

MISCELLANEOUS NEW TAXA OF BROMELIACEAE (XII)

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ABSTRACT. Five new species of Bromeliaceae are described and illustrated: *Greigia cochabambae*, *Greigia kessleri* and *Racinaea kessleri* from Bolivia, *Aechmea roeseliae* from Ecuador, and *Guzmania darienensis* from Panama. Also included is a new combination: *Guzmania marantoidea*. Miscellaneous New Taxa of Bromeliaceae (XI) appeared in Selbyana 18(1) (1997).

BOLIVIA

Greigia cochabambae H. Luther, sp. nov. FIGURE 1.

TYPE. Bolivia. Dept. Cochabamba: Prov. José Carrasco Torrico, km 123 along the old Cochabamba—Villa Tunari Highway, 17°08'S, 65°37'W, 2,100 m elev., 9 July 1996, *M. Kessler, T. Krömer, J. Gonzáles, J. Ledesma and B. Hibbits 7111* (Holotype: SEL; Isotype: LPB).

A *Greigia ocellata* L.B. Smith and Steyermark, cui similis, bracteis florigeris et sepalis pungentibus concoloribusque differt.

Plant a terrestrial, caulescent; the stem 25 cm × 10–12 mm, completely covered by living or dead leaves which conceal the lateral inflorescences. **Leaves** densely imbricate along the stem, spreading, 45–95 cm long. **Leaf sheaths** elliptic, 5–7 × 2–4 cm, entire, thin-coriaceous, appressed brown-lepidote, concolorous with the blades or somewhat darker abaxially. **Leaf blades** linear, long-attenuate, 15–30 mm wide, variably serrate with dark antrorse spines, somewhat channeled, coriaceous, sparsely to subdensely lepidote with 1 mm wide pale trichomes. **Scape** 5–8 × 4–5 mm, drying dark-castaneous. **Scape bracts** ovate to triangular with an attenuate, pungent apex, 3–5 × 1–3 cm, entire or with a few dark antrorse spines, thin-coriaceous, nerved, carinate, fugaceously punctate-lepidote, drying tan. **Inflorescences** multiple, lateral, simple, 4–6 × 2–6 cm. **Floral bracts** elliptic to triangular, acute to attenuate, pungent, 20–25 mm long, thin-coriaceous, somewhat nerved, carinate, drying tan. **Flowers** 1–3 mm pedicellate. **Sepals** free, subtriangular, acute, pungent, 18–20 mm long, thin-coriaceous, nerved, carinate, sparsely pale-lepidote, drying tan and spreading. **Corolla** slightly spreading. **Petals** naked, ca ½ connate, ca 32 mm long, pale purple. **Fruit** somewhat trigonous, 13–15 × 10–12 mm, lustrous, sparsely pale lepidote, drying

dark-castaneous. **Seeds** disc-like, 2–3 × 2 × 1 mm, castaneous.

PARATYPE. Bolivia. Dept. La Paz, Prov. Murillo, Valle de Zongo, 2,700 m elev. 25 March 1984, *St. G. Beck 8824* (LPB)

Until now, the genus *Greigia* was not known in Bolivia but was expected in this southeastern extension of the Andes. This new species resembles *G. ocellata* from Venezuela but can be distinguished by its acute to attenuate, pungent (not obtuse to subacute) and concolorous (not partially castaneous) floral bracts and sepals.

Greigia kessleri H. Luther, sp. nov. FIGURE 2.

TYPE. Bolivia. Dept. Cochabamba: Prov. José Carrasco Torrico, km 5 between Siberia and Karahuasi, 17°48'S, 64°41'W, 2,200 m elev., 15 Oct. 1996, *M. Kessler, J. Gonzáles and A. Acebey 9067* (Holotype: SEL; Isotype: LPB).

A *Greigia columbiana* L.B. Smith, cui similis, lamini bractearum scaporum perangustioribus longioribusque et bracteis florigeris sepalisque carinatis differt.

