

STUDIES ON THE FLORA OF THE GUIANAS NO. 90: CHECKLIST  
OF BROMELIACEAE OF THE GUIANAS WITH NOTES ON  
CRITICAL SPECIES

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ABSTRACT. An updated checklist of Bromeliaceae in the Guianas includes plants of Guyana (GU), Surinam (SU), and French Guiana (FG). The checklist is based on collections from the herbaria at Utrecht University (U), the New York Botanical Garden (NY), and the Smithsonian Institution (US). Of the 13 new country records reported (GU-7, SU-1, FG-5), nine are new for the overall Guianas region. Notes on critical or poorly known species are presented, along with three new synonyms, two in *Aechmea* and one in *Tillandsia*.

Key words: Bromeliaceae, Guianas, Surinam, French Guiana, checklist

INTRODUCTION

In preparation for future installments of the Bromeliaceae treatment for the Flora of the Guianas project, a herbarium study was undertaken at the U.S. National Herbarium, Smithsonian Institution (US); Utrecht University (U); and the New York Botanical Garden (NY). Newly studied collections were made, for the most part, by the following collectors: G. Cremers, J.J. de Granville, L.J. Gillespie, W. Hahn, T.W. Henkel, B. Hoffman, K. Lance, T. McDowell, and J.J. Pipoly. Adding to a former study on the Tillandsioideae (Gouda 1987), this paper reports on a herbarium study of about 500 collections (mainly non-Tillandsioid), in which 13 taxa were found to be new country records. Of these, nine are new records for the Guianas as a whole (FIGURE 1): *Aechmea castelnavii* Baker, *A. rodriguesiana* (L.B. Sm.) L.B. Sm., *A. polyantha* E. Pereira & Reitz, *Brocchinia acuminata* L.B. Sm., *B. hechtioides* Mez, *Bromelia granvillei* L.B. Sm. & Gouda, *Connellia quelchii* N.E. Br., *Racinaea tetrantha* var. *caribea* (L.B. Sm.) Spencer & L.B. Sm., and *Tillandsia fendleri* var. *reducta* (L.B. Sm.) L.B. Sm.

In addition to a list of the new individual country records and representative specimens, a discussion section addresses critical or poorly known species. It is followed by the checklist of Bromeliaceae in the Guianas. A total of 128 Bromeliad species currently are known from the Guianas: Guyana with 110 species, French Guiana with 68, and Surinam with 56 species.

NEW COUNTRY RECORDS

New Records for Guyana

*Brocchinia acuminata* L.B. Sm.—Mt. Latipu, 15 km N of Kamarang (Mazaruni R.) on

mountain top in low scrubby vegetation, 900 m, 22 Aug. 1977, *P.J.M. Maas et al.* 2652 (U); Pakaraima Mts., Mt. Aymatoi, 1150 m, 16 Oct. 1981, *P.J.M. Maas et al.* 5762 (U).

*Brocchinia hechtioides* Mez—Potaro-Siparuni, Pakaraima Mts., Upper Ireng R. watershed, 16 Jul. 1994, *T.W. Henkel & M. Chin* 5665 (US).

*Catopsis sessiliflora* (Ruiz & Pav.) Mez—Pomeroon-Supenaam region, Akawini River, 11 Sep. 1992, *B. Hoffman et al.* 2551 (US).

*Connellia quelchii* N.E. Br.—Cuyuni-Mazaruni, Pakaraima Mts., 3 Nov. 1992, *B. Hoffman & T. Henkel* 3202 (US).

*Racinaea tetrantha* (Ruiz & Pavon) Spencer & L.B. Sm. var. *caribaea* (L.B. Sm.) Spencer & L.B. Sm.—Cuyuni-Mazaruni region, Pakaraima Mts., 3 Nov. 1992, *B. Hoffman et al.* 3200 (US).

*Tillandsia fendleri* Griseb. var. *reducta* (L.B. Sm.) L.B. Sm.—Potaro-Siparuni, Pakaraima Mts., 29 Jan. 1993, *T.W. Henkel et al.* 1085 (US).

