

## REVIEWS

R. DESALLE, G. GIRIBET & W. WHEELER (eds.): **Techniques in Molecular Systematics and Evolution**. Birkhäuser Verlag, Berlin, 2002. 420 pp., illus. ISBN 3-7643-6257-X (softcover). Price: EUR 72.90.

This practitioner's manual is the complement to the recently published volume 'Molecular Systematics and Evolution: Theory and Practice' and focuses on recently developed techniques for data acquisition and analysis in molecular systematics and evolutionary biology. The first section examines analytical methods in chapters dealing with DNA sequence alignment optimisations, techniques for analysing large data sets as implemented in the program TNT, measures of support and data partitions. Approaches that will develop further in the next few years are also covered and the reader is subsequently exposed to chapters on genome databases and comparative phylogenomics.

The second section is dedicated to obtaining and archiving specimens for molecular work and laboratory methods. Future developments are again included by chapters on high-throughput DNA sequencing and in situ hybridisation techniques. Due to the detailed protocols on DNA isolations of plants, algae, animals and bacteria from both fresh, silica-dried and ancient museum material, various PCR methods, microsatellite analysis and information on web-located sites, both systematists and evolutionary biologists can find a lot of information in this manual about modern molecular data collection techniques. In addition, molecular biologists might get ideas on how their data can be analysed in an evolutionary context.

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R.J. HENRY (ed.): **Plant genotyping. The DNA fingerprinting of plants**. CABI publishing, Wallingford, UK, 2001. xiii + 325 pp., illus. ISBN 0-85199-515-2. Price: GBP 55, USD 100.

Plant genotyping has become an indispensable technology for plant breeders in the last two decades. DNA fingerprinting techniques can assist breeders in a multitude of ways, for instance in their commercial activities (e.g. quality control and breeders' rights and patents), practical aspects of selection and breeding, and in population genetic research.

'Plant genotyping. The DNA fingerprinting of plants' discusses the DNA fingerprinting techniques available and their applications in plant breeding. As many as 38 authors contributed to this book. This large number of authors enabled the editor to combine the expertise of many scientists in the field of plant breeding. Unfortunately, this also resulted in chapters that are frequently overlapping in contents: the discussion of the relative merits of DNA fingerprinting techniques, for example, is repeated in many of the chapters. In my opinion, this book gives a decent overview of the current state of affairs in the application of molecular tools in the genotyping of commercially important plant species. It would be more complete, however, if more attention would have been given to the statistical analysis of data derived from genotyping studies, and if the most important molecular techniques would have been explained and illustrated in more detail.

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