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Book Review

Molecular Zoology: Advances, Strategies, and Protocols. Edited by J. D. Ferraris and S. R. Palumbi, Wiley-Liss, New York, 1996. 580 pp.+xxx. ISBN 0 471 14461 4. £34.95 (\$45.00 flexicover, \$89.95 hardcover).

This book forms the proceedings of a symposium held at the annual meeting of the American Society of Zoologists (now the Society for Integrative and Comparative Biology) in St Louis, Missouri, in January 1995. There are 24 chapters arranged in four parts: (I) systematics, phylogeny, and databases; (II) population structure and molecular markers; (III) classic problems in the evolution of growth and development; and (IV) evolution in variable environments and physiological adaptation. Detailed protocols are grouped into a separate section at the end of the book. The goal was to "bring together the perspectives of zoologists in a number of different fields and show how molecular tools are helping them expand the frontiers of knowledge." Thus, the result is a symposium volume (not a textbook) which contains, as most such volumes do, a diversity of seemingly unrelated topics. However, this book goes beyond that and contains some excellent reference material. For example, there is a chapter on biological databases that provides a nice introduction to the internet, world wide web, and how databases are stored and accessed for those not yet initiated. Most of the chapters emphasize methodology to a greater degree than is normally encountered in journal articles. In addition, the separate section on protocols clarifies and extends methods discussed in the individual chapters, and includes procedures for cloning and cell preparation, DNA preparation and manipulation, gel electrophoresis, hybridization, molecular characterization of macromolecules, polymerase chain reaction, expression and transfection, and sequencing. Within each of those broader categories is a variety of laboratory methods, including such popular ones (for systematics) as RAPD analysis, DNA fingerprinting, microsatellites, and DNA sequencing. For this reason alone, many biologists using molecular techniques in their research will find this to be a handy reference source.

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