



## Miscellaneous New Species of Brazilian Bromeliaceae – III

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### Abstract

The authors describe and illustrate 14 new Bromeliaceae species: *Aechmea avaldoana*, *Ae. gregaria*, *Ae. timida*, *Alcantarea lanceopetala*, *A. nana*, *A. recurvifolia*, *Billbergia matogrossensis*, *Bromelia amplifolia*, *Cryptanthus walkerianus*, *Encholirium viridicentrum*, *Vriesea bifida*, *V. lilliputiana*, *V. magnibracteata* and *V. tubipetala*.

**Key words:** Bromelioideae, morphology, Pitcairnioideae, taxonomy, Tillandsioideae

### Introduction

The family Bromeliaceae, with 3,352 species and 58 genera (Luther 2012), is one of the most remarkable constituents of the tropical forests in the Americas and contributes significantly to the amazing biodiversity of the communities where they occur (Benzing 2000). Currently, 1,306 species are accepted to occur in Brazil belonging to 44 genera and 1,181 species and 23 genera recognized as endemic (Forzza *et al.* 2013). According to Sobral & Stehmann (2009), from 1990 to 2006, 2,875 new angiosperm species were described in Brazil, including 280 new Bromeliaceae species. This rate of publication is considered a useful indicator of floristic richness as well as of lack of adequate floristic knowledge. This fact reveals huge gaps in our knowledge about the species that make up Brazilian biomes and highlights the need for improving scientific production by means of cooperative taxonomic networks and collaborative research as an essential strategy to surpass logistical difficulties, for example complex topography, resource scarcity, and reluctant policies.

The study presented here is the result of cooperative collecting efforts in underexplored sites in the highly biodiverse Atlantic forest biome, as well as in the Campos Rupestres and Cerrado domains in Espírito Santo, Minas Gerais, Mato Grosso, and Bahia, revealing new and thus far unknown species in Bromeliaceae.

### Material & Methods

The studied species were collected during field activities with the specific purpose of biodiversity discovery in Bromeliaceae. The descriptions and illustrations are based on careful examination of living, fertile material, including the use of a stereomicroscope, prior to voucher specimen preparation. Descriptive terminology follows Smith & Downs (1974, 1977, 1979), with adaptations following Scharf & Gouda (2008). Voucher specimens were pressed and dried following conventional methods and deposited in CEPEC, HB, R or RB (acronyms follow Index Herbariorum; Thiers continuously updated). Living specimens were grown at the Refúgio dos Gravatás, in Teresópolis, Rio de Janeiro following the guidelines recommended by the Convention on Biological Diversity (CBD 1993) for *ex situ* conservation.

**Observations:**—This new species closely related to *V. claudiana* Leme, Trindade-Lima & Ribeiro (2010c: 19), but can be distinguished from it by the purple-wine spotted leaf blades (*vs.* greenish-glaucous with darker green irregular cross-veins), primary bracts shorter to equaling the stipes (*vs.* equaling to slightly exceeding the stipes), longer stipes (2.5–3 cm *vs.* 1–2 cm), longer and narrower petals (38 × 11–12 mm *vs.* 35 × 13–14 mm), bearing rounded basal appendages (*vs.* acute, subobtusate to obtusely and irregularly bidentate), stamens shorter than the petals (*vs.* exceeding the petals by a fraction of the anthers) and filaments not at all dilated toward the apex (*vs.* distinctly dilated). This new species can also be compared to *V. marceloi* Versieux & Machado (2012: 37), differing from it by the larger size when in bloom (*ca.* 70 cm *vs.* 40–60 cm), leaf blades green with purplish-wine spots throughout (*vs.* purple toward the apex and without spots), the usually longer peduncle (35–37 cm *vs.* 13.5–25(–39) cm), peduncle bracts exceeding the internodes (*vs.* shorter), stipes of the lateral branches longer (2.5–3 cm *vs.* 1.1–2.1 cm), longer flowers (*ca.* 47 mm *vs.* 31–40 mm), longer petals (*ca.* 38 mm *vs.* *ca.* 32 mm) with obovate and rounded basal appendages (*vs.* lanceolate, acute to acuminate) and the stamens shorter to equaling the petals (*vs.* distinctly exceeding).

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