

A new species of *Hybanthus* (Violaceae) from north-eastern Brazil

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A new species of *Hybanthus* (Violaceae) from north-eastern Brazil is described and illustrated. *Hybanthus verrucosus* Paula-Souza is endemic to ‘caatingas’ of Bahia and Alagoas states and is very distinct from all other Brazilian species of the genus, for its anterior petal, which is covered with small wart-like outgrowths. Other distinctive characteristics of the new species and its relationship with a closely related species (*H. atropurpureus* (A.St.-Hil.) Taub.) are discussed. © 2003 The Linnean Society of London, *Botanical Journal of the Linnean Society*, 2003, 141, 503–506.

ADDITIONAL KEYWORDS: Alagoas – Bahia – caatingas – endemism – systematics.

INTRODUCTION

The genus *Hybanthus* Jacq. comprises about 150 species of herbs, (sub)shrubs and small trees occurring mainly in subtropical regions of the Old and New Worlds, with great diversity in the Neotropics where approximately 75 species are found (Hekking, 1988). *Hybanthus* is the most representative genus of Violaceae in the extra-amazonian part of Brazil, and a recent survey of *Hybanthus* in this country (Souza, 2002) reported 26 species of the genus, 12 of which are endemic to Brazil. Other important works concerning the Brazilian species of *Hybanthus* were produced by Eichler (1871) and Schulze (1936), in a study of the South and Central American species.

‘Caatinga’ is a xerophytic, deciduous vegetation which covers approximately 834 666 km², mainly in the north-east region of Brazil (Andrade-Lima, 1981). *Hybanthus* is relatively well-represented in this kind of vegetation, and four species occur exclusively in the ‘caatinga’ or associated vegetal formations surrounded by it (‘campos rupestres’, ‘campos gerais’). These are *H. albus* (A.St.-Hil.) Baill., *H. arenarius* Ule, *H. verrucosus* Paula-Souza described here and another undescribed species.

MATERIAL AND METHODS

This study was based on a bibliographical review, field observations of living specimens, as well as consultations at the main Brazilian and some European herbaria.

DESCRIPTION OF THE NEW SPECIES

HYBANTHUS VERRUCOSUS PAULA-SOUZA SP. NOV.
(FIGS 1,2)

Typus: Brazil: Bahia: Feira de Santana, Serra de S. José – Faz. Boa Vista, 12°15’S, 38°58’W, 24.v.1984, L.R. Noblick 3260 (Holotypus: ESA, Isotypi: ALCB, CEPEC, HUEFS, K).

Diagnosis: *Hybantho atropurpureo* (A.St.-Hil.) Taub. affinis floribus parvis et habitu, sed bracteolis praesentibus et sepalis longioribus differt, et ab omnibus speciebus brasiliensibus petalo antico verrucoso differt.

Description: Herbs to sub-shrubs, 30–70 cm high, branched; stems glabrous to puberule, viscoso. Leaves alternate or opposite, stipule 2–4 × c. 0.5 mm, linear, margin entire; petiole 1–9 mm; blade 2.9–10 × 1.4–4.5 cm, elliptic, lanceolate, ovate or oblanceolate, acute to acuminate, margin serrate to toothed, base

