



A new species of *Anemopaegma* (Bignoniaceae, Bignoniaceae) from the Atlantic Forest of Brazil

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Abstract

The Atlantic Forest of Brazil includes one of the highest species diversity and endemism in the planet, representing a priority for biodiversity conservation. A new species of *Anemopaegma* from the Atlantic Forest of Brazil is here described, illustrated and compared to its closest relatives. *Anemopaegma nebulosum* Firetti-Leggieri & L.G. Lohmann has been traditionally treated as a morph of *Anemopaegma prostratum*; however, additional morphological and anatomical studies indicated that *A. nebulosum* differs significantly from *A. prostratum* and is best treated as a separate species. More specifically, *A. nebulosum* is characterized by elliptic and coriaceous leaflets (vs. ovate to orbicular and membranaceous in *A. prostratum*), smaller leaflet blades (3.6–5.5 x 2.0–3.0 cm vs. 6.7–13.0 x 4.2–8.4 cm in *A. prostratum*), orbicular prophylls of the axillary buds (vs. no prophylls in *A. prostratum*), solitary flowers (vs. multi-flowered axillary racemes in *A. prostratum*) and a gibbous corolla (vs. infundibuliform corollas in *A. prostratum*). In addition, *A. nebulosum* differs from *A. prostratum* anatomically in having thicker leaflet blades composed of two to four layers of palisade parenchyma (vs. one to three layers in *A. prostratum*), and seven to eight layers in the spongy parenchyma (vs. six to eight layers in *A. prostratum*). A key for the identification of all species of *Anemopaegma* from the Atlantic Forest of Brazil is presented.

Key words: Anatomy, Brazilian Atlantic Forest, cloud forest, morphology, tropical forests

Introduction

The Atlantic Forest of Brazil occurs in a variety of topographic and climatic conditions, encompassing humid lowland forests and coastal mountain regions as well as interior plateaus with long dry periods (Metzger 2009). This biome includes one of the highest species diversity and endemism in the planet, encompassing approximately 20,000 species of vascular plants (Myers *et al.* 2000). Despite its biological richness, the Atlantic Forest of Brazil is one the most threatened pieces of tropical forests around the world (Myers *et al.* 2000, Metzger 2009, Ribeiro *et al.* 2009), representing a priority for biodiversity conservation (Myers *et al.* 2000, Mittermeier *et al.* 2005).

Anemopaegma comprises approximately 47 species, representing the third largest genus of Tribe Bignoniaceae (Bignoniaceae) (Lohmann & Taylor 2014). The genus includes lianas and shrubs that are distributed throughout tropical America, where they occur in wet forests, dry forests and savannas (Lohmann 2006, Lohmann & Taylor 2014). Phylogenetic studies, based on molecular and morphological data (Lohmann 2003, 2006), showed that the genus is highly supported as monophyletic and inserted in a clade that is characterized by stems with multiples of four phloem wedges in cross section (Lohmann 2006).

Members of *Anemopaegma* have cylindrical and striated branchlets, without interpetiolar gland fields, solid or hollow piths, 2–3(–5)-foliolate leaves, with the terminal leaflet often modified into a simple or trifid tendril. The inflorescences are axillary, organized in fascicles, racemes or thyrses. The flowers are zygomorphic, with a cupular, truncate or 5-lobed calyx, usually with patelliform/cupular glandular trichomes (*sensu* Nogueira *et al.* 2013) clustered close to the margins; the corolla is infundibuliform, generally yellow and lepidote externally; the ovary is stipitate, smooth or covered by glandular trichomes; a large nectary disc surrounds the ovary. The capsule is thick, mostly compressed, elliptic and woody, bearing seeds with large hyaline-membranous wings that surround the seed body (Lohmann & Taylor 2014).