



***Dorstenia acangatara* (Moraceae), a new and threatened species from Southeastern Brazil**

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Abstract

Dorstenia acangatara (Moraceae), a new species, endemic to the Atlantic rainforest between Espírito Santo and Minas Gerais states, in Southeastern Brazil is described and illustrated. *D. acangatara* is considered threatened by IUCN standards due to its restricted geographic area of occurrence.

Key words: *Dorstenia*, taxonomy, Atlantic rainforest, Neotropics

Introduction

With approximately 108 species, *Dorstenia* Linnaeus (1753: 121) is the second largest genus of Moraceae and the largest in the tribe Dorsteniinae. The genus has pantropical distribution and its range extends from (sub)tropical America to Africa, Madagascar and Arabian Peninsula (Berg & Hijman 1999). *Dorstenia* is easily distinguished from other Moraceae by its herbaceous to subshrub habit, the absence of tepals in the pistillate flower, interfloral bracts simple, and an expanded receptacle showing several minute flowers, congested and fused one each other with the peripheral ones fused with the receptacle margin (De Granville 1971; Berg 2001).

Taxonomic treatments of the genus have been made by Carauta (1978), Berg & Hijman (1999) and Berg (2001), following the proposition of sections as described by Fisher & Meyer (1846). Afterwards, Carauta & Valente (1983) and Carauta *et al.* (1974a, 1974b, 1975, 1976, 1996) described new taxa from Brazil and, since then, there has been no new contribution to the genus from this country. Romaniuc *et al.* (2010) listed 37 species of *Dorstenia* occurring in Brazil, as a contribution to the list of species to this country. Recent papers (Machado & Vianna Filho 2012, Santos & Romaniuc (2012) presented two new species of the genus from Brazil.

Material and method

The new species was identified from herbarium collections. Additionally, one live population of the new species was found in the field. Vouchers were deposited in the HUEFS and RB herbaria. The preserved material was compared with the *Dorstenia* samples in the main collections to the group: R, RB, GUA, MG, SP, SPF, UB, BHCB, MBM herbaria, and with digital images in on-line databases (NY, MO, P). Fresh

material of both *Dorstenia albertii* (1974a:63) and the new species were observed under a stereomicroscope at magnifications of 10–30x.

Taxonomic Treatment

Dorstenia acangatara M.D.M.Vianna, Al.Santos, A.F.P.Machado, Mansano & Romaniuc, *sp. nov.*, Fig. 1, Fig. 2.

Type:—BRAZIL. Minas Gerais: Caratinga, Estação Biológica de Caratinga, Fazenda Montes Claros, 19°44'11"S/41°49'18"W, 578 m.s.m, 24 Mar 2000, *J.A.Lombardi* 3639 (holotype BHC51149!).

Diagnosis:—*Similis Dorstenia albertii* sed inflorescentis rubris et viridibus; margine inflorescentiae longe appendiculato-bracteata differt.



FIGURE 1: *Dorstenia acangatara* Photograph of the living plant in the field. (Julio Lombardi)

Description:—Herb to subshrub 30–50 cm tall; rhizome elongate, mainly supraterranean; stem 4–5 mm thick, glabrous to sparsely puberulous, internodes up to 1–3 cm long. Leaves in spiral: lamina oblong-cordate 14–20 x 10–12 cm, chartaceous, apex acute, base cordate, margin entire to denticulate; adaxial side glabrous; abaxial side puberulous, lateral veins 6–7 pairs, tertiary venation reticulate; petiole 10–12 cm long, puberulous; stipules persistent, ovate to oblong acuminate, 5–8 mm long, plurinerveous, coriaceous, glabrous to puberulous. Coenanthium reddish; peduncle 4 cm long, minutely puberulous; receptacle centrally attached, pateliform, 1–1,2 cm in diameter, outside dark green, minutely puberulous, internal side purplish, external side dark green, minutely puberulous; internal side purplish, glabrous to minutely puberulous, margin reddish, undulate; fringe to 0,4 mm long, long-appendiculate, appendages 9–17, 1 submarginal row, clavate, 0,5–1 cm long, reddish, puberulous short and long intercalate, usually with a green bract on its apex; staminate flowers among the pistillate flowers; tepals 2, stamens 2, puberulous, filament long; stigmas 2. Endocarp body not observed.

