



Guzmania altomayoensis (Bromeliaceae): a New Species from Peru related to *Guzmania striata* L.B.Sm.

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Abstract

A new *Guzmania* species from Peru, *G. altomayoensis* is described, illustrated and compared to the morphologically closely related species *Guzmania striata* from Ecuador. This plant is in culture for many years at the nursery of Jeffrey Kent in Vista, California, and recently at Anthura in Bleiswijk, the Netherlands. A specimen has been on loan at the Botanic Garden Utrecht to prepare this publication and preserve herbarium material for the type specimens.

Key words: Taxonomy, Poales, Tillandsioideae, Andes

Introduction

The genus *Guzmania* Ruiz & Pavon (1802) is the second largest genus in the subfamily Tillandsioideae and consists of 220 recognized species and 26 infraspecific taxa, which is slightly more than the genus *Vriesea* with 216 species, mainly distributed in the Atlantic Rainforest of Brazil (Gouda *et al.* cont. updated). Most species of *Guzmania* occur in the southern part of Central America and the north-western part of South America (including Venezuela), with Ecuador as biodiversity hotspot for the genus.

The genus includes the about 10 species formerly described in *Sodirola* (André 1877: 167) with the sepals more than half connate into a slenderly cylindrical tube, the free lobes often cucullate or dilated. These species were transferred to *Guzmania* by Lyman B. Smith (1934). All other species of *Guzmania* have the sepals not more than about 1/2 connate, not forming a slender tube and sometimes even free of each other. The group of species with the sepals in a slender tube is now 22 in number (Gouda *et al.* cont.upd.) and deserves to be recognized as a subgenus of *Guzmania*.

The species described as new here, has the sepals only short connate. It is from the Alto Mayo region of northern Peru, which is very interesting floristic area. Several species from different families have been described from this area, for example two Solanaceae, two Orchidaceae and several Bromeliaceae like *Vriesea altomayoensis* Luther & Norton (2009: 2004), *Guzmania vinacea* Luther & Norton (2008: 203) and *Tillandsia altomayoensis* Gouda (2019: 62).

Taxonomy

Guzmania altomayoensis Gouda, *sp. nov.* Figs. 1 and 2.

Diagnose:—A *Guzmania striata* like species but more robust and much taller, flowering 130 cm tall (*vs.* 70 cm), wider leaf blades (to 6 cm *vs.* 3 cm), the lower ones narrowly rounded and apiculate (*vs.* narrowly caudate), inflorescence lax with an elongate axis (*vs.* subdense, axis short), peduncle 11–13 mm in diameter (*vs.* 7 mm), spikes 9–12 cm long and 3–3.5 cm in diameter (*vs.* 5 cm long, 1.5 cm in diameter), floral bracts c. 3 cm long (*vs.* 2 cm long), sepals rounded then acutish or acuminate and cream colored (*vs.* obtuse and castaneous).

Type:—Peru, San Martin, Alto Mayo region, 2000 m elevation, *s.d.* Jeffrey Kent *s.n.*, flowered in cultivation at Antura Bleiswijk (NL) March 2025 (holotype U, isotype HUT).

