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**Molecular phylogenetics of the  
*Dasymaschalon-Desmos-Friesodielsia-Monanthotaxis* lineage  
(Annonaceae)**

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The *Dasymaschalon-Desmos-Friesodielsia-Monanthotaxis* lineage (the ‘desmoid clade’) comprises ca. 170 species of trees, shrubs and woody climbers distributed in tropical Africa and tropical Asia. Although the desmoid clade is very diverse in flower and fruit morphology, phylogenetic relationships of the constituent genera are poorly understood due to the limited taxon sampling and insufficient plasmid DNA data in previous studies. Based on plasmid and nuclear DNA sequence data, a multilocus phylogeny was reconstructed to improve the resolution of phylogeny and to test the hypotheses of generic monophyly. Preliminary results indicate problems in the existing delimitations of *Dasymaschalon* and *Friesodielsia*. *Friesodielsia* as currently circumscribed is polyphyletic, with African *Friesodielsia* species nesting within the African genus *Monanthotaxis*, and only distantly related to Asian representatives. Incongruence between plastid and nuclear topologies occur in *Dasymaschalon*: in the plastid tree, the majority of *Dasymaschalon* species form a strongly supported clade, but three species are more closely related to the Asian species of *Friesodielsia*; in the nuclear tree, however, *Dasymaschalon* is monophyletic. This incongruence may suggest reticulate evolution and chloroplast capture due to hybridization events emphasizing the importance of integrating plastid and nuclear DNA sequence data in Annonaceae phylogenetics.