



## *Stelis concava* (Orchidaceae, Pleurothallidinae), a new species from the Brazilian Atlantic Forest

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### Abstract

A new species of *Stelis* from Brazil is described and illustrated. *Stelis concava* is the third species of the *S.* sect. *Humboldtia* known in Brazil and the first described in the Atlantic Forest.

**Key words:** epiphyte, *Stelis maxima*, *Stelis purpurea*, *Stelis* sect. *Humboldtia*, taxonomy

### Resumo

Uma nova espécie de *Stelis* do Brasil é descrita e ilustrada. *Stelis concava* é a terceira espécie de *S.* sect. *Humboldtia* relatada para o Brasil e a primeira descrita para a Floresta Atlântica.

**Palavras-chave:** epífita, *Stelis maxima*, *Stelis purpurea*, *Stelis* sect. *Humboldtia*, taxonomia

### Introduction

*Stelis* Swartz (1799: 239, pl. 2, f. 3) is one of the most taxonomically complex genera of Orchidaceae, widely neglected due to its minute flowers and that are difficult to preserve in conventional dry samples (Garay 1979, Duque 2008), resulting in many unidentified specimens in herbaria worldwide.

Until quite recently, the morphological delimitation of this genus was very consistent, with the flower outline more or less triangular, sepals connate to a greater or lesser degree, forming a synsepal, small petals and lip, both often fleshy, with a short and broad column, apical anther and bilobed stigma with different degrees of divergence (Garay 1979, Luer 1986, 2007, Duque 2008). However, after molecular phylogeny studies indicated the need to transfer several species previously attributed to *Pleurothallis* and allied genera to *Stelis* (Pridgeon *et al.* 2001, Karremans *et al.* 2013), *Stelis s.l.* (according to Pridgeon & Chase 2001) became strongly heterogeneous, and a consistent morphological generic delimitation is no longer possible (see Figure 9 in Karremans *et al.* 2013).

*Stelis sensu stricto* comprises between 640 (Duque 2008) and 900 species (Luer 2007, 2009), distributed predominantly on the moist forests of the Neotropical region, from the southwestern area of Florida, through the Antilles, southeastern Mexico to Bolivia, Venezuela, and French Guiana, reaching the Atlantic Forest in Brazil (Pridgeon *et al.* 2005; Luer 2009). In Brazil, the majority of the c. 48 known species of *Stelis s.s.* are found in the Atlantic Forest of the Southeastern region (Barros *et al.* 2015).

*Stelis* sect. *Humboldtia* (Ruiz & Pavón 1798: 121) Persoon (1807: 524) can be characterized by flowers with lateral sepals completely or nearly completely connate forming a concave synsepal, with the dorsal sepal connate with the lateral sepals only at the base (Luer 1986). The majority of the species of this section have Andean distribution, with some also occur in the Amazon and Central America (Duque 2008). Only two species, *S. maxima* Lindley (1845: 106–107) and *S. purpurea* (Ruiz & Pavón 1798: 235) Willdenow (1805: 140) are found in Brazil, both of them in the Amazon domain.