Plant a terrestrial or epiphyte, probably long caulescent, the stem 1 cm in diameter, covered by living and dead leaves. **Leaves** densely imbricate along the stem, spreading, 90–120 cm long. **Leaf sheaths** elliptic, 3–6 cm × 15–45 mm, entire, nerved, coriaceous, castaneous abaxially, brown-lepidote especially abaxially. **Leaf blades** linear, long-attenuate, pungent, 20–35 mm wide, channeled; subdensely serrate with 1–3 mm long spines, the spines straight to retrorse toward the sheath, antrorse toward the apex; sparsely pale- and appressed-lepidote especially abaxially. **Scape** 15–30 × 3–4 mm, dark-castaneous. **Scape bracts** elliptic to ovate, acute to long-attenuate and pungent, densely serrate with dark, antrorse, 1–2 mm long spines, carinate, appressed- and punctate-lepidote, dark-castaneous and lustrous toward the base. **Inflorescence** probably lateral, simple, 8 × 6 cm. **Floral bracts** narrowly elliptic to triangular, 28–35 mm long, acute, carinate, thin-coriaceous,

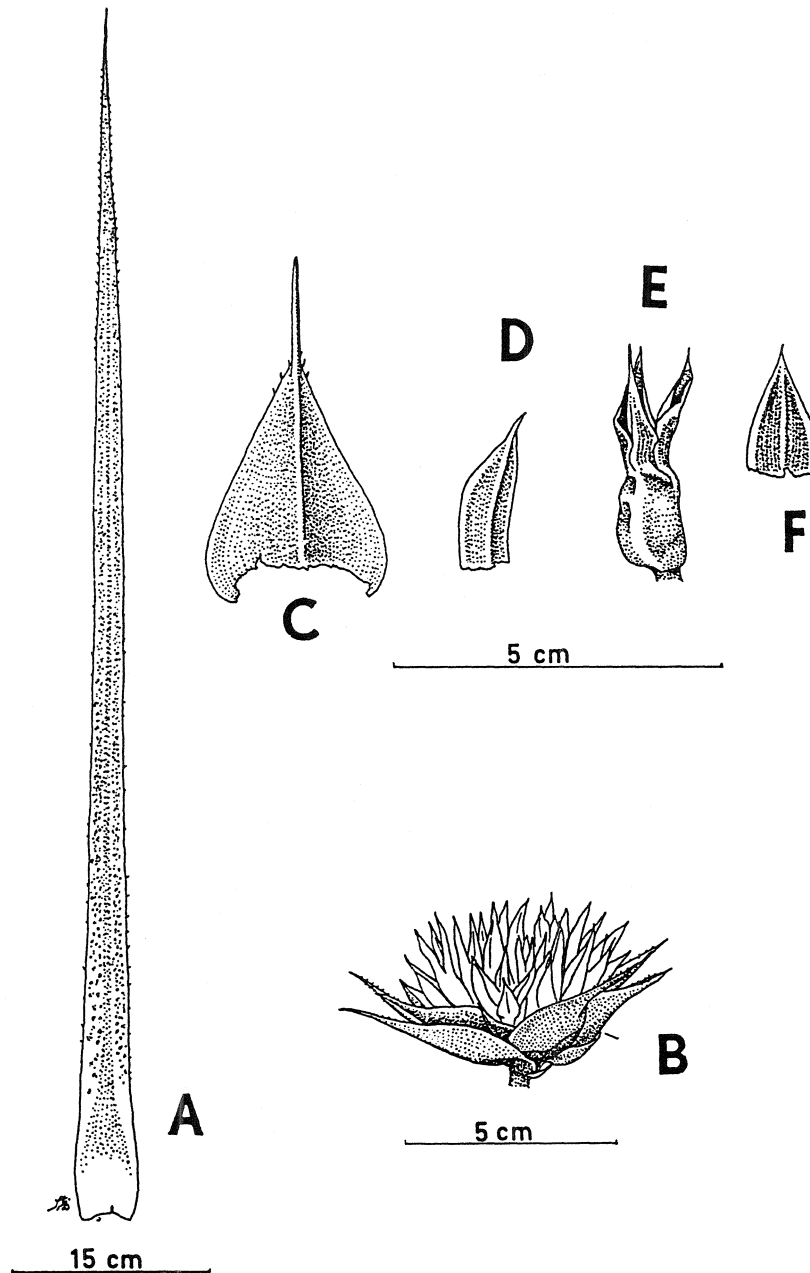


FIGURE 1. *Greigia cochabambae*. A, leaf. B, inflorescence. C, upper scape bract. D, floral bract. E, flower, post anthesis. F, sepal.

sparsely brown-lepidote, drying brown. **Flowers** 1–2 mm pedicellate. **Sepals** free, elliptic, acute, pungent, 18–24 mm long, coriaceous, carinate, sparsely brown-lepidote, drying light brown and erect. **Corolla** subspreading. **Petals** naked, spatulate; the blades elliptic, broadly acute, free,

rosey purple; the claws adnate to each other and forming a tube. **Fruit** trigonous, tri-carinate, 2 × 1 cm, glabrous, lustrous, drying castaneous.

