

## NEW SPECIES OF *LESSINGIANTHUS* (ASTERACEAE, VERNONIEAE) FROM CENTRAL BRAZIL

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### SUMMARY

Two additional species of *Lessingianthus* (Vernonieae, Asteraceae) from the Brazilian highlands are described and illustrated. One of the new species, *Lessingianthus barrosoanus*, is characterized by the presence of solitary heads disposed in relatively long, flexuous branches. It has certain resemblance to *L. ligulifolius* (Mart. ex DC.) H. Rob., which has short, commonly erect branches of the inflorescence, and capitula geminate or disposed in groups. *Lessingianthus minimus* is closely related to *L. reitzianus* (Cabrera) H. Rob., but differs in having acuminate phyllaries, glabrous corolla lobes and lanceolate leaves, cuneate at the base.

**Key words:** Asteraceae, Vernonieae, South America, new species, taxonomy.

### INTRODUCTION

The genus *Lessingianthus* H. Rob. (Vernonieae, Asteraceae) is widely distributed in tropical and subtropical South America, from Venezuela to Argentina, with the majority of species in eastern Brazil. The species are perennial herbs or shrubs, with sessile or rarely pedunculate heads, large-sized involucre and capitula solitary or arranged in scorpioid-cymose inflorescences (Bremer, 1994). It can be distinguished from other American members of the tribe by its non-glandular anther appendages, lack of basal style nodes and quadrate raphids in the achene wall (Robinson, 1999). The genus is distinguished also by the surface morphology of the pollen grains, which are tricolporate, echinolphate, with irregular areoles and colpi lacking a polar areole (Keeley & Jones, 1979).

*Lessingianthus* was firstly established to separate c. 100 species previously placed into *Vernonia* sect. *Lepidaploa* subsect. *Macrocephalae* Benth. (Baker, 1873). However, since the description of the genus by Robinson (1988), additional studies have increased the total number of species to 110 (Robinson, 1995, 1999; Díaz-Piedrahita & Obando, 2002; Deble et al., 2005; Dematteis, 2006). In the present paper two additional species of *Lessingianthus* from Brazil, which occur in campo and savannah vegetation, are described.

