

The History of the Genus *Mezobromelia* and a New Combination for this Genus.

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Photos by Eric Gouda.

The Genus *Mezobromelia* was created in 1935 with the description of *Mezobromelia bicolor* Smith (1935) and for a long time that would be the only species in the genus, until in 1948 *Mezobromelia fulgens* (Smith 1948) was described, now *Gregbrownia fulgens* Till & Barfuss (in Barfuss et al. 2016). Several other species described later were transferred to *Gregbrownia* in the same publication, like *Mezobromelia lyman-smithii* Rauh & Barthlott (in Rauh 1976), *Mezobromelia trollii* Rauh (1977) and a new combination *Mezobromelia hutchisonii* (L.B.Sm.) Weber & Smith (1983) earlier described as *Tillandsia hutchisonii* Smith (1966). *Mezobromelia brownii* Luther (1991) was also transferred to *Gregbrownia* in that publication.

Several other species described in other genera were later transferred to *Mezobromelia*, like *Tillandsia pleiosticha* Grisebach (1865) as *Mezobromelia pleiosticha* Utley & Luther (1991) and has been in *Guzmania*, *Thecophyllum* and *Vriesea* before; *Tillandsia capituligera* Grisebach (1866) as *Mezobromelia capituligera* Grant (1993), and has been in *Guzmania*, *Schlumbereria*, *Thecophyllum* and *Vriesea* before; *Tillandsia hospitalis* Smith (1948) as *Mezobromelia hospitalis* Grant (1993) has been in *Vriesea* before; *Vriesea magdalenae* Smith (1963) as *Mezobromelia magdalenae* Grant (1993).

So many of the current species of *Mezobromelia* traveled from one genus to another, mainly because of the subtle flower differences between the genera, that are easily lost in the drying process of herbarium specimens. The molecular study by Barfuss et al. (2016) strongly supports that *Mezobromelia* is a monophyletic (natural) group if the earlier mentioned species were transferred to *Gregbrownia*. In these results *Gregbrownia* is a sister group of *Guzmania* in the Non-core Tillandsiae Tribe. *Mezobromelia* however belongs to the Subtribe Cipuropsidinae and clusters together with *Cipuropsis* and the new genera *Josemania*, *Zizkaea*, *Goudaea* and *Lutheria* forming a sister group of *Werauhia*. Further study is needed to find out if *Mezobromelia* can be kept separated from *Cipuropsis*.

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Part of the key to the genera of Tillandsioideae from Barfuss et al. (2016) is cited below, to show the difference between the genera *Guzmania*, *Mezobromelia* and *Gregbrownia*.

“4a. Petals without basal appendages; stigma of the convolute-blade I type or the simple-erect type, occasionally of the simple-patent type or simple-pinnatisect type *Guzmania*

4b. Petals bearing basal appendages; stigma of the simple-erect type or the conduplicate-spiral type 5.

5a. Inflorescence compound, once or rarely twice branched, with branches composed of dense flower fascicles petals about 1/3–1/2 of their entire length conglutinate/connate into a tube, tips slightly divergent, bearing linear and entire basal appendages, highly adnate to the conglutinated/connate portion of the petals; stamens and style included within the corolla; anthers united into a tube surrounding the stigma, not versatile; stigma of the simple-erect type *Mezobromelia*

5b. Inflorescence compound, twice or rarely triple branched, a laxly flowered panicle; petals more than 1/2 of their entire length conglutinate/connate into a tube, blades spreading, bearing crenulated basal appendages adnate for less than 1/3 of the conglutinated/connate portion of the petals; stamens and style exerted from the corolla; anthers not forming a tube around the stigma, versatile; stigma of the conduplicate-spiral type (weakly spiral) *Gregbrownia*”.