PARATYPES. Bolivia. Dept. La Paz, Prov. Nor Yungas, between Cotapata and Chuspipata,

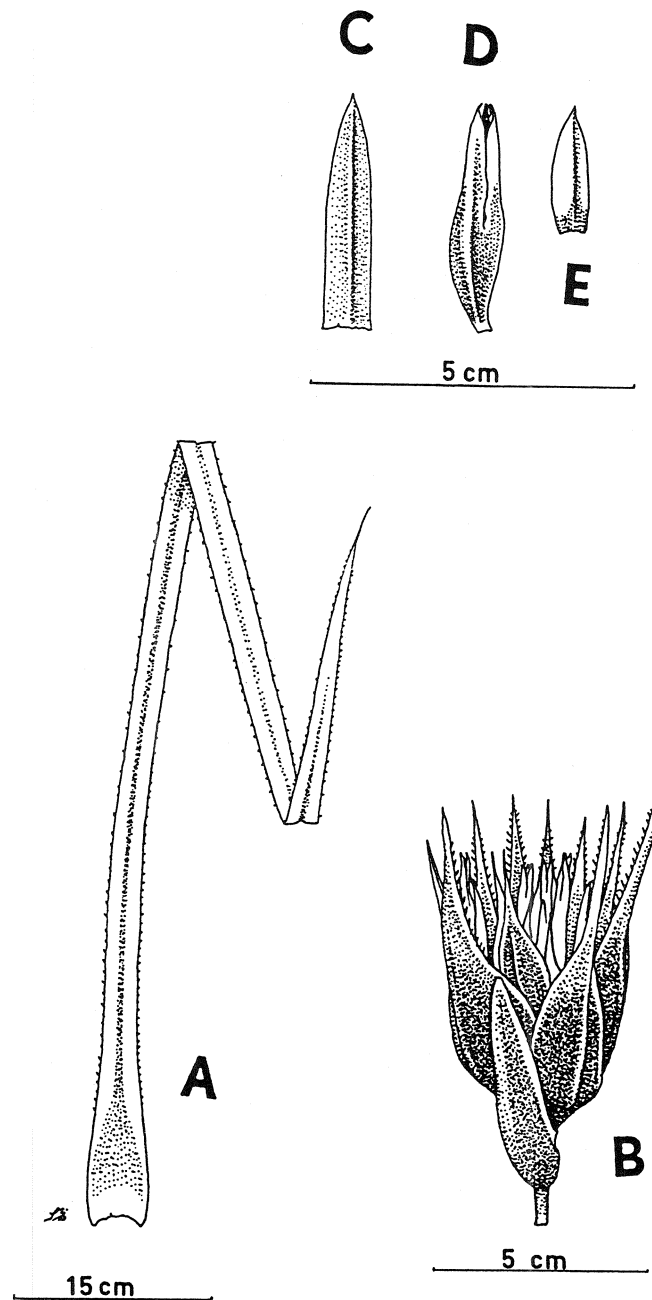


FIGURE 2. *Greigia kessleri*. A, leaf. B, inflorescence. C, floral bract. D, flower, post anthesis. E, sepal.

3,000 m elev., 2 Nov. 1996, *St. G. Beck* 22783 (SEL, LPB). Also, the following collections, although fragmentary and sterile, appear to represent this taxon: Dept. Cochabamba, Prov. José Carrasco Torrico, km 130 along the old highway between Cochabamba and Villa Tunari, 2,200 m elev., 13 July 1996, *M. Kessler, T. Krömer, J.*

Gonzáles, B. Hibbits, I. Jimenez 7253 (SEL, LPB); *Ibid*, km 100, 3,200 m elev., 21 Aug. 1996 *M. Kessler, T. Krömer, J. Gonzáles, B. Hibbits, A. Acebey, M. Sonnentag* 7512 (SEL, LPB).

This new species is similar to the widespread (Costa Rica to Ecuador) *G. columbiana* but differs by the longer attenuate and serrate blades

of the upper scape bracts. In addition, the floral bracts, sepals and ovary display conspicuous keels.

The label of the type collection states that the plant was an epiphyte. This life form is virtually unknown for *Griegia*; it seems more likely that the plant was a scandent hemi-epiphyte.

