

# A New Species of *Lobelia* (Campanulaceae) from Brazil

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**ABSTRACT.** *Lobelia brasiliensis*, a new species of subsection *Haynaldianae* F. E. Wimmer (of *Lobelia* L. sect. *Rhynchopetalum*), is described from Brazil. It is distinguished from related Brazilian species by its yellowish puberulous abaxial leaf surface and the smaller dimensions of its floral structures. This species also has a different flowering period and is isolated geographically.

The genus *Lobelia* was established by Linnaeus (1753) in *Species Plantarum*. *Lobelia* is included in the family Campanulaceae Jussieu (Cronquist, 1981), subfamily Lobelioideae Burnett (Burnett, 1835; Wimmer, 1943), considered by some authors to be the separate family Lobeliaceae R. Brown (Dahlgren, 1980; Heywood, 1993; Hutchinson, 1973). This genus is distinguished by a dorsal slit that reaches the corolla base and by the fruit, which is a capsule that dehisces by two valves. This genus is widespread in the tropics, with centers of diversity in tropical Africa and Mexico. *Lobelia* L. is estimated to contain about 450 species (Wimmer, 1953, 1968) and is represented in Brazil by two subgenera: subg. *Lobelia* (6 species), delicate prostrate or erect herbs up to 1 m; and subg. *Tupa* (G. Don) F. E. Wimmer (10 species), erect herbs with hollow stems up to 4 m tall at flowering (Braga, 1956; Kanitz, 1878).

During a study of Brazilian lobelias, a new species was recognized in subgenus *Tupa*. This new taxon belongs to section *Rhynchopetalum* (Fresenius) Benth., subsection *Haynaldianae* F. E. Wimmer (Mabberley, 1974). The new species is described and illustrated here.

## MATERIAL AND METHODS

This study was based on herbarium material borrowed from the herbaria cited in the material examined and on observations of plants in their natural habitats.

## RESULTS AND DISCUSSION

***Lobelia brasiliensis*** A. O. S. Vieira & G. J. Shepherd, sp. nov. TYPE: Brazil, Distrito Federal: Brasília a Taguatinga, 12 Sep. 1964, Prance & Silva 59034 (holotype, UB; isotypes, M, NY, RB, S, US). Figure 1.

Inter species brasilienses subsection *Haynaldianae* F. E. Wimmer, foliis supra glabris, subtus puberulis, 14–29 cm longis, 2.5–6 cm latis; pedicello sigmoideo, puberulo, 12–35 mm; corolla extus puberula et intus puberula vel tantum adest in parte inferiore, ca. 2–4 cm longa; hypanthio puberulo; seminis late alatis differt.

Plant 1.5–4 m tall, with white latex. Stem terete, fistulose, glabrous. Leaves narrowly oblong or narrowly elliptic-lanceolate, 14–29 cm long, 2.5–6 cm wide; apex acuminate, base narrowly cuneate and decurrent, margin minutely serrate or dentate, chartaceous, adaxially glabrous, abaxially puberulous with yellowish indument; secondary veins 14–26 pairs forming an angle of 45°–60° with the midrib. Inflorescence a terminal raceme, up to 1.5 m, with smaller secondary basal racemes, all puberulous on the rachis. Bracts reflexed, lanceolate, 17 mm long, 3 mm wide, acute, margin entire and ciliate, decurrent, and connate to pedicels, puberulous. Pedicel terete, sigmoidal ascending, 12–35 mm long, puberulous. Calyx with triangular sepals, 3–4 mm wide at the base and 15–17 mm long, acute, margin entire, puberulous. Dorsal corolla lobes 21–39 mm long and 0.5–1.5 mm wide, ventral lobes 10 mm long and 1.5–2.5 mm wide; puberulous on both faces or only on the lower third of the internal face, indument yellowish. Stamens with filaments 25 mm long, puberulous; anthers 6–8 mm long, glabrous, grayish. Hypanthium campanulate, 3–5 mm long and 5–9 mm wide, puberulous, indument yellowish. Capsule ovoid, 3–3½ free from the hypanthium, 10–12 mm long, 20–25 mm wide; sepals 3–4 mm wide and 20–35 mm long; bract 25 mm long, pedicel 20–25 mm long.

