NOTES ON BROMELIACEAE, XXXIX

Lyman B. Smith and Robert W. Read

Since the publication of Notes on Bromeliaceae, XXXVIII in Phytologia 33: 429-443. June 1976, the second part of Flora Neotropica, No. 14, Tillandsioideae, September 23, 1977, has been published and the manuscript for the third part, Bromelioideae, has been completed. Consequently the following miscellaneous notes are wholly supplementary to the monograph in character.

PITCAIRNIOIDEAE
(Enumeration of Flora Neotropica, Monograph 14. 1974)

8. PITCAIRNIA

24. P. QUESNELIOIDES L. B. Smith emend. L. B. Smith & R. W. Read.

PLANT somewhat caulescent; stem 15 mm thick. LEAVES distichous and equitant along the stem, 2.4 m long; sheaths narrowly triangular with a slight enlargement at base, complanate, obtusely carinate, densely brown-lepidote; petioles indistinct, flat, laxly retrorse-serrate; blades linear-lanceolate, attenuate at base into the petiole, caudate-attenuate at apex, 5 cm wide, obscurely lepidote beneath. SCAPE erect but flattened and decurved at apex, 1-1.2 m high (! Schunke), brown-lepidote, soon glabrous; scape-bracts lanceolate to broadly ovate, acuminate, shorter than the internodes, entire. INFLORESCENCE nutant, densely cylindric, 20 cm long, 5 cm wide. FLORAL BRACTS erect, densely imbricate, ovate, lepidote becoming glabrous, dull red (! Schunke), thin, deteriorating into a mesh of fine fibers; flowers subsessile. SEPALS asymmetric, ovate, acute, 30 mm long, glabrous; petals 5 cm long, red, bearing a large ovate acute scale at base, arching over the stamens; ovary 1/2 to 3/4 inferior. Pl. 1.

PERU: SAN MARTÍN: Mariscal Caceres: Uchiza: Sanja Seca de Tipishca, 8 km from Progreso (road to Tingo Maria), edge of quebrada in moist soil and deep shade, 500-550 m, Schunke 7881 (MO, US).

The difference between the original and the emended description is easily understood when the old shriveled condition of the type is compared with the full flowering condition of the Peruvian specimen.

24a. P. SERRULATA L. B. Smith & R. W. Read, sp. nov. A P. quesnelioide L. B. Smith, cui affinis, foliorum laminis apice serrulatis, inflorescentia pauciflora, sepalis symmetricis angustis obtusis differt.

LEAVES fasciculate, polymorphic, the outermost reduced to small ovate acuminate dark castaneous verrucose densely brown-lepidote sheaths, the innermost 1.2-1.3 m long with long narrowly triangular sheaths; petioles slender, dark castaneous, serrulate

toward base; blades lanceolate and attenuate to oblanceolate and acuminate (paratype), 5-7 cm wide, covered on both sides with pale brown appressed scales, serrulate toward apex. SCAPE more or less curved, 25-40 cm long, brown-lepidote becoming glabrous; scape-bracts erect, mostly imbricate, broadly ovate, acute to acuminate, thin verrucose, brown-lepidote becoming glabrous. INFLORESCENCE densely subcylindric, few-flowered, 8 cm long. FLORAL BRACTS erect, imbricate, ovate, acute, 4 cm long, thin, soon glabrous; flowers subsessile. SEPALS symmetric, narrowly lanceolate, obtuse, 26 mm long; petals over 4 cm long, reddish (! Berlin), bearing a bidentate scale at base; ovary ca. 2/3 superior; ovules and seeds alate. Pl. 2.

PERU: AMAZONAS: Without further locality, terrestrial, 18 December 1972, Berlin 631 (US, holotype; MO, isotype); Monte, Quebrada Yutui Entsa, 1000 m, 12 April 1973, Ancuash 221 (MO, US, paratypes).

