

Air-Breathing Fishes: Evolution, Diversity, and Adaptation most certainly qualifies as a comprehensive, authoritative source that will be required reading for fish biologists and for biologists studying tropical aquatic ecosystems. More than this, however, Graham successfully convinces the reader that air-breathing fishes provide a powerful case study with broad implications for evolutionary biologists. Utilizing an abundance of physiological, morphological, behavioral, and biochemical clues, Graham pieces together patterns of physicochemical and biological selection pressures that underlie the evolution of air-breathing. Through a similar approach with other taxa evolutionary biologists can gain additional insight into vertebrate evolution. Thus, this book should prove useful to biologists with little or no previous knowledge of air-breathing fishes. A special strength of the book derives from Graham's years of field observations in Latin America, which enable him to use natural historical and behavioral data to color the morphological and physiological tapestry he weaves.

Graham's book is easily the most comprehensive treatment of its kind, rich in detail with abundant tabulated data and illustrations. Yet it remains refreshingly readable, entertaining and occasionally even amusing. I appreciate the rare book in this genre that leaves the reader with the impression of actually having had a conversation with an informed, enthusiastic teacher. Indeed, by the end of this book we know the names not only of Graham's fishes, but also of his mentors, his scientific heroes, his field assistants, and even his wife! Whether you are in serious pursuit of a detailed understanding of air-breathing fishes or merely curious to know a little more of the biology

behind the quiet air gulps made by that unusual aquarium fish, Graham's book is sure to please.

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Other Books Received

The American Bird Conservancy's Field Guide to All the Birds of North America. Jack L. Griggs. HarperPerennial, New York, 1997. Unpagged, illus. Paper, \$19.95 or C\$28.50. ISBN 0-06-273028-2.

Anesthesia and Analgesia in Laboratory Animals. Dennis F. Kohn *et al.*, Eds. Academic Press, San Diego, 1997. xviii, 426 pp., illus. \$99.95. ISBN 0-12417570-8. American College of Laboratory Animal Medicine.

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Atlas of Venus. Peter Cattermole and Patrick Moore. Cambridge University Press, New York, 1997. xvi, 143 pp., illus. \$29.95. ISBN 0-521-49652-7.

Averting Extinction. Reconstructing Endangered Species Recovery. Tim W. Clark. Yale University Press, New Haven, CT, 1997. xii, 270 pp., illus. \$30. ISBN 0-300-06847-6.

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Encounters in Nonlinear Optics. Selected Papers of Nicolaas Bloembergen (with commentary). Nicolaas Bloembergen, Ed. World Scientific, River Edge, NJ, 1997. xvi, 622 pp., illus. \$86. ISBN 981-02-2549-0. World Scientific Series in 20th Century Physics, vol. 16.

The Ethics of Human Gene Therapy. LeRoy Walters and Julie Gage Palmer. Oxford University Press, New York, 1997. xviii, 209 pp., illus. \$29.95. ISBN 0-19-505955-7.

The Ethics of Scientific Research. A Guidebook for Course Development. Judy E. Stern and Deni Elliot. Published for the Institute for the Study of Applied and Professional Ethics at Dartmouth College by the University Press of New England, Hanover, NH, 1997. x, 116 pp. Paper, \$15. ISBN 0-87451-798-2.

Evolutionary Social Psychology. Jeffrey A. Simpson and Douglas T. Kenrick, Eds. Erlbaum, Mahwah, NJ, 1997. xii, 424 pp., illus. \$79.95. ISBN 0-8058-1905-3; paper, \$39.95. ISBN 0-8058-2420-0.

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Handbook of Carcinogenic Potency and Genotoxicity Databases. Lois Swirsky Gold and Errol Zeiger, Eds. CRC Press, Boca Raton, FL, 1997. xiv, 754 pp. \$99.95. ISBN 0-8493-2684-2.

A History of Transplantation Immunology. Leslie Brent. Academic Press, San Diego, 1997. xxii, 482 pp., illus. \$35. ISBN 0-12-131770-6.

How To Report Statistics in Medicine. Annotated Guidelines for Authors, Editors, and Reviewers. Thomas A. Lang and Michelle Secic. American College of Physicians, Philadelphia, 1997. xxvi, 367 pp., illus. Paper, \$39.95. ISBN 0-943126-44-4. Medical Writing and Communication.

Mathematical Methods for Neural Network Analysis and Design. Richard M. Golden. Bradford (MIT Press), Cambridge, MA, 1997. xvi, 419 pp., illus. \$65. ISBN 0-262-07174-6.

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Oxidative Stress and the Molecular Biology of Antioxidant Defenses. John G. Scandalios, Ed. Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY, 1997. xiv, 890 pp., illus. \$150. ISBN 0-87969-502-1. Monograph 34.

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Psychology of Russia. Past Present Future. Elena L. Grigorenko, Patricia Ruzgis, and Robert J. Sternberg. Nova, Commack, NY, 1997. iv, 457 pp. \$59. ISBN 1-56072-389-0.

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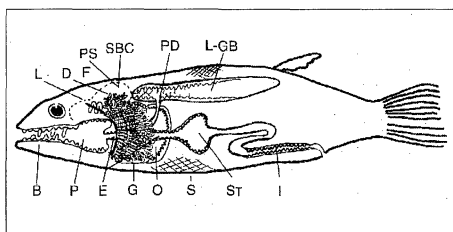
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Yeast Stress Responses. Stefan Hohmann and Willem H. Mager, Eds. Chapman and Hall, New York, and Landes, Austin, TX, 1997. xii, 252 pp., illus. \$89.95. ISBN 0-412-13251-6. Molecular Biology Intelligence Unit.



"Generalized air-breathing fish '*Aerosperichthys*' illustrating the [air-breathing organs] presently known, including: Modified epithelial surfaces in the buccal (B), pharyngeal (P), esophageal (E), and opercular (O) chambers, as well as the gills (G), skin (S), stomach (ST), and intestine (I). Modified spaces include, the suprabranchial chamber (SBC), or pharyngeal sacs (PS). Modified chambers include the pneumatic duct (PD), and the lung or respiratory gas bladder (L-GB). Projections into these spaces include the labyrinth (L), dendrites (D), and gill fans (F)." [From *Air-Breathing Fishes*]