Molecular Tools for Screening Biodiversity. Edited by A. Karp, P. G. Isaac and D. S. Ingram. London: Chapman & Hall (Kluwer). 1998. 498pp. ISBN 0 412638 30 4. £75 (hardback).

Biological diversity has been the subject of considerable political attention in recent years. The 1992 Earth Summit in Rio firmly placed the conservation of biological diversity onto the world's political agenda and incorporated the conservation of biodiversity into national and international legislative policy. Running parallel to these political developments (and in later years undoubtedly helped by them) have been developments in the methodologies for describing biodiversity. In particular, molecular genetic technologies now allow the application of high resolution assays to a range of taxonomic groups, addressing issues from the parentage of individuals to the relationships among the deepest branches of life. Coupled with advances in theoretical and practical aspects of data analysis, the tool kit of the natural historian has expanded considerably.

Molecular Tools for Screening Biodiversity is essentially a practical guide to the various molecular components of this tool kit. The book is split into five sections. The first section deals with methods of DNA extraction, and covers protocols for both amenable and recalcitrant species, as well as advice for field collection and storage of tissue. The second section describes the various methods of screening for genetic polymorphism, including approaches suitable for both population genetic and phylogenetic studies. This is followed by a section providing information on how to obtain or develop the primers and probes that might be needed to do this. The fourth section covers methods of data analysis, again encompassing approaches applicable to both intra- and interspecific studies. The final section is a collection of case studies that provide practical examples of applications of the approaches described previously.

There is a remarkable amount of information packed into the 500 pages of the book. Technical problems are covered in detail and there are many useful hints for improving efficiency and resolution of assays. Botanists in particular will be pleased with this book, which gives considerable attention to plants. Unlike some general texts in this field, this is not a book about animals with occasional reference to plants. The underlying differences in the evolution and the characteristics of plant and animal genomes are recognized, and specific chapters dealing with problems peculiar to either kingdom are given where necessary. In addition, it should be stressed that the book is not just a laboratory guide listing experimental protocols. There are comparisons between the different techniques and discussions on their relative values, not just in terms of cost efficiency, but also in terms of technical difficulties, data quality and health and safety issues. Over all, it represents a detailed and highly useful compilation of information.

That said, there are some limitations to the book. As an inevitable consequence of having 103 authors contribute over 80 chapters, the book has a somewhat staccato feel to it. Some of the chapters are only 3–4 pages long, and there is a noticeable

flux of styles. Although the chapters are cross referenced, a few strategically placed summary chapters would have given the book a more cohesive feel and helped the uninitiated in choosing an appropriate technique and method of analysis.

Perhaps a more serious limitation of the book is its high price of £75. Texts covering similar ground such as *Molecular Systematics* (Hillis *et al.*, 1996, 655 pages) and *Molecular Genetic Analysis of Populations* (Hoelzel, 1998, 445 pages) are available as paperbacks at £37.95 and £29.95. For £75, both of these texts could be bought and one could still have change left for a couple of bottles of wine. This is a shame, as it stacks the odds against well thumbed copies of *Molecular Tools for the Screening of Biodiversity* residing on postgraduate students' shelves.

Despite the pricing obstacle to this book's broader success I am sure it will be widely consulted as a laboratory or library copy. It is a very useful text for researchers interested in the application of molecular techniques to study relationships among organisms and genes, and the editors and authors are to be congratulated for the production of a valuable contribution to the field.

References

HILLIS, D. M., MORITZ, C. & MABLE, B. K. (1996). *Molecular Systematics.* 2nd edition. Sunderland, Massachusetts: Sinauer.

HOELZEL, A. R. (1998). *Molecular Genetic Analysis of Populations: a practical approach.* 2nd edition. Oxford: IRL.

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The Genus *Cypripedium*. Phillip J. Cribb. Portland, Oregon: Timber Press/Royal Botanic Gardens Kew. 1997. 301pp. ISBN 0 88192 403 2. US $39.95, UK £29.99 (hardback).

This compact, well-produced book is Phillip Cribb's second contribution (following *Paphiopedilum*: Cribb, 1987) to the monography of the relatively primitive (two-anthered, synsepalic) and wonderfully exotic slipper-orchids. It also offers a strong iconographic element, incorporating 26 full colour plates of watercolours by no less than 12 artists (lending the volume a vaguely competitive air) and 97 photographs, most of excellent quality but suboptimally organized within each of the 27 composite plates. The bulk of the text consists of thorough, formal morphological descriptions linked to less formal discursive passages that bear the stamp of the author's personality; they cover all 45 known species of *Cypripedium* plus four natural hybrids. Each is illustrated by a full-page composite line-drawing and a distribution map, plus appended details of materials consulted.

The second-largest section (sublet to Holger Perner) covers Cultivation and Hybridisation with sufficient detail and enthusiasm to further encourage horticul-