40a. P. KIRKBRIDEI L. B. Smith & R. W. Read, sp. nov. A P. ensifolia Mez, cui valde affinis, foliorum laminis supra glabris et mediano pallidis, scapo brevi, inflorescentia elongata differt

LEAVES trimorphic, some reduced to ovate acuminate pungent entire sheaths, some with subulate spinose-serrate blades, others large with broad flat serrulate persistent blade-bases; blades pendent (! Kirkbride), deciduous, linear, filiform-attenuate, to 8 dm long, 18 mm wide, entire, covered beneath with pale appressed scales, glabrous above with a prominent white median stripe. SCAPE suberect, slender, 9-21 cm long, glabrous; scape-bracts erect, ovate, caudate or acuminate, the upper ones about equaling the internodes. INFLORESCENCE simple, lax, to 23 cm long, obscurely pale-lepidote becoming glabrous; axis red (! Kirkbride). FLORAL BRACTS narrowly lance-triangular, attenuate, shorter than the pedicels; pedicels very slender, to 14 mm long, mostly ascending. SEPALS linear-lanceolate, acute, 21 mm long, narrowly alate-carinate; petals ca. 35 mm long, orange (! Kirkbride), appendaged; stamens evidently included; ovary ca. 2/3 superior; ovules alate. Pl. 3.

BRAZIL: PARÁ: Serra do Cachimbo, in forest downstream from Cachoeira do Curuá on west side of Rio Curuá, on rock, 15 February 1977, Kirkbride & Lleras 2813 (holotype INPA; isotype, US).

215a. P. SAGASTEGUII L. B. Smith & R. W. Read, sp. nov. A P. augustii Harms, cui valde affinis, scapi bracteis pectinato-serratis, sepalis majoribus, petalis rubris differt.

PLANT caulescent, flowering 45 cm above the apex of the stem; stem erect, 12 mm thick and branching near apex. LEAVES 6 dm long; blades dimorphic, some reduced to suborbicular dark-castaneous spine-tipped sheaths, others with deciduous linear-lanceolate, entire green blades 2 cm wide. SCAPE erect, stout, white-flocculose; scape-bracts erect, imbricate, ovate with narrowly triangular pectinate-serrate partially deciduous blades. INFLORESCENCE simple, densely cylindric, 12 cm long, 3 cm thick. FLORAL BRACTS erect, ovate, attenuate, pungent, entire, soon glabrous; flowers erect. SEPALS linear-lanceolate, attenuate, 40 mm long, the lateral alate-carinate; petals ca. 7 cm long, red,

bases decayed and not seen; stamens exserted. Pl. 4.

PERU: PIURA: Huancabamba: Puente Quebrada Seca (Canchaque - Huancabamba), on rocks, 1700 m, 20 July 1975, Sagástegui, Cabanillas & Dios 8145 (US, holotype; HUT, MO, isotypes).

10. AYENSUA

1. A. UAIPANENSIS (Maguire) L. B. Smith emend. L. B. Smith & R. W. Read. Petalis ellipticis, late rotundatis, cum sepalis vix similibus. Fig. 1.

J. Bogner, Journ. Bromel. Soc. 25: 215, fig. 1975.

VENEZUELA: BOLIVAR: Auyán-tepuí, "El Libertador", forming cushions, 2400 m, Bogner 988 (M).

Bogner's color photo shows such different sepals and petals that it did not seem possible that it could be the same species as Ayensua uaipanensis. However, comparison of his collection with earlier ones showed that the difference was due to age. In the earlier ones the thin petals had shriveled until they closely resembled the sepals, a condition not previously known in the Bromeliaceae and now happily removed.

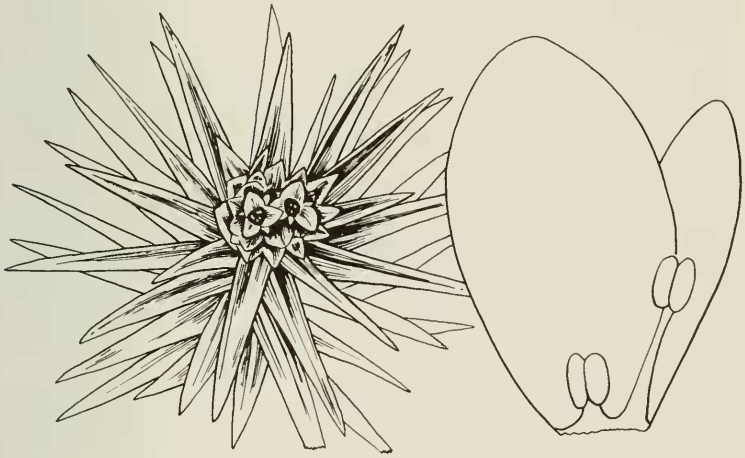


Fig. 1. Ayensua uaipanensis. Photo J. Bogner (988).