Guzmania marantoidea (Rusby) H. Luther, comb. nov. Basionym: *Tillandsia marantoidea* Rusby, Desc. So. Am. Pl. 4. 1920.

TYPE. Bolivia. Without specific locality, *Bang* 2570 (Holotype: NY; Isotype: US).

SYNONYMS. *Guzmania rio-nievensis* Rauh, Trop. Subtrop. Pflanzenwelt 50:22–6. 1984. TYPE. *Rauh and Bismarck* 63 687a (Holotype: HEID), Peru, San Martin. *Guzmania rio-nievensis* var. *laxiflora* Rauh, Trop. Subtrop. Pflanzenwelt 50:22–6. 1984. Type. *Rauh & Bismarck* 63 687b (Holotype: HEID), Peru, San Martin.

DISTRIBUTION. Amazonian slopes of the Andes in Ecuador, Peru and Bolivia, 900–2,700 m. elev.

This species is similar to *Guzmania paniculata* Mez from eastern Peru and Ecuador. It differs by having a more richly branched inflorescence with longer, more laxly flowered ultimate branches.

Racinaea kessleri H. Luther, sp. nov. FIGURE 3.

TYPE. Bolivia. Dept. Cochabamba: Prov. Chacabambilla: km 70 Cochabamba–Villa Tunari, 17°11'S, 65°51'W, 2,500 m elev. 5 Sep. 1996, *M. Kessler, J. Gonzáles, T. Krömer, A. Acebey, B. Hibbitts & M. Sonnentag* 8380. (Holotype: SEL; Isotype: LPB).

A *Racinaea tripinnata* (Baker) M.A. Spencer and L.B. Smith, cui similis, ramis primariis subsessilibus vel stipitatis brevisissimis, flores dispositis laxius et bracteis florigeris minoribus differt.

Plant an epiphyte, flowering to 75 cm tall. **Leaves** more or less erect, densely rosulate, about 30 in number, 20–35 cm long, thin-coriaceous. **Leaf sheaths** broadly elliptic, 10–15 × 8–9 cm, somewhat inflated, somewhat nerved, dark-castaneous and dark-punctate-lepidote especially abaxially. **Leaf blades** linear to narrowly triangular, acute to attenuate, 18–45 mm wide, pale-punctate-lepidote especially abaxially. **Scape** erect, 27 cm × 2–5 mm, fugaciously punctate-lepidote. **Scape bracts** foliaceous, erect and densely imbricate (the lowest) to narrowly elliptic, attenuate and lax (the uppermost); densely punctate-lepidote throughout. **Inflorescence** 3-pinnately compound with 10 primary branches, 25 × 10 cm. **Primary bracts** elliptic,

attenuate, 12–55 mm long, exceeding the lowest branches and about ½ as long as the upper branches, punctate-lepidote throughout. **Primary branches** subsessile or with a 2–6 mm long sterile base; spreading at 45–90° from the main axis. **Secondary bracts** elliptic, acute, slightly larger than the floral bracts, brown-punctate-lepidote. **Secondary branches** 2–4 cm long; 5- to 8-flowered. **Floral bracts** broadly elliptic to ovate, acute, 4 × 4 mm, thin, nerved, coarsely brown-stellate-lepidote. **Flowers** sessile, distichously arranged, spreading at 45–90° from the geniculate, densely and coarsely brown-stellate-lepidote angled rhachis. **Sepals** asymmetrical, obovate, 6.5 mm long, thin, nerved, densely and coarsely brown-stellate-lepidote. **Corolla** about equalling the calyx. **Petals** elliptic, acute, 5–7 mm long, exceeding the stamens and style.

Racinaea kessleri is similar to *R. tripinnata* from Ecuador. It differs from this species by having subsessile or very short stipitate primary branches, more laxly flowered ultimate branches (flowers 3–5 mm apart vs. 2–3 mm apart) and smaller (4 mm vs. 5–6 mm long) floral bracts. In addition, the flowers of *R. kessleri* are strictly distichously arranged and not somewhat secundly arranged as is more usual with *R. tripinnata*. The somewhat similarly *R. flexuosa* (Baker) M.A. Spencer and L.B. Smith has longer, stipitate branches which are straight or flexuous, not geniculate.

ECUADOR

Aechmea roeseliae H. Luther, sp. nov. FIGURE 4.

