

productivity of the tension and the necessity of sharing the intellectual enterprise. At this extraordinary moment when schools of education are a focus of attention and debate, *Ed School* is an important contribution, presenting the case for a distinctive professional school that turns outward away from the campus and toward the public schools. That case has a great deal of merit, but taken to the length that Clifford and Guthrie suggest it also means a loss of faith in the value of scholarly inquiry that I, for one, am not ready to accept.

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Pacific Overview

The Ocean Basins and Margins. Vol. 7B, The Pacific Ocean. ALAN E. M. NAIRN, FRANCIS G. STEHLI, and SEIYA UYEDA, Eds. Plenum, New York, 1988. xiv, 642 pp., illus. \$95.

Although I have never seen the guidelines or instructions that the editors of this series provide to contributors, I imagine they read something like this: "Write a well-illustrated review of part of an ocean (or related adjacent land masses) and include enough geological and geophysical information so that a wide variety of earth scientists can capture the essence of its evolution and structure." The book at hand completes the survey of the Pacific Ocean begun by its companion, Volume 7A. Most of the papers focus on either the Pacific or an adjacent continent, but four chapters deal with geophysical data from the entire ocean. In my estimation, most, but not all, of the 14 chapters meet the imaginary criteria quoted above.

I will use a few chapters as examples illustrating the range encompassed in this collection. The contribution by D. B. Stone on the Bering Sea and Aleutian arc epitomizes what I believe will prove to be the most useful kind of review. Perhaps its most striking feature is the quality of its illustrations, which include a variety of clearly labeled maps, cross sections, seismic reflection and refraction profiles, and oblique physiographic diagrams. By scanning the figures alone a reader could obtain at least a feel for the overall structure of the Bering Sea and its margins. Another important attribute of the chapter is its variety of well-integrated and up-to-date geophysical data and geological evidence. Most of the chapter is devoted to the Bering Sea itself and the Aleutian arc constituting its southern margin, but some relevant features of mainland Alaska and the Soviet Union adjacent to the

sea (for example, large latitudinal displacements indicated by paleomagnetic data) are briefly discussed. Other chapters on the northeast Pacific, the Caroline plate region, and New Zealand and environs are comparable in scope and quality.

Notably less successful are two chapters on China and the China Sea. Although there is a reawakening of interest in the geology of China among Western geoscientists, I doubt that these contributions will satisfy the need for an overview of the stratigraphy, tectonics, or geological history of the region. The chapter on China suffers from a lack of powerful yet simple illustrations—especially maps and cross sections—on the one hand, and too much stratigraphic detail from diverse regions on the other. I concluded after reading this contribution that chapters on continental regions adjacent to oceans should be included in this kind of volume only if the information in them is clearly relevant to processes recorded in the oceans themselves. The chapter on the China Sea also needs more illustrations and a better explanation of how the evolution of the component ocean basins themselves is related to not only the Asian mainland but also the archipelagos and islands to the south and east.

A chapter by Saleeby and Gehrels on the tectonic history of the California margin is unusual and deserves comment. It makes the case that the Phanerozoic tectonics of not only California but also the western margin of the United States and Canada is clearly related to processes in the adjacent Pacific Ocean. Though I found it fascinating reading, probably because of my specialized interest in Cordilleran tectonics, I was nearly overwhelmed with details of on-land geology, and even the authors would admit that the connections between what is recorded on land and what is inferred to have occurred offshore prior to about 20 to 30 million years ago are quite hypothetical. I find these model-dependent contributions less valuable to the nonspecialist than the comprehensive yet broad reviews such as Stone's on the Bering Sea.

This volume (like its companion) contains several general reviews that are potentially useful for a geoscientist who wants an introduction to parts of the Pacific without spending the better part of a lifetime in the library plowing through an immense literature scattered through tens of sources. Not every part of the Pacific or its related margins is covered, of course, but I would recommend this volume and the majority of its papers as an excellent place to begin.

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Some Other Books of Interest

Pheromone Biochemistry. GLENN D. PRESTWICH and GARY J. BLOMQUIST, Eds. Academic Press, San Diego, CA, 1987. xx, 565 pp., illus. \$85.