12. DYCKIA

12c. D. BURLE-MARXII L. B. Smith & R. W. Read, sp. nov. A D. encholirioide (Gaudichaud) Mez, cui in monographiae clave proxima foliorum spinis maximis, inflorescentiae indumento cinereo, sepalis late rotundatis, filamentis alte connatis differt.

PLANT flowering over 1.7 m high. LEAF-BLADES very narrowly triangular, over 3 dm long, 15 mm wide, finely pale lepidote between the nerves beneath, soon glabrous and lustrous above except

on the spines, laxly spinose-serrate with curved spines 9 mm long. SCAPE over 12 mm in diameter, glabrous at least with age; scape-bracts exceeding the internodes but not imbricate, ovate, the lower with narrowly triangular, obscurely serrulate blades, the upper attenuate, entire. INFLORESCENCE compound, finely cinereous-tomentose; primary bracts lance-ovate, attenuate, to 5 cm long, serrulate or entire; branches suberect, slender, ca. 3 dm long. FLORAL BRACTS broadly ovate, acuminate, nearly equaling the sepals; pedicels obconic, 3 mm long. SEPALS broadly subelliptic, broadly rounded at apex, 6 mm long, ecarinate, cucullate at anthesis; petals 8 mm long, orange, the blades spreading, elliptic, broadly rounded, ecarinate; stamens nearly equaling the petals; filaments high-connate and visible above the petal-claws; ovary broadly ovoid; style very short. Pl. 5.

BRAZIL: BAHIA: Chapada Diamantina without exact locality, cultivated and flowered 15 May 1977, R. Burle Marx s n (HB, holotype; US, photo).

Dyckia burle-marxii comes to D. encholirioides in the key but differs in so many ways that it can scarcely be considered a close relative. However, it seems equally distant from any Bahian species when different priorities are given its key characters

103a. DYCKIA PAUCIFLORA L. B. Smith & R. W. Read, sp. nov. A D. paraënsi L. B. Smith, cui affinis, foliis valde brevioribus crasse serratis, inflorescentia pauciflora geniculata differt.

PLANT flowering 5 dm high. LEAVES densely rosulate; sheaths ample, ca. 15 mm long; blades recurved-spreading, narrowly triangular, 6 cm long, 17 mm wide, covered on both sides with appressed cinereous scales, becoming glabrous above, laxly serrate with black recurved 3 mm long spines. SCAPE erect, very slender, glabrous; scape-bracts remote, very small, acuminate or apiculate. INFLORESCENCE simple, very lax, typically 5 cm long and 6-flowered, glabrous; axis geniculate. FLORAL BRACTS suborbicular, apiculate, 3 mm long, about equaling the slender pedicels; flowers subspreading. SEPALS broadly elliptic, obtuse, 6 mm long; petals very broadly rounded, 9 mm long, ecarinate, orange; stamens included; filaments connate above the common tube with the petals; stigmas subsessile. Pl. 6.

BRAZIL: GOIÁS: Posse vicinity, peak of rock dome, 1 January 1977, Hatschbach 39429 (US, holotype; MBM, isotype); Posse, Rio da Prata, cerrado, 800 m, 9 April 1966, Irwin et al. 14528 (NY, US, paratypes).

TILLANDSIOIDEAE

(Enumeration of Fl. Neotropica Mon. 14, pt. 2. 1977)

15. VRIESEA

11. V. DUBIA (L. B. Smith) L. B. Smith emend. L. B. Smith & R. W. Read. Inflorescentia usque 4-ramosa, bracteis primariis eis scapi similibus, quam spicis multo brevioribus.

PERU: AMAZONAS: Rio Cenapa, ridge above Quebrada Chikisinuk throat, a tributary of Huampami, entering from south about 5 km

from confluence with Cenepa, 240-270 m, 21 December 1972, Berlin 664 (MO, US); Quebrada Cunup, 240-255 m, 24 July 1974, Kayap 1277 (MO, US).