TYPE. Ecuador. Prov. Napo: Hollin to Coca, new road, km 50, ca. 1,200 m elev., 27 Feb. 1988, *Luther, Kress and Roesel, legit*, flowered in cultivation, SEL 88-325, 1 Dec. 1989, *H.E. Luther s.n.* (Holotype: SEL; Isotypes: US, QCA, QCNE).

A *Aechmea contracta* (Mart. ex Scultes f.) Baker, cui affinis, rhache gracilior, angulata non concava differt; a *A. abbreviata* L.B. Smith, cui similis et affinis, spica termina floribus polystichis differt.

Plant an epiphyte, flowering 30–55 cm tall; spreading by 4–8 cm × 4–5 mm stolons. **Leaves** suberect to laxly spreading, 20–45 cm long, 8 to 15 in number. **Leaf sheaths** elliptic, 55–80 × 30–50 mm, densely pale-punctate-lepidote especially abaxially, concolorous with the blades or somewhat paler adaxially. **Leaf blades** narrowly lanceolate, acute to attenuate, apiculate, 10–18 mm wide above the sheaths, 25–35 mm wide at midlength, variably serrate with 0.5–3.0

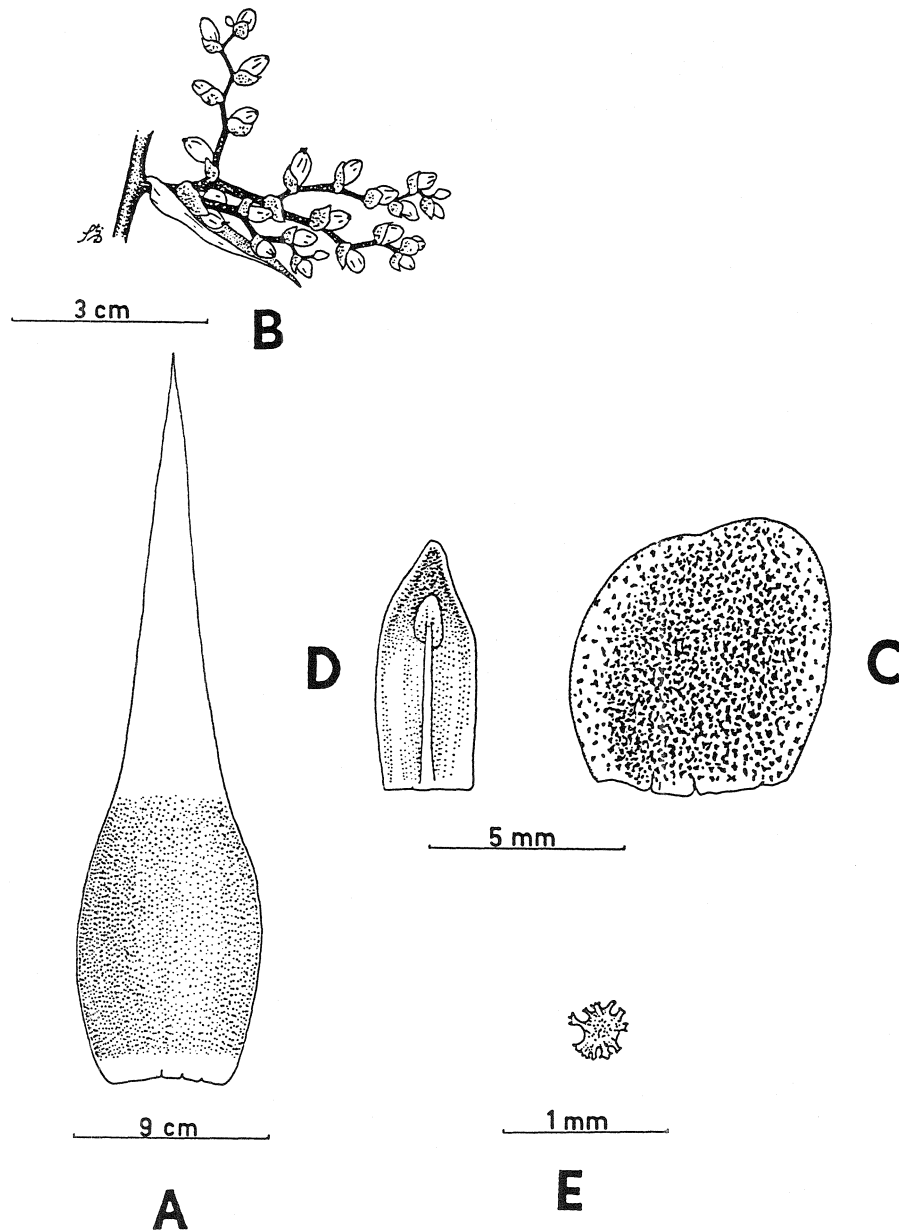


FIGURE 3. *Racinaea kessleri*. A, leaf. B, branch of inflorescence. C, sepal. D, petal and stamen. E, trichome from floral bract.