This book is "designed as a sourcebook for the next decade of research" on insect pheromones. The first part of the book is devoted to pheromone biosynthesis and its regulation. The opening papers deal with the structure and function of pheromones (Tumlinson and Teal) and with glands that produce sex pheromones (Percy-Cunningham and MacDonald). Four papers in the section relate to Lepidoptera: Bjostad *et al.* on desaturation and chain shortening in biosynthesis, Morse and Meighen on enzymatic studies, Raina and Menn on endocrine regulation, and Eisner and Meinwald on courtship behavior. Others deal with Coleoptera (Vanderwel and Oelschlager), Diptera (Blomquist *et al.*), ixodid ticks (Sonenshine), and meloid beetles (cantharadin; McCormick and Carrel). Part 2, on pheromone reception and catabolism, contains five papers: Steinbrecht on pheromone-sensitive sensilla, Vogt on the molecular biology and De Kramer and Hemberger on the neurobiology of pheromone reception, Prestwich on chemical studies using radioligands, and Pace and Lancet on molecular mechanisms of vertebrate olfaction.—K.L.

NaCl Transport in Epithelia. R. GREGER, Ed. Springer-Verlag, New York, 1988. xii, 321 pp., illus. \$89.50. *Advances in Comparative and Environmental Physiology*, vol. 1.

This volume inaugurates a series that, in the words of its editor-in-chief, Raymond Gilles, is intended to "provide comprehensive, integrated reviews giving sound, critical, and provocative summaries of our present knowledge in environmental and comparative physiology, from the molecular to the organismic level." The present volume consists of eight papers, covering sodium chloride transport in gills and related structures in vertebrates and invertebrates (Péqueux, Gilles, and Marshall), intestine in invertebrates (Gerencser) and vertebrates (Groot and Bakker), the kidney (Lang), amphibian skin (Larsen), tracheal epithelium (Welsh), salt glands (Schlatter and Greger), and tight epithelia (Palmer). Volume 2 of the series will cover a variety of topics including hibernation and nutrient transport. Further projected volumes will be devoted to the molecular and cellular basis of social behavior in vertebrates, animal adaptation to cold, and vertebrate gas exchange.—K.L.

Artifacts in Biological Electron Microscopy.

RICHARD F. E. CRANG and KAREN L. KLOMPARENS, Eds. Plenum, New York, 1988. xx, 233 pp., illus. \$45.

In the foreword to this volume Charlotte L. Ownby notes several examples of biological structures whose reality has been a matter of uncertainty—the Golgi apparatus, once thought to be an artifact of the technique by which it was revealed; bacterial mesosomes, products of chemical fixation once thought to be natural structures; and the microtubular lattice, still of uncertain status. The present book dealing with the problems that gave rise to such uncertainties “is not intended to be an atlas of artifacts, but rather a discussion of the basis for some of the most common artifacts, with advice on how to avoid or at least understand them.” In 11 chapters 14 authors discuss artifacts in the sampling and preparation—chemical fixation, dehydration and epoxy embedding, sectioning, and staining—of specimens, artifacts due to the operation of the instruments, and artifacts associated with photography. Problems in the less traditional procedures of cryo- and analytical electron microscopy are also dealt with.

—K.L.

Books Received

Amenable Banach Algebras. Jean-Paul Pier. Longman Scientific, Harlow, U.K., and Wiley, New York, 1988. xiv, 161 pp. Paper, \$47.95. Pitman Research Notes in Mathematics Series, vol. 172.

Analysis of Means in Some Non-Standard Situations. J. B. Dijkstra. Centrum voor Wiskunde en Informatica, Amsterdam, 1988. x, 138 pp. Paper, Dfl. 21.60. CWI Tract 47.

Ancient Egypt. The Land and Its Legacy. T. G. H. James. University of Texas Press, Austin, 1988. 223 pp., illus. \$29.95.

Animal Cell Biotechnology. Vol. 3. R. E. Spier and J. B. Griffiths, Eds. Academic Press, San Diego, CA, 1988. xviii, 450 pp., illus. \$96.

Antarctic Mineral Exploitation. The Emerging Legal Framework. Francisco Orrego Vicuña. Cambridge University Press, New York, 1988. xvi, 615 pp., illus. \$89.50. Studies in Polar Research.

Anticarcinogenesis and Radiation Protection. Peter A. Cerutti, Oddvar F. Nygaard, and Michael G. Simic, Eds. Plenum, New York, 1987. xiv, 509 pp., illus. \$85. From a conference, Gaithersburg, MD, March 1987.

