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A NEW SPECIES OF *GUZMANIA* RUIZ & PAV. (BROMELIACEAE) FROM VENEZUELA

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ABSTRACT. A new species of Bromeliaceae, *Guzmania loeflingiana*, is described and illustrated. It appears to be related to *G. cylindrica*.

Key words: *Guzmania*, Bromeliaceae, new species, Venezuela

INTRODUCTION

The genus *Guzmania* (Bromeliaceae: Tillandsioideae), comprises 212 species (Luther 2012) distributed in the Americas, in the southern USA (Florida), Mexico and the Antilles south to Brazil and Peru (Smith & Downs 1977; Uteley 1994; Smith 1998). It includes approximately 6% of the species in the family.

In the last full treatment of the genus for the country, 27 species were included in the Flora de Venezuela (Smith 1971). Subsequently in other formats, Holst (1994, 1997) and Holst and Vivas (2008) reported 28 species. The number rises to 29 with the description of this new species.

Guzmania species are distributed throughout the country, but predominately occurs in the Andes and Coastal Cordillera. The genus is less well represented in the Llanos and Guayana Shield. Species of *Guzmania* can be found from sea level to approximately 3500 m elevation, with many species being cloud forest specialists (Vivas 2006). Species of the genus may be epiphytic, terrestrial, or rupicolous, and are important in the ecology of forested ecosystems due to their diversity and abundance (Laessle 1961; Blanchado et al. 1986). Some species also form part of the diet of the Spectacled Bear and all Venezuelan species are tank plants with the capacity of accumulating water in the base of the rosette, which may harbor a rich fauna (Till 2000; Paz 1977, 1980).

Most of species of the genus grow in cloud forests or evergreen forests, except ones that reach the subparamo such as *Guzmania lychnis* and *G. confinis*, this last one reaches a higher elevation (ca. 3500 m). *Guzmania lingulata* and *G. monostachia* have the widest distribution in Venezuela. Four species of the genus are terrestrial, *G. confinis*, *G. nubicola*, *G. steyermarkii*, and *G.*

terrestris. Twelve species are epiphytes and 14 are facultative, growing on the ground, on trees, or on rocks.

Nine species of *Guzmania* are endemic to Venezuela, six of which are restricted to the Cordillera de la Costa.

TAXONOMIC TREATMENT

Guzmania loeflingiana Y. Vivas & B. Holst, **sp. nov.** TYPE: Venezuela. Aragua: Parque Nacional Henri Pittier, camino hacia Guacamaya, desde la estación Biológica Rancho Grande, 10°21'N, 67°41'O, 1230–1400 m, 14 abr. 2006, Y. Vivas, B. Holst, B. Manara, L. Peña y O. Vivas 1427 (HT: VEN). FIGURES 1, 2.

Herba epiphytica, 32–40 cm alta; folia, saltem interiora, suberecta. Scapus inclusus, ca. 10 cm longus, bracteis inferioribus ovatis, superioribus late ovatis, omnibus conspicue internodos excedentibus. Inflorescentia simplex, ellipsoidea, 6–10 cm longa. Bractea floralis obovata, apice ex obtuso subacutae, sepala conspicue excedentes, margine late membranaceae. Flores 8,5–9 cm longi. Sepala lanceolata vel oblanceolata, apice acuta, 3–3,5 cm longa, 8–9 mm connata. Petala ex albo albo-viridia.

Epiphytic or lithophytic herb 35–40 cm tall in flower. *Leaves* 20–35 cm long; *sheaths* conspicuous, obovate to elliptic, 9–12 × 5–7 cm, densely brown punctate-lepidote above and below; *blades* suberect, ligulate to slightly lanceolate, 16–20 cm long, 2–4 cm wide, apex obtuse, mucronate, brown punctate-lepidote above and below; *scape* erect, included, 17–25 cm long, 3–4 mm diameter; *scape bracts* erect, densely imbricate, the lower ones ovate, apex obtuse, mucronate, the upper broadly ovate, apex subacute, mucronate, all conspicuously