So, both *Mezobromelia* and *Gregbrownia* have petal appendages like in *Vriesea*, but the latter has twice or triple branched inflorescences, while *Mezobromelia* has only a once branched inflorescence and the petals are less than half conglutinated or connate at the base (in *Guzmania* mostly highly connate, not mentioned in the key). Most *Mezobromelia* do look much like most *Guzmania* species, with the short thick branches for most part hidden by the primary bracts. That is the reason that there are probably other species of *Mezobromelia* hidden in the genus *Guzmania* and one of them is presented here with photographs and an emended description. The current number of species including this new combination is now six (Gouda et al. cont. upd.).

Mezobromelia verecunda* (L.B.Sm.) Gouda *comb. nov.

Basionym: *Guzmania verecunda* L.B.Sm. *Phytologia* 4: 366 pl. 4 figs. 4-6 (1953). Type: Colombia: Prov. Valle del cauca, Rio San Juan, below El Quere-mal, between km 52 & 53, basin of Rio Digua., Alt.1500 m., lat. 3.8811, long. -72.8667. 19-Mar.-1947. *Cuatrecasas, J.* 23875 (holotype COL!, isotypes: F, INPA, SEL, US! photo/fragment).



Figure 1. Habit of *Mezobromelia verecunda* (pink form) with a weakly S-shaped peduncle (left) and an erect peduncle (right), Botanic Gardens University Utrecht accession number 2018GR0054.

Plant stemless forming an open rosette. **Leaves** to 45 cm long, exceeding or much exceeded by the inflorescence, subdensely and minutely lepidote with brown appressed scales not masking the color of the leaves; **sheaths** elliptic, 8-10 cm long, dark castaneous at the base; **blade** ligulate, acuminate, or acutish, 25 mm wide, canaliculate in lower part and flat and arching to recurved in upper part, green. **Peduncle** erect, or sometimes in a flat S-shape, short to elongate; **peduncle-bracts** strict, densely imbricate, foliaceous, the upper ones roseate. **Inflorescence** once branched, fertile part ca 15 cm long; **primary bracts** broadly ovate or orbicular with a subtriangular blade, erect at base then divergent, much exceeding the few-flowered fascicles, roseate to pink with a green and castaneous base. **Spikes** 4.3 x 1.3-1.5 cm, subsessile, strongly complanate (flat at one side), 3(-4) distichously flowered, one sterile reduced flower at the apex, barely exposed. **Floral bracts** sub-coriaceous at the base, 29 x 12-14 mm, lanceolate or oblong-obovate, sub-obtuse at apex, nerved, bluntly carinate, green or castaneous at the base to white at apical part and flushed violet below the apex, exceeding the sepals, exposing the rachis, slightly incurved and verrucose at apex, glabrous. **Flowers** sessile, ca. 6 mm apart, 2.9-3.2 cm long, barely if at all exceeding the floral bracts; **receptacle** cuneate 3-4 x 3.5 mm, bluntly carinate. **Sepals** evenly (1.5-)3 mm connate or sub-free, coriaceous in center, with broad hyalin margins, (20-)22-24 x 5-5.5 mm, oblong-lanceolate, narrowly rounded or obtuse and obscurely apiculate, slightly nerved toward the apex, glabrous, adaxial ones bluntly carinate. **Petals** 25.5-26.5 x 4.5-5 mm, apical third fleshy and pale violet and white apex, narrowly rounded, cucullate, ca 7-10 mm connate and adnate to the filaments, bearing 2 ligules at the base; **ligules** 12 mm long, 9 mm adnate to the petals, free lobes ca. 1.8 x 1.8 mm, erodate dentate. **Stamens** subequal, 17-18 mm long; **filament** complanate, white, adnate to the petal in lower part; **anther** 4 mm long, sagittate, white, basi-fixed. **Pistil** about equaling the stamens; **ovary** 5 mm long, ovoid, green, slightly contracted into the style; **style** slender 13 mm long, white; **stigma** erect conduplicate, papillose.

Additional material studied: Colombia, Chocó, San José del Palmer, Los Pulmones del Mundo, Jeffrey Kent, grown from seed at Botanic Gardens University Utrecht accession number 2018GR00541 (U).