Flora Neotropica No. 14, pt. 2: 1074. 1977 covers the character of compound inflorescence in the key but fails to in the description on p. 1097. The above notes serve to rectify the omission and also to add the species to the flora of Peru.

16. GUZMANIA

117a. G. LELLINGERI L. B. Smith & R. W. Read, sp. nov. A G. sprucei (André) L. B. Smith, cui affinis, scapo gracili curvato, bracteis florigeris quam sepalis subduplo brevioribus, floribus gracilibus differt.

PLANT evidently stemless, flowering 46 cm long. LEAVES (inner) to 45 cm long, laxly vestite with minute flat brown-centered scales; sheaths elliptic, to 15 cm long, dark castaneous at base; blades ligulate, subacute and apiculate, 18 mm wide. SCAPE slender, curved; scape-bracts erect, barely imbricate, ovate, acuminate, laxly lepidote. INFLORESCENCE simple, lax, typically 8-flowered, 10 cm long; axis slender, flexuous. FLORAL BRACTS suborbicular, apiculate, 30 mm long, reaching about the midpoint of the sepals, thin, reddish orange (! Lellinger), obscurely lepidote at apex; pedicels 10 mm long, nearly as thick as the flower-base; flowers spreading. SEPALS 45 mm long, glabrous, connate in a slender tube, the free lobes elliptic, obtuse, cucullate, 8 mm long; petal-blades broadly elliptic, 10 mm long, yellow-green outside, pale green inside (! Lellinger); stamens and stigmas included. Pl. 7.

COLOMBIA: CHOCÓ: Northwest side of Alto del Buey, trail along ridge from the confluence of the forks of the Río Mutatá above the Río Dos Bocas to the top of Alto del Buey, primary mossy montane forest, 1450-1750 m, 9 February 1971, Lellinger & De la Sota 241 (US, holotype).

BROMELIOIDEAE

ARAEOCOCCUS

A. ALVIMII L. B. Smith & R. W. Read, sp. nov. Ab omnibus speciebus adhuc cognitis sepalorum tubo magno, ovario alato-costato differt.

PLANT stemless, spreading by stout rhizomes, flowering 55 cm high. LEAVES few in a crateriform rosette, 3-4 dm long, laxly and minutely appressed-lepidote; sheaths elliptic, the inner to 15 cm long; blades ligulate, rounded and apiculate, narrowed and bearing a broad pale median channel toward base, 5 cm wide, laxly and minutely serrulate. SCAPE erect, slender, about equaling the leaf-sheaths, glabrous; scape-bracts not seen, probably like the primary bracts. INFLORESCENCE laxly tripinnate, glabrous; primary bracts lanceolate, acute, 5 cm long, membranaceous; branches elongate, nearly straight, very slender. FLORAL BRACTS suborbi-

cular, apiculate, 1.5 mm long, membranaceous, brown; flowers sessile, barely more than 2-ranked, spreading. SEPALS connate in a subcylindric 2.5 mm long green tube, the free lobes ca. 3 mm long including the large lateral wing exceeding the midnerve, stramineous when dry and contrasting strongly with the tube; petals unguiculate with a small suborbicular blade, white, apparently naked; stamens and style included; ovary subcylindric, 3-3.5 mm long, alate-costate; epigynous tube very short; placenta apical; ovules 3-4 in each locule. Pl. 8.

BRAZIL: BAHIA: Along road to Pau Brasil between Camacá and Rio Pardo crossing, in woods with Cryptanthus beuckeri, Billbergia fosteriana, Aechmea depressa, Bertolonia sp., Bactris sp. and Geonoma sp., 20 January 1975, Read & Daniels 3560 (US, holotype, CEPEC, isotype).

This species is named in honor of Dr. Paulo de Tarso Alvím, Scientific Director of CEPLAC, Centro de Pesquisas do Cacau, Itabuna, Bahia, Brazil, in appreciation of his high regard for and encouragement of botanical research in Brazil. His gracious assistance to Drs. Read and Daniels during their visit to Bahia in February 1975 is sincerely appreciated.

