



## New species of *Sloanea* (Elaeocarpaceae) from the Brazilian Cerrado

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### Abstract

*Sloanea petalata* D. Sampaio & V.C. Souza is an endemic species known only from Mogi-Guaçu municipality, in the Cerrado of São Paulo state, Brazil. This new species shares some features with *Sloanea garckeana* K. Schum., differing mainly in the presence of petals, an uncommon characteristic among Neotropical species of this genus. Description of *Sloanea petalata*, as well as illustration, diagnosis, and comments on distribution are provided in this paper.

**Key words:** Brazilian savanna, conservation status, taxonomy.

### Resumo

*Sloanea petalata* D. Sampaio & V.C. Souza é uma espécie endêmica do Cerrado do município de Mogi Guaçu, estado de São Paulo, Brasil. Essa nova espécie é semelhante a *Sloanea garckeana* K. Schum., da qual pode ser diferenciada principalmente pela presença das pétalas, característica incomum nas espécies neotropicais do gênero. A descrição de *Sloanea petalata*, bem como ilustrações, diagnose e comentários sobre a distribuição geográfica são apresentados neste trabalho.

**Palavras-chave:** Cerrado, status de conservação, taxonomia.

### Introduction

The genus *Sloanea* is comprised by at least 150 species occurring in the Old and New World (Mabberley 2008). About 40 species are found in Brazil, which are distributed in various types of vegetation, and they are usually located near water-courses and in preserved environments (Smith 1954; Sampaio 2009). The Amazon Rainforest, the Atlantic Forest, and Cerrado Vegetation are the biomes with the highest diversity of *Sloanea* species in Brazil. In the Brazilian extra-Amazonian region, the *Sloanea* species are assigned to both *Quadrisepala* and *Sloanea* subgenera, according to the classification proposed by Smith (1954) based on the position of the calyx in the flower bud. Moreover, the species of the New World had been characterized as monochlamydeous, but two dichlamydeous species, *Sloanea jamaicensis* Hook. and *Sloanea petalata* - here presented - have been registered in the Neotropics region. Due to the presence

of petals and sepals covering the reproductive organs on the flower bud near anthesis, *S. petalata* was included in the subgenus *Quadrisepala*.

*Sloanea petalata* D. Sampaio & V.C. Souza, *sp. nov.*  
Type: BRAZIL. SÃO PAULO: Rodovia Campinas–Mogi Mirim, Auto Posto Varanda, 12.XII.1980, H. Leitão-Filho 12087 (holotype UEC!; isotype RB!).

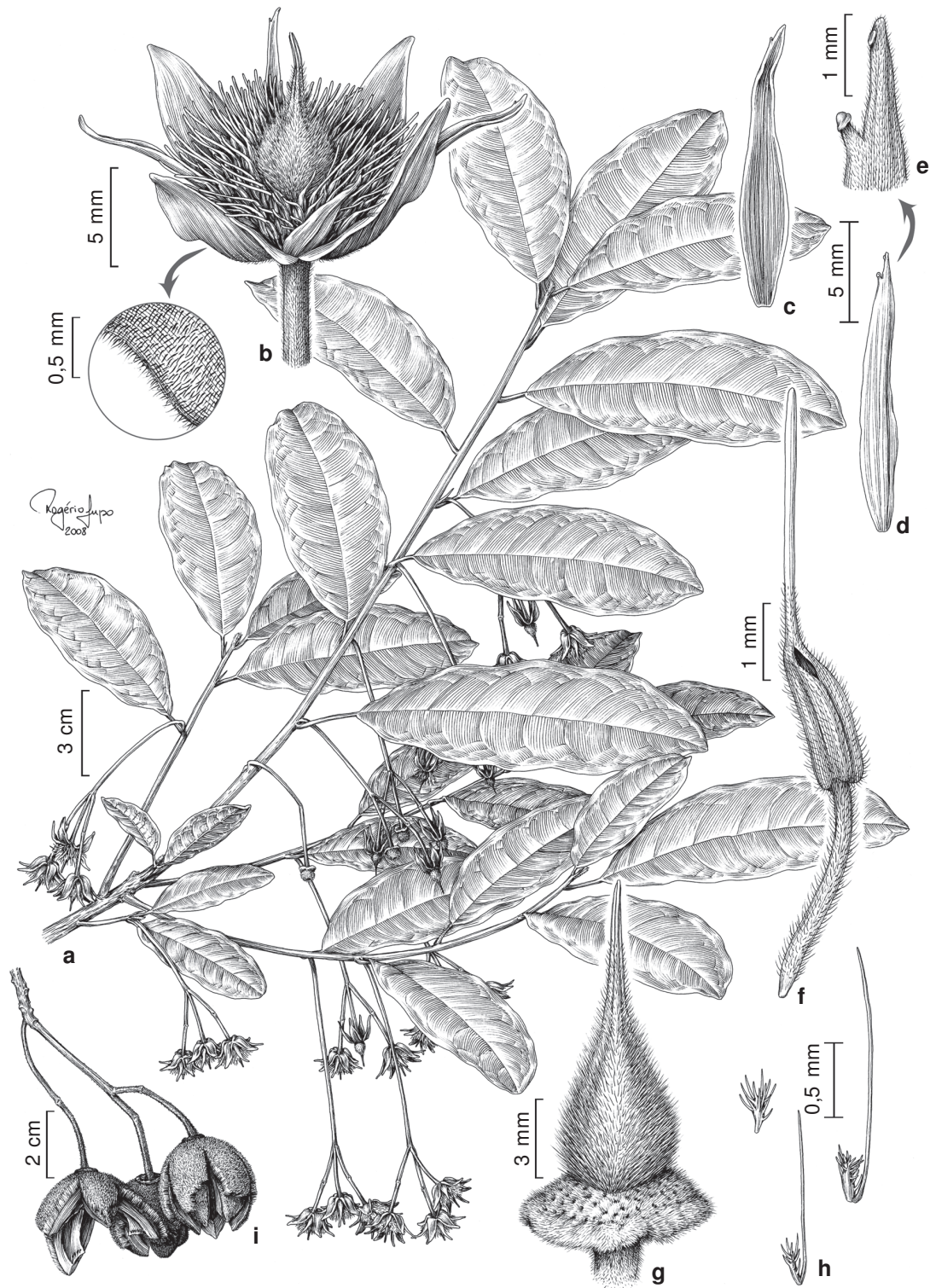
Fig. 1  
*Affinis* *Sloanea garckeana* K. Schum.,  
*inflorescentia* -3 et ovario longe velutino sed  
*praesentia petalorum differt.*

