

A new species of *Bulbophyllum* Thouars (Orchidaceae) from Minas Gerais, Brazil

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ABSTRACT – (A new species of *Bulbophyllum* Thouars (Orchidaceae) from Minas Gerais, Brazil). During the taxonomic revision of the Neotropical *Bulbophyllum* (Orchidaceae) species, a new species was discovered from Bom Sucesso, Minas Gerais State, described and illustrated here as *B. hatschbachianum* E. C. Smidt & Borba. This species belongs to the Neotropical section *Xiphizusa* (Rchb. f.) Cogn. and posses a lip epichile completely different from the related species. It is closely to *B. plumosum* (Barb. Rodr.) Cogn. due to its vegetative morphology, but has different flower size, color and lip epichile. In *B. plumosum* the epichile is thin, longer and wider than the hipochile. In *B. hatschbachianum* the epichile is fleshy, shortest than the hipochile, thin, and sharply narrower than the hipochile. The flowers of this new species is similar to the Mexican *B. solteroi* R. González, but the general morphology of the lip, trichome size and the geographical distribution clearly distinguishes apart the two species.

Key words - *Bulbophyllum*, *Cerrado*, Orchidaceae, taxonomy

RESUMO – (Uma nova espécie de *Bulbophyllum* Thouars (Orchidaceae) de Minas Gerais, Brasil). Durante a revisão taxonômica das espécies neotropicais de *Bulbophyllum* (Orchidaceae), uma nova espécie foi descoberta em uma coleta proveniente de Bom Sucesso, Estado de Minas Gerais, descrita e ilustrada, aqui, como *B. hatschbachianum* E. C. Smidt & Borba. A espécie pertence à seção Neotropical *B. sect. Xiphizusa* (Rchb. f.) Cogn. e possui um labelo com epiquílio completamente diferente das demais espécies da seção. É próxima de *B. plumosum* (Barb. Rodr.) Cogn. considerando-se a morfologia vegetativa, mas difere desta pelo tamanho e coloração da flor e pelo epiquílio do labelo. Em *B. plumosum* o epiquílio é delgado, maior e mais largo que o hipoquílio. Em *B. hatschbachianum* o epiquílio é carnoso, mais curto que o hipoquílio, delgado e nitidamente mais estreito que o hipoquílio. As flores da nova espécie podem ser comparadas às da espécie mexicana *B. solteroi* R. González, mas a morfologia geral do labelo, o tamanho dos tricomas, e a distribuição geográfica tornam fácil a distinção entre as duas espécies.

Palavras-chave - *Bulbophyllum*, *Cerrado*, Orchidaceae, taxonomia

Introduction

The Pantropical *Bulbophyllum* Thouars is the largest orchid genus, including over 1,700 species (Vermeulen 1991, Dressler 1993, Sieder *et al.* 2007). Most of its species occur in the Old World, mainly in southeastern Asia, and nearly 100 names are proposed for the Neotropics, of which 60 species could be recognized (Smidt 2007). In the most recent inventory of Brazilian orchids, Pabst & Dungs (1975) cited 54 species for Brazil. However, with the addition of some recently described species, new occurrences for this country (*e.g.*, Borba

& Smidt 2004, Fraga & Smidt 2004, Ribeiro *et al.* 2005, Smidt & Borba 2007b), and the proposal of new synonyms, 47 species, two subspecies and one nothospecies are considered to occur in Brazil (Smidt 2007).

The State of Minas Gerais comprises the region with the highest diversity of the genus, including 34 species, of which eight (24%) are endemics. This high diversity is probably due to the occurrence of Atlantic Rain Forest and *Cerrado* vegetational edges and to the high topographical diversity, including several mountain ranges presenting *campo rupestre* vegetation and valleys with high humidity (Smidt & Borba 2007a, Smidt *et al.* 2007).

Twenty three *Bulbophyllum* species belong to section *Xiphizusa* (Rchb. f.) Cogn., characterized mainly by the discoid small aggregated pseudobulbs and the long scape with distically disposed flowers on the thin rachis. The flowers have a conspicuous jugae (ovary tissue extension) at the petals base, long fused lateral sepals in most species, petals oblong to narrow lanceolate, which are pilose in most species with long hairs in the margins.

