

## MISCELLANEOUS NEW TAXA OF BROMELIACEAE (XIV)

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**ABSTRACT.** Four new taxa of Bromeliaceae are described: *Tillandsia kessleri* from Bolivia; *Guzmania betancurii* and *Tillandsia bakiorum* from Colombia; and *Tillandsia laxissima* var. *moorei* from Peru. Also included are notes pertaining to the circumscription and distribution of *Tillandsia engleriana*. Miscellaneous new taxa of Bromeliaceae (XIII) appeared in Selbyana 19(2): 218–226. “1998.” 1999.

**Key words:** Bromeliaceae, *Tillandsia*, *Guzmania*, Bolivia, Colombia, Peru

Following are descriptions of four new taxa of Bromeliaceae from Bolivia, Colombia, and Peru, and notes on the circumscription of *Tillandsia engleriana*.

### BOLIVIA

*Tillandsia kessleri* H. Luther, sp. nov. TYPE: Bolivia. Dept. Cochabamba: Prov. Ayopaya, km 10 Cocapata–Cotacajas, 16°38'S, 66°41'W, 2600 m, 15 May 1997, M. Kessler, J. Gonzales, K. Bach & A. Acebey 9557 (Holotype: SEL; Isotype: LPB).

FIGURE 1.

A *T. pomacochae* Rauh, cui similis affinisque, bracteis florigeris majoribus et petalis longioribus differt.

**Plant** an epiphyte, flowering to 2.2 m tall (M. Kessler!). **Leaves** densely arranged in a very compact, subspreading rosette, 40–50 cm long. **Leaf sheaths** elliptic, 20–22 × 10–13 cm, merging with the leaf blades, coriaceous, very densely punctate lepidote, very dark castaneous, especially adaxially. **Leaf blades** ligulate to subtriangular, acute to acuminate, 7–10 cm wide, coriaceous, rather stiff, coarsely nerved toward the apex, punctate lepidote, especially abaxially, green tinged purple. **Scape** erect, stiff, 10–12 mm in diameter. **Scape bracts:** the lowest subfoliaceous, the upper elliptic, all erect and densely imbricate, punctate lepidote, especially abaxially. **Inflorescence** narrowly conical to subcylindrical, 85–100 × 25 cm, mostly 2-pinnate but 3-pinnate toward the base with 26 primary branches (M. Kessler!). **Primary bracts** elliptic, acute, 6–10 cm long, shorter than to slightly exceeding the sterile, bracteate bases of the primary branches. **Primary branches** 12–22 cm long with 3 to 7 basal, sterile bracts. **Secondary bracts** like the floral bracts. **Secondary branches** 9–20 cm long. The ultimate flowering branches all complanate, ca. 3 cm broad with 3 to 6 sterile bracts at the base, 12- to 25-flowered. **Floral bracts** elliptic, acute to acuminate, sharp-

ly carinate to bicarinate, 35 mm long, thin coriaceous, lustrous, even, golden yellow. **Flowers** subsessile, spreading at ca. 45° from the rachis at anthesis, ca. 35 mm long. **Sepals** 1–2 mm connate, narrowly lanceolate, acute, 20–27 mm long, the adaxial pair carinate. **Petals** lingulate, cucullate, obtuse, 32–35 mm long, naked, violet to lavender rose. **Stamens** and **style** included. **Fruit** a slender dry capsule to 30 mm long.

**Paratypes:** BOLIVIA. Dept. Cochabamba: Prov. Ayopaya, km 10 Cocapata–Cotacajas, 16°38'S, 66°41'W, 2700 m, 11 May 1997, M. Kessler, J. Gonzales, K. Bach & A. Acebey 9491 (SEL, LPB); Prov. José Carrasco Torrico, Km 113 Cochabamba–Villa Tunari, old road, 17°07'S, 65°38'W, 2650 m, 3 July 1996, M. Kessler, T. Krömer, J. Gonzáles, J. Ledsema & B. Hibbits 6947 (LPB, SEL).

This new species seems most similar in overall habit to *Tillandsia pomacochae* from the department of Cajamarca in Peru but differs by having a longer inflorescence (85–100 cm vs. 50 cm long), larger floral bracts (35 mm vs. 25 mm long) that much exceed the low connate sepals in length (vs. about equalling the one-third connate sepals in length) and longer petals (32–35 mm vs. 26 mm long).