*Vriesea heliconioides* (Kunth) Hook. ex Walp.—Barima-Waini region, Aranka Head, 10 Apr. 1991, *T. McDowell et al.* 4337 (US).

New Record for Surinam

*Aechmea castelnavii* Baker—Sipalawini savanna, 1 km N of Tussenkamp at bank 4—gebroeders creek, near Brazilian frontier, 300 m, *F.H.F. Oldenburger et al.* 613 (U).

New Records for French Guiana

*Aechmea angustifolia* Poepp. & Endl.—Säül, Route de Belizon; Gobaya Soula-Bassin du

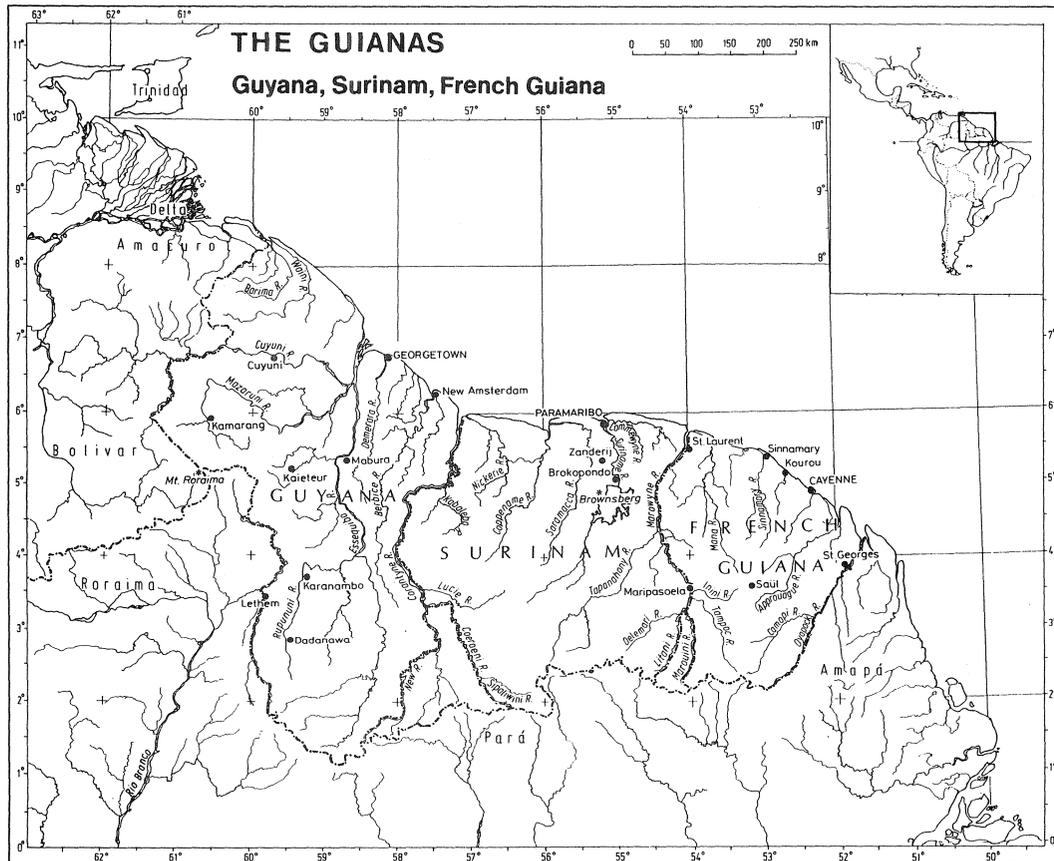


FIGURE 1. The Guianas region, drawn by H. Rypkema.

Maroni, 28 Sep. 1995, *S.A. Mori et al.* 24245 (NY); French Guiana, Gobaya Soula - Bassin du Maroni, Rivedroute, 100 m, 3°37'N, 53°58'W, 1 Feb. 1989, *J.J. de Granville et al.* 10977 (B, CAY, P, US).

