



## *Staminodianthus*, a new neotropical Genistoid legume genus segregated from *Diptotropis*

DOMINGOS CARDOSO<sup>1\*</sup>, HAROLDO CAVALCANTE DE LIMA<sup>2</sup> & LUCIANO PAGANUCCI DE QUEIROZ<sup>1</sup>

<sup>1</sup>Departamento de Ciências Biológicas, Universidade Estadual de Feira de Santana, Av. Transnordestina, s/n, Novo Horizonte, 44036-900, Feira de Santana, Bahia, Brazil

<sup>2</sup>Instituto de Pesquisas Jardim Botânico do Rio de Janeiro, Rua Pacheco Leão, 915, 22460-030, Rio de Janeiro, Brazil

\*Author for Correspondence: [cardosobot@gmail.com](mailto:cardosobot@gmail.com)

### Abstract

Morphological and molecular phylogenetic evidence strongly demonstrated the paraphyly of the Genistoid legume genus *Diptotropis* with respect to the recently described monospecific *Guianodendron* (a segregate of *Acosmium* sensu lato). In order to achieve a phylogenetically based classification of the group, the new Amazonian genus *Staminodianthus* D.B.O.S. Cardoso, H.C. Lima & L.P. Queiroz is described and illustrated to accommodate three species previously placed in *Diptotropis* sect. *Racemosae*. We present a synopsis for *Staminodianthus*, including geographical distribution, lectotypification, and new species circumscriptions of the following three new combinations: *Staminodianthus duckei* (Yakovlev) D.B.O.S. Cardoso & H.C. Lima, *Staminodianthus racemosus* (Hoehne) D.B.O.S. Cardoso & H.C. Lima, and *Staminodianthus rosae* (H.C. Lima) D.B.O.S. Cardoso & H.C. Lima. *Staminodianthus* differs most notably from its sister genus *Guianodendron* by having bilaterally symmetrical flowers, calyces with a curved hypanthium, a well-differentiated standard petal, lateral and lower petals without auricles, and the androecium with a combination of five fertile stamens and five short staminodes, a unique feature within the Genistoid legumes.

**Key words:** Genistoid clade, lectotypification, Leguminosae, Papilionoideae, phylogeny, Sophoreae, taxonomy

### Introduction

The neotropical genus *Diptotropis* Bentham (1837: 24) (Leguminosae, Papilionoideae) as traditionally circumscribed has about 12 species that occur mainly in tropical rain forests of the Amazon region (Pennington *et al.* 2005, Lima *et al.* 2010), with only two species endemic to the Atlantic Forest in eastern Brazil (Cardoso 2008, Lima *et al.* 2009). *Diptotropis* has been circumscribed by the combination of crimped petals, standard petal with inflexed, fleshy auricles, undifferentiated lateral and lower petals, and overgrown seeds (Polhill 1981). The morphological diversity within *Diptotropis* has long been recognized (e.g., Lima 1985, who established a sectional classification of the genus). In that treatment, the species of *Diptotropis* sect. *Racemosae* Lima (1985: 63), namely *Diptotropis racemosa* (Hoehne) Amshoff (1939: 43) and *D. duckei* Yakovlev (1971: 694), were distinguished from *Diptotropis* sect. *Diptotropis* mainly because of their androecium composed of 5 fertile stamens and 5 short staminodes.

Phylogenetic analyses of plastid *matK* and *trnL* intron data concurred in resolving *Diptotropis* within the quinolizidine-accumulating Genistoid clade, in which the genus appeared in a lineage identified as the Bowdichia clade (Cardoso *et al.* 2012a). This clade was recently subjected to a comprehensive phylogenetic analysis that combined data from morphology and nuclear and plastid DNA sequences (Cardoso *et al.* 2012b). The analysis resolved generic relationships in the group and strongly supported the nesting of the radially-symmetrical-flowered *Guianodendron* Rodrigues & Tozzi (2006: 129) within a paraphyletic bilaterally-