### COLOMBIA

*Guzmania betancurii* H. Luther, sp. nov. TYPE: Colombia. Antioquia: Municipio San Luis, Piedra del Castrillón, Cord. Central, 6°04'N, 74°59'W, 1300–1700 m, 17 Sep. 1988, J. Betancur, F.J. Roldán & G. Castaño 695 (Holotype: US; Isotypes: COL, HUA, MO, NY). FIGURE 2.

*G. lehmanniana* (Wittm.) Mez affinis sed ramis perlongioribus et sepalis brevioribus recedit; a *G. pungente* L.B.Sm., cui similis, ramis longioribus et bracteis florigeris brevioribus differt.

**Plant** a lithophyte (Betancur!), flowering to more than 1.3 m tall. **Leaves** rosulate, 80–90 cm

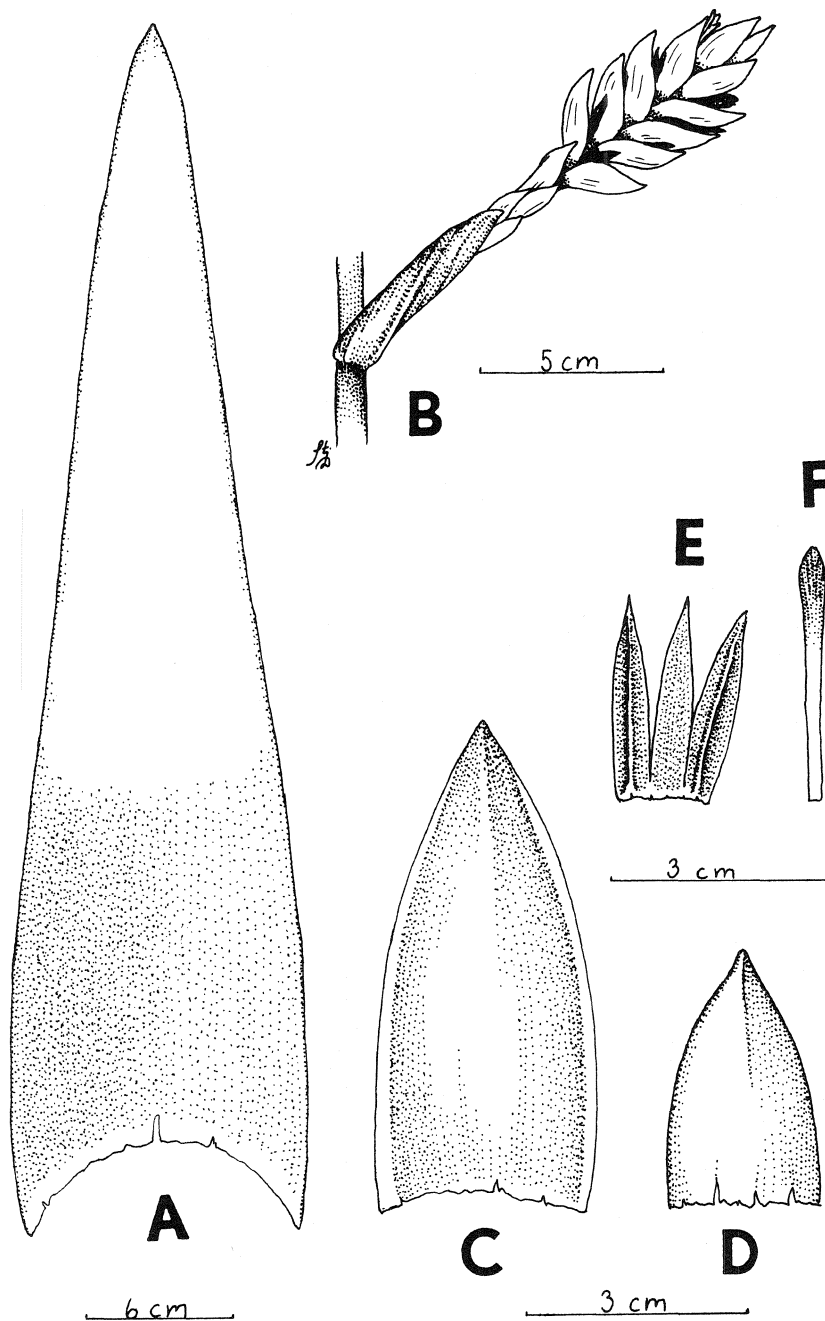


FIGURE 1. *Tillandsia kessleri*: A. Leaf. B. Branch and primary bract. C. Primary bract. D. Floral bract. E. Calyx. F. Petal.

