of the history and sociology of plant pathology is provided by the editors. They discuss the struggle between objectivity and the dogma of the time as they trace the historical development of the concept of plant disease. They also list the scientific genealogy of the 70 presidents of the American Phytopathological Society and report that H. A. deBary was the ancestral professor of all but three. Their compilation of a hall of fame of the 100 most distinguished plant pathologists (dead or retired) will stimulate considerable discussion.

Present-day societal constraints on disease management procedures are shown to have limited the alternatives for disease control and in some cases to have encouraged disease epidemics. Laws designed to protect us from risks inherent in the use of pesticides are inhibiting the development of chemicals potentially useful in disease control; but pesticides, properly used, must remain one choice in pest management.

It is unfortunate that the book neglects the subject of management of pathogen vectors, since many causal agents, such as mycoplasma-like organisms and most viruses, are transmitted by insects. Information about this subject is vital to the holistic approach to management of many diseases and would have been of greater value here than the chapter on the action of antiviral agents.

The book will be useful for plant pathologists, students of pest management, and all scientists interested in crop production.

DOUGLAS P. MAXWELL
Department of Plant Pathology, University of Wisconsin, Madison 53706

Steroids

Biochemistry of Steroids and Other Isopentenoids. WILLIAM R. NES and MARGARET LEE MCKEAN. University Park Press, Baltimore, 1977. xii, 690 pp., illus. $39.50.

Although there are a number of books and monographs that discuss one or more aspects of steroid chemistry and biology, this scholarly, comprehensive book provides a well-rounded presentation of both the theoretical and practical aspects of the subject. It tells, in fact, what you always wanted to know about steroids but couldn't find in any single place before. Nes has himself made numerous contributions to the field of steroid chemistry and biochemistry over the past quarter-century and has a keen sense of the historical development of the field. This is made evident in the first chapter, an interesting review of the major discoveries in the field, especially those that gained the discoverer a Nobel prize. The steroids have undergone a number of changes in nomenclature, some evolutionary and some revolutionary; this subject is discussed in a detailed, scholarly review of steroid structure and nomenclature in chapter 2. The following chapter provides an overview of the many types of analytic procedures used in steroid biochemistry, ranging from classical chemical and physical methods to newer ones utilizing chromatography and protein-steroid interactions such as radioimmunoassay and competitive protein binding.

Much of the book is devoted to a detailed review of the experimental basis of our present understanding of how steroids and other terpenoids are synthesized, by way of the formation and polymerization of isopentenoid units. The chapters of greatest interest to chemists are those concerned with the structure, nomenclature, analytic procedures, and biosynthesis of steroids (chapters 2 through 9). Of greatest interest to biologists, perhaps, will be chapter 10, on the occurrence, physiology, and ecology of the sterols. Here the authors discuss the various kinds of sterols synthesized and metabolized by a wide range of organisms ranging from bacteria and protozoans through fungi, green plants, and invertebrate and vertebrate animals. Of special interest to clinical endocrinologists is chapter 11, dealing with the functions of steroids. The chapter provides a detailed and up-to-date discussion not only of steroidal hormones but of bile acids and cholecalciferol as well. In addition, it contains a fine review of the roles of sterols in the structure and function of biological membranes.

Each chapter is well annotated, with an excellent bibliography, and the book has an index of authors cited as well as an index of subjects discussed. The historical approach is evident throughout the book and results in an interesting, easily understood presentation of the field. Many of the monographs published today are collections of chapters by many different authors, each writing primarily about his or her own contributions to the field. This book, written by two authors, is comprehensive without being concerned with minutiae, logically organized so that there is minimal duplication of subjects between chapters, and uniformly clearly written. The authors set out to write an up-to-date version of *Steroids* by Louis and Mary Fieser, and they have succeeded admirably in this endeavor.

CLAUDE A. VILLEE
Department of Biological Chemistry and *Laboratory of Human Reproduction and Reproductive Biology, Harvard Medical School, Boston, Massachusetts 02115*

Books Received and Book Order Service

Books Received and the Book Order Service will be combined in issues in which there is a Readers' Service Card. To order any of the Book Order Service books, circle the corresponding number on the Readers' Service Card (pages 242A and 330A); the participating publisher(s) will ship the title(s) ordered and send you a bill. Where no Readers' Service number is given, the publisher is not participating in the Book Order Service; send your order and check directly to the publisher.

Advanced Mechanics of Materials. Hugh Ford. Horwood, Chichester, England, and Halsted (Wiley), New York, ed. 2, 1977. x, 672 pp., illus. $27.50.

Advances in Inorganic Chemistry and Radiochemistry. Vol. 20. H. J. Emeléus and A. G. Sharpe, Eds. Academic Press, New York, 1977. viii, 374 pp., illus. $38.

Aircraft Emissions. Potential Effects on Ozone and Climate. A Review and Progress Report. R. C. Oliver with E. Bauer, H. Hildalgo, K. A. Gardner, and W. Wasylkiwskyj. Federal Aviation Administration Office of Environmental Quality, Washington, D.C., 1977 (available from the National Technical Information Service, Springfield, Va.). Variously paged, illus. Paper, $11. Report No. FAA-EQ-77-3.

Alternatives to Psychiatric Hospitalization. Harry Gottesfeld. Gardner Press, New York, 1977 (distributor, Halsted [Wiley], New York). x, 132 pp. $11.95.

The Analysis of Contingency Tables. B. S. Everitt. Chapman and Hall, London, and Halsted (Wiley), New York, 1977. x, 128 pp. $8.50. Monographs on Applied Probability and Statistics.

(Continued on page 330)