

illuminate areas for future research. The book is mechanically well produced, with easily readable type and a convenient page size. Six appendixes, a helpful index, and collection of all the references into a single list contribute to its value.

Perhaps the weakest part of the book is the systematic overview presented in the opening chapter by Lynne Parenti and Mary Rauchenberger. One or more figures would have been helpful for sorting out the taxonomic organization and relationships among the 190 species in 22 genera and 12 subgenera. To make matters more confusing, we are told in the preface that most contributors to the volume have chosen to use a different classification scheme from the one presented in this introductory chapter.

The greatest future contribution of this book to our understanding of evolution may not have been anticipated by its editors. The excitement of the many contributors to the book is obvious, and John Endler argues persuasively in the foreword for the value of this family for evolutionary investigations. I would be surprised if this book did not inspire many additional young, or not so young, evolutionary biologists to use these species in their research.

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Some Other Books of Interest

Biological Clocks and Environmental Time.

SERGE DAAN and EBERHARD GWINNER, Eds. Guilford, New York, 1989. viii, 197 pp., illus. \$35. Also published as a special issue of the *Journal of Biological Rhythms* (vol. 4, no. 5). Based on a symposium, Munich, F.R.G., Jan. 1988.

The conceptual foundations of the study of biological rhythms, the editors note in their foreword, "were laid by two people, Colin Pittendrigh and Jürgen Aschoff." This volume stems from a meeting honoring Aschoff on his 75th birthday and opens with a brief "appreciation" of Aschoff by Michael Menaker. There follow 12 papers on topics to which Aschoff has made contributions. Benjamin Rusak, distinguishing between formal (descriptive or mathematical) and physiological analysis of circadian systems, discusses the former with regard to mammals and questions whether the "flow charts" that have been produced can be read as "wiring diagrams." Fred Turek then examines the "dogma" that circadian pacemakers must be independent of changes in external or internal environment and suggests that Aschoff's 1960 hypothesis that "level of

excitement" affects pacemakers will have utility for future studies. Wever reviews recent work from the Max-Planck-Institut at Andechs on the effects of light on human circadian rhythms, and Heldmeier *et al.* discuss the relation between photoperiod and thermoregulation in vertebrates. Other papers in the volume report on studies of sleep initiation and pineal *N*-acetyltransferase activity in the rat, swarming rhythm in the flagellate *Gonyaulax polyedra*, eclosion as related to latitude in *Drosophila auraria*, circannual rhythms in migratory birds (two species of flycatcher), allometry of basal metabolic rate in the kestrel, and lunar rhythms of reproduction in the intertidal insect *Clunio*. J. T. Enright concludes the volume with a consideration of "the insidious influence of the parallactic view," or subjective interpretation, in statistical testing of data. The papers were, according to the editors, reviewed in accordance with the procedures of the *Journal of Biological Rhythms*. Most include abstracts, and a subject index has been added.—K.L.

Immunopharmacology Reviews. Vol. 1. JOHN W. HADDEN and ANDOR SZENTIVANYI, Eds. Plenum, New York, 1990. xiv, 418 pp. \$79.50.

In their preface the editors of this volume note that the field of immunopharmacology, which "had its origins . . . in the application of antibody-based techniques to assays of hormones and drugs in tissues and body fluids," has recently been "redefined to include a primary focus on the immune system as a target of xenobiotic action," thus standing as "the preclinical and clinical science of immune manipulation." They intend that the reviews in this new series will be "the best by the best," providing a "strong reference background" for researchers, teachers, and students in the field. The volume opens with chapters by Hadden *et al.* on the characterization of immunotherapeutic agents and by J. F. Williams on the pharmacokinetics of immunomodulators. C. W. Taylor and E. M. Hersch then review immunotherapy for cancer. In the longest chapter in the book (114 pages, with a continuation planned for volume 2 of the series), Szentivanyi *et al.* discuss the pharmacology of microbial modulation of immune reactivities. In the two final chapters Hadden and R. G. Coffey discuss early biochemical events in the activation of T-lymphocytes by mitogens (listing some 600 references), and J. H. Dean *et al.* review toxic responses of the immune system, including the effects of pesticides and various pollutants. The volume includes a subject index, and the table of contents outlines each chapter in detail. It is intended that future volumes in the series

will encompass "the full range of cellular and molecular components and the disease processes intrinsic to our definitions of immunopharmacology."—K.L.

Books Received

Advances in Mutagenesis Research. Vol. 1. G. Obe, Ed. Springer-Verlag, New York, 1990. x, 217 pp., illus. \$79.50.