long, coriaceous. **Leaf sheaths** elliptic, 15–22 cm × 6–11 cm, nerved, densely brown punctate-lepidote, dark castaneous especially abaxially. **Leaf blades** linear, attenuate; the spine-like apex

very rigid and somewhat darker; 4–6 cm wide, somewhat nerved, appressed punctate-lepidote throughout. **Scape**, only the upper part known, 1 cm in diameter, fugaceously brown-lanate, red.

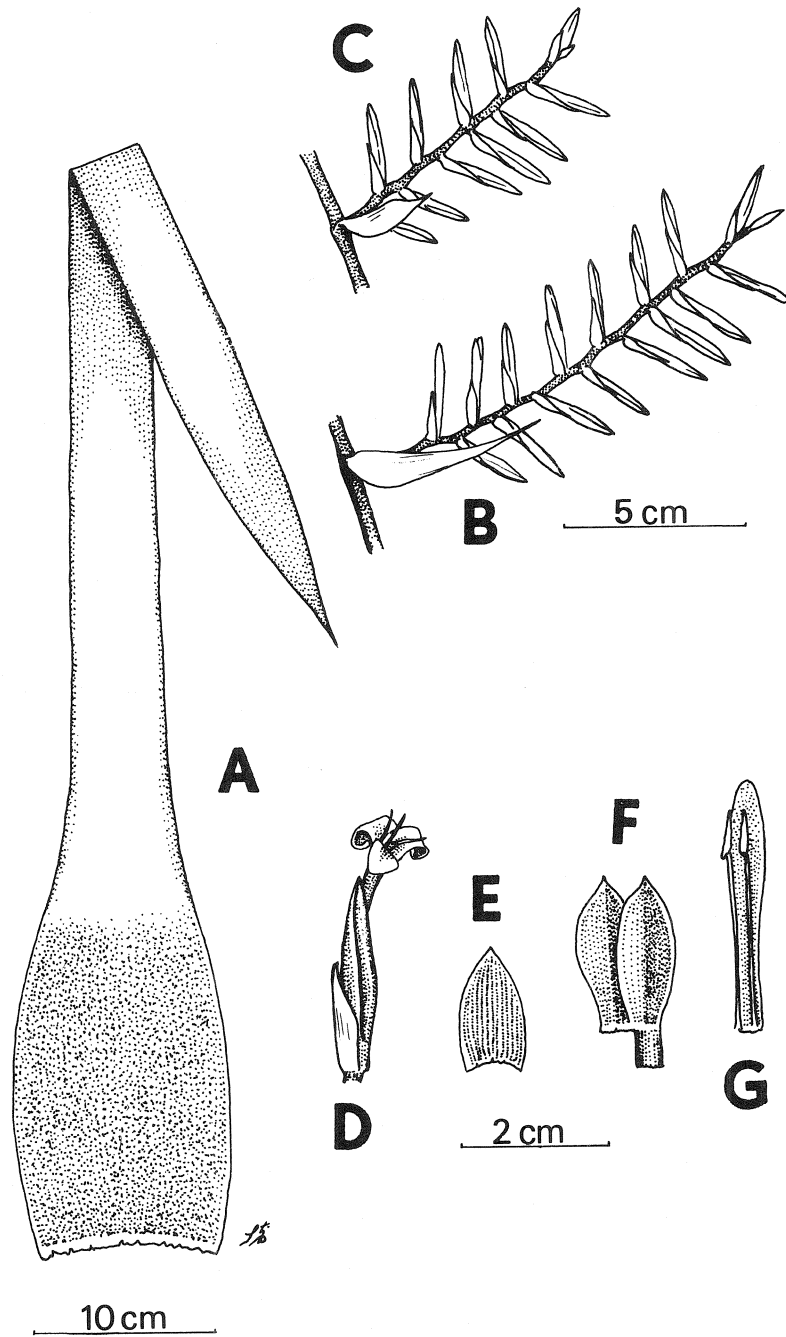


FIGURE 2. *Guzmania betancurii*: A. Leaf. B. Lower branch. C. Upper branch. D. Flower and bract. E. Floral bract. F. Adaxial sepals. G. Petal and 2 stamens.

