

***Euphorbia* subg. *Euphorbia* sect. *Monadenium* (Pax) Bruyns (Euphorbiaceae) —  
a phylogenetic study based on sequences of the nuclear ribosomal ITS region**

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*Monadenium*, discovered in 1885 in German East Africa by G. A. Fischer, was first described as a genus by F. Pax in 1895. It comprises approximately 70 species and is mainly distributed in eastern Africa. The genus *Manadenium* was monographed by P. R. O. Bally in 1961. Bruyns et. al. (2006) included *Monadenium* (Pax) Bruyns, *Endadenium* (L.C. Leach) and *Synadenium* (Boiss.) in the genus *Euphorbia* L. in order to make the genus monophyletic, and they recognized *Monadenium* (incl. *Synadenium* and *Endadenium*) as one of four sections of the genus *Euphorbia*. Examinations by S. Carter (1987) gave evidence that delimitations of taxa within *Monadenium* were arbitrary in many cases. This discrepancy led us to a molecular phylogenetic investigation, to light up the relationships within the section. We sequenced the nuclear ribosomal ITS (internal transcribed spacer) region of 17 species. The resulting phylogenetic trees, rooted with several species of other sections of *Euphorbia* as outgroup, were discussed with respect to the evolution of morphological characters. Preliminary results suggest, that the different growth forms (non- succulents or succulents) are not reflected by the phylogeny.

BALLY, P.R.O. (1961): The Genus *Monadenium*. Benteli Publishers, Berne. 1961

BRUYNS, P.V. (2006): A new subgeneric classification for *Euphorbia* (Euphorbiaceae) in southern Africa based on ITS and *psbA-trnH* sequence data. *Taxon*: 55(2):397—420.

CARTER, S. (1987): New taxa and observations in *Monadenium* (Euphorbiaceae) in East Africa, *Kew Bulletin* 42(4): 903-918.