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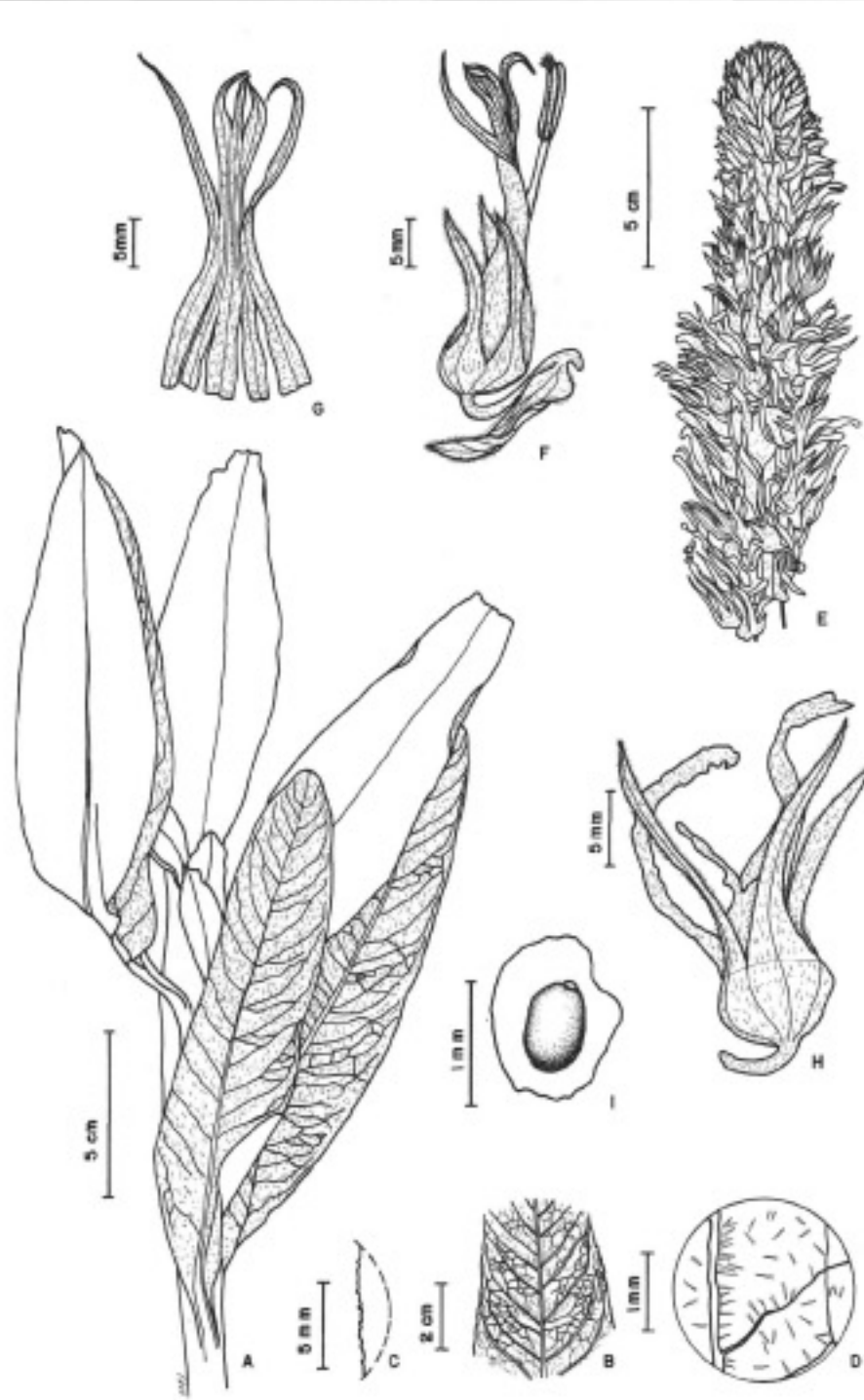


Figure 1. *Lobelia brasiliensis* A. O. S. Vieira & G. J. Shepherd. —A. Shoot with leaves. —B. Leaf with venation. —C. Detail of margin of leaf. —D. Indument on abaxial surface. —E. Inflorescence. —F. Flower and bract. —G. Corolla open, internal face. —H. Fruit. (A–H *Silva* s.n., RB 162862.) —I. Seed (*Heringer* et al. 254).