**Scape bracts**, only the uppermost known, narrowly elliptic, attenuate with a spine-like rigid apex, much exceeding the internodes, appressed punctate-lepidote, green, tinged reddish. **Inflorescence** bipinnate with ca. 18 branches, 65 ×

30 cm. **Primary bracts** narrowly elliptic, attenuate with a spine-like rigid apex, 2–10 cm long, much exceeding the naked or 1-bracteate peduncle, appressed punctate-lepidote, red at the base, green to yellow toward the apex. **Branches** 8–

15 cm long with a 5–20 mm long peduncle, subdistichous to laxly polystichous-flowered, spreading at 45–90° from the main axis at anthesis. **Floral bracts** elliptic, acute, 14–20 mm long, nerved, thin-coriaceous, ecarinate, glabrous, red at the base, yellow toward the apex or completely red. **Flowers** with a 4–8 mm long pedicel, spreading at 60–90° from the axis at anthesis. **Sepals** narrowly elliptic, acute, yellow, 22–24 mm long, connate for 2–6 mm, the adaxial pair somewhat carinate. **Corolla** spreading. **Petals** narrowly oblanceolate, 30–36 × 3–4 mm, conglutinated into a tube for 15–20 mm, green or yellow-green. **Fruit** a slender dry capsule ca. 30 mm long.

Paratype: COLOMBIA. Municip. San Luis, Piedra del Castellón, 6°04'N, 74°59'W, 1300 m, 12 Aug. 1987, J. Betancur & D.C. Daly 504 (HUA, US).

This new species appears to be related to *Guzmania lehmanniana*, but has longer branches of the inflorescence (8–15 cm vs. 4–8 cm long), shorter sepals (22–24 mm vs. 40 mm long), and green or yellow-green (vs. white) petals. Due to the pungent leaves, scape bracts and primary bracts, *G. betancurii* somewhat resembles *G. pungens* but has longer (8–15 cm vs. 4–8 cm), more laxly-flowered branches and shorter (14–20 mm vs. 22–25 mm) floral bracts that are much exceeded by the pedicellate (vs. subsessile) flowers.

*Tillandsia bakiorum* H. Luther, sp. nov. TYPE: Colombia. Cundinamarca: between Bogotá and Fusagasugá. Received from the Bak Bromeliad Nursery, Assendelft, Holland; flowered in cultivation, SEL 91–120, 28 May 1998, H.E. Luther s.n. (Holotype: SEL; Isotype: COL). FIGURE 3.

A *T. elongata* Kunth, cui affinis, inflorescentia declinata et petalis viridibus differt.

**Plant** clustering, flowering 60–70 cm tall with the inflorescence extended. **Leaves** densely rosulate, 30 to 50 in number, 20–25 cm long, thin-coriaceous, arcuate-spreading. **Leaf sheaths** broadly elliptic, 6–10 × 5–7 cm, densely appressed brown punctate-lepidote, somewhat castaneous especially adaxially. **Leaf blades** narrowly triangular, 2–3 cm wide, channeled, appressed pale punctate-lepidote, bright green. **Scape** erect to arcuate, 10–12 cm × 5 mm. **Scape bracts** foliaceous, erect and densely imbricate, green or tinged red. **Inflorescence** 2- or 3-pinnate, 30–50 × 20–30 cm, arcuate to pendent with 15–22 subdistichously arranged branches. **Primary bracts** subfoliaceous, 5–15 cm long, the lowest exceeding the branches, the upper about ½ as long as the branches, pale punctate-lepidote, green to dark rose. **Primary**