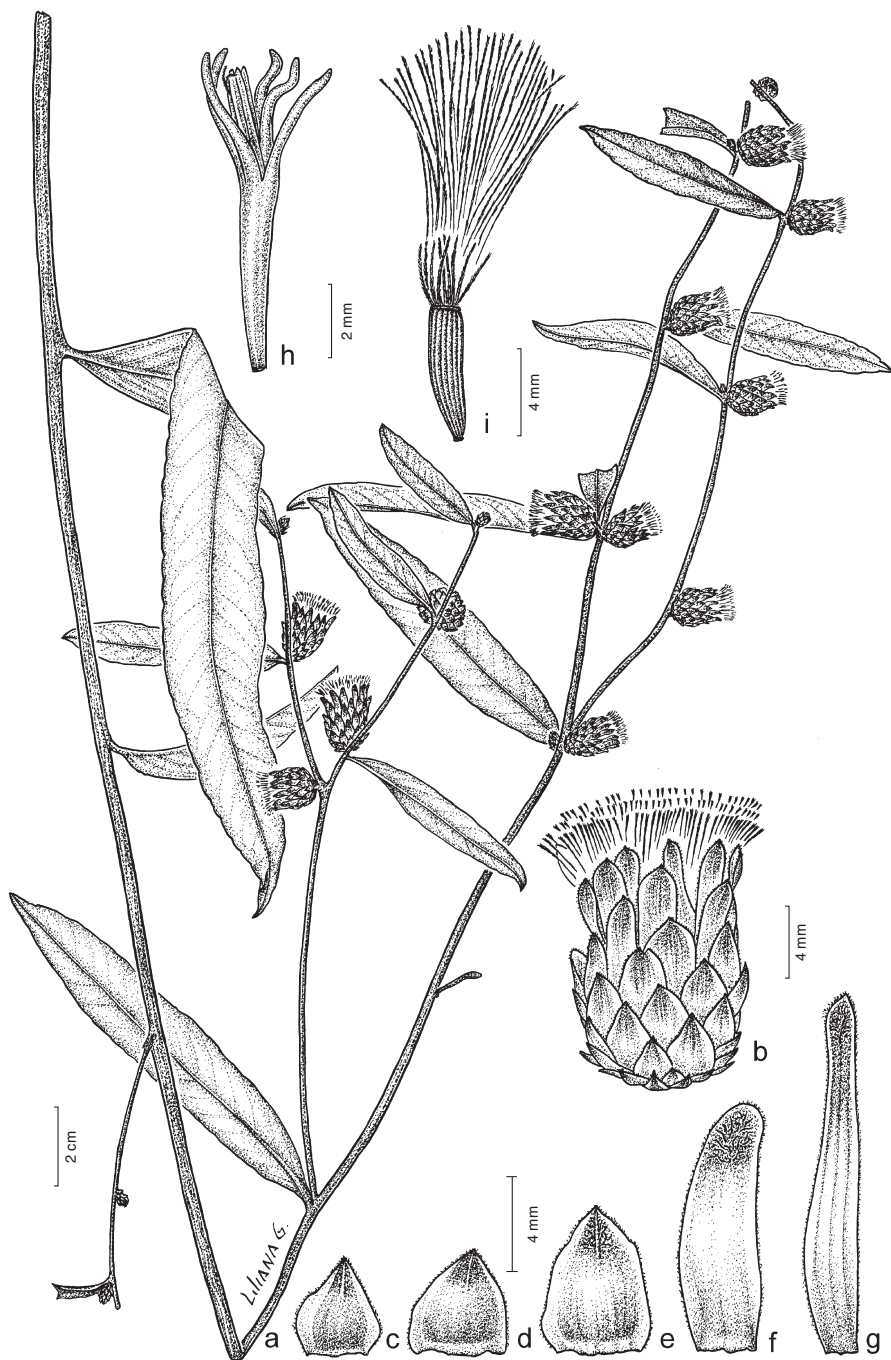


Fig. 1. *Lessingianthus barrosoanus* Dematt. a. Flowering branch; b. capitulum; c, d. outer phyllaries; e. middle phyllary; f, g. inner phyllaries; h. corolla showing anthers; i. cypsela (all: *Borges Dias, Machado & Pereira Silva s.n.*).

## DESCRIPTIONS

**Lessingianthus barrosoanus** Dematt., *spec. nov.* — Fig. 1

*Lessingianthus ligulifolius* simile sed capitulis solitariis et involucribus angustioribus differt. Frutex erectus, caulibus gracilibus laxe foliatis. Inflorescentiae cymosa, ramis 2–3, erectis, 20–30 cm longis. Capitula sessilia, solitaria, cylindrica, 11–13 mm altae. — Typus: *Borges Dias, Machado & Pereira Silva s.n.* (holo SPF 111491; iso CEN), Brazil, Distrito Federal, Mun. Brasília, DF-100 a 99.7 km do Cenargem/Embrapa, a esquerda da estrada, 5 May 1992.

Erect branched shrub, 1–1.5 m tall. Stems flexuous, rounded, laxly leafy, densely to scarcely lanate, purplish brown. Leaves alternate, sessile to subsessile, coriaceous. Leaf blades ovate-lanceolate to lanceolate, entire, acute at the apex, cuneate to subcordate at the base, glabrous and lustrous above, white-tomentose beneath, densely lanate on the veins, basal leaves 10–15 by 2–2.5 cm, upper leaves gradually shorter. Bracts of the inflorescence leafy, ovate-lanceolate, alternate to the heads. Inflorescence corymbose, branches 2 or 3, cymose, erect, 20–30 cm long, with 2–4 heads. Capitula sessile to shortly pedunculate, peduncles 0–3 mm long. Involucre cylindrical to narrowly campanulate, 11–13 mm high. Phyllaries 7 or 8 seriate, lanate, the outer ones triangular, subacute, inner phyllaries oblong-lanceolate, obtuse at the apex. Florets 30–40, purple to violet. Corolla glabrous, 12–13 mm long, lobes lanceolate, 4.8–5.3 mm long. Styles 13–14 mm long, branches linear, 3.8–4.3 mm long. Anthers basally sagittate, 4.5–5 mm long, apical appendage 0.4–0.6 mm long, without glands. Cypselas yellowish, glabrous, 4–4.5 mm long, raphids quadrate. Pappus white, biseriate, outer scales 3–4 mm long, inner bristles 9–10 mm long.

Distribution — Brazil (Bahia, Distrito Federal).

Habitat & Ecology — It grows on campo and grassy savannahs with dry, rocky soils. Flowering and fruiting from March to May.