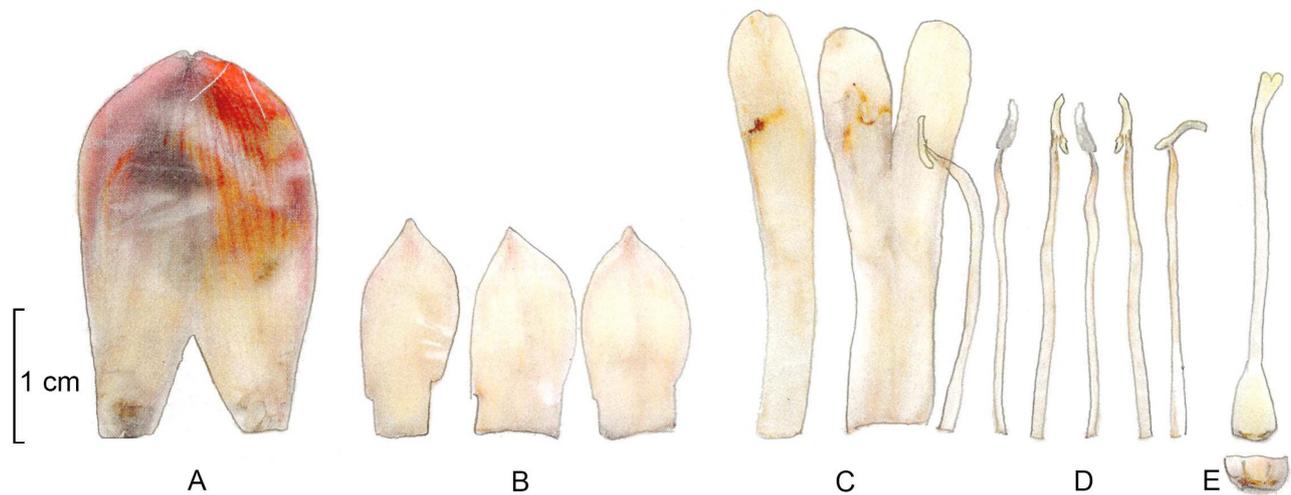


FIGURE 1. Drawing of the flower parts of the type specimen of *Guzmania altomayoenis*: A. Floral bract, split at the base; B. Sepals; C. Petals; D. Stamens; E. Flower receptacle and pistil. Drawing by the author.

Description:—**Plant** c. 60 cm tall, 135 cm wide, flowering 130 cm tall, acaulescent, not dense, with c. 40 leaves, forming an open rosette, lustrous-green. **Leaves** spirally arranged, thin coriaceous, 70–75 cm long, shorter than the peduncle; **sheath** ample, merging into the blade, stiff-coriaceous, ovate, stiff-convex in transection, divergent, c. 20 cm long, 9.5 cm wide, with hyaline margins, subdensely lepidote on both sides (adaxially less toward the base), with closely appressed pale-brown trichomes, brown striate to castaneous at the base abaxially and green in the upper 2/3, even; **blade** arching, somewhat stiff and thin coriaceous, strongly channeled except the apical part, strap-shaped (linear oblong), 48–64 cm long, to 6.5 cm wide at the base, margins firm, with many longitudinal grooves (especially the inner ones); apex narrowly rounded and apiculate to narrowly acuminate in the inner ones, the inner ones pungent, sparsely lepidote on both sides, with minute punctulate trichomes, not masking the color of the blade. **Inflorescence** erect, once-branched, of 6–8 spirally arranged branches, 107 cm long, fertile part 42 cm long, c. 20 cm wide/diameter, lax; **peduncle** elongate, wholly covered by bracts, erect, stout, c. 75 cm long, 13 mm in diam., glabrous, cream colored and red striate; **peduncle bracts** erect and clasping the peduncle, the lower ones short foliaceous and suberect, densely imbricate, the lower ones much exceeding to about twice as long as the internodes distally, thin coriaceous, 8–11 cm long, 5.5 cm wide, ovate and triangular attenuate, acuminate and pungent, sparsely lepidote (more adaxially toward the base), green to brown at the base and red striate and marginate; **axis** (rachis) elongate, stout, flexuous, 3–4 angled, glabrous, tinged reddish or vinaceous, internodes 3–4 cm long; **primary bracts** spreading with the branches, exposing the main axis, thin rigid-coriaceous, 4.5–6 cm long, 5 cm wide, ovate, acuminate, exceeding the sterile part of the branches, red striate; **spikes** divergent to spreading, very densely, polystichously c. 70 flowered, terete, fusiform, subobtuse, 9–12 cm long, 3–3.5 cm wide, with a bicarinate prophyll well above the base, terminal spike longer and subcylindrical with two remote bracts at the base; **stipes** (of the lateral spikes) short, naked, very stout (1.4 cm in diameter), 1.2 cm long, glabrous; **floral bracts** suberect, very densely imbricate, thin coriaceous, even except near the apex, ecarinate but with a subapical elevated thickened and incurved midvein, obovate, rounded or broadly obtuse (spitting open when stretched), slightly inflated, c. 3 cm long, 1.9 cm wide, much exceeding the sepals, many times longer than the internodes, concealing the rachis, with narrow hyaline margins, abaxially glabrous (adaxially sparsely brown appressed lepidote especially toward the apex), green and red striate in the center to red toward the margins. **Flowers** nocturnal, sessile, without the petals 6.5 mm in diameter, 36 mm long (petals stretched), not fragrant, contiguous with each other and the rachis (suberect); **receptacle** short, broadly obconic, 3 mm long,



FIGURE 2. The Type specimen of *Guzmania altomayensis* before preparing the herbarium vouchers: A. Habit; B. Inflorescence, notice the two remote bracts at the base; C. lateral spike. Photos by the author.