Observations: The species is widespread from Ecuador near the Colombian border, where the primary bracts are red, to Antochia in Colombia where the bracts are light pink as in the type specimen. This species is autogenous and setting seed without pollination.

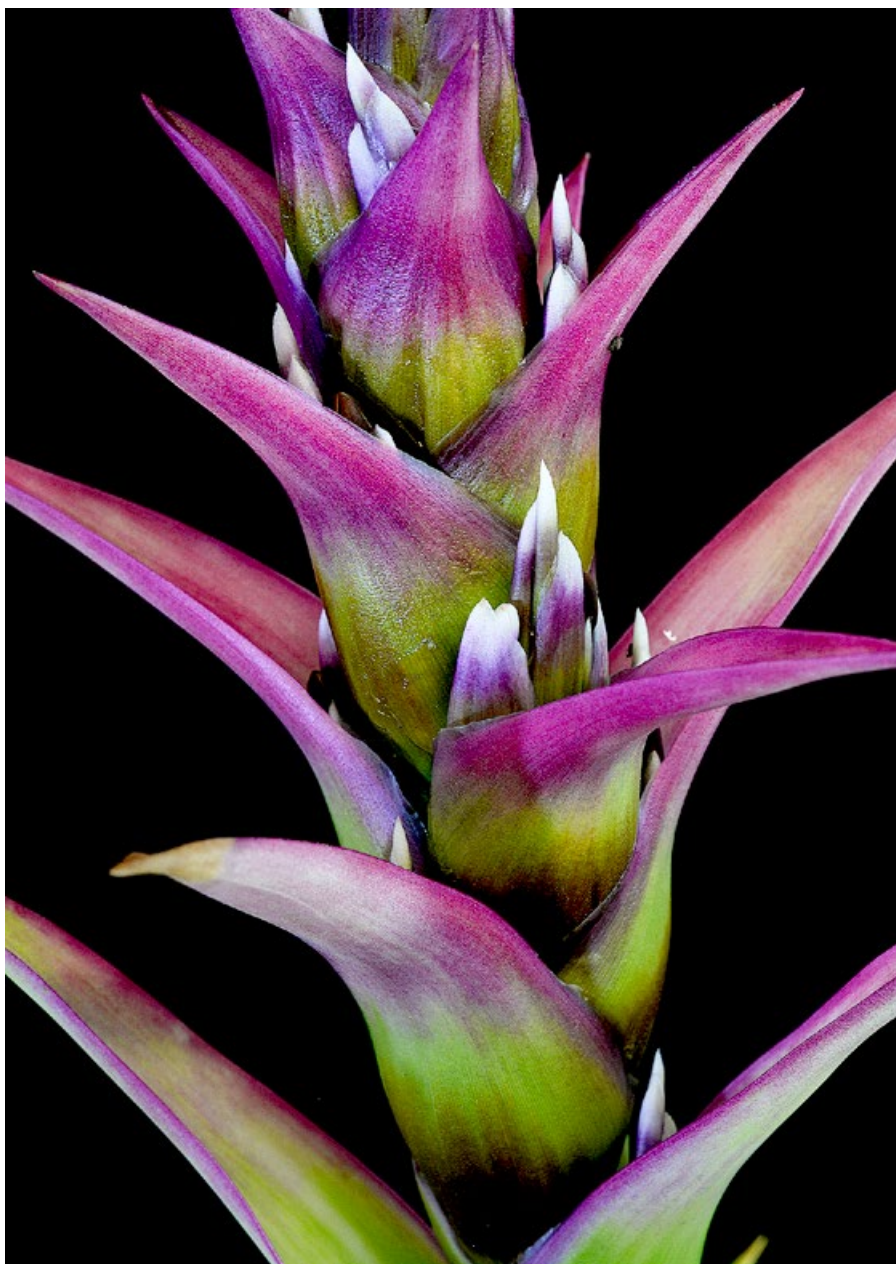


Figure 2. Inflorescence of *Mezobromelia verecunda* with the top part of the spikes visible and the clearly castaneous based primary bracts.