Etymology — *Lessingianthus barrosoanus* is named after the Brazilian botanist Graziela Maciel Barroso (1912–2003), the leading authority of the Flora of Brazil and a specialist in Asteraceae.

Note — The new species can be distinguished from other taxa of the genus by the combination of long branches of the inflorescence, solitary heads and cylindrical involucre. It has certain resemblance to *L. ligulifolius* (Mart. ex DC.) H. Rob., which presents capitula disposed in groups, branches of the inflorescence relatively short and broadly campanulate involucre. The new species is also superficially similar to *L. brevipetiolatus* (Sch. Bip. ex Baker) H. Rob., but it differs in having subsessile leaves, 5 or 6 series of phyllaries and glandular hairs on stems and leaves.

Additional specimens examined:

BRAZIL. **Bahia:** Mun. Chapada Diamantina, Andaraí, subida para o Patí, 10 May 2003, *M.L. Guedes, A.B. Xavier, B.A. Arijos & F. Guaré s.n.* (ALCB, SPF); Oeste, Barreiras, São Sebastião de Monte Verde, bairro Vila Rica, subarbusto 1.5 m, folhas coriáceas, discolors, capítulos com flores lilásas, ocasional, 30 March 2002, *D.L. Santana, D.M. Loureiro & M.L. Guedes 717* (ALCB, MBM).

**Distrito Federal:** Reserva ecológica do IBGE, 15° 56' 47" S, 47° 52' 40" W, cerrado, arbusto flores lilásas, folhas discolors com parte abaxial esbranquiçada, papus cremes, 5 May 1988, *R.C. Mendonça 975* (RB).

