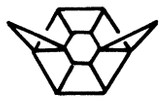
smith, and their index covers more than 1000 names—not, to be sure, all shape-descriptive. The more numerous and elegant epithets have been coined from Greek or Latin roots, but such caconyms as snoutene, barrelene, and screwene are also noted. This is nomen-clatter. One morphodelotic name appearing too late to be included is *garudane,*



recalling Garuda, the mythical Hindu demigod, part man, part bird, who had such wings (G. Mehta and S. Padma, *J. Am. Chem. Soc.* **109**, 7230–32 [1987]).

The book is extremely well printed and illustrated; the multitudinous structural formulas are beautifully done, misprints are uncommon, and the nomenclature of building blocks for complex structures is (almost) irreproachable.

O. C. DERMER
Department of Chemistry, Oklahoma State University, Stillwater, OK 74078

Crustal Extension

Continental Extensional Tectonics. M. P. COWARD, J. F. DEWEY, and P. L. HANCOCK, Eds. Published for the Geological Society by Blackwell Scientific, Palo Alto, CA, 1987. xii, 637 pp., illus. $115. Geological Society Special Publication, vol. 28. From a conference, Durham, U.K., April 1985.

This volume, like the conference on which it is based, is dedicated to Bert Quennell, who was active in studies of extensional tectonic regions of Africa. The book summarizes a decade of data from field, geophysical, seismological, and experimental studies demonstrating the presence of listric and detachment faults, rotated blocks, and other features in extensional terrains.

The papers, which present many conflicting viewpoints, show an excellent mixture of approaches. The general papers review fault geometry and associated processes and experimental studies. The regional papers include 16 on the Basin and Range Province and the Pacific Margin, 8 on the Northwest European continental shelf, 3 on the Middle East, and 2 on thrust belts.

I was especially interested in the paper by J. A. Jackson on the geometry and rheology of active normal faults and crustal extension and the paper by A. Gibbs on the development of extension and mixed-mode sedimentary basins, with its potential for applications in seismic geology and fault segmentation. The other papers in this first group are also useful for understanding the regional papers that follow. Two papers furnish visual models: "Physical models of extensional tectonics at various scales," by B. Vendeville *et al.*, and "Analogue models of extensional fault geometries," by K. R. McClay and P. G. Ellis.

Four papers on the Basin and Range Province, the region with which I am most familiar, are outstanding, state-of-the-art tectonic reviews by leading investigators (W. Hamilton; P. J. Coney; L. J. Sonder *et al.*; and B. P. Wernicke *et al.*). Another 12 papers provide a variety of methods for evaluating the character of this area. They include an up-to-date study of tectonic heredity and deep seismic reflection data from the layered lower crust (R. W. Allmendinger *et al.*), a shear-zone model for structural evolution of metamorphic core complexes in Arizona (G. H. Davis), a case study of ductile strain and metamorphism in the Snake Range, with fabric analyses and geochronology (J. Lee *et al.*), and studies of low-angle and imbricated faulting and mid-crustal faulting in the Colorado River area (K. A. Howard; B. E. John). Some other topics covered in this section are rupture characteristics of the Wasatch fault zone, including segmentation (R. L. Bruhn *et al.*), the origin of broad-scale topography in the southern Rocky Mountains (G. P. Eaton), and kinematics of strain rates based on seismologic, geodetic, and geologic data for the Basin and Range extension (P. K. Eddington *et al.*). Footwall structural evolution in the Tucki Mountain detachment system in Death Valley is discussed by K. V. Hodges *et al.*, and continental extension in other regions is reviewed in papers by B. Thompson *et al.* (Canada), S. W. Garrett and B. C. Storey (Antarctica), and I. W. D. Dalziel *et al.* (Gondwandaland).

Tectonic analysis of the Northwest European continental shelf has great economic, as well as scientific, application, and the papers on this region form a good nucleus for further evaluations and studies. They also show some of the relationships among analyses based on seismic reflection, fault rupture pattern, timing and style of deformation, thermal, mechanical, and tectonic development, and kinematics.

Although the last five papers deal with areas that are scattered throughout the Middle East and in thrust belts, they contain key and well-described examples from the very active and youthful Suez rift (P. Y. Chenet *et al.*) and the Sinai triple junction (V. Courtillot *et al.*). A. M. C. Sengor discusses accommodation cross-faults, using excellent block diagrams, and gives examples of stretching in hanging walls of low-angle normal faults in Turkey. Two papers deal with extensional relations in thrust belts: J. K. Leggett *et al.* for the Honshu fore-arc, and L. H. Royden and B. C. Burchfiel for thin-skinned extension within a convergent Himalayan region.

In summary, this is a major reference that should be readily accessible to most geologists, and especially to researchers working in extensional terrains.