**branches** 10–18 × 1 cm with a 2–5 cm long 2-bracteate peduncle, spreading at 45° to 90° from the main axis at anthesis, 6- to 12-flowered. **Secondary bracts** like the floral bracts. **Secondary branches** 3- to 8-flowered. **Floral bracts** elliptic, acute, 22–27 × 6–7 mm, tightly imbricate in life, spreading when dried, thin-coriaceous, nerved, carinate, pale punctate-lepidote, rose-red to dark rose. **Flowers** with a 2–3 mm pedicel, 30–34 mm long, opening during the day. **Sepals** elliptic, acute, 16–18 mm long, free, carinate, thin-coriaceous, nerved, sparsely pale-lepidote, pale green with a rose apex. **Corolla** semitubular, spreading slightly apically. **Petals** narrowly oblanceolate, obtuse, 27–30 mm long, unappendaged, light yellow-green. **Stamens** and **style** included. **Filaments** terete, yellow-green. **Stigma** conduplicate-spiral, yellow-green.

This unusual new species seems most closely related to the widespread *Tillandsia elongata*. It differs by having a pendulous inflorescence, longer floral bracts (22–27 mm vs. 18–20 mm), longer sepals (16–18 mm vs. 11–13 mm) and yellow-green, not blue or lilac petals.

The specific name honors the Bak family of Corn. Bak B.V. bromeliad nursery in Holland.

## PERU

*Tillandsia laxissima* Mez. var. **moorei** H. Luther, var. nov. TYPE: Peru. San Martin: vic. Moyobamba, 1992, Lee Moore s.n. (Holotype: SEL).

A *T. laxissima* Mez, cui affinis, foliis, bracteis florigeris et sepalis longioribus differt.

This spectacular ornamental differs from the typical *T. laxissima* from the Departments of Santa Cruz and La Paz in Bolivia by having longer (85 cm vs. 30 cm) leaves, longer (10–12 mm vs. 6–7 mm) floral bracts and longer (18–20 mm vs. 12–13 mm) sepals; in all other details, as well as overall appearance, it is identical to the typical variety.

## NOTES ON *TILLANDSIA ENGLERIANA*

*Tillandsia engleriana* Wittmack. Bot. Jahrb. 11: 63. 1890. TYPE: Colombia. Nariño: Santiaño, eastern slopes of the Cordillera of Pasto, 2000 m, Lehmann 520 (Holotype: G-BOIS, photo: US!).

*Tillandsia appendiculata* L.B. Smith Lloydia 11: 307. 1949.—*Vriesea appendiculata* (L.B. Sm.) L.B. Sm., Contr. U.S. Natl. Herb. 29: 445. 1951. TYPE: Ecuador. Loja, southeast of Yangana, 2000–3000, Steyermark 54780 (Holotype: GH!).

