



Towards a stable generic circumscription in Oxypetalinae (Apocynaceae)

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Abstract

Based on phylogenetic studies and morphological evidence, we propose the synonymization of *Morrenia* and *Schistogyne* under *Araujia* and *Oxypetalum* respectively. As a result, eight new combinations are proposed in *Araujia* (*A. brachystephana*, *A. hassleriana*, *A. herzogii*, *A. odorata*, *A. scalae*, *A. stuckertiana*, *A. stuckertiana* subsp. *grandiflora* and *A. variegata*), and eight in *Oxypetalum*, including two new names (*O. fiebrigii*, *O. heptalobum*, *O. karstenianum*, *O. longipedunculatum*, *O. pentaseta*, *O. pubescens*, *O. sylvestre* and *O. tucumanense*). We provide new synonymies and designate lectotypes for *Lagenia megapotamica*, *Morrenia hassleriana*, *M. herzogii*, *M. intermedia*, *Schistogyne boliviensis*, *S. longipedunculata* and *S. sylvestris*. We also clarify the typification of *Tweedia*.

Key words: *Araujia*, classification, *Morrenia*, *Oxypetalum*, *Schistogyne*, *Tweedia*

Introduction

The systematics of Asclepiadoideae (Apocynaceae) has received a great boost from molecular phylogenetics. Relationships in the subfamily are much better understood than ten years ago, and numerous taxonomic changes have been proposed to reflect these advances. Neotropical species of Asclepiadoideae are distributed in just four lineages, the largest including members of the Metastelmatinae, Oxypetalinae and Gonolobinae. Together, these three subtribes form the core group of a clade informally referred as the “MOG” clade (Rapini *et al.* 2003, Liede-Schumann *et al.* 2005).

The plastid phylogenetic framework presented for the neotropical Asclepiadoideae by Rapini *et al.* (2003) and Liede-Schumann *et al.* (2005) provided important evidence to support significant subtribal rearrangements. The Metastelmatinae became restricted to the New World, also including genera previously classified in the Marsdenieae, such as *Barjonia* Decaisne (1844: 512) and *Nephradenia* Decaisne (1844: 604); whereas most Old World species of the subtribe were transferred to the Cynanchinae (Liede & Täuber 2002, Rapini *et al.* 2003). Reducing the Gonolobae to the rank of subtribe (Liede 1997) improved the classification as the Gonolobinae are nested within the New World Asclepiadeae (Rapini *et al.* 2003). The Oxypetalinae were amplified to include a few genera previously considered in the Metastelmatinae, such as *Philibertia* Kunth in Humboldt & Bonpland (1819: 195) and *Funastrum* Fournier (1882: 388) (Rapini *et al.* 2003, 2006). And finally, the Orthosiinae were created based on the previous Orthosieae, but excluding *Peplonia* Decaisne (1844: 545) and *Macroditassa* Malme (1927: 9), which were shown to belong to the Metastelmatinae (Rapini *et al.* 2004, Liede-Schumann *et al.* 2005).

Internal resolution varies among the three largest subtribes of the MOG core group. In Metastelmatinae, phylogenetic studies supported the fusion of *Gonioanthela* Malme (1927: 6) and the monotypic *Peplonia*