



## Three new endemic species of *Muelleria* (Fabaceae, Papilionoideae) from Brazil

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### Abstract

Based on studies of herbarium collections, and fieldwork in Brazil for a taxonomic revision of the genus *Muelleria*, were discovered three new species which are described and illustrated here: *M. fernandesii*, *M. leptobotrys* and *M. nitens*. In addition, aspects about the morphology and the geographical distribution of these species, as well as their affinities are discussed.

### Resumo

Baseado em estudos de coleções de herbários e trabalho de campo no Brasil para a revisão taxonômica do gênero *Muelleria*, foram descobertas três novas espécies: *M. fernandesii*, *M. leptobotrys* e *M. nitens*, as quais são descritas e ilustradas aqui. Em adição, são discutidos aspectos sobre a morfologia e a distribuição geográfica destas espécies, bem como suas afinidades.

**Key words:** Endemism, Leguminosae, Systematics

### Introduction

*Muelleria* L.f. was described by the son of Linnaeus (1781) based on *M. moniliformis* L.f. and has a problematic taxonomic history. It has been treated as a synonym of *Lonchocarpus* Kunth (Geesink 1981, 1984, Fortunato & Palese 1997, Sousa & Sousa 1981, Tozzi 1989, 1992) or, as we do here, accepted as a separate genus (Burkart 1969, Herman 1965, Polhill 1981, Schrire 2005). The genus belongs to tribe Millettieae (Schrire 2005) and is historically comprised of two species: *Muelleria moniliformis* and *M. fluvialis* (Lindm.) Burkart (1969), see Schrire (2005), or it has been considered to be a monotypic genus (Bentham 1862, Macbride 1943, Pittier 1944).

Motivated by these divergent viewpoints, Silva (2010) conducted molecular phylogenetic studies on *Lonchocarpus sensu lato*, which unveiled its paraphyletism, as well as the recognition of three morphological groups. One of these groups informally called “Laxiflori clade” by Silva (2010), included species of *Lonchocarpus* sect. *Laxiflori* (Benth.) Taub. (e.g. species with pseudoracemes and geminate flowers, but not in a Y-shape), and also *Bergeronia sericea* Micheli (1883: 39) and *Margaritolobium luteum* (Johnston) Harms (1923: 67). Based on results of his work, Silva (2010) proposed to transfer species from the “Laxiflori clade” into the genus *Muelleria*, and revise the taxonomy of that genus.

According to Silva (2010), in its current circumscription, *Muelleria* comprises 26 species, distributed mainly in South America. They can be characterized as a genus distinct from *Lonchocarpus* by their