2 Phylogeny of Magnoliaceae: Combined Data of Ten Chloroplast DNA Regions

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Phylogenetic analyses were carried out for 48 taxa representing all genera and sections in the currently recognized taxonomic scheme of the Magnoliaceae, using sequence data from 10 regions of chloroplast DNA: *ndh*F, *rbc*L, *mat*K, *trn*L intron, *trn*L-F spacer, *trn*K 5′ intron, *trn*K 3′ intron, *rbc*L-*atp*B spacer, *trn*H-*psb*A spacer, and ORF 350. The determined sequences of these regions were about 8.7 kb in total and the highest value of sequence divergence among 10 regions was 7.66%, observed in *trn*H-*psb*A spacer. The cladistic analyses of the combined data generated well-resolved phylogenetic trees with the consistency index of 0.73. Major clades recognized in the previous *ndh*F analysis were more strongly supported in the combined molecular data: 1) *Michelia*/ *Elmerrillia*/*Magnolia* sect. *Maingola*/sect. *Alcimandra*/sect. *Aromadendron*; 2) *Magnolia* subgenus *Yulania*; Magnolia sect. *Manglietiastrum*/sect. *Gynopodium*/*Pachylarnax*; 4) *Kmeria*; 5) *Magnolia* sect. *Gwillimia*/sect. *Lirianthe*/sect. *Blumiana*; 7) *Manglietia*; 8) *Magnolia macrophylla*/*M. dealbata*; 9) *M. fraseri*; 10) *Magnolia* sect. *Rytidospermum*/ sect. *Oyama*; 11) *Magnolia* sect. *Talauma*/sect. *Splendentes*; 12) *Liriodendron*.

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