

Contents

Preface	9
Are Monocots Particularly Suited to Develop Mycoheterotrophy?	
<i>Stephan Imhof</i>	11
Mycoheterotrophy and Diversity in Orchidaceae	
<i>John V. Freudenstein and Craig F. Barrett</i>	25
Cretaceous Origins of Myco-Heterotrophic Lineages in Dioscoreales	
<i>Vincent Merckx, Suzy Huysmans, and Erik Smets</i>	39
Phylogeny, Systematics, and Recircumscription of Juncaginaceae – A Cosmopolitan Wetland Family	
<i>Sabine von Mering and Joachim W. Kadereit</i>	55
Floral Vascularity in <i>Tofieldia</i> (Tofieldiaceae) is Correlated with Floral Morphology and Development	
<i>Margarita V. Remizowa, Dmitry D. Sokoloff,</i> <i>Alexander C. Timonin, and Paula J. Rudall</i>	81
Recent Advances Towards an Evolutionary Comprehension of Araceae Pollination	
<i>Marc Gibernau, Marion Chartier, and Denis Barabé</i>	101
Molecular and Morphometric Patterns in Araceae from Fragmented Northeast Brazilian Forests	
<i>Ivanilza M. Andrade and Simon J. Mayo</i>	115
An Eocene Aroid Inflorescence from the Appian Way Locality on Vancouver Island	
<i>Ruth A. Stockey, Jennifer L. Gemmell, and Graham Beard</i>	129

Convergence or Reticulation? Mosaic Evolution in the Canalized American Amaryllidaceae	Alan W. Meerow	145
Genomic Responses Drive Adaptation in Allotetraploid Species of <i>Dactylophiza</i> (Orchidaceae; Orchidinae)	Ovidiu Paun, Javier A. Luna, Michael F. Fay, Richard M. Bateman, and Mark W. Chase	169
Inadequate Morphometric Analyses have Contributed to Oversplitting in European Orchids: A Case Study in <i>Dactylophiza</i> (Orchidaceae)	Henrik A.E. Pedersen	193
Gunnar Seidenfaden's Contributions to Orchidology and Conception of Taxonomy	Finn N. Rasmussen	213
Drivers of Diversification in the Vegetable Ivory Palms (Arecaceae: Ceroxyloideae, Phytelphaeae) - Vicariance or Adaptive Shifts in Niche Traits?	Anders S. Barfod, Philipp Trénel, and Finn Borchsenius	225
Divergence Times in the Tribe Geonomateae (Arecaceae) Coincide with Tertiary Geological Events	Julissa Roncal, Finn Borchsenius, Conny B. Asmussen-Lange, and Henrik Balslev	245
Species Delimitation in the Genus <i>Phoenix</i> (Arecaceae) Based on SSR Markers, with Emphasis on the Identity of the Date Palm (<i>Phoenix dactylifera</i>)	Jean-Christophe Pintaud, Salwa Zebdi, Thomas Courvreur, Sasha Barrow, Sally Henderson, Frédérique Aberlenc-Bertossi, James Tregear, and Norbert Billotte	267
Phylogeny and Dating of <i>Aframomum</i> (Zingiberaceae)	Gaëlle Auvray, David J. Harris, James E. Richardson, Mark F. Newman, and Tiina E. Särkinen	287
Phylogenetic Relationships and Species Delimitation in <i>Canna</i> (Cannaceae)	Linda M. Prince	307

Cretaceous and Paleogene Fossil Record of Poales: Review and Current Research <i>Selena Y. Smith, Margaret E. Collinson, Paula J. Rudall, and David A. Simpson</i>	333
Phylogeny and Features in Restionaceae, Centrolepidaceae and Anarthriaceae (Restiid Clade of Poales) <i>Barbara G. Briggs, Adam D. Marchant, and Andrew J. Perkins</i>	357
Phylogenetic Relationships within Juncaceae: Evidence from Five Regions of Plastid, Mitochondrial and Nuclear Ribosomal DNA, with Notes on Morphology <i>Lenka Závěská Drábková</i>	389
Documenting Cyperaceae in Diverse Tropical Countries: The Example of Brazil <i>Marcus Alves, Ana Claudia Araújo, Ana Paula Prata, Fabio Vitta, Sonia Hefler, Rafael Trevisan, André Bragança Gil, Shirley Martins and Wm. Wayt Thomas</i>	417
Arrangement of Reproductive Units in <i>Centrolepis</i> (Poales: Centrolepidaceae): Cincinnus or Spikelet? <i>Dmitry D. Sokoloff, Margarita V. Remizowa, H. Peter Linder, Terry Macfarlane, and Paula J. Rudall</i>	425
Molecular Evolution and Phylogenetics of Complete Chloroplast Genomes in Poaceae <i>Melvin R. Duvall, Charles H. Leseberg, Colin P. Grennan, and Leah M. Morris</i>	437
Diversification of the Grasses (Poaceae): a Phylogenetic Approach to Reveal Macro-Evolutionary Patterns <i>Yanis Bouchenak-Khelladi, Vincent Savolainen, and Trevor R. Hodgkinson</i>	451
Phylogenetics of Muhlenbergiinae (Poaceae: Chloridoideae, Cynodonteae) Based on ITS and <i>trnL-F</i> DNA Sequences <i>J. Travis Columbus, Paul M. Peterson, Nancy F. Refulio Rodríguez, Rosa Cerros Tlatilpa, and Michael S. Kinney</i>	477

Phylogenetics of <i>Dendrocalamus</i> (Poaceae: Bambusoideae, Bambuseae, Bambusinae) and its Related Genera Based on Combined Multi-gene Analyses <i>Sarawood Sungkaew, Chris M.A. Stapleton, and Trevor R. Hodgkinson</i>	497
Phylogenetics of Stipeae (Poaceae: Pooideae) Based on Plastid and Nuclear DNA Sequences <i>Konstantin Romaschenko, Paul M. Peterson, Robert J. Soreng, Núria García-Jacas, and Alfonso Susanna</i>	511
A Review of the Systematics and Phylogenetics of the Koeleriinae (Poaceae: Poae) <i>Alejandro Quintanar, Pilar Catalán, and Santiago Castroviejo</i>	539
Phylogenetics of the Grass 'Aveneae-Type Plastid DNA Clade' (Poaceae: Pooideae, Poae) Based on Plastid and Nuclear Ribosomal DNA Sequence Data <i>Jeffery M. Saarela, Qing Liu, Paul M. Peterson, Robert J. Soreng, and Beata Paszko</i>	557
Phylogeny and Reticulation in Subtribe Poinae and Related Subtribes (Poaceae) Based on nrITS, ETS, and <i>trnTLF</i> data <i>Lynn J. Gillespie, Robert J. Soreng, Michel Paradis, and Roger D. Bull</i>	589
Phylogeny and Reticulation in <i>Poa</i> Based on Plastid <i>trnTLF</i> and nrITS Sequences with Attention to Diploids <i>Robert J. Soreng, Roger D. Bull, and Lynn J. Gillespie</i>	619
Polyploid Speciation and Evolution in Arctic <i>Puccinellia</i> (Poaceae: Puccinelliinae) - A Review <i>Laurie L. Consaul, Lynn J. Gillespie, and Marcia J. Waterway</i>	645
List of Reviewers	663