Trees 10–15 m tall. Leaves alternate; stipules early deciduous, 6–9 × ca. 1 mm, filiform, pubescent; petioles 0.9–1.3 cm long, pubescent to tomentose on the upper portion; leaf blade obovate, 7–13 × 3.5–6 cm, base acute, apex acute, margins entire or serrate on the first upper third of blade, glabrous on both surfaces, except for on the veins;

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**Figure 1** – *Sloanea petalata* – a. flowering stem; b. opened flower and detail of the indument on the inner surface of the sepal; c. inner surface of the petal; d. outside surface of the petal; e. detail of the apex; f. detail of the stamen; g. detail of the ovary; h. detail of the branched trichomes from the ovary; i. mature fruits (a-f *Leitão-Filho* 12087; g-h *Gibbs & Leitão-Filho* 3553; i. collection of *Rossi* 2119).

venation brochidodromous on the first third of the lower blade, semicraspedodromous on the upper portion, midrib grooved on adaxial surface, prominent on abaxial surface; domatia absent. Inflorescence axillary; triad type; peduncle 1.5–4.5 cm long, striate, non-lenticellate, cylindrical, pubescent to tomentose; bracts and bracteoles early deciduous, not seen; pedicels 0.9–2.5 cm long, striate, pubescent to tomentose. Flowers with 4-sepals, uniseriate, entire, 11–15 × 3–4 mm, ovate, apex acuminate, margins revolute, pubescent on both surfaces, more densely on a line on the inner surface; petals 4, uniseriate, entire, 7–13 × ca. 1 mm, lanceolate, apex acuminate, margins revolute, pubescent on both surfaces, petals covering the reproductive organs on the floral buds near anthesis; filaments 2–3 mm long, hirsute; anthers ca. 2 mm long, elliptical, pubescent; connective prolonged into an aristate awn, 3–4 mm long, glabrous; ovary ca. 6 mm long, globose, velutinous, with branched trichomes, sessile; style ca. 5 mm long, straight or twisted, apex entire, velutinous on the basal portion, glabrous on the apical portion; floral receptacle densely pubescent. Fruits orbicular, 2–3 × 0.7–1.3 cm, valves 4 or 5, pubescent, externally covered by pubescent bristles, the bristles 2–4 mm long. Seeds not seen.

**Examined material:** BRASIL. SÃO PAULO: Mogi Guaçu, Estação Experimental de Mogi Guaçu (Fazenda Campininha), 26.XI.1973, fl., *P.E. Gibbs & H. Leitão-Filho 3553*. (MBM 49255, TE 1727, UEC 4105); Estrada Campinas–Mogi Mirim, Super Posto Varanda (km 156), 14.VII.2000, fr., *L. Rossi & O.T. Oyakawa 2119* (SP); Posto Varanda, 12.XII.1980, *F. de Barros 592* (SP 167115); lateral do Auto Posto Varanda, 13.VIII.2007, fr., *D. Sampaio 1801* (ESA).

*Sloanea petalata* is known only from the type locality, the city of Mogi Guaçu, state of São Paulo, an area with predominance of Cerrado Vegetation. This species is one of the few of its genus that occurs in drier habitats and apparently away from water-courses. Typically, *S. petalata* blooms from November to December.

The epithet is referred due to the presence of petals, an uncommon feature in the New World species.

Besides the endemic distribution restricted to the region of Mogi Guaçu city just few individuals of this species were found in disturbed areas. Due to that, *S. petalata* was classified as Critically Endangered (CR) by the criteria of IUCN (2001), following the criteria B1abIII - extent of occurrence estimated to be less than 100 km<sup>2</sup> and estimates indicating only a single location and continuing decline in quality of habitat.

*Sloanea petalata* shares some characteristics with *S. garckeana* K. Schum. such as inflorescence type (a triad), the connective prolonged into an aristate awn, and the velutinous indument that covers the ovary. However, it can be distinguished from *S. garckeana* in having petals and longer filaments (3 mm long in *S. petalata* vs. 1–2 mm long in *S. garckeana*) and ovary (ca. 6 mm long in *S. petalata* vs. 3–4 mm long in *S. garckeana*).

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