

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) impeccable.

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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 segmen-

tation. 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. Edgington *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.* (Gondwanaland).

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.

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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