Antiviral Drug Development. A Multidisciplinary Approach. Erik De Clercq and Richard T. Walker, Eds. Plenum, New York, 1988. viii, 309 pp., illus. \$59.50. NATO Advanced Science Institutes Series A, vol. 143. From an institute, Lucca, Italy, May 1987.

Aportes a la Ecología Urbana de la Ciudad de México. Eduardo H. Rapoport and Ismael R. López-Moreno, Eds. Instituto de Ecología, Mexico City, 1987. 228 pp., illus. Paper, \$15. Publication no. 16.

The Archaeology of Prehistoric Coastlines. Geoff Bailey and John Parkinson, Eds. Cambridge University Press, New York, 1988. vi, 154 pp., illus. \$42.50. New Directions in Archaeology.

Artificial Intelligence and Expert Systems. Stuart E. Savory, Ed. Horwood, Chichester, U.K., and Wiley, New York, 1988. 278 pp. \$39.95. Ellis Horwood Series in Artificial Intelligence.

Aspergillus and Aspergillosis. Hugo Vanden Bossche, Donald W. R. Mackenzie, and Geert Cauwenbergh, Eds. Plenum, New York, 1988. x, 322 pp., illus.

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Astrophysical and Laboratory Spectroscopy. R. Brown and J. Lang, Eds. Scottish Universities Summer School in Physics, Edinburgh, 1968. xxiv, 415 pp. £24. From a school, St. Andrews, Scotland, Sept. 1988.

Atmosphere, Weather and Climate. Roger G. Barry and Richard J. Chorley. 5th ed. Methuen (Routledge), New York, 1988. xxii, 460 pp., illus. \$99.50; paper, \$27.50.

Bacterial Cell Surface Techniques. Ian Hancock and Ian Poxton. Wiley-Interscience, New York, 1988. xvi, 329 pp., illus. \$89.95. Modern Microbiological Methods.

The Bald Eagle. Haunts and Habits of a Wilderness Monarch. Jon M. Gerrard and Gary R. Bortolotti. Smithsonian Institution Press, Washington, DC, 1988. xvi, 177 pp., illus. \$24.95; paper, \$12.95. A Smithsonian Nature Book.

Base Metal Sulfide Deposits in Sedimentary and Volcanic Environments. Günther H. Friedrich and Peter M. Herzig, Eds. Springer-Verlag, New York, 1988. x, 290 pp., illus. \$65.50. Society for Geology Applied to Mineral Deposits Special Publication no. 5. From a meeting, Aachen, F.R.G., Sept. 1985.

Basic Histochemistry. Barbara E. H. Sumner. Wiley-Interscience, New York, 1988. xvi, 271 pp. Spiral bound, \$29.95.

Before the Indians. Björn Kurtén. Columbia University Press, New York, 1988. vi, 158 pp., illus., + plates. \$29.95.

The Biochemistry of Plants. A Comprehensive Treatise. Vol. 14. Carbohydrates. Jack Preiss, Ed. Academic Press, San Diego, CA, 1988. xvi, 529 pp., illus. \$95.

Biology. Norman K. Wessells and Janet L. Hopson. Random House, New York, 1988. xxviii, 1251 pp., illus., + appendixes. \$35.

Biology and Diseases of the Ferret. James G. Fox. Lea and Febiger, Philadelphia, 1988. xii, 345 pp., illus. \$45.

Boundary Layer Climates. T. R. Oke. 2nd ed. Methuen (Routledge), New York, 1988. xxiv, 435 pp., illus. \$97.50; paper, \$32.50.

Cadmium. M. Stoeppeler and M. Piscator, Eds. Springer-Verlag, New York, 1988. xii, 237 pp., illus. \$89.70. Environmental Toxin Series, vol. 2. From a workshop, Juelich, F.R.G., Aug. 1985.

California Mammals. E. W. Jameson, Jr., and Hans J. Peters. University of California Press, Berkeley, 1988. xii, 403 pp., illus., + plates. \$24.95. California Natural History Guides, vol. 52.

Carbohydrate Chemistry. Monosaccharides and Their Oligomers. Hassan S. El Khadem. Academic Press, San Diego, CA, 1988. x, 256 pp., illus. \$44.95.

Cell and Molecular Biology of the Uterus. Wendell W. Leavitt, Ed. Plenum, New York, 1988. vii, 246 pp., illus. \$55. Advances in Experimental Medicine and Biology, vol. 230. From a symposium, Bethesda, MD, Dec. 1986.

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