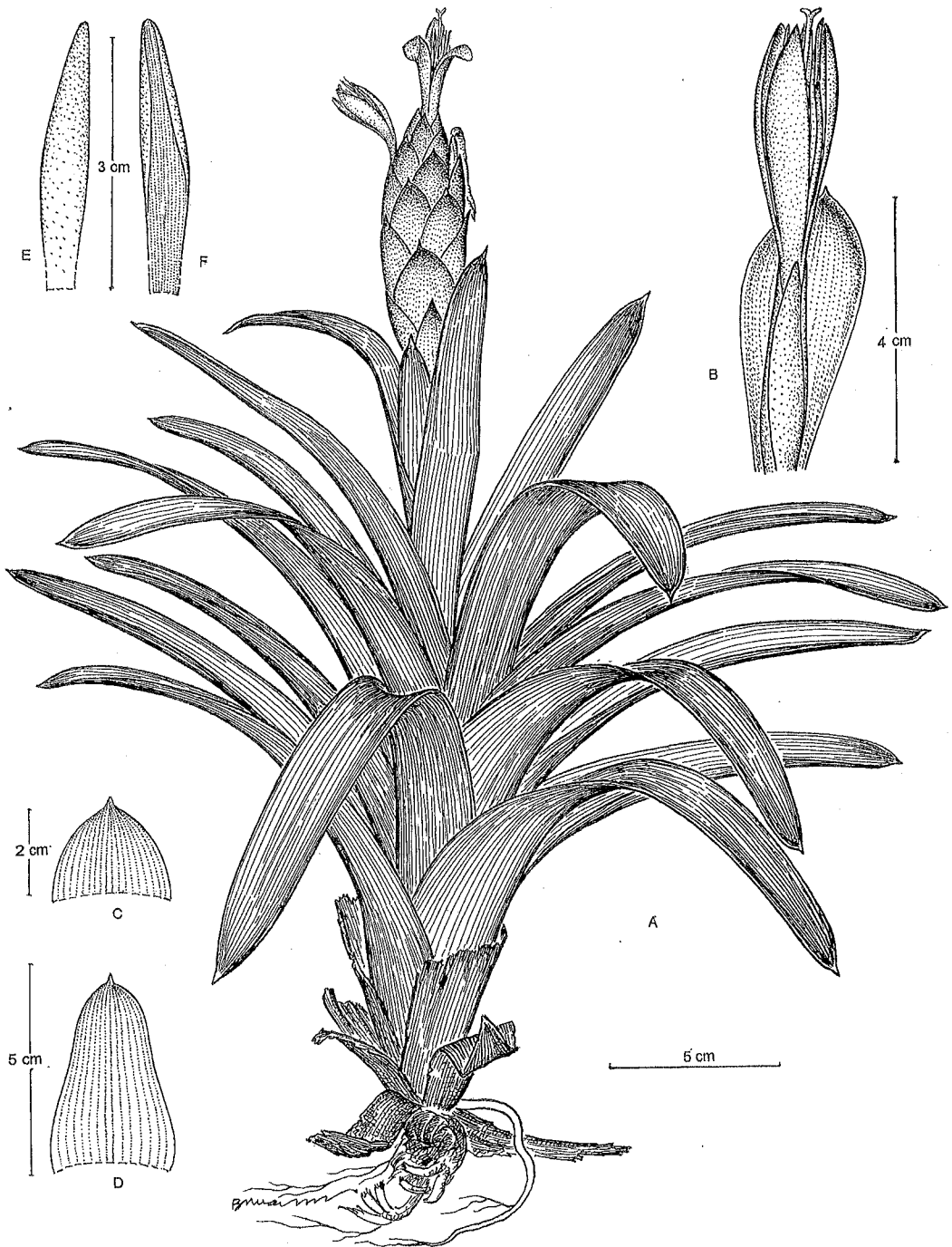


FIGURE 1. *Guzmania loeflingiana*. A. Habit. B. Flower and floral bract. C. Upper scape bract. D. Lower scape bract. E. Sepal, lower surface. F. Sepals, upper surface. Illustration by Bruno Manara from a photograph of the live plant and the holotype specimen.