Alcohol, Immunomodulation, and AIDS. Daniela Seminara, Ronald Ross Watson, and Albert Pawlowski, Eds. Liss (Wiley), New York, 1989. xx, 457 pp., illus. \$98. Progress in Clinical and Biological Research, vol. 325. From a conference, Tucson, AZ, April 1989.

Algorithmic Algebraic Number Theory. M. Pohst and H. Zassenhaus. Cambridge University Press, New York, 1989. xiv, 465 pp. \$89.50. Encyclopedia of Mathematics and Its Applications.

American Medicine as Culture. Howard F. Stein. Westview, Boulder, CO, 1989. xxii, 281 pp. \$29.95.

America's Forgotten Pandemic. The Influenza of 1918. Alfred W. Crosby. Cambridge University Press, New York, 1990. xiv, 337 pp. \$39.50; paper, \$12.95. Reprint of *Epidemic and Peace, 1918* (1976).

The Anatomical Substrate for Telencephalic Function. C. L. Veeman *et al.* Springer-Verlag, New York, 1989. xii, 110 pp., illus. \$65.50. Advances in Anatomy, Embryology, and Cell Biology, vol. 117.

Animal Species for Developmental Studies. Vol. 1, Invertebrates. T. A. Dettlaff and S. G. Vassetzky, Eds. Consultants Bureau (Plenum), New York, 1990. xviii, 317 pp., illus. \$85. Translated from the Russian by G. G. Gause, Jr., and S. G. Vassetzky.

Applications of Biotechnology in Forestry and Agriculture. Vibha Dhawan, Ed. Plenum, New York, 1989. xii, 385 pp., illus. \$89.50. From a workshop, New Delhi, India, Jan. 1988.

Biochemistry of the Lanthanides. C. H. Evans. Plenum, New York, 1990. xvi, 444 pp., illus. \$79.50. Biochemistry of the Elements, vol. 8.

Biological Systems. Papers from Science, 1988–1989. Barbara R. Jasny and Daniel E. Koshland, Jr., Eds. American Association for the Advancement of Science, Washington, DC, 1990. xii, 270 pp., illus. Paper, \$31.50; to AAAS members, \$24.95.

Biomedical Technology and Public Policy. Robert H. Blank and Miriam K. Mills, Eds. Greenwood Press, Westport, CT, 1989. xviii, 235 pp. \$42.95. Contributions in Medical Studies, no. 26.

Breast Cancer Immunodiagnosis and Immunotherapy. Robert L. Ceriani, Ed. Plenum, New York, 1989. xii, 259 pp., illus. \$65. From a workshop, San Francisco, CA, Nov. 1988.

Cell to Cell Signalling. From Experiments to Theoretical Models. A. Goldbeter, Ed. Academic Press, San Diego, CA, 1989. xviii, 647 pp., illus. \$120. From a workshop, Knokke-Zoute, Belgium, Sept. 1988.

Challenges for the 1990s for Arms Control and International Security. National Academy of Sciences. National Academy Press, Washington, DC, 1989. viii, 78 pp. Paper, \$15.

Chaotic Evolution and Strange Attractors. The Statistical Analysis of Time Series for Deterministic Nonlinear Systems. David Ruelle. Cambridge University Press, New York, 1989. xii, 96 pp., illus. \$39.50; paper, \$12.95. Lezioni Lincee. From a lecture series, Rome, Italy, May 1987.

The Chemistry and Biology of Mineralized Tissues. Melvin J. Glimcher and Jane B. Lian, Eds. Gordon and Breach, Philadelphia, 1989. lxii, 967 pp., illus. \$74. Reprinted from *Connective Tissue Research*, vols. 20–22 (1989). From a conference, Chatham, MA, Oct. 1988.

Chromatography/Fourier Transform Infrared Spectroscopy and Its Applications. Robert White. Dekker, New York, 1990. viii, 328 pp., illus. \$99.75. Practical Spectroscopy, vol. 10.

Cognitive Science and Genetic Epistemology. A Case of Understanding. David Leiser and Christiane Gillieron. Plenum, New York, 1990. xvi, 200 pp., illus. \$35. PATH in Psychology.

Collected Works. Vol. 2, Publications 1938–1974. Kurt Gödel. Solomon Feferman *et al.*, Eds. Oxford University Press, New York, 1990. xviii, 407 pp. \$45.

The Colonization of the Pacific. A Genetic Trail. Adrian V. S. Hill and Susan W. Serjeantson, Eds. Clarendon (Oxford University Press), New York, 1989.