



## A revised generic classification for *Aloe* (Xanthorrhoeaceae subfam. Asphodeloideae)

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### Abstract

The predominantly southern African Xanthorrhoeaceae subfam. Asphodeloideae (Asphodelaceae subfam. Alooideae) has long been regarded as comprising seven so-called alooid genera (*Aloe*, *Astroloba*, *Chortolirion*, *Gasteria*, *Haworthia*, *Lomatophyllum*, *Poellnitzia*). A reassessment of the classification of the traditionally broadly circumscribed genus *Aloe*, a charismatic Old World group of leaf succulents, has necessitated nomenclatural adjustments. We propose a narrower generic concept for *Aloe* s. str. and the recognition of segregate genera to reflect accumulating evidence for monophyletic groups: here, the genus *Kumara* is reinstated and the new genera *Aloidendron* and *Aloiampelos* are established. New combinations are made in *Aloe* for the three species of *Chortolirion*.

### Introduction

The predominantly southern African Xanthorrhoeaceae subfam. Asphodeloideae [following APG III (APG 2009); alternatively Asphodelaceae, following Nyffeler & Eggli (2010)] comprise over 700 species in 15 genera, including the charismatic leaf succulent genus *Aloe* Linnaeus (1753: 319) and related alooid genera. A traditionally broad circumscription of *Aloe* and considerable infrageneric diversity (about 560 species) have been accommodated by traditional classifications at sectional, subsectional and series levels, or as informal infrageneric groups (Berger 1905, 1908, Reynolds 1950, 1966, Carter *et al.* 2011). A reassessment of the classification of *Aloe* (Grace & Rønsted in prep.) supports previous studies that have highlighted the need for taxonomic changes to reflect phylogenetic relationships between the core aloes and sister groups (Adams *et al.* 2000, Treutlein *et al.* 2003a, Klopper *et al.* 2010, Grace & Rønsted 2012).

As the first step towards a revised classification of *Aloe*, we propose a new generic circumscription to address the previous lack of monophyly in the genus and provide a nomenclatural framework for future studies of the biology and evolution of the alooids. Two distinct lineages comprising the tree aloes and