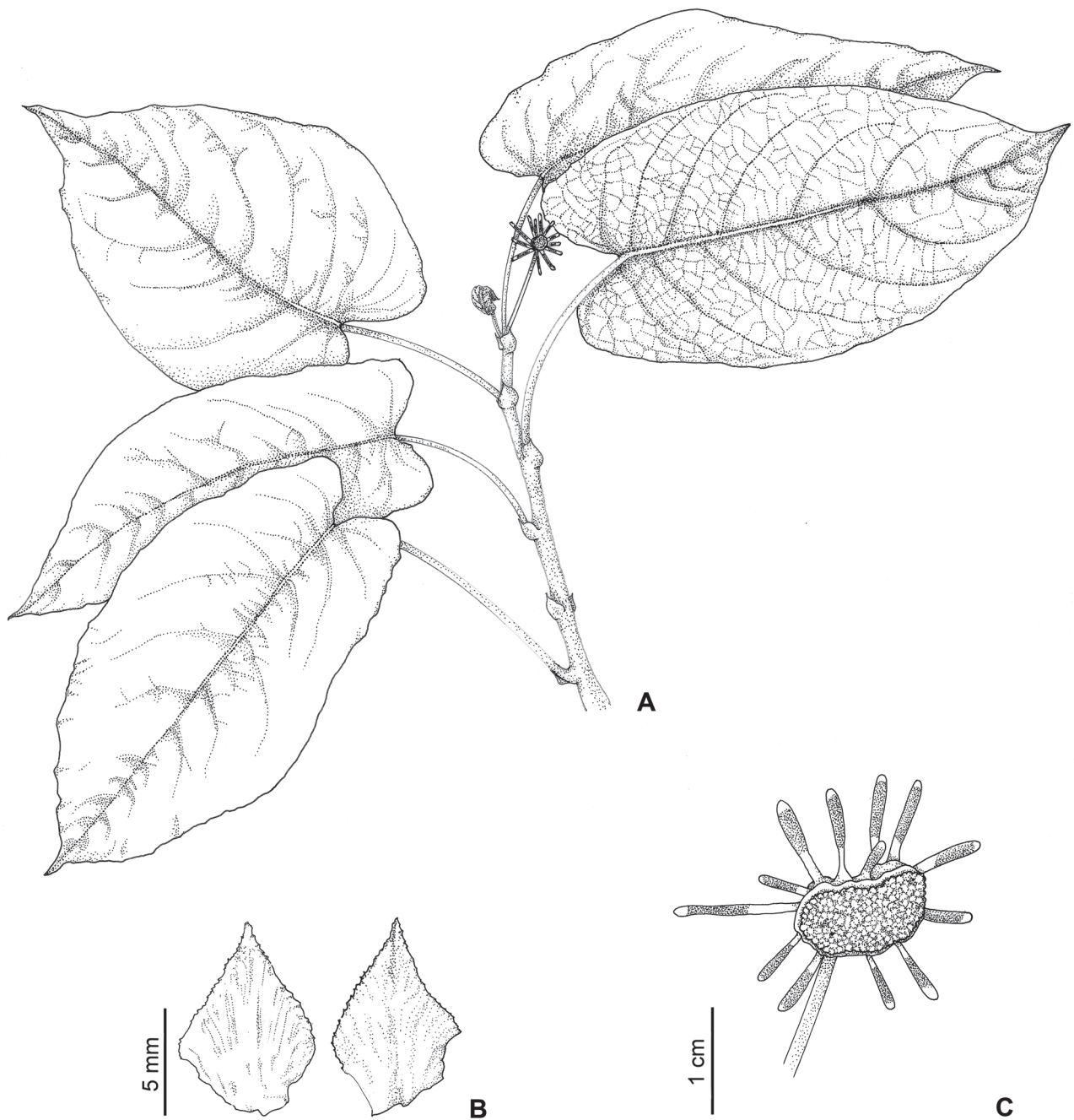


FIGURE 2: *Dorstenia acangatara* A: habit; B. Detail of the stipules (scale: 5 mm); C. detail of coenanthium (scale: 1 cm).

Distribution and Habitat:—*Dorstenia acangatara* is known only from two localities, from municipality of Caratinga, east Minas Gerais state and Alegre, south of Espírito Santo state, in Brazil, at elevations from 850 to 990 m in montane rainforest (collections marked by black dots in Fig. 3).

This species is a camephyte from shady and moist areas, which occur in litter soils, inside forests of the type locality. The new species is endemic to southeastern Brazil, found in the understory of wet tropical rainforest.

Etymology:—In the tupi language the epithet “acangatara” [*acanga*=head + *tara*=adornment] refers to the exuberant aspect of the coenanthium like a head adornment used by the Tupi’s, one of the main ethnic groups of Brazilian indigenous people.



MAP 1: Location of *Dorstenia acangatara* populations in Brazil (Minas Gerais and Espírito Santo states).

Additional specimens examined (paratypes):—BRAZIL. Espírito Santo: Alegre, between Monte Cristo and Burarama, Florestinha, 5 Out 2009, A.F.P.Machado *et al.* 855; 856; 858; 874 and 875 (HUEFS, RB).

Conservation Status:—According to IUCN (2011) criteria, this species is considered Critically Endangered (CR B1a) because its area of occupancy is less than 100 Km². The new species is known only from two localities.

Discussion:—This species falls into Carauta’s (1978) and Berg’s (2001) *Dorstenia* sect. *Dorstenia* L. species group. *Dorstenia acangatara* is characterized by the reddish coenanthium, with long appendages on its margin. The new species resembles *D. albertii* Carauta, Valente & Sucre (1974a:63), which also occurs in the Atlantic forest. The two species shares oblong-cordate leaves and distance between the internodes, but can be promptly distinguished by inflorescence reddish with the margin appendiculate-bracteate. The new species also resembles *Dorstenia fischeri* Bureau (1873:211) by the stipules shape and distance between the internodes, but differs by nonpeltate leaves and appendiculate inflorescence margin (TABLE 1).

	<i>Dorstenia acangatara</i>	<i>D. albertii</i>	<i>D. fischeri</i>
Stipules	ovate to oblong	ovate	ovate
Leaves	nonpeltate	nonpeltate	peltate
Margin of coenanthium	appendiculate-bracteate	bracteate	bracteate
Fringe of coenanthium	short	short	elongated

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