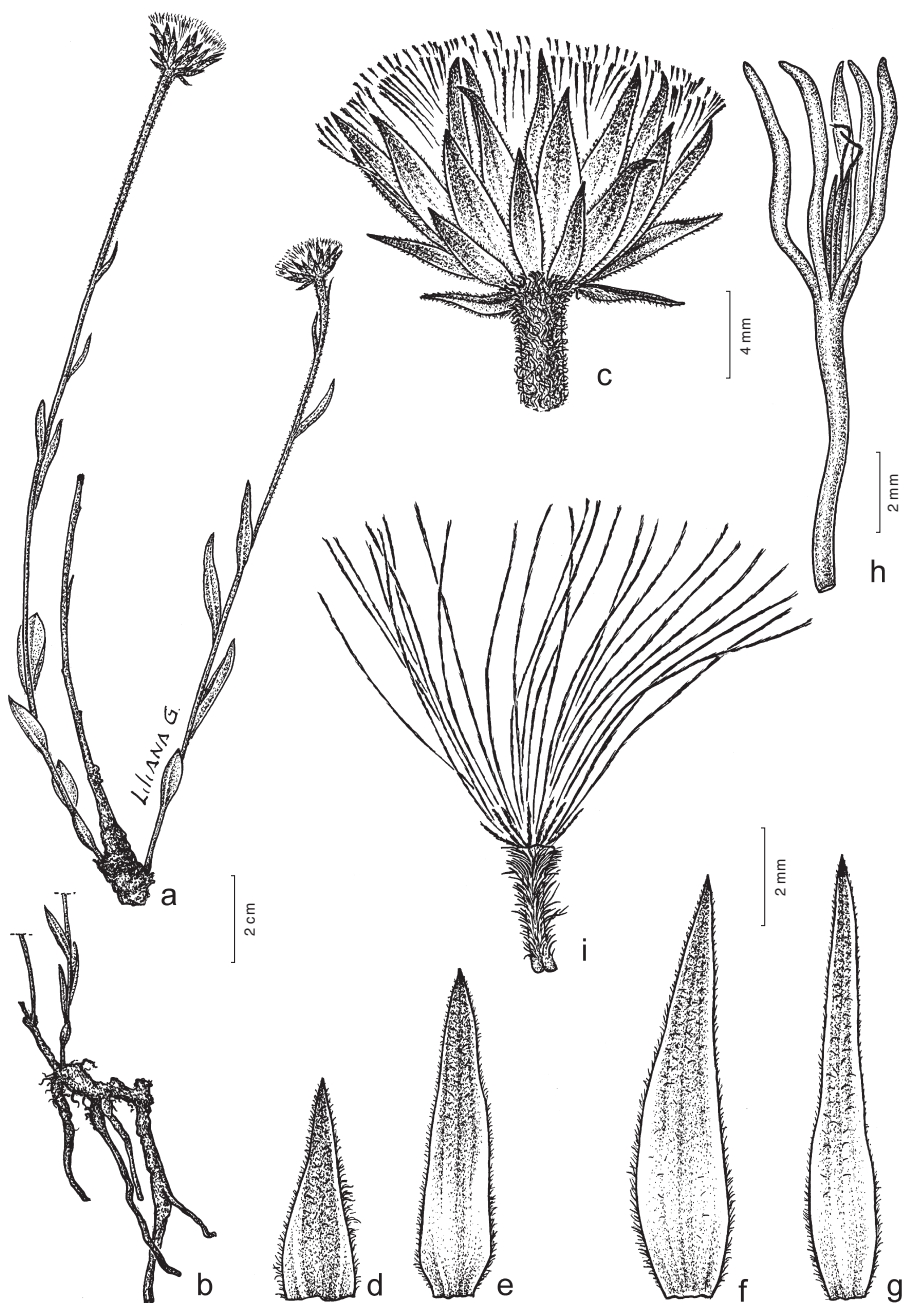


Fig. 2. *Lessingianthus minimus* Dematt. a. Plant; b. xylopodia; c. capitulum; d, e. outer phyllaries; f. middle phyllary; g. inner phyllary; h. corolla showing anthers and style; i. cypselas (all: *Hatschbach & Kummrow 37253*).

**Lessingianthus minimus** Dematt., *spec. nov.* — Fig. 2

Haec species *Lessingianthus reitzianus* similis sed folia breviora, capitula campanulata, corolla glabrata, phyllaria acuminata et lamina basi cuneata differt. Herba rizomatosa 10–24 cm altae, folia lanceolata vel ovato-lanceolata, 1.2–2 cm longa, 0.2–0.4 cm lata, utrinque glabrata et glanduloso-punctata. Capitula solitaria campanulata ad apicem caulibus disposita. Corolla glabrata, 13–14 mm longa. — Typus: *Hatschbach & Kummrow 37253* (holo MBM; iso C), Brazil, Goiás, Mun. Alto Paraiso, Chapada dos Veadeiros, campo, solo úmido capítulos violeta, 28 September 1975.

Perennial herb, rhizomatous, 10–24 cm height. Stems 1 or 2, herbaceous, ribbed, laxly leafy at the base, white-tomentose, brownish to purple-brownish. Basal internodes 3–8 mm long, the upper ones up to 40 mm long. Leaves alternate, sessile, chartaceous. Leaf blades lanceolate to ovate-lanceolate, 1.2–2 cm long by 0.2–0.4 (–0.7) cm wide, entire, acute at the apex, basally cuneate, glabrous and glandular-dotted on both faces. Inflorescence of a single head, aphyllous. Capitula largely pedunculate, solitary at the stems tip. Involucre widely campanulate, 8–10 mm height. Phyllaries 3 (or 4) seriate, subimbricate, lanceolate to ovate-lanceolate, acuminate at the apex, tomentose, outer phyllaries 4–5 mm long, the inner ones 8–10 mm long. Florets 20–25, violet to pink. Corolla glabrous, 13–14 mm long, lobes lanceolate, 5–6 mm long. Styles 14–15 mm long, branches pilose, 2.6–3.2 mm long. Anthers sagittate at the base, 4–4.5 mm long, apical appendage ovate, 0.3–0.5 mm long, without glands. Cypselas densely sericeous, 2.5–3 mm long, raphids quadrate to subquadrate. Pappus yellowish to brownish, outer scales lanceolate, 0.5–0.7 mm long, inner bristles 6–7 mm long.

Distribution — Only known from the type locality, in Chapada dos Veadeiros, at the northeast of the Brazilian state of Goiás.

Habitat & Ecology — The new species is restricted to campo and campo cerrado vegetation. Flowering and fruiting in September.

Etymology — The specific epithet refers to the small size of the plant.

Note — Its closest ally is *L. reitzianus* (Cabrera) H. Rob., which also presents inflorescences of a single head, phyllaries 3- or 4-seriate and glandular dotted blades. However, *L. reitzianus* almost always presents 3–6 stems, leaf blades 4–7 cm long, basally attenuate, involucre hemispheric, outer phyllaries obtuse or subacute and pilose corolla lobes. In addition, both taxa have a quite different geographic distribution. The new species is restricted to northern Goiás, while *L. reitzianus* occurs in southern Brazil, in the states of Paraná and Santa Catarina.

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