



Contribution to the Vernonieae (Asteraceae) of the Cerrado: a transfer to *Lessingianthus*, in a new rank and with a new name

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Abstract

Vernonia monocephala subsp. *irwinii* is a member of the genus *Lessingianthus* and is hereby transferred to that genus with a new status and a new name, *L. semirii*. It differs from *L. monocephalus* by its subsessile to petiolate (vs. sessile) leaves, largely attenuate (vs. rounded to attenuate) leaf bases, adaxial leaf surfaces drying black (vs. greenish), tomentose to velutinous (vs. villous) abaxial leaf surface and stem indument, and number of florets per head (up to 120 vs. up to 210). Both species are native to provinces of the Cerrado Domain, but they do not occur sympatrically: *L. semirii* is restricted to the North-eastern floristic province (Bahia, Maranhão, Tocantins and Pará states) and northern portion of the Central-western floristic province (Mato Grosso state), whereas *L. monocephalus* occurs in Distrito Federal and Goiás states in the Central-western, Central and South-eastern floristic provinces. *Lessingianthus semirii* is hereby described and illustrated for the first time; a distribution map is provided and affinities of this species are discussed.

Key words: Brazil, Compositae, savanna, *Vernonia*

Introduction

Lessingianthus Robinson (1988: 939) is one of the largest members of the tribe Vernonieae (Asteraceae) with ca. 135 species distributed in South America, most of them being concentrated in Brazil (Angulo & Dematteis 2014, Robinson 1988, 1999). These species are perennial herbs, subshrubs or shrubs frequently with a thickened underground system (likely a xylopodium) and medium or large-sized heads organized in seriate-cymose capitulescence. The genus comprises species previously placed in *Vernonia* Schreber (1791: 541) sect. *Lepidaploa* (Cassini 1817: 66) Candolle (1836: 26) subsect. *Macrocephalae* Bentham (1873: 229). Its circumscription is based on the unique combination of apical anther appendages without glands, styles without basal node, cubic crystals on the ovary wall, and pollen type B (Robinson 1999, Dematteis 2006, Angulo & Dematteis 2014).

The North-eastern floristic province of the South American Cerrado Domain (Ratter *et al.* 2003, Bridgewater *et al.* 2004) includes some of the most extensively conserved areas of *cerrado* vegetation, especially in the Jalapão region (east of Tocantins State), which is the largest continuous protected area of Cerrado (Silva & Bates 2002, Yamamoto *et al.* 2008). Despite this level of conservation and protection, the flora of this province is still poorly known due to rare field expeditions conducted there until now (Ratter *et al.* 2003, Proença *et al.* 2007). Several new species have been described recently from the Jalapão region and surrounded areas (Salas & Cabral 2006, Araujo & Souza 2007, Proença *et al.* 2007, Delprete 2008, Rua *et al.* 2008, Vieira & Souza 2008, Yamamoto *et al.* 2008).

During recent field work in the Jalapão region (east of Tocantins State), specimens identified as *Vernonia monocephala* subsp. *irwinii* Jones (1982: 109) have been collected. When Robinson (1988) segregated part of *Vernonia* into *Lessingianthus*, this subspecies was overlooked. Dematteis & Almeida (2015), in the Brazilian Flora Checklist, treated it as a synonym of *Lessingianthus monocephalus* (Gardner 1847: 418) Robinson (1988: 945). Hardly any infraspecific rank has been recognized in *Lessingianthus* species by recent taxonomists; subspecies and varieties described in *Vernonia* species have been treated as synonyms or distinct species during their transfer to *Lessingianthus*. This taxon clearly belongs to *Lessingianthus* by possessing apical anther appendages without glands, a style without a basal node, and cubic crystals on the ovary wall. However, after close examination of its morphology, we consider it as a species distinct from *L. monocephalus*. Since the final epithet of this subspecies name is preoccupied in *Lessingianthus*