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The lip is trilobed, with lateral lobes erect, obtuse, and sometimes pilose, the disc (region on the lip between the lateral lobes, sometimes extended to the apex) is smooth or with a longitudinal ridge at the middle. The epichile may be thin and membranaceous or hardly thick. In some species the epichile is sessile at the base or more usually constricted, the limb may be flat or concave, and normally smooth or rarely pilose in the margin and in the face. Species from sect. *Xiphizusa* are mainly epiphytic in forested and *Cerrado* areas, and occasionally lithophytic in *campo rupestre* vegetation, such as *B. plumosum* (Barb. Rodr.) Cogn. and *B. gladiatum* Lindl. This section presents an interesting disjunction between southeastern Brazil and the Andean mountains in Venezuela throughout Peru, with one species endemic to Mexico.

In the course of a revision of the Neotropical *Bulbophyllum* species, we found a new species which belongs to section *Xiphizusa*, with a particular suite of characters described as follows.

Results and discussion

Bulbophyllum hatschbachianum E. C. Smidt & Borba, *sp. nov.* Type: BRAZIL. MINAS GERAIS: Bom Sucesso, 18°35' S, 45°54' W, 3-XI-1991 (fl.), *E.T. Neto & M.S. Werneck 715* (holotype BHCB).

Figure 1

B. plumoso vegetativus affine, florem differt. B. solteroi aemulans, differt hipoquilis trichomate brevissimus, epiquilis brevis cum callus differens.

Mostly epiphytic herbs. Rhizome inconspicuous. Pseudobulbs 1.2-1.5 × 1.3-1.5 cm, deltoid, transversally elliptic, brownish, rugose, monophyllous. Leaves 5.0-6.0 × 0.8-1.2 cm, plane, oblong to elliptic, base constricted, apex acute, coriaceous. Inflorescence raceme, 12.0-15.0 cm long, erect, scape cylindrical, basal bract of the scape inconspicuous, the others not imbricate; rachis 4.0-5.0 cm long, thin, pendulous, 10-12 flowers arranged distichously, anthesis simultaneous. Flowers resupinated by rachis bending, membranaceous, jugae present and very conspicuous. Sepals erect, smooth, purple; dorsal sepal 5.0 × 1.5 mm, lanceolate, concave, 3-nerved, margin glabrous, apex acuminate; lateral sepals 5.0 × 2.0 mm, lanceolate, fused from base up near to the apex, 3-nerved, margin glabrous, apex acute. Petals 2.0 × 1.2 mm, lanceolate, erect, flat, 1-nerved, base sessile, dilated, apex acute, margin ciliate with long linear purple hairs, whitish, translucent, mid-vein purple. Lip 4.0 × 1.2 mm, trilobed, purple, differentiated in epichile and hypochile; hypochile

with lateral lobes erect, obtuse, hairy, hairs very short, apex attenuate, disc between the lateral lobes with a smooth discrete ridge; epichile fleshy, short, linear-lanceolate, margin glabrous, base constricted, apex acute, purplish. Column glabrous adaxially; stellidia present, erect, entire, apex acute; teeth present, erect, apex acute; column foot short, stigma large; anther versatile, 3-globose. Fruit 5.0 × 4.0 mm, smooth.

Etymology – This species is named in honor to Gerdt Hatschbach, one of the leading Brazilian botanic collectors in activity, herbarium curator of the “Museu Botânico Municipal de Curitiba” (MBM) and responsible for dissemination of the knowledge of Brazilian biodiversity. During his 65 years dedicated to Botany, G. Hatschbach has collected more than 77,000 specimens, ca. 500 of them being new species for the science, with ca. 140 named on his honor, including 14 orchids.

Distribution – Endemic to Minas Gerais State, Brazil, growing in *Cerrado* as epiphytic, ca. 950 meters of altitude. It is known from the type only.

Conservation status – Insufficient data. Species recently discovered, in a place with few collections. More field studies are necessary to frame it in some conservation category. However, *B. hatschbachianum* is likely to have a restricted geographical distribution, since it occurs in one of the best collected states of Brazil. The discovery of a new orchid species in a such well collected region, certainly emphasizes the importance of continuous field trips and suggests SE Brazil may present a higher diversity of *Bulbophyllum* species than previously thought.

Bulbophyllum hatschbachianum is a species with peculiar morphology, whose lip cannot be compared directly with any other species of the genus in the Neotropics. It is closely related to *B. plumosum* (Barb. Rodr.) Cogn. due to its general vegetative morphology, but the flower size, color and distinctive epichile make its recognition easy. In *B. plumosum* the epichile is thin, longer and wider than the hypochile. In *B. hatschbachianum* the epichile is fleshy, shortest than the hypochile, thin, and sharply narrower than the hypochile. *Bulbophyllum solteroi* R. González, a Mexican species, also possess hypochile of the same size or slightly larger than the epichile, however its epichile has the same width or is slightly wider than the hypochile and possess a different morphology of the callus. The trichomes in the margin of the hypochile are very short, being discernible only with the aid of a magnifying glass, unlike its closest species, which possess clear trichomes along the hypochile margin.