Araeococcus alvimii is a good illustration of the state of generic confusion in the Bromelioideae. In its unarmed sepals and alate-costate ovary it resembles Aechmea subgenus Lamprococcus but no scales can be found on its petals. With its naked petals it falls between Araeococcus and Streptocalyx. The sepals are too long for Araeoccus if the calyx-tube is included, but the habit and small number of ovules fit well. Therefore we have arbitrarily assigned the species and thereby enlarged the generic concept to include the presence of a calyx-tube but with the size limit applying to the free lobes alone.

FLORA NEOTROPICA, Monograph No. 14, [Part 1], Pitcairnioideae, October 14, 1974. L. B. Smith & R. J. Downs. Errata:

As opportunity offers we plan to note errata in this and succeeding parts of the monograph so that users may annotate their copies accordingly.

P. 66. After first heading "11" read: "8. Pitcairnia".

P. 79. After "1. Puya ultima...," read: "Fig. 18".
After "2. Puya longisepala...," read: "Fig. 18".
After "3. Puya roezlii...," read: "Fig. 18".

P. 254. Should read: "15. Leaves dimorphic..."
"15. Leaves trimorphic..."

P. 259. Under Subkey V the second "10" heading should read: "10. Inflorescence dense throughout."

P. 261. Under Subkey at end of heading "1" add: "and P. abundans in Mexico."

P. 265. In 3. Pitcairnia wurdackii, line 8 of the description after "pedicels" add: "to much shorter".

United States National Museum, Washington, D. C., U. S. A.