After examining a number of new collections

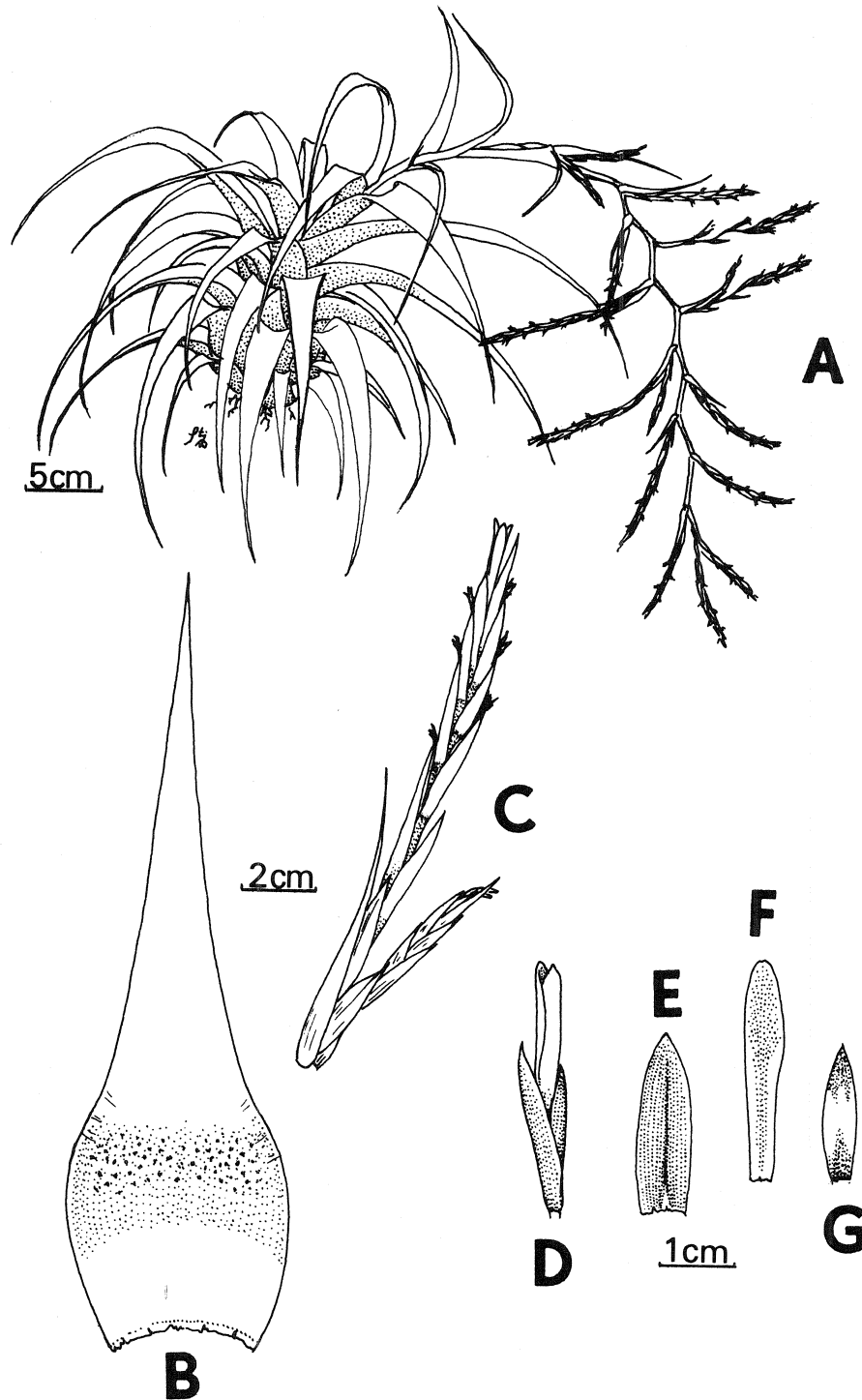


FIGURE 3. *Tillandsia bakiorum*: A. Habit. B. Leaf. C. Branch of inflorescence. D. Bract and flower. E. Floral bract. F. Petal. G. Sepal.

from Colombia, Ecuador, and Bolivia, I can find no features to consistently separate *Tillandsia engleriana* and *Vriesea appendiculata*. Both have primary bracts that exceed the lateral branches toward the base of the inflorescence. Bract and floral dimensions are similar. Both have a declinate to pendulous inflorescence. Flower color has been reported as white, rose, blue or violet but a color photograph of an Ecuadorian collection (*Jose Manzanares JM 0828*, SEL) shows the exerted portion of the semitubular corolla as being blue with a white apex. The bracts are rose.

Although the photo of the type of *T. engleriana* shows a very dense and narrow inflorescence with erect branches, the very strict rosette of leaves accompanying the inflorescence appears to have been rolled into a tight tube during preservation. I believe the inflorescence received a similar treatment.

Even though most of this taxon's closest relatives now reside in *Vriesea* (*V. heterandra*,

*chontalensis*, *appenii*, etc.) I decline to make a new combination that at best will be temporary and at worst unnatural and misleading. This taxon has nothing in common with the "true vrieseas" that are nearly restricted to eastern Brazil but is a member of the "small-flowered-grey-Vriesea" complex (Luther 1995) that has its greatest diversity in the northern Andes.

*Tillandsia engleriana* is known from the eastern slopes of the Andes in Colombia, Ecuador, and Bolivia at 2000–3000 m elevation.

#### ACKNOWLEDGMENTS

I thank the cited collectors and herbaria for making the material available to me and Stig Dalström for preparing the illustrations.

#### LITERATURE CITED

- LUTHER, H.E. 1995. A new *Vriesea* from Ecuador. *J. Bromeliad Soc.* 45: 52–54, 56.