FIGURE 2. *Guzmania loeflingiana*, flowering in cultivation at the Marie Selby Botanical Gardens (MSBG 1992-0438). Photograph by Vern Sawyer.

exceeding the internodes, subdensely brown punctate-lepidote above and below, light green, slightly succulent when fresh; **inflorescence** simple, ellipsoid, 6–10 cm long, 2.5–3 cm diameter, slightly exceeding the leaves; **floral bracts** densely imbricate, obovate, succulent, lustrous when fresh, pale dull green to dull brownish green when dry, 4.5–5 cm long, apex obtuse to subacute, slightly cucullate, conspicuously exceeding the sepals, margin widely membranaceous, punctate-lepidote, nerved toward the apex when dry, lustrous green to whitish toward the base; **flowers** 8–9 cm long, subsessile; **sepals** lanceolate to oblanceolate, apex acute, 3–4.5 cm long, connate 8–9 mm, subdensely dark punctate-lepidote above and below; **petal-blades** whitish to white greenish or cream, lobes elliptic to obovate, ca. 7 cm long, apex acute; **stamens** included; **capsules** 3.5 cm long; **seeds** ca. 2 cm long, the coma light brown.

Distribution: Endemic to the evergreen broad-leaf humid forests or cloud forests of Cordillera de la Costa in northern Venezuela (Aragua, Falcón, Lara, Miranda, Yaracuy); 200–1600 m elevation.

Flowering: January, March–May, September, October.

Comments: *Guzmania loeflingiana* appears to be most closely related to *G. mucronata* (Griseb.) Mez from the central Cordillera de la Costa (Aragua, Distrito Capital, Miranda) and *Guzmania cylindrica* L.B. Sm. of Falcón and Yaracuy states. The following key will help distinguish the species.

1. Floral bracts lustrous and smooth when dry, often subcastaneous, with up to a 1 mm wide hyaline margin; inflorescence 12–28 cm long *G. cylindrica*
1. Floral bracts dull and verruculose when dry, hyaline margins 1–2 mm wide; inflorescence 6–17 cm long 2
2. Floral bracts mostly acute at the apex, 6–7 cm long; inflorescences (excluding scape) 13–17 cm long, often recurved . . . *G. mucronata*
2. Floral bracts broadly obtuse to rounded at the apex, 4.5–5 cm long; inflorescences (excluding scape) 6–10 cm long, ellipsoid, erect. *G. loeflingiana*

The flowers of all of these species open at night and persist into the morning hours. One specimen of *Guzmania loeflingiana* (Plowman *et al.* 13407) was reported to be “exuding copious mucilage from stem and inflorescence.”

Etymology: *Guzmania loeflingiana* is named in the memory of Pehr Loeffling (1729–1756), student of Carl Linnaeus and explorer of Venezuela in the mid 1700s before his premature death at the age of 27.

Conservation Status (IUCN): Data Deficient. *Guzmania loeflingiana* grows in several protected areas such as Henri Pittier National Park in Aragua state, and was reported to be “common” in at least one locality in Miranda state (*Bernardi 5890*), but outside of those areas forests are routinely cleared for agriculture and other types of development. The species may be able to adapt to changing vegetation cover as at least one specimen was collected from citrus tree trunk (*Plowman et al. 13407*).

Paratypes: **Aragua:** *Manara s.n.* (VEN 172909); *Foster 2758* (US); *Owen & Gaffee 107* (MY); *Steyermark 89807* (NY); **Aragua-Miranda:** *Meier, Kunert & Speckmai 4470* (VEN); **Falcón:** *Bernardi 5890* (NY); *Bunting 3181* (US, VEN); *Plowman, Berry & Wingfield 13407* (F, US); *Plowman, Berry & Wingfield 13453* (F, VEN); **Lara:** *Steyermark, Smith & Carreño 111740* (VEN); **Lara-Yaracuy:** *Oliva-Esteve 223* (SEL, VEN); **Miranda:** *Bernardi 5890* (NY); *Steyermark & Davidse 116650* (MO); **Yaracuy:** *Davidse, Liesner & Steyermark 20743* (MO, VEN); *Grant, Oliva-Esteve 223* (SEL, VEN); *Oliva-Esteve & Manara 99-3348* (US); *Meier & Oliva-Esteve 4258* (VEN); *Luther s.n.* (SEL 068187); *Mori, Holmgren & Steyermark 14649* (VEN).

ACKNOWLEDGEMENTS

We thank the Instituto Nacional de Parques of Venezuela for granting Administrative Providencias Authorization No. PAA-345-2005, PAA-262-2006 and PAA-286-2007 in order to carry out the collection activities in some national parks, Harry Luther and an anonymous reviewer for their observations and valuable comments, to Bruno Manara for his excellent drawing, and to Luis Peña for his invaluable assistance in the field.

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