***Aechmea rodriguesiana*** (L.B. Sm.) L.B. Sm.—Mataroni to Savanne Roche, 17 Mar. 1998, *J. Moonen* 195 (U).

***Aechmea polyantha*** E. Pereira & Reitz—Savane Roche de Virginie, Bassin de l'Approuague, *G. Cremers et al.* 11880 (CAY, US), 15285 (CAY, U), *J. Moonen* 149, 166, 167, 185 (U), *E.J. Gouda & J. Moonen* EG99-5 (CAY, U); also new for Amapá, Brazil, Município de Calçoene, BR156, in vicinity of government road camp "Carnot," 53 km WNW of Calçoene, 10 Dec. 1984, *S. Mori et al.* 17353 (NY).

***Ananas parguazensis*** Camargo & L.B. Sm.—Savana roche, Piton Rocheux remarquable region de la Haute Crique Armontabo, Bas Oyapock, 24 Feb. 1981, *G. Cremers* 7116 (US).

***Bromelia granvillei*** L.B. Sm. & Gouda—Mont Bakra, Region des Emerillons, 15 Apr. 1993, *G. Cremers* 13122 (B, BR, CAY, NY, P, U, US); Savane Roche du Quatorze Juillet, Bassin du Bas Oyapock, 16 Apr. 1991, *G. Cremers* 12188 (CAY).

#### CRITICAL AND POORLY KNOWN SPECIES

##### *Aechmea*

***Aechmea campanulata*** L.B. Sm., Mem. New York Bot. Gard. 9: 316. 1957. TYPE: Guyana, Pakaraima Mts., valley of the Mahdia River (Tributary, Potaro R.), summit of Eagle Mt., 700 m, 13 Oct. 1951 B. Maguire 32098, (Holotype: NY!).

Besides the type, two more collections from Guyana were found (*T. McDowell & D. Gopaul* 3546 and 3480 [US!], both from Eagle Mt., near the type location collected in Oct. 1990). This species strongly resembles *Pseudaechmea ambigua* L.B. Sm. & R.W. Read, from Colombia

and is suspected to be closely related. It has strongly asymmetric sepals, a very shallow epigynous tube above the ovary and caudate ovules. The inflorescence is bipinnate at the base or pseudo-simple (with one-flowered branches). Ligules on the petals are highly adnate to the petals and sometimes difficult to find. At this time, ligules on the petals are keeping these two probably closely related species in two different genera. This characteristic, however, has proven to be unreliable in many cases for generic level classification (Grant 1995), and the relation between these two species is subject for further investigation.

***Aechmea eglariana*** L.B. Sm., Bol. Mus. Paranaense Emilio goeldi II, 1958. TYPE: Brazil, Pará: Rio Trombetas, region of the upper Ariramba, Dec. 1910, *Ducke s.n.* (Holotype: MG; Isotype: US!).

***Aechmea eglariana*** L.B. Sm. var. *major* L.B. Sm., syn. nov., Mem. New York Bot. Gard. 10(5): 40. 1964. TYPE: Venezuela, Amazonas: along Río Siapa between Río Casiquiare and mouth of Caño Hechimoni, 120 m, 25 Jul. 1959, *Wurdack & Adderley 43613* (Holotype: US!).

No evidence was found that this variety could be distinguished from the typical variety. *Aechmea eglariana* seems to be very variable in plant size, coloration and density of the inflorescence; therefore, *A. eglariana* var. *major* must be considered as a synonym to the type variety.

***Aechmea rodrigueziana*** (L.B. Sm.) L.B. Sm., Phytologia 19: 281. 1970. TYPE: Brazil, Amazonas: Manaus, Reserva Florestal Ducke. *W. Rodrigues 5399* (holotype, US!).

***Aechmea meeana*** E. Pereira & Reitz, syn. nov., Bradea 1: 385. 1974, TYPE: Brazil, Amazonas: near Manaus, Rio Maráu, Sep. 1972, *Mee 66* (Holotype: HB!).

Although *Aechmea rodrigueziana* was originally described in the genus *Gravisia* (= *Aechmea*), it was later wrongly placed in the subgenus *