



## Revision of *Orthophytum* (Bromeliaceae): the species with sessile inflorescences

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### Abstract

*Orthophytum* is a bromeliad genus restricted to Brazil with records for the states of Paraíba, Pernambuco, Alagoas, Sergipe, Bahia, Espírito Santo and Minas Gerais. The genus is usually divided in two informal groups based on the presence or absence of a peduncle. This paper presents a taxonomic revision of the 12 species in the group with sessile inflorescences and descriptions of the genus and species, nomenclatural and ecological notes, as well as illustrations are provided. The new species *Orthophytum ulei* is described. The conservation status for each species is evaluated using the World Conservation Union (IUCN) criteria.

**Key words:** Brazil, Bromelioideae, Chapada Diamantina, endangered species, endemism, Espinhaço Range, inselbergs

### Introduction

The Bromeliaceae is the largest Neotropical plant family of monocots. Currently, 58 genera and 3172 species are recognized (Luther 2008), the majority of these occurring in Brazil. Within Brazil, the family ranks second among the monocots with the highest number of endemic genera (16), only after Orchidaceae with 35 genera, (Smith & Downs 1974, 1977, 1979, Forzza 2005, Giulietti *et al.* 2005). The generic boundaries in Bromeliaceae are still not well-defined, particularly within the subfamily Bromelioideae, to which the genus *Orthophytum* Beer (1854: 347) has been assigned (Smith & Downs 1979, Wendt 1997, Canela *et al.* 2003, Faria *et al.* 2004, Schulte *et al.* 2005, Horres *et al.* 2007, Schulte *et al.* 2009).

The genus *Orthophytum* comprises about 55 species that are all endemic to Brazil, distributed from the northeastern to the southeastern regions of the country. Two centres of diversity can be recognized, one in the Espinhaço range in the states of Bahia and Minas Gerais, and the other in the inselberg region in the states of Espírito Santo and Minas Gerais, which is part of the Atlantic rain forest area (Wanderley 1990, Leme 2004a, Louzada & Wanderley 2008, Martinelli *et al.* 2008). *Orthophytum* species grow on rocky outcrops in 'campos rupestres' (rocky fields), the 'caatinga', and on the inselbergs in the Atlantic rain forest area (Leme 2004a, Louzada & Wanderley 2008).

When Beer (1854) described the genus, he did not assign any previously described species to it, nor published any new species. But he did cite one unnamed collection: *Pohl 3436*, today known as *Orthophytum glabrum* (Mez) Mez (1896: 116). Almost four decades later, Mez (1892) described the genus *Prantleia*, including *P. glabra* Mez in Martius (1892: 258, based on *Pohl 3436* and *P. leprosa* Mez in Martius (1892: 259; based on *Pohl 5229* and *Glaziou 14035*). When Mez (1896) realized that *Pohl 3436* had already been applied to *Orthophytum* by Beer (1854), he synonymized his *Prantleia* under that genus (Mez 1896).

Botanic expeditions to Bahia by Ernst Heinrich Georg Ule at the end of 19<sup>th</sup> the century, led to the description of two new genera: *Sincoraea* Ule (1908: 191) and *Cryptanthopsis* Ule (1908: 193), which were