enzyme kinetics, the molecular basis of vision, and photosynthesis), Thermodynamics and Transport Systems (thermodynamics, diffusion and active transport, and information theory), and Specialized Instrumentation (optical, spectroscopic, and isotopic instruments, and computers). Each chapter concludes with a short list of references, and each main section includes a set of discussion questions.

Ackerman's style is concise and clear, and the necessary biological (and biochemical) concepts and terminology are explained and defined as they are introduced. The book is well produced and appropriately illustrated. It should be extremely useful as the textbook for a course in general biophysics and, to more advanced workers, as a source for independent reading or reference. To the physicist or the engineer, it offers a pleasant opportunity to acquaint himself wth those biological or biochemical fields in which his own techniques have been employed with success.

*Biophysics: Concepts and Mechanisms* is intended for students of biology and medicine who are without a background in either calculus or physics, and both subjects are introduced in a somewhat abbreviated fashion. The topics treated here are quite similar to those treated by Ackerman, but their treatment is necessarily less detailed. A set of problems and a list of references are provided at the end of each chapter. The style is informal and at times even whimsical.

An unfortunate number of errors, both of fact and of typography, remain in the text—the following are a small sample: "Because they carry more energy than photons in the visible region, the photons in the ultraviolet region are less likely to be absorbed" (p. 92); "Punctures [in the lung], called air embolism . . ." (p. 33); . . . [the ion] is deflected there by the magnetic field, by an amount determined by the weight of the flying particle . . ." (p. 119); "If waves are *diverging*, or being dissipated or scattered, the important general rule, called the 'inverse square law,' is obeyed" (p. 52). In other instances imprecision detracts from the presentation: ". . . in destroying the bacteria, *escherichia coli* and *bacteria coli*, in foods or in our water supply. Each of these is killed by about $14 \times 10^{-6}$ ergs per bacterium" (p. 93); "The heart is a pulse pump. It distends . . . closes its inlet valves, and contracts, forcing the blood out through the aorta" (p. 35).

Although this book is written for a deserving audience and its subject matter is well chosen, the many errors make it impossible to recommend the book in its present form.

M. S. BLOIS

*Biophysics Laboratory,*
*Stanford University*

# Note

## Water Maps

**Water Atlas of the United States** (Water Information Center, Port Washington, N.Y., 1962. 7 pp. + 40 plates. $6.95), by David W. Miller, James J. Geraghty, and Robert S. Collins, contains 40 well-prepared maps; all are on a uniform scale of 1:16,500,000 (260 miles per inch).

The maps contain data on physiographic provinces, average annual precipitation, areas of cloud seeding operations, mean annual evaporation, average temperature of groundwater, strontium concentration in streams, and the amount of water used for various purposes. Each map is accompanied by a few paragraphs of explanatory text.

Professional workers in the field will find nothing in the atlas that they do not already have in their libraries. Nineteen maps are adapted from publications of the U.S. Geological Survey and eight from books sponsored by Resources for the Future. The layman can easily be misled by the apparent simplicity of the extremely small-scale maps which cannot represent accurately the complex areal patterns of the various factors, especially in the western United States. The brief descriptions are overly generalized and superficial.

The atlas does not live up to its advance billings as "a single authoritative reference book; nor does it provide "answers to almost every conceivable question on water." It is clearly a commercial venture which falls far short of meeting the need for a detailed and comprehensive national water atlas.

RAY K. LINSLEY

*Department of Civil Engineering,*
*Stanford University*

# New Books

### Biological and Medical Sciences

**Aktuelle Fragen der Psychotherapie.** vol. 4, pt. 2, *Selected Lectures.* Proceedings of the fifth International Congress of Psychotherapy (Vienna, Austria), 1961. Berthold Stokvis, Ed. Karger, Basel, Switzerland, 1963. 287 pp. Illus. Paper, $16.75.

**Comparative Aspects of Neurohypophysical Morphology and Function.** *Symposia of the Zoological Society of London,* No. 9. Proceedings of a symposium, 1962. H. Heller, Ed. Zoological Society of London, London, 1963. 193 pp. Illus. Paper, £2 10s.

**Comparative Nutrition of Man and Domestic Animals.** vol. 1. H. H. Mitchell. Academic Press, New York, 1962. 723 pp. Illus. $25.

**Evolution of Neotropical Cricetine Rodents (Muridae).** With special reference to the phyllotine group. Philip Hershkovitz. Chicago Natural History Museum, Chicago, Ill., 1962. 524 pp. Illus. Paper, $12.50.

**Faune de France.** vol. 66, pt. 2, *Isopodes Terrestres.* Albert Vandel. Lechevalier, Paris, 1962. 514 pp. Illus. NF. 110.

**Flora of Illinois.** George N. Jones. Univ. of Notre Dame Press, Notre Dame, Ind., ed. 3, 1963. 407 pp. $7.50.

**The Growth of Plants.** G. E. Fogg. Penguin Books, Baltimore, Md., 1963. 288 pp. Illus. Paper, $1.65.

**Horticultural Science.** Jules Janick. Freeman, San Francisco, Calif., 1963. 484 pp. Illus. $8.50.

**Methodology in Mammalian Genetics.** Walter J. Burdette, Ed. Holden-Day, San Francisco, Calif., 1963. 660 pp. Illus. $6.

**Methods in Carbohydrate Chemistry.** vol. 2, *Reactions of Carbohydrates.* Roy L. Whistler and M. L. Wolfrom, Eds. Academic Press, New York, 1963. 588 pp. Illus. $19.50.

**Methods of Biochemical Analysis.** vol. 11. David Glick, Ed. Interscience (Wiley), New York, 1963. 452 pp. Illus. $14.50.

**The Neural Mechanism of Parkinsonian Tremor.** J. M. Gybels. Arscia and Presses Academiques Europeennes, Brussels, Belgium, 1963. 161 pp. Illus. Paper, F. 320.

**Physiology.** Ewald E. Selkurt, Ed. Little, Brown, Boston, Mass., 1962. 749 pp. Illus. Paper, $7.50.

**The Pigment Cell: Molecular, Biological, and Clinical Aspects.** *Annals of the New York Academy of Sciences,* vol. 100. Vernon Riley and Joseph G. Fortner, Eds. The Academy, New York, 1963. 1124 pp. Illus. Paper.

**Progress in Medicinal Chemistry.** vol. 2. G. P. Ellis and G. B. West, Eds. Butterworth, Washington, D.C., 1962. 211 pp. Illus. $11.25.

**Stages in the Development of Ictalurus Nebulosus.** Philip B. Armstrong. Syracuse Univ. Press, Syracuse, N.Y., 1962. 8 pp. 16 plates. $4.95.

**A Stereotaxic Atlas of the Brain of the Squirrel Monkey (Saimiri Sciureus).** Raimond Emmers and Konrad Akert. Univ. of Wisconsin Press, Madison, 1963. 120 pp. Illus. $15.