REVIEW

R.J. HENRY (ed.): **Plant Diversity and Evolution – Genotypic and Phenotypic Variation in Higher Plants.** Cabi Publishing, Cambridge MA, USA, 2005. 352 pp., illus. ISBN 0-85199-904-2. Price: GBP 65.

This book reviews recent advances in studies on plant evolution by bringing together new insights in relationships between plant genomes and associated phenotypes. The phylogeny of flowering plants and the latest classifications of angiosperms and gymnosperms are presented and elaborately discussed by Mark Chase and Ken Hill in Chapter two and three, respectively. These chapters are clearly written and provide a good base for lectures for botany students and introductions to new editions of local Floras based on these classifications. New insights in evolution of chloroplast and mitochondrial genomes in higher plants are presented in Chapter four and five. The complications of reticulate evolution and polyploidy for the interpretation of plant phylogenies are discussed in Chapter six and seven. Chapter eight and nine deal with variation in the Brassicaceae and plant populations, respectively. Chapter ten focuses on the evolution of flower development. Douglas Soltis and co-authors give an elaborate overview of the latest insights in the evolution of perianth differentiation, models of floral developmental genes and critically review the use of gene expression data for homology assessments of floral organs. For readers who want to stay updated with this rapidly evolving new field of research, I can recommend this chapter as it provides good background reading. The remaining chapters of the book deal with the cell wall and secondary metabolism (presented as two key factors of plants), ecological significance of plant diversity, the impact of plant domestication and the importance of conservation of plant diversity.

The multiple authors of the above-mentioned chapters managed to give an animated overview of the latest developments in the study of plant evolution and I think that both beginning botanists and more professional readers will find useful new information in this book.

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