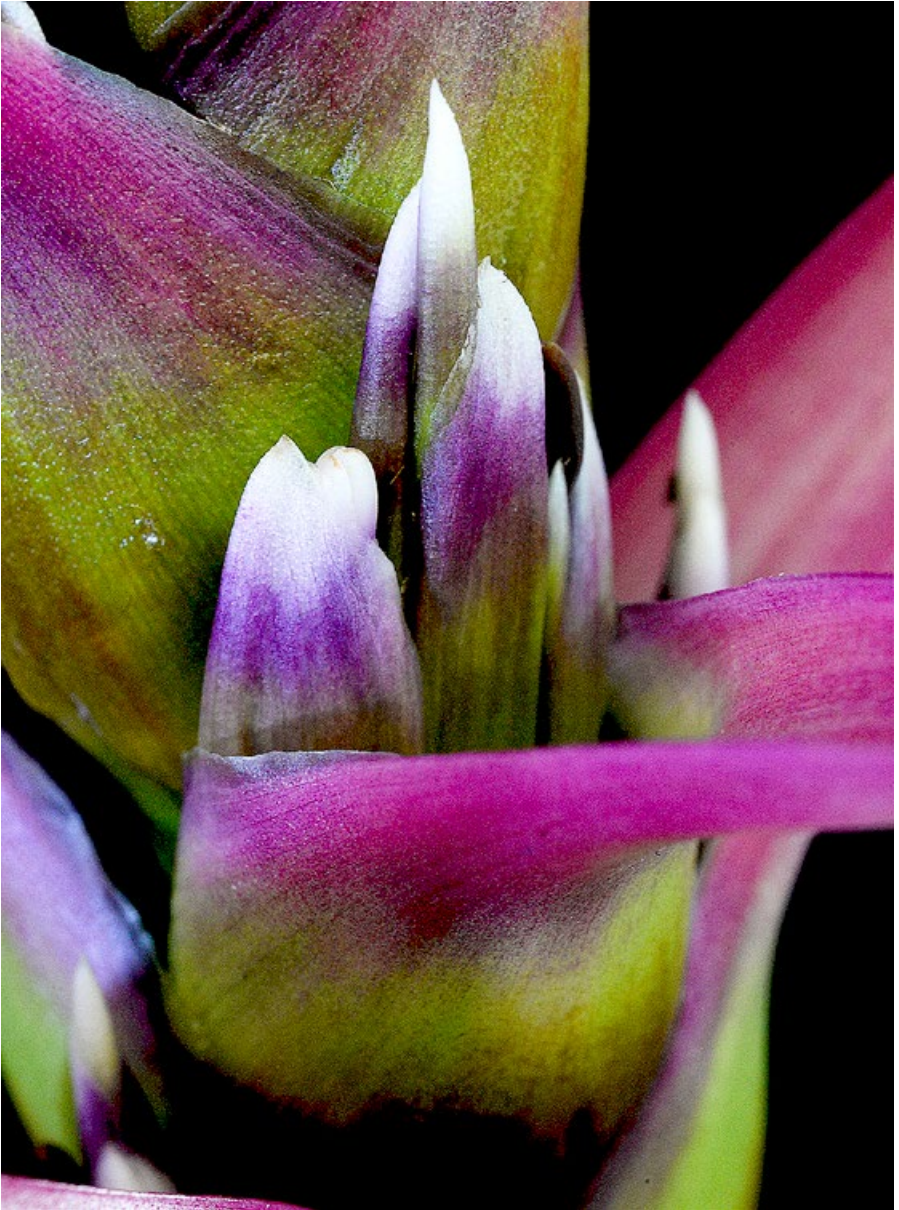


Figure 3. Detail of the inflorescence of *Mezobromelia verecunda* showing the petals barely exceeding the floral bracts (brown ones) or about as long as (fresh white cucullate petal apex in center of the photograph) the various colored floral bracts.

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