mm long dark, straight or curving spines, thin-coriaceous, densely pale-punctate-lepidote especially abaxially, green, purple-green or green tinged red. **Scape** erect, 20–38 cm × 2–3 mm, pale-floccose, dull red. **Scape bracts** laxly arranged, erect, elliptic to lanceolate, very thin, nerved, entire, pale-punctate-lepidote, green to dull red. **Inflorescence** bipinnate, 10–17 × 5–

10 cm with 5 to 10 polystichously arranged lateral branches. **Primary bracts** like the scape bracts but abruptly reduced toward the apex of the inflorescence, all shorter than the branches, green to dull red. **Branches** with a 3–15 mm long naked, sterile base; the lateral branches distichously 5-to 12-flowered; the terminal spike polystichously 8-to 20-flowered. **Floral bracts**

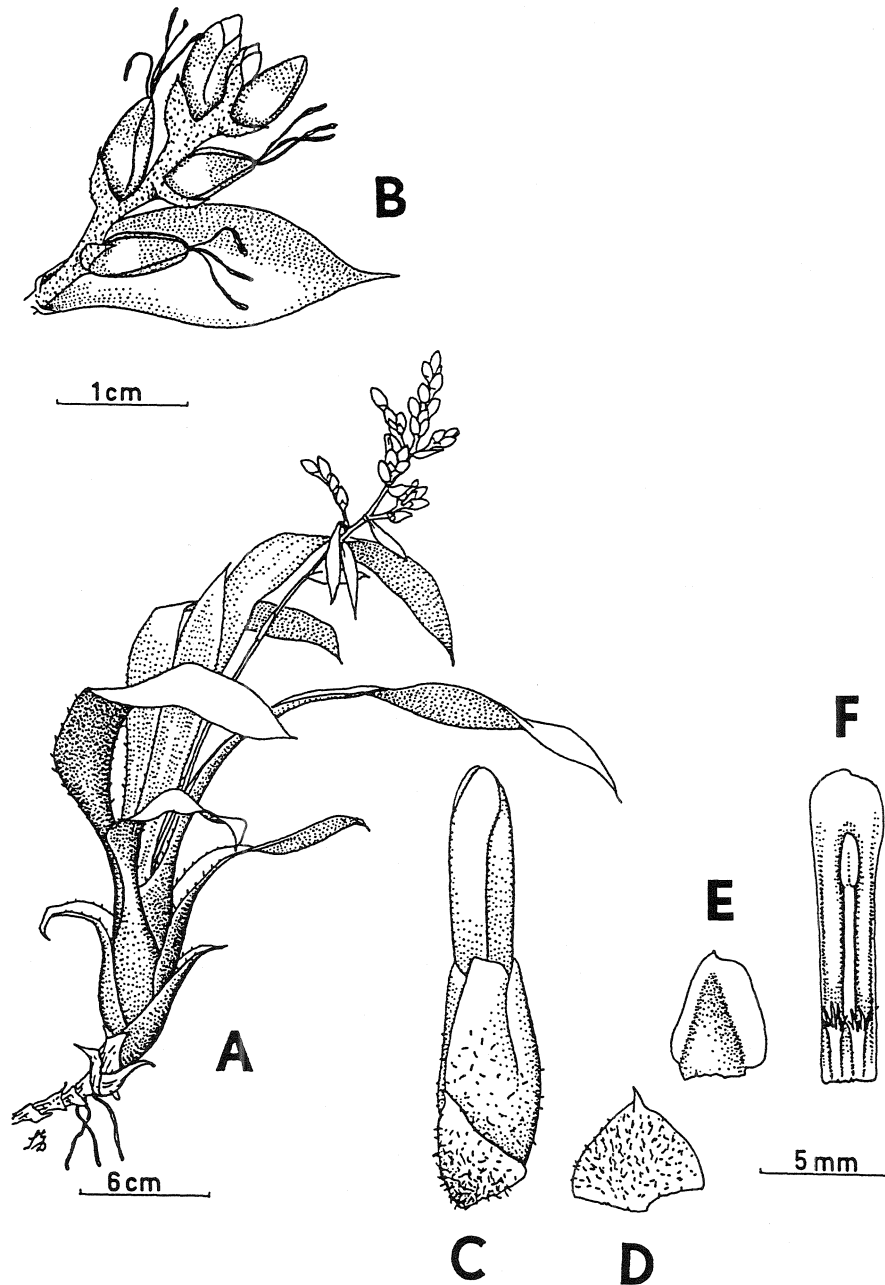


FIGURE 4. *Aechmea roeseliae*. A, habit. B, lateral branch of inflorescence. C, flower and bract. D, floral bract. E, sepal. F, petal and stamen.