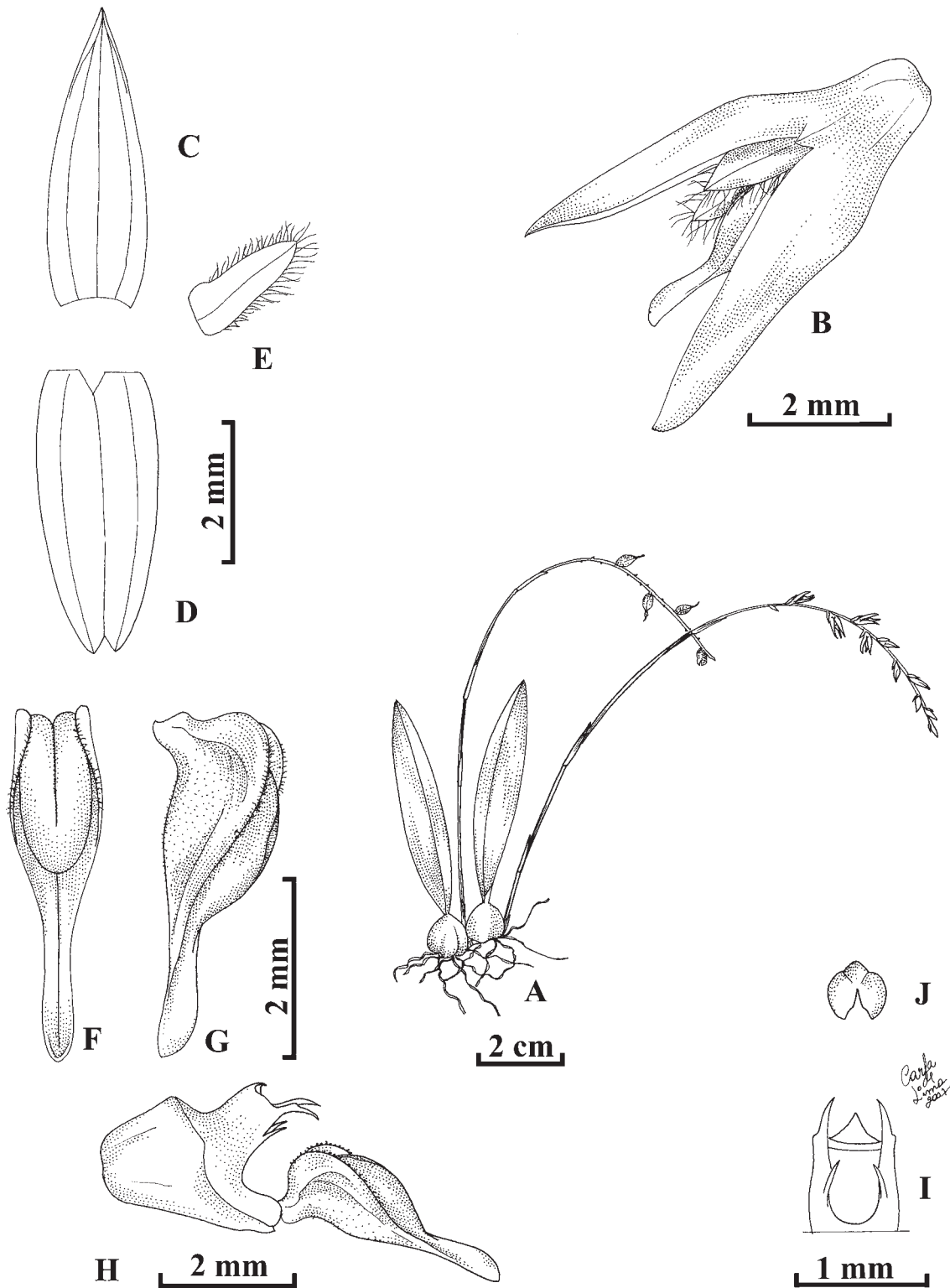


Figure 1. *Bulbophyllum hatschbachianum* E. C. Smidt & Borba. A. Habit. B. Flower, side view. C. Dorsal sepal. D. Fused lateral sepals. E. Petal. F. Lip, upper view. G. Lip, side view. H. Lip and column, side view. I. Column, ventral view. J. Anther. (Neto & Werneck 715; by Carla Lima).

The flowering period is November. There is no information on the pollination and reproductive system of this species.

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