

A new species and a new combination in the South American genus *Lessingianthus* (Vernonieae, Asteraceae)

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Abstract

A detailed analysis of the type material of *Vernonia oxyodonta* clearly indicates that it is morphologically identical to *Lessingianthus glabratus* because it has glabrous leaves, pedunculate heads at the end of the inflorescence, outer phyllaries with acute apex and inner phyllaries with obtuse and mucronulate apex, and 30–40 florets per head. Consequently, all the specimens identified as *V. oxyodonta* are placed to a new species, *L. pubescens*. Also, *V. pseudoincana* is transferred to the genus *Lessingianthus*. This species belongs to the *L. rubricaulis* complex but can be distinguished from the remaining taxa of the group by its lanceolate leaves, grayish phyllaries, and habitat.

Key words: Compositae, taxonomy, *Vernonia*

Introduction

Lessingianthus Robinson (1988a: 939) is one of the largest genera of tribe Vernonieae Cassini (1819: 203), with 133 species distributed in South America including Argentina, Bolivia, Brazil, Colombia, Paraguay, Peru, Uruguay and Venezuela (Robinson 1999). The species are perennial herbs or shrubs with xylopodia, having medium or large-sized heads and seriate-cymose synflorescences (Robinson 1999). The genus comprises the species initially placed in *Vernonia* sect. *Lepidaploa* (Cassini 1817: 66) Candolle (1836: 26) subsect. *Macrocephalae* Benth (1873: 229). *Lessingianthus* can be distinguished from the remaining genera of the tribe by its apical anther appendages without glands, styles without basal node, cubic crystals on the ovary wall, and pollen type B (Dematteis 2006, Robinson 2007, Angulo & Dematteis 2010, 2014). The basic chromosome number of the genus is $x=16$, and the genus has the greatest number of polyploid species and the highest ploidy level within the tribe (Angulo & Dematteis 2012).

Since the description of *Lessingianthus* (Robinson 1988a), there have been a few problems in its generic limits. The single modification carried out by Dematteis (2007) has been the transfer of *Lessingianthus* subgen. *Oligocephalus* Robinson (1988a: 949) to the genus *Chrysolaena* Robinson (1988b: 956). After that, taxonomic studies carried out in this genus have focused on the description of new species and the resolution of nomenclatural specific problems (Dematteis 2006, 2008, Borges & Dematteis 2008, Dematteis & Angulo 2010, 2012). Nevertheless, several species still included in *Vernonia* have not been examined and, consequently, their taxonomic positions remain uncertain.

In this paper, after the intense herbarium revision of species still included in *Vernonia*, we conclude that an accepted species name, *V. oxyodonta* Malme (1932: 19), should be placed to the synonymy of *L. glabratus* (Lessing 1829: 294) Robinson (1988a: 943) because the type material of *V. oxyodonta* is morphologically referable to *L. glabratus*. All the other specimens recognized as *V. oxyodonta* constitute a separate species and, therefore, should be formally described as a new species. Additionally, one taxon previously placed in *Vernonia* as *V. pseudoincana* (Hieronymus 1897: 689) Cabrera (1999: 110) is transferred to *Lessingianthus*.

Materials and Methods

This study was based on a morphological analysis of the type specimens and additional specimens kept at BA, BAF, BM, BR, C, CESJ, CTES, CORD, G, ICN, K, LIL, LP, P, S and SI (acronyms according to Thiers 2012).

Discussion:—This species was initially described as a variety of *V. rubricaulis* (Hieronymus 1897), and then Cabrera & Dematteis (1999) elevated this taxon to the rank of species based on morphological and ecological observations. However, this entity was not included in *Lessingianthus* by Robinson (1988a, 1999). *Lessingianthus pseudoincanus* belongs to the *L. rubricaulis* (Humboldt & Bonpland 1809: 66) Robinson (1988a: 948) complex, which includes other three species with shortly seriate-cymose synflorescences, sessile capitula, 30–40 florets per head and linear to linear-lanceolate leaves, incanous to lanate beneath. However, *L. pseudoincanus* can be distinguished from the remaining taxa of the group by lanceolate leaves and grayish phyllaries. Besides, it grows in high fields with sandy soils, while *L. rubricaulis*, for example, grows in low and flooded fields. A comparison among *L. pseudoincanus* and closely related species is summarized in Table 2.

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