ovate, acute to rounded and apiculate, 4–5 mm long, thin, carinate at the apex, pale-floccose, green. **Flowers** subdensely arranged, spreading at 30–45° from the angled, straight to flexuous, pale-floccose, green rhachis. **Sepals** oblong to subtriangular, asymmetrical, minutely mucronate, 5 mm long, thin-coriaceous, some-

what nerved, pale-floccose, dull red. **Corolla** erect, tubular. **Petals** narrowly elliptic, 12–15 mm long, cucullate, each with a pair of fimbriate basal appendages, white at the base, bright yellow in the middle, white at the tip, exceeding the stamens and style. **Ovary** ellipsoid, 3–4 mm long, pale-floccose, green. **Fruit**

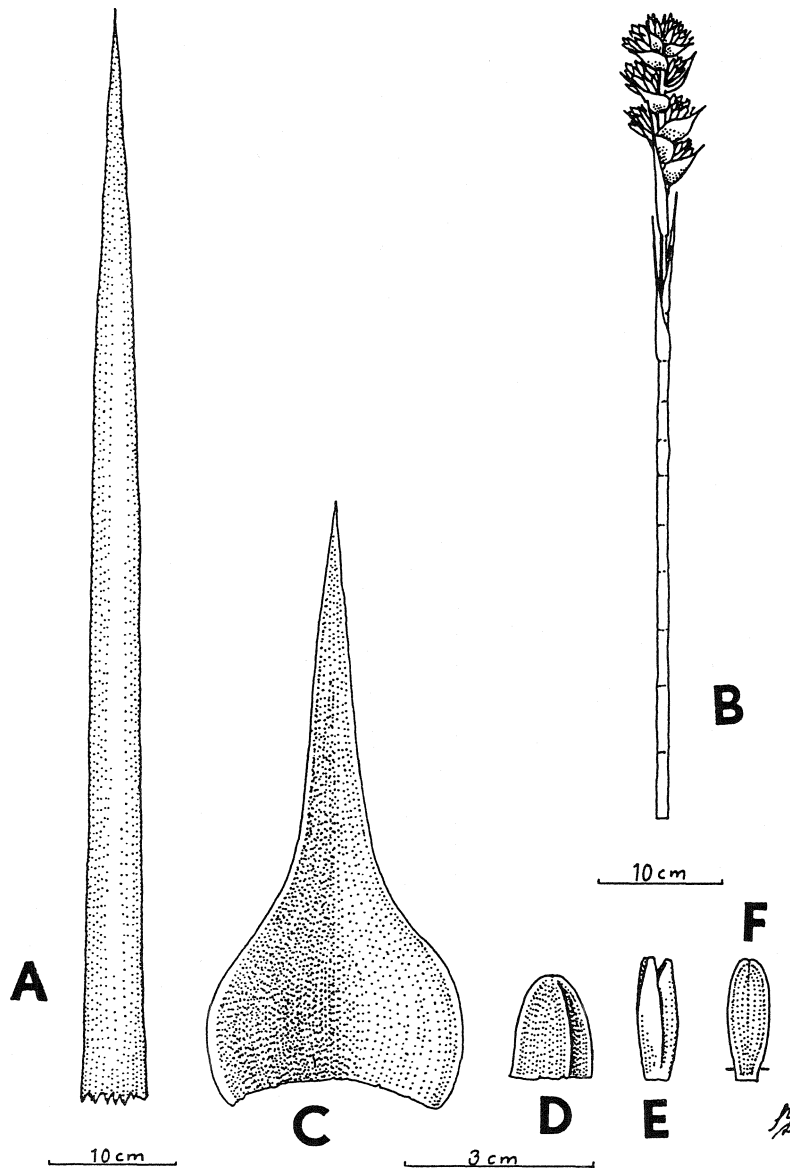


FIGURE 5. *Guzmania darienense*. A, leaf blade. B, inflorescence. C, lower primary bract. D, floral bract. E, calyx. F, sepal.

a globose berry, 3–5 mm long, white turning blue.