Plate 1

Pitcairnia quesnelioides L. B. Smith emend. Smith & Read

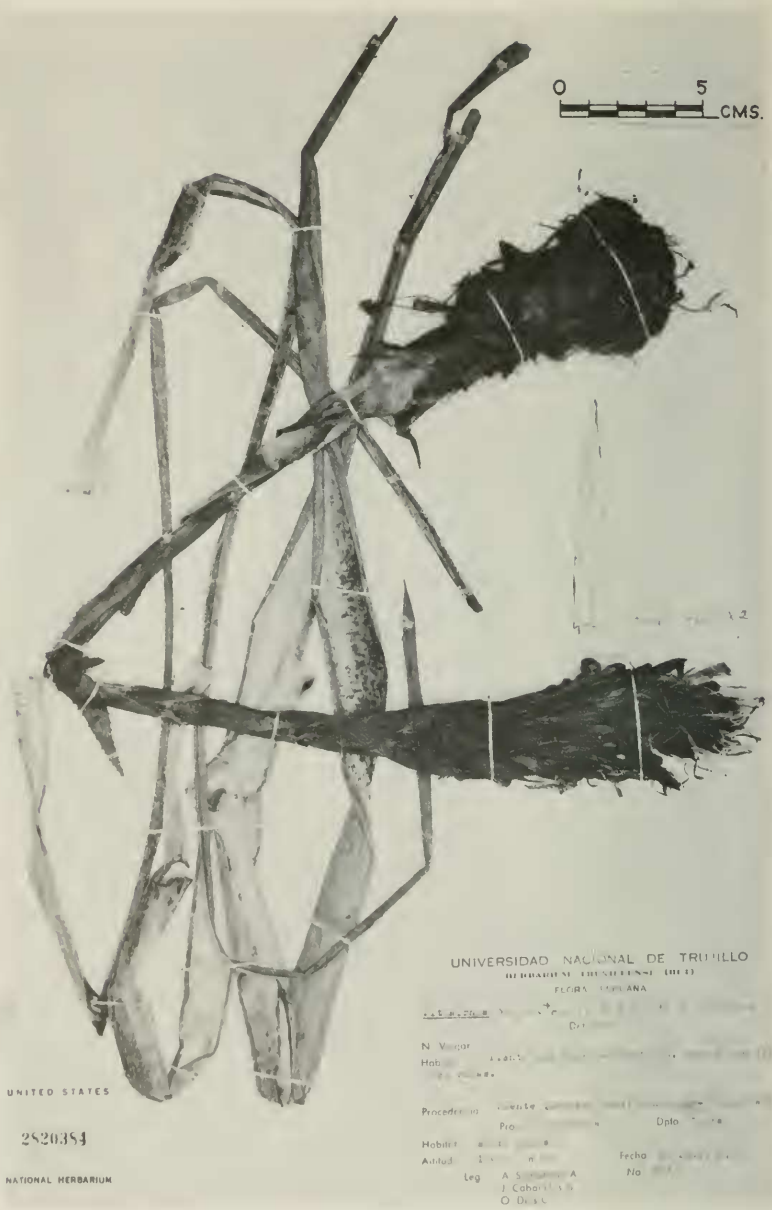
Plate 2

Pitcairnia serrulata Smith & Read

Plate 3

Pitcairnia kirkbridei Smith & Read

Plate 4

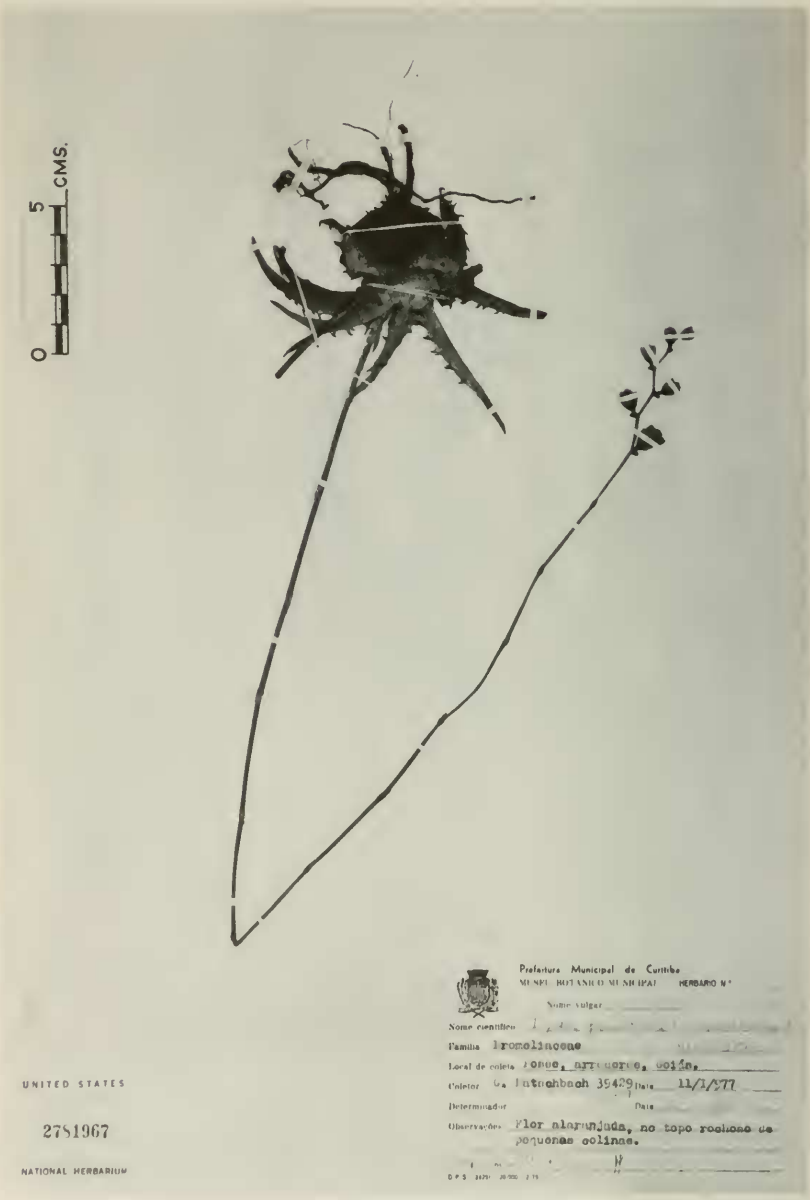


Pitcairnia sagasteguii Smith & Read

Plate 5

Dyckia burle-marxii Smith & Read

Plate 6



Dyckia pauciflora Smith & Read

Plate 7

Guzmania lellingeri Smith & Read

Plate 8

Araeococcus alvimii Smith & Read