5.6 mm in diameter, filled with laminar nectary tissue; **sepals** stiff-coriaceous to fleshy at the base, surface even or slightly nerved toward the apex and adaxially, symmetrical, obovate, rounded then acutish or acuminate, stiffly convex, 1.6–1.7 cm long, 0.8–0.9 cm wide, with hyaline margins, adaxial ones distinct from the abaxial one, adaxial ones bluntly carinate, evenly short connate for 3 mm, glabrous, lustrous, cream colored; **petals** not fleshy, 3.3 cm long, 0.6–0.7 cm wide, lingulate, rounded and slightly cucullate, with oblong-oblongeolate blade, highly connate and forming a tube of about 14 mm long, white, blade spreading. **Stamens** exerted caused by spreading of the petal-blades, all equal in length, 1.6 cm long, shorter than the pistil; **filament** largely conglutinate to the petals, adnate part flat and thin but the free part dilated, free part s-shaped, white, distally abruptly acuminate; **anther** dorsifixed at about one third from base, with strongly recurved upper half, 4–5 mm long, 1.2 mm wide, short bi-lobed at the base, obscurely apiculate, green, pollen cream colored. **Pistil** exceeding the stamens, 2.7 cm long; **ovary** subpyriform, 4.5 mm long, 3 mm wide, attenuate from near the base and slightly contracted into the style, largely superior, pale green; **style** elongate, 3–4 times longer than the ovary, slender, white; **stigma** simple erect (weekly conduplicate) and slightly wider than the style, densely papillose at the margins, greenish.

Observations:—This new species resembles the much smaller *Guzmania striata* Smith (1959: 438). Obvious differences are the size, flowering 130 cm tall (*vs.* 70 cm), the much broader leaf blades (to 6 cm *vs.* 3 cm), the outer ones rounded and apiculate (*vs.* narrowly acuminate) and lax inflorescence with much longer spikes 9–12 cm long (*vs.* subdense inflorescence, spikes 5 cm long), for more detailed differences see Table 1. It also resembles *Guzmania altsonii* Smith (1930: 7) in some way, especially the sharply pungent peduncle bracts and inner leaves, which is rare in the genus. The later has more slender (fusiform) spikes 3.5–6(–8.2) cm long, ca 2 cm in diameter and 10–20-flowered (*vs.* 9–12 cm long, 3–3.5 cm in diameter and c. 70 flowered).

Etymology:—the name refers to Alto Mayo, the area where the type specimen was collected.

Phenology:—the plant started to flower in culture in March and flowering could continue for several months (because of the many flowered spikes), it is not clear if this would be similar in the wild.

Conservation Status:—No information about the populations is available to the author, so the conservation status should be considered DD (Data Deficient).

TABLE 1. Morphological comparison between *Guzmania altomayoensis* sp. nov. and *Guzmania striata*.

| | <i>Guzmania altomayoensis</i> | <i>Guzmania striata</i> |
|---------------------------------------|--|----------------------------|
| Plant | | |
| - (flowering) flowering size | 130 cm | 70 cm |
| - leaf length | 70–75 cm | 80 cm |
| sheath | | |
| - form | ovate | elliptic |
| - length | 20 cm | 15 cm |
| - color | brown striate-castaneous & green distally | longitudinally red striate |
| blade | | |
| - shape | strap-shaped (linear oblong) | linear |
| - width | up to 6.5 cm | 3 cm |
| - (apex) toward the apex | narrowly rounded & the inner ones apiculate-acuminate, pungent | acuminate |
| Inflorescence | | |
| - number of branches | 6–8 | 4 |
| - total length including the peduncle | 107 cm | 14 cm |
| - density | lax | subdense |
| peduncle | | |
| - diameter | 13 mm | 7 mm |
| peduncle bracts | | |
| - distribution | densely imbricate | imbricate |
| - apex | acuminate & pungent | acuminate |
| inflorescence rachis | | |

...continued on the next page

TABLE 1. (Continued)

| | <i>Guzmania altomayoensis</i> | <i>Guzmania striata</i> |
|--------------------------------|--|------------------------------------|
| - straightness | flexuous | geniculate |
| primary bracts | | |
| - apex | acuminate | apiculate |
| - relative length | exceeding the sterile part of the branches | reaching over halfway the branches |
| Spikes | | |
| - direction | divergent-spreading | divergent |
| - form 3D | fusiform | ellipsoid |
| - length | 9-12 cm | 5 cm |
| - width | 3-3.5 cm | 1.5 cm |
| Floral bracts | | |
| - surface | even | slightly nerved |
| - form | obovate | broadly elliptic |
| - length | 3 cm | 2 cm |
| - relative length flower parts | much exceeding the sepals | equaling or exceeding the sepals |
| - indument (abaxially) | glabrous | obscurely lepidote |
| - color | green to red striate and marginate | red |
| Flowers | | |
| - sessile/pedicellate | sessile | subsessile |
| sepals | | |
| - form | obovate | narrowly obovate |
| - apex | rounded/acuminate | obtuse |
| - color | cream colored | castaneous |
| petals | | |
| - length | 3.3 cm | 2.5 cm |
| - color | white | yellow |

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