PARATYPES. Ecuador. Without specific locality, *B. Fuerstein legit*, flowered in cultivation, 12 Sept. 1994, *B. Girko s.n.* (SEL); without locality, flowered in cultivation, 20 Nov. 1994, *D. Butcher s.n.* (SEL).

When first collected and cultivated, the type plant of *Aechmea roeseliae* was thought to be an odd form of *A. abbreviata*. *Aechmea roese-*

liae consistently differs from this species by having the terminal spike polystichously flowered (vs. distichously flowered); in addition, the terminal spike is usually much longer and somewhat more laxly flowered than the lateral branches.

Aechmea contracta has distichously flowered lateral branches (not always present) with the terminal spike trigonally flowered; in addition, the spike rhachis is broader and is excavated at the base of each flower. The spike

rhachis of *A. roeseliae* is angled but scarcely excavated.

The specific name honors one of the co-collectors, Cheryl Roesel, formerly on the research staff at the Marie Selby Botanical Gardens, and now at the Smithsonian Institution.

PANAMA

Guzmania darienensis H. Luther, sp. nov. FIGURE 5.

TYPE. Panama. Darién: Parque Nacional Darién near Cerro Sapo, 07°58'N, 78°23'W, 800–840 m elev., 25 May 1991, H. Herrera, G. McPherson, N. Hensold, J. Polanco and G. Palacios 1006 (Holotype: MO).

A *G. weberbaueri* Mez cui affinis similisque planta minoribus sepalis brachyconnatis differt.

Plant an epiphyte, flowering to 0.6 m tall. **Leaves** to 90 cm long, densely punctate-lepidote especially abaxially, coriaceous, green. **Leaf sheaths** elliptic, 8 × 5 cm, nerved, concolorous with the blades or somewhat paler. **Leaf blades** linear, attenuate, 20–45 mm wide, nerved. **Scape** erect, 40 cm × 5 mm, sparsely brown and stellate-lepidote. **Scape bracts** imperfectly known, mostly missing; the uppermost narrowly elliptic, long-attenuate, erect, densely imbricate, pale-punctate-lepidote, nerved, thin-coriaceous. **Inflorescence** bipinnate, 14 × 6 cm, polystichously 12-branched, lax toward the base, dense at the apex. **Primary bracts** ovate, acute to acuminate, the lowest exceeding the lateral branches, the uppermost equaling or shorter than the lateral branches, thin, somewhat rugose, punc-

tate-lepidote, red. **Branches** with a stout 1–3 mm long, naked, sterile base, 2–4 × 2–3 cm, 8- to 12-flowered, spreading at ca. 45° from the main axis. **Floral bracts** elliptic, broadly acute to obtuse, 15–17 × 8–13 mm, thin, somewhat rugose, obtusely carinate, yellow. **Flowers** with a 2 mm long pedicel, spreading at ca 30° from the rhachis. **Sepals** elliptic, obtuse, 18 mm long, connate for 3–5 mm, thin, nerved, yellow. **Corolla** unknown. **Fruit** a dry capsule at least 23 mm long.

This new species is very similar to *Guzmania weberbaueri* from Amazonian Ecuador and Peru, but is smaller (shorter with narrower leaves) and the sepals are lower-connate (3–5 mm connate vs 10–13 mm connate). In addition, the type and only known collection of *G. darienensis* is noted as being an epiphyte; in contrast, *G. weberbaueri* is usually a terrestrial in very humid forests.

In the key to *Guzmania* presented in Flora Mesoamericana (Utley in Davidse *et al.* 1994, pp. 135–6), *Guzmania darienensis* would come out in the vicinity of *G. zahnii*, but can be distinguished by somewhat longer floral bracts (15–17 mm vs. 10–15 mm) and leaves that are conspicuously lepidote and not heavily suffused or striated with red.

LITERATURE CITED

- UTLEY J. 1994. Bromeliaceae. Pp. 89–186 *In*, Flora mesoamericana, Vol. 6. DAVIDSE G., M. SOUSA S. AND A.O. CHATER eds., Universidad Nacional Autónoma de México, Missouri Botanical Garden & The Natural History Museum (London).