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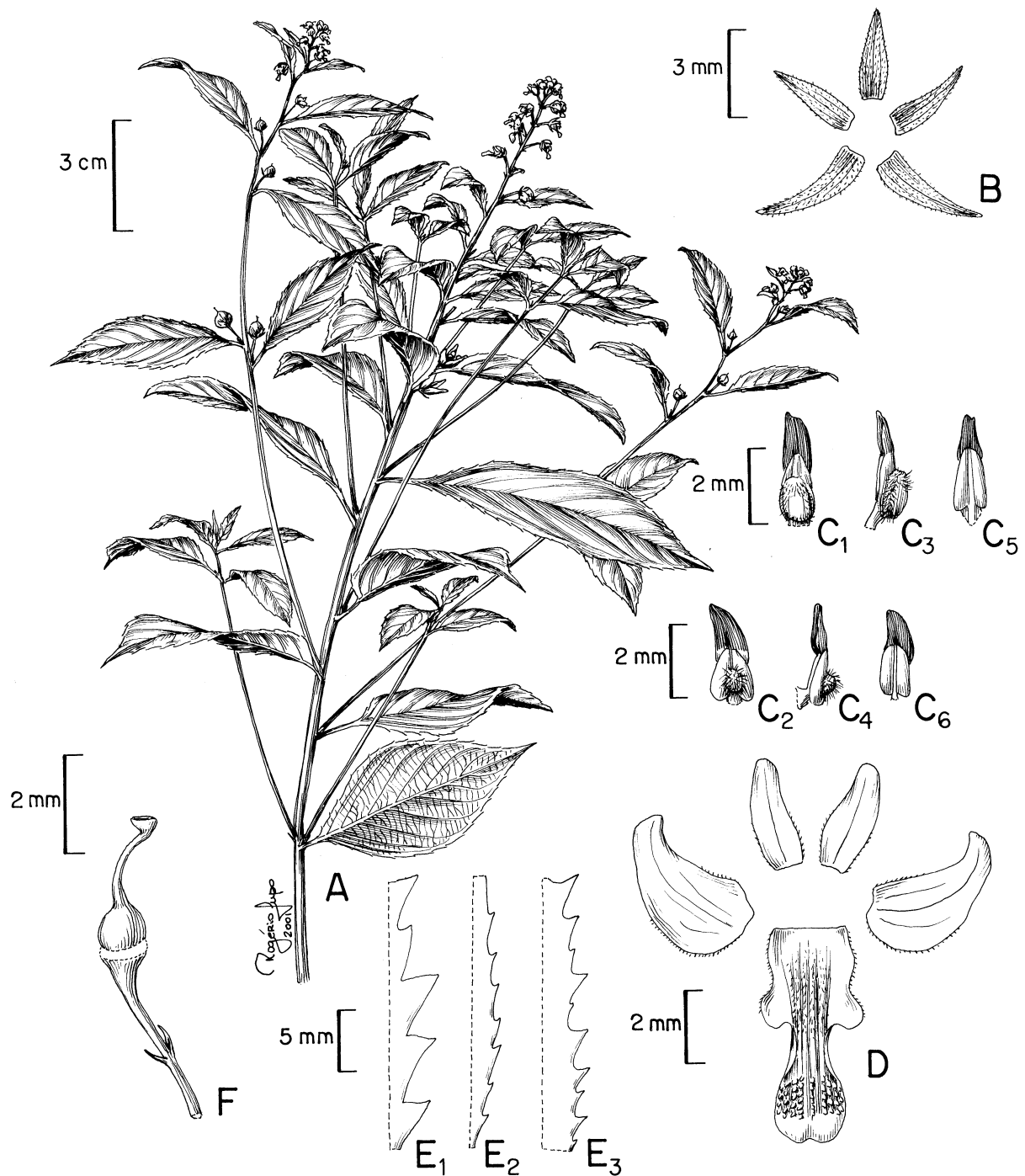


Figure 1. *Hybanthus verrucosus* Paula-Souza *sp. nov.* (A) Flowering branch (Noblick 3260). (B) Calyx (Pinto 02/88); (C₁–C₄) Variation of anterior stamens. (C₅–C₆) Variation of posterior stamens (C₁, C₃, C₅; Pinto 02/88; C₂, C₄, C₆; Noblick 3260). (D) Corolla (Pinto 02/88). (E₁–E₃) Margin of leaves (E₁, E₃; Lima 65; E₂; Noblick 3260). (F) Gynoecium, pedicel and bracteoles (sepals, petals and stamens removed; Pinto 02/88).

attenuate, acute to obtuse, glabrous to puberule on both surfaces. Flowers white with the anterior petal pale purple or lilac, arranged on racemose inflorescences; pedicel 3.5–4.5 mm, puberule; bracteoles $c. 0.5 \times c. 0.2$ mm, filiform; sepals $2.3\text{--}3.7 \times 0.5\text{--}1$ mm, lanceolate, the two inferior ones frequently subfalcate to falcate, acuminate, margin entire, base truncate, puberule; posterior petals $2.5\text{--}3 \times c. 1$ mm, oblong to lanceolate, subfalcate, glabrous, shortly ciliate; lateral petals $3.5\text{--}4 \times c. 2.5$ mm, ovate, falcate, glabrous, shortly ciliate; anterior petal 5–5.5 mm long, covered with small wart-like outgrowths, basal part $2.5\text{--}3 \times 2\text{--}3.3$ mm, suborbicular to orbicular, apex lobed, pubescent to tomentose along the nerves, apical part $2\text{--}2.8 \times 1.6\text{--}2.6$ mm, oblong, obovate to spatulate, apex emarginate to truncate; stamens subsessile, anthers 1.5–1.8 mm long, connective appendages orange-brown, $c. 1\text{--}1.5$ mm long, apex round, acute or truncate, frequently asymmetric, anterior stamens provided with globose to ellipsoid nectariferous appendages, pubescent to tomentose; style 2 mm long, glabrous, ovary $c. 1\text{--}1.3$ mm, glabrous. Capsule $6.5\text{--}8 \times 5\text{--}6.5$ mm, ovoid or globose; seeds 2×1.5 mm.