DAVID B. SLEMMONS
Center for Neotectonic Studies, Mackay School of Mines, University of Nevada, Reno, NV 89557-0047

A Model Microorganism

Phycomyces. ENRIQUE CERDÁ-OLMEDO and EDWARD D. LEPSON, Eds. Cold Spring Harbor Laboratory, Cold Spring Harbor, NY, 1987. xvi, 430 pp., illus. $88.

This book is dedicated to Max Delbrück, whose energy, insight, and hard work with his many students and collaborators turned *Phycomyces* into a model system for sensory biology. In his delightfully human portrayal of Delbrück in the dedication, Walter Shropshire points out that Delbrück was mistaken in his belief that this "simple" fungus could be used to provide a rapid solution to fundamental problems of sensory physiology and range adjustment. The succeeding chapters document well the complexity of the problem, which is highlighted by the plea of Cerdá-Olmedo and Lipson in chapter 1: "To avoid complications, further research should be concentrated on strain NRRL 1555." It is equally clear from the wealth of information presented that considerable progress has been made by a relatively small number of scientists. A complete bibliography through April 1985 occupies 38 pages at the end of the book—impressive, but surely small next to those of other model microorganisms, *Escherichia, Saccharomyces*, or *Neurospora.*

The stated purpose of the book is to provide access to *Phycomyces* to students and nonspecialists, in such a way that the individual chapters as well as the book can stand alone. The inclusion of appendixes giving readable descriptions of procedures of investigation, not the terse, highly referenced descriptions usual in research papers, is an imaginative device that offsets the arcane references in the detailed, research-oriented chapters. Each chapter begins with an outline that comprises the headings and subheadings used within, each has a useful introduction to guide the nonspecialist, and most have good summaries of the main

conclusions. Those chapters that lack summaries clearly suffer. After reading the chapter on the cell wall, for example, I am left wondering whether these studies have really made or will make any contribution to the understanding of phototropism. Although the discussions in the chapters on photophysiology, other sensory responses, and differentiation and cytology may also be difficult for the nonspecialist, the well-written introductions and conclusions of these chapters enable the reader to proceed through the details with some understanding of the contribution these studies make.

The book provides a thorough coverage of what is known of *Phycomyces*. It opens with a historical review of how the study of this fungus developed, followed by an introductory chapter on its life cycle, development, and taxonomy. The succeeding ten chapters provide a wealth of detail on the genetics, cytology, biochemistry, growth and development, and, most important, the photobiology of this wonderful fungus. The chapters on photobiology provide a clear understanding of what is known about the blue light receptor, or receptors, of *Phycomyces* and their regulatory functions. These studies have not yielded the simple solutions for which Delbrück hoped, but the applicability of this system to the phenomenon of blue light perception and to the regulation of biological activity that is common to the five kingdoms is abundantly evident.

This is clearly a book that should be on the shelf of every mycologist and photobiologist, and it contains much of interest to other scientists as well. The editors and authors have succeeded well in honoring Delbrück and his outstanding contributions.

DAVID H. GRIFFIN
Department of Environmental and Forest Biology, College of Environmental Science and Forestry, Syracuse, NY 13210

Books Received

Advances in Cancer Control. The War on Cancer—15 Years of Progress. Paul F. Engstrom, Lee E. Mortenson, and Paul N. Anderson, Eds. Liss, New York, 1987. xviii, 325 pp., illus. $65. Progress in Clinical and Biological Research, vol. 248. From a meeting, Washington, DC, April 1986.

The Animal Estate. The English and Other Creatures in the Victorian Age. Harriet Ritvo. Harvard University Press, Cambridge, MA, 1987. xii, 347 pp., illus. $25.

The Antarctic Treaty Regime. Law, Environment and Resources. Gillian D. Triggs, Ed. Cambridge University Press, New York, 1987. xxii, 239 pp., illus. $54.50. Studies in Polar Research. From a conference, London, April 1985.

Atomic and Quantum Physics. An Introduction to the Fundamentals of Experiment and Theory. H. Haken and H. C. Wolf. 2nd ed. Springer-Verlag, New York, 1987. xvi, 454 pp., illus. Paper, $39. Translated from the German edition (Berlin, 1983) by W. D. Brewer.

Bacterial Protein Toxins. P. Falmagne *et al.*, Eds. Fischer, Stuttgart, 1986 (U.S. distributor, VCH, New York). x, 398 pp., illus. $83.75. Zentralblatt für Bakteriologie, Mikrobiologie und Hygiene, vol. 1, suppl. 15. From a workshop, Wépion, Belgium, June–July 1985.

Bioenergetics. Structure and Function of Energy Transducing Systems. Takayuki Ozawa and Sergio Papa, Eds. Japan Scientific Societies Press, Tokyo, and Springer-Verlag, New York, 1987. xii, 325 pp., illus. $80.60. Based on a symposium, Nagoya, Japan, May 1986.