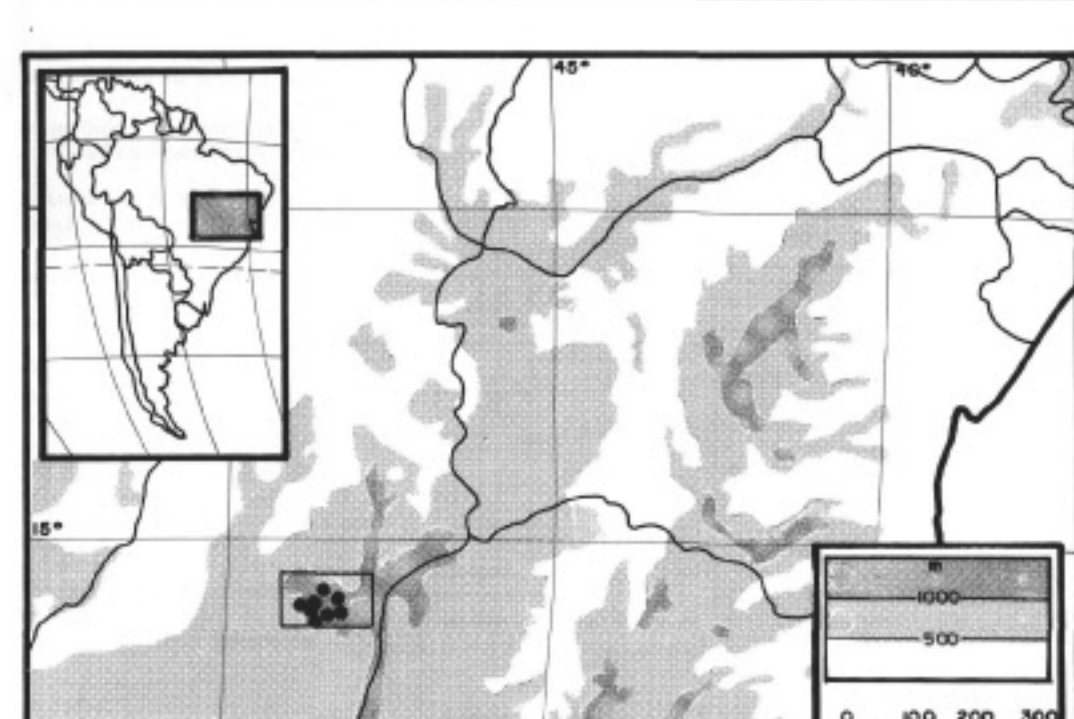


Figure 2. Geographic distribution of *L. brasiliensis*.

Seed lenticular, suborbicular, yellow and finely reticulate, 1.2 mm long, 1.0 mm wide, with seed body 0.8 mm long and 0.3 mm wide, surrounded by a broad (0.1–0.4 mm) wing.

**Etymology.** The specific epithet is a reference to *Brasília*, since this species is endemic and occurs around the capital, Brasília.

**Taxonomic remarks.** This species appears to be close to *Lobelia thapsioides* Schott (Schott, 1831), which occurs predominantly in the state of Rio de Janeiro, but differs in its narrowly winged seeds and lack of yellowish indument. The broadly winged seeds also show similarities to *L. organensis* Gardner, but this species has glabrous leaves (Gardner, 1845). Scanning electron microscope (SEM) observations show that in the present species the seed coat has much thicker cell walls, the thickest observed in all of the Brazilian lobelias. The yellowish indument concentrated on floral structures and the smaller dimensions of its leaves and flowers are also distinctive among the Brazilian species of this section.

**Distribution and habitat.** *Lobelia brasiliensis* is geographically isolated from the remaining species of the subsection. Its distribution area is concentrated in the Distrito Federal (Fig. 2), in moist plac-

es near riparian forests and "cerrados" (Brazilian savannas) or open spaces; 700–1175 m.

**Flowering and fruiting.** The majority of individuals flower in spring (September–November), and the remaining Brazilian species flower in summer or winter.

**Paratypes.** BRAZIL. Distrito Federal: Brasília, *Irwin & Soderstrom* 6119 (UB); Colégio Agrícola de Brasília, Rio Paranaíba, *Mattos Filho & Heringer* 350 (RB); Colégio Agrícola, *Pires & Mattos* 9864 (UB); Córrego do Zoológico, *Lima* 22 (UB); Zoobotânico, *Sucre* 483 (UB); Córrego Samambaia, *Irwin* et al. 8157 (UB); Fundação Zoobotânica, *Pires* et al. 9516 (F not seen, RB, UB); RECOR R.2, 1978, s. col. 609 (UEC); RECOR R.7, *Heringer* et al. 204 (UEC); RECOR R.7, *Heringer* et al. 254 (UEC); Brasília Rio Torto, *Irwin* et al. 18065 (UB); Rodovia 3, *Allen* et al. 394 (RB); Universidade de Brasília, Campo Olímpico Lagoa Paranoá, 15°46'S, 47°51'W, *Ploewmann* 10000 (F not seen, NY, MBM); Cerrado 3 km da Rodovia, *Silva* s.n. (RB 162862); Sobradinho, *Heringer* 13223 (HB, UB); 4 km Vargem Bonita, rodovia para Brasília, *Ratter* et al. 4355 (E); 5 km S de Brasília para Belo Horizonte, *Rio Gama*, *Irwin* et al. 8529 (UB); Reserva Ecológica do IBGE, *Pereira Neto* 55 (UEC); Final da Asa Norte, *Rocha* s.n. (FUEL 11115).

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