Notes: *Hybanthus verrucosus* Paula-Souza is very distinct from all other Brazilian species of the genus for its anterior petal covered with small wart-like outgrowths. This new species is morphologically closely related to *H. atropurpureus* (A.St.-Hil.) Taub., especially based on the habit and size of the flowers. The distinctive features of these two species are presented in Table 1.

GEOGRAPHICAL DISTRIBUTION AND HABITAT

Hybanthus verrucosus is endemic to the 'caatinga' of Alagoas and Bahia states (Fig. 2), being commonly found in disturbed areas such as pastures and roadsides.

Paratypes: BRAZIL: Alagoas: Pão de Açúcar, Clareira da mata do Fuzil, 10.vi.1981, A. Lima *et al.* 65 (ESA, IPA). Bahia: Cruz das Almas, $12^{\circ}40'S$, $39^{\circ}06'W$, 07.v.1988, G.C.P. Pinto 02/88 (HRB, IBGE, MBM, MG, RB, UB). Feira de Santana, Morro da Agulha, $c. 304$ msl, $12^{\circ}00'35'S$, $39^{\circ}11'56'W$, 25.iv.1997, F. França *et al.* 2198 (ESA, HUEFS). Iaçú, Fazenda Suibra, $12^{\circ}43'S$, $40^{\circ}07'W$, 12.iii.1985, L.R. Noblick & Lemos 3573 (ESA, HUEFS). Irecê, Alto da Gabriela, 10.v.1984, Fotius 3858 (ESA, IPA). Jussara, Toca, $11^{\circ}05'S$, $41^{\circ}54'W$, 655 msm, 02.iv.1984, O.A. Salgado & H.P. Bautista 335 (HRB, RB). Monte Santo, subida para igreja ao lado da escada, $10^{\circ}26'19'S$, $39^{\circ}20'09'W$, caatinga, 480 m, 27.ii.2000, A.M. Giuliatti & R.M. Harley 1831 (ESA, HUEFS).

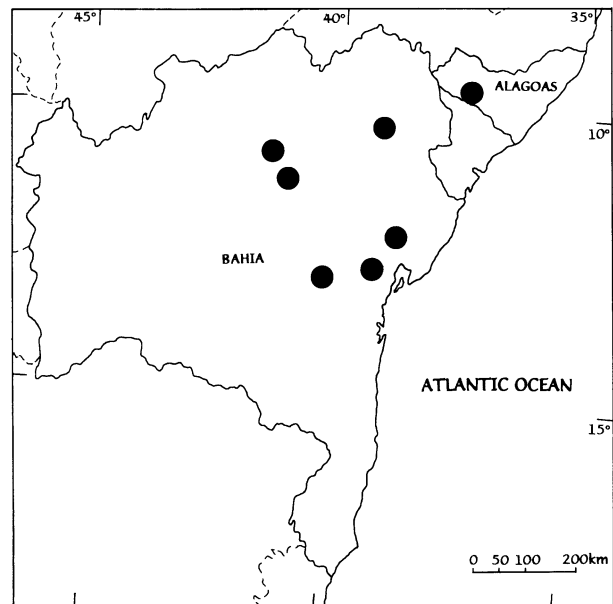


Figure 2. Distribution map of *Hybanthus verrucosus* Paula-Souza **sp. nov.** in north-eastern Brazil.

Table 1. Diagnostic features between *H. atropurpureus* and *H. verrucosus* **sp. nov.**

	<i>H. atropurpureus</i>	<i>H. verrucosus</i>
Leaf arrangement	Opposite	Alternate or opposite
Leaf margin	Serrate	Serrate to dentate
Bracteoles	Absent	Present
Size of sepals	$1.5\text{--}2 \times 1\text{--}1.3$ mm	$2.3\text{--}3.7 \times 0.5\text{--}1$ mm
Colour of anterior petal	Dark purple to almost black	Pale purple or lilac
Surface of anterior petal	Smooth	Warty
Distribution	States of Bahia, Goiás (including Distrito Federal), Mato Grosso do Sul, Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo	States of Alagoas and Bahia (Fig. 2)

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