Cancer Cells 5. Papillomaviruses. Bettie M. Steinberg, Janet L. Brandsma, and Lorne B. Taichman, Eds. Cold Spring Harbor Laboratory, Cold Spring Harbor, NY, 1987. xxviii, 423 pp., illus. Paper, $80.

Cancer Risks and Incidence Trends. The Connecticut Perspective. George C. Roush *et al.* Hemisphere (Harper and Row), New York, 1987. xvi, 583 pp., illus. 110.

DNA-Ligand Interactions. From Drugs to Proteins. Wilhelm Guschlbauer and Wolfram Saenger, Eds. Plenum, New York, 1987. x, 290 pp., illus. $55. NATO Advanced Science Institutes Series A, vol. 137. From a course, Abbey of Fontevraud, France, Aug.–Sept. 1986.

The Earth's Core. J. A. Jacobs. 2nd ed. Academic Press, Orlando, FL, 1987. x, 416 pp., illus. $65. International Geophysics Series, vol. 37.

The Effects of Low Temperatures on Biological Systems. B. W. W. Grout and G. J. Morris, Eds. Arnold, Baltimore, MD, 1987. x, 500 pp., illus. $89.50.

From Sagebrush to Sage. The Making of a Natural Resource Economist. Marion Clawson. Ana, Washington, DC, 1987. xvi, 476 pp. Paper, $20.

Gender and Stress. Rosalind C. Barnett, Lois Biener, and Grace K. Baruch, Eds. Free Press (Macmillan), New York, 1987. xii, 386 pp., illus. $29.95.

Human Lactation 3. The Effects of Human Milk on the Recipient Infant. Armond S. Goldman, Stephanie A. Atkinson, and Lars Å. Hanson, Eds. Plenum, New York, 1987. xii, 400 pp., illus. $75. From a conference, Konstanz, F.R.G., Sept. 1986.

Immunological Approaches to the Diagnosis and Therapy of Breast Cancer. Roberto L. Ceriani, Ed. Plenum, New York, 1987. x, 272 pp., illus. $55. From a workshop, San Francisco, CA, Nov. 1986.

Immunology of the Ear. Joel M. Bernstein and Pearay L. Ogra, Eds. Raven, New York, 1987. xx, 515 pp., illus. $89.50.

Instabilities in Luminous Early Type Stars. Henny J. G. L. M. Lamers and Camiel W. H. de Loore, Eds. Reidel, Dordrecht, 1987. xvi, 290 pp., illus. $69. Astrophysics and Space Science Library, vol. 136. From a workshop, Lunteren, the Netherlands, April 1986.

Multinuclear NMR. Joan Mason, Ed. Plenum, New York, 1987. xx, 639 pp., illus. $115.

NATO's Maritime Flanks. Problems and Prospects. H. F. Zeiner-Gundersen *et al.* Pergamon-Brassey's, McLean, VA, 1987. xii, 125 pp., Paper, $9.95. Institute for Foreign Policy Analysis, Inc., Special Report. The Atlantic Alliance and Western Security, vol. 3.

A Naturalist Buys an Old Farm. Edwin Way Teale. Dodd, Meade, New York, 1987. 250 pp., illus. $17.95; paper, $9.95. The Edwin Way Teale Library of Nature Classics. Reprint, 1974 edition.

The New Dimensions of Warfarin Prophylaxis. Standford Wessler, Carl G. Becker, and Yale Nemerson, Eds. Plenum, New York, 1987. x, 329 pp., illus. $57.50. Advances in Experimental Medicine and Biology, vol. 214. From a symposium, New York, Oct. 1986.

Observation of the Continental Crust through Drilling II. H.-J. Behr, F. G. Stehli, and H. Vidal, Eds. Springer-Verlag, New York, 1987. x, 229 pp., illus. $46.50. Exploration of the Deep Continental Crust. From a symposium, Seeheim, F.R.G., Oct. 1985.

Planetary Landscapes. Ronald Greeley. 2nd ed. Allen and Unwin, Winchester, MA, 1987. x, 275 pp., illus. Paper, $24.95.

Platelet-Activating Factor and Related Lipid Mediators. Fred Snyder, Ed. Plenum, New York, 1987. xxii, 471 pp., illus. $79.50

The River That Flows Uphill. A Journey from the Big Bang to the Big Brain. William H. Calvin. Sierra Club Books, San Francisco, CA, 1987. xvi, 528 pp., illus. Paper, $12.95.

Robot Dynamics Algorithms. Roy Featherstone. Kluwer. Norwell, MA, 1987. x, 211 pp., illus. $42.50. Kluwer International Series in Engineering and Computer Science, 22.

Social Information Processing and Survey Methodology. Hans-J. Hippler, Norbert Schwarz, and Seymour Sudman, Eds. Springer-Verlag, New York, 1987. 223 pp., illus. Paper, $34.50. Recent Research in Psychology. Based on a conference, Mannheim, F.R.G., July 1984.