

ate and control the nucleation of the mineral and the crystal form. Chapters 2 and 3 examine the diversity of the mineral forms, and the role of matrix macromolecules in the process, in a very interesting and sophisticated way. These chapters, along with the three final chapters, on nonskeletal functions in biomineralization, environmental influences on biomineralization, and the evolution of biomineralization, are worth the price of the book by themselves. The authors give the most coherent analysis of the evolutionary development of biominerals this reviewer has had the pleasure to read. The intervening chapters on the specific systems are well done and beautifully illustrated. The emphasis is on matrix components and their ultrastructural distribution, and on the nature of the mineral phase. I think it is fair to say that I appreciated these chapters more because of having read the comparable chapters in Simkiss and Wilbur.

Both of these books are major feats of scholarship, and they are truly complementary. Both belong on the bookshelves of every scientist interested in biomineralization.

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## Reprints of Books Previously Reviewed

**Adolescent Mothers in Later Life.** Frank F. Furstenberg Jr., J. Brooks-Gunn, and S. Philip Morgan. Cambridge University Press, New York, 1989. Paper, \$14.95. *Reviewed* 240, 1060 (1988).

**Darwin and the Emergence of Evolutionary Theories of Mind and Behavior.** Robert J. Richards. University of Chicago Press, Chicago, 1989. Paper, \$17.95. *Reviewed* 239, 198 (1988).

**Psychology in Twentieth-Century Thought and Society.** Mitchell G. Ash and William R. Woodward, Eds. Cambridge University Press, New York, 1989. Paper, \$15.95. *Reviewed* 241, 1837 (1988).

## Books Received

**The Acquisition of Strategic Knowledge.** Thomas R. Gruber. Academic Press, San Diego, CA 1989. xxiv, 311 pp., \$39.95. Perspectives in Artificial Intelligence, vol. 4.

**Alice and the Space Telescope.** Malcolm Longair. Johns Hopkins University Press, Baltimore, 1989. x, 198 pp., illus. \$28.95.

**Almost Everywhere Convergence.** Gerald A. Edgar and Louis Sucheston, Eds. Academic Press, San Diego, CA, 1989. xvi, 416 pp. \$49.95. From a conference, Columbus, OH, June 1988.

**Anatomy of the Dicotyledons.** Vol. 2, Wood Structure and Conclusion of the General Introduction. C. R. Metcalfe and L. Chalk. 2nd ed. Clarendon (Oxford University Press), New York, 1989. xii, 297 pp., illus., + plates. Paper, \$55. Reprint, 1985 ed.

**The Anatomy of Xerography.** Its Invention and Evolution. J. Mort. McFarland, Jefferson, NC, 1989. xiv, 226 pp., illus. \$29.95.

**Behavioural Pharmacology of 5-HT.** Paul Bevan, Alexander R. Cools, and Trevor Archer, Eds. Erlbaum, Hillsdale, NJ, 1989. viii, 519 pp., illus. \$49.95. Based on

a symposium, Amsterdam, The Netherlands, Oct. 1987.

**The Bending and Stretching of Plates.** E. H. Mansfield. 2nd ed. Cambridge University Press, New York, 1989. xii, 228 pp., illus. \$59.50.

**Betting on Ideas.** Wars, Inventions, Inflation. Reuben Brenner. University of Chicago Press, Chicago, 1989. xii, 247 pp. Paper, \$12.95. Reprint, 1985 ed.

**Biologic Markers in Pulmonary Toxicology.** National Research Council. National Academy Press, Washington, DC, 1989. xiv, 179 pp., illus. Paper, \$22.50.

**Biologic Markers in Reproductive Toxicology.** National Research Council. National Academy Press, Washington, DC, 1989. xxiv, 395 pp., illus. Paper, \$27.95.

**Biological Control of Microbial Plant Pathogens.** R. Campbell. Cambridge University Press, New York, 1989. x, 218 pp., illus. \$55; paper, \$17.95.

**Biological Oceanography.** An Early History, 1870-1960. Eric L. Mills. Cornell University Press, Ithaca, NY, 1989. xx, 378 pp., illus. \$47.95.

**Biosynthesis of Heme and Chlorophylls.** Harry A. Dailey. McGraw-Hill, New York, 1989. xiv, 594 pp., illus. \$89.95.

**The Book of Waves.** Form and Beauty on the Ocean. Drew Kampion. Arpel, Santa Barbara, CA, 1989. Unpagged, illus. \$39.95.

**The Case for Mars III.** Strategies for Exploration. Carol R. Stoker, Ed. Published for the American Astronautical Society by Univelt, San Diego, CA, 1989. 2 vols. General Interest and Overview. xvi, 727 pp., illus. \$75; paper, \$55. Technical. xvi, 630 pp., illus. \$70; paper, \$50. Science and Technology Series, vols. 74 and 75. From a conference, Boulder, CO, July 1987.

**Cosmic Perspectives.** Essays Dedicated to the Memory of M. K. V. Bappu. S. K. Biswas, D. C. V. Mallik, and C. V. Vishweshwara, Eds. Cambridge University Press, New York, 1989. xx, 249 pp., illus. \$49.50.

**Current Algebras and Groups.** Jouko Mickelsson. Plenum, New York, 1989. xviii, 313 pp. \$79.50. Plenum Monographs in Nonlinear Physics.

**Cytoplasmic Organization Systems.** George M. Malacinski, Ed. McGraw-Hill, New York, 1989. xxiv, 482 pp., illus. \$59.95. Primers in Developmental Biology.

**The Grazing Land Ecosystems of the African Sahel.** Henry Noël Le Houérou. Springer-Verlag, New York, 1989. x, 282 pp., illus. \$89.50. Ecological Studies, vol. 75.

**The Great Design.** Particles, Fields, and Creation. Robert K. Adair. Oxford University Press, New York, 1989. viii, 376 pp., illus. Paper, \$12.95. Reprint, 1987 ed.

**Inorganic Contaminants in the Vadose Zone.** B. Bar-Yosef, N. J. Barrow, and J. Goldschmid, Eds. Springer-Verlag, New York, 1989. xiv, 200 pp., illus. \$79.50. Ecological Studies, vol. 74. Based on a workshop, Bet Dagan, Israel, June 1987.

**Instrumental Effects in Homodyne Electron Paramagnetic Resonance Spectrometers.** R. Czoch and A. Francik. Horwood, Chichester, U.K., Halsted (Wiley), New York, and PWN, Warsaw, 1989. 395 pp., illus. \$69.95. Ellis Horwood Series in Analytical Chemistry.

**Instrumentation for Future Parallel Computing Systems.** Margaret Simmons, Rebecca Koskela, and Ingrid Bucher. ACM Press, New York, and Addison-Wesley, Redwood City, CA, 1989. xxii, 260 pp., illus. \$41.95.

**Integral Transforms of Generalized Functions.** Yu. A. Brychkov and A. P. Prudnikov. Gordon and Breach, New York, 1989. xii, 343 pp. \$140.

**Interaction in Human Development.** Marc H. Bornstein and Jerome S. Bruner, Eds. Erlbaum, Hillsdale, NJ, 1989. xviii, 306 pp. \$49.95. Crosscurrents in Contemporary Psychology.

**An Introduction to Harmonic Analysis on Semisimple Lie Groups.** V. S. Varadarajan. Cambridge University Press, New York, 1989. x, 316 pp. \$69.50. Cambridge Studies in Advanced Mathematics, vol. 16.

**Ion Formation from Organic Solids (IFOS IV).** Mass Spectrometry of Involatile Material. A. Benninghoven, Ed. Wiley, New York, 1989. vi, 159 pp., illus. \$61.95. From a conference, Munster, F.R.G., Sept. 1987.

**Maya Resistance to Spanish Rule.** Time and History on a Colonial Frontier. Grant D. Jones. University of New Mexico Press, Albuquerque, 1989. xviii, 365 pp. \$39.50.

**Membrane Transport.** People and Ideas. Daniel C. Tosteson, Ed. American Physiological Society, Bethesda, MD, 1989 (distributor, Oxford University Press, New York). vi, 414 pp., illus. \$65.

**Metal-Microbe Interactions.** Robert K. Poole and Geoffrey M. Gadd, Eds. Published for the Society for

General Microbiology by IRL (Oxford University Press), New York, 1989. xii, 133 pp., illus. \$85; paper, \$50. Special Publications of the Society for General Microbiology, vol. 26. From a symposium, April 1988.

**Microvascular Mechanics.** Hemodynamics of Systemic and Pulmonary Microcirculation. Jen-Shih Lee and Thomas C. Skalak, Eds. Springer-Verlag, New York, 1989. xvi, 222 pp., illus. \$59. From a symposium, Charlottesville, VA, June 1988.

**Modeling Brain Function.** The World of Attractor Neural Networks. Daniel J. Amit. Cambridge University Press, New York, 1989. xviii, 504 pp., illus. \$39.50.

**Modulation of Defined Vertebrate Neural Circuits.** Michael Davis, Parry L. Jacobs, and Ronald I. Schoenfeld, Eds. New York Academy of Sciences, New York, 1989. viii, 195 pp., illus. \$49. Annals of the New York Academy of Sciences, vol. 563. From a conference, Elkridge, MD, Sept. 1988.

**Molecular Cloning.** A Laboratory Manual. J. Sambrook, E. F. Fritsch, and T. Maniatis. 2nd ed. Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY, 1989. 3 vols. Variousy paged, illus. Comb bound, \$115.

**New Generation Guide to the Fungi of Britain and Europe.** Stefan Buczacki. University of Texas Press, Austin, 1989. 320 pp., illus. \$22.95. Corrie Herring Hooks Series.

**The New Heat Transfer.** Eugene F. Adiutori. 2nd ed. Ventuno, West Chester, OH, 1989. xvi, 434 pp., illus. \$29.95.

**NMR.** Principles and Applications to Biomedical Research. Jay W. Pettegrew, Ed. Springer-Verlag, New York, 1989. xvi, 618 pp., illus. \$69.

**Oil.** The Devil's Gold. Leo Drollas and Jon Greenman. Duckworth, London, 1989. xvi, 335 pp., illus. £18.95.

**Optimal Structures in Heterogeneous Reaction Systems.** Peter J. Plath, Ed. Springer-Verlag, New York, 1989. viii, 195 pp., illus. \$42. Springer Series in Synergetics, vol. 44. Based on a seminar, Tirol-Vorarlberg, Austria, Feb.-March 1988.

**Ornithology.** Frank B. Gill. Freeman, New York, 1989. xiv, 660 pp., illus. \$49.95.

**Perspectives of Nonlinear Dynamics.** Vol. 1. E. Atlee Jackson. Cambridge University Press, New York, 1989. xx, 495 pp., illus. \$54.50.

**Perspectives on Animal Research.** Vol. 1. Stephen R. Kaufman and Betsy Todd, Eds. Medical Research Modernization Committee, New York, 1989. x, 134 pp. \$15.

**Perspectives on Nonviolence.** V. K. Kool. Ed. Springer-Verlag, New York, 1989. xiv, 282 pp., illus. \$39. Recent Research in Psychology. From a symposium, Eau Claire, WI, Oct. 1988.

**The Politics of Public Health.** Meredith Turshen. Rutgers University Press, New Brunswick, NJ, 1989. xii, 319 pp., \$38; paper, \$15.

**Probability, Statistics, and Mathematics.** Papers in Honor of Samuel Karlin. T. W. Anderson, Krishna B. Athreya, and Donald L. Iglehart, Eds. Academic Press, San Diego, CA, 1989. xl, 371 pp. \$39.95.

**Probing Bioactive Mechanisms.** Philip S. Magee, Douglas R. Henry, and John H. Bock, Eds. American Chemical Society, Washington, DC, 1989. x, 414 pp., illus. \$59.95. ACS Symposium Series, vol. 413. From a symposium, Los Angeles, CA, Sept. 1988.

**Productivity and American Leadership.** The Long View. William J. Baumol, Sue Anne Batey Blackman, and Edward N. Wolff. MIT Press, Cambridge, MA, 1989. xii, 395 pp., illus. \$29.95.

**The Psychological Impact of Unemployment.** Norman T. Feather. Springer-Verlag, New York, 1989. xii, 285 pp., \$49. Springer Series in Social Psychology.

**Satellite Data.** Processing, Archiving and Dissemination. Vol. 1, Applications and Infrastructure. D. R. Sloggett. Horwood, Chichester, U.K., and Halsted (Wiley), New York, 1989. 177 pp., illus. \$59.95. Ellis Horwood Library of Space Science and Space Technology.

**Scattering of Thermal Energy Atoms from Disordered Surfaces.** Bene Poselsma and George Comsa. Springer-Verlag, New York, 1989. viii, 108 pp., illus. \$59. Springer Tracts in Modern Physics, vol. 115.

**Transport of Photoassimilates.** D. A. Baker and J. A. Milburn, Eds. Longman Scientific, Harlow, U.K., and Wiley, New York, 1989. xviii, 384 pp., illus. \$108. Monographs and Surveys in the Biosciences.

**Tunneling Phenomena in Chemical Physics.** V. I. Gol'danskii, L. I. Trakhtenberg, and V. N. Fleurov. Gordon and Breach, New York, 1989. x, 334 pp. \$198. Translated from the Russian by V. N. Fleurov.

**Ultrasound in Synthesis.** Steven V. Ley and Caroline M. R. Low. Springer-Verlag, New York, 1989. x, 133 pp., illus. \$79.50. Reactivity and Structure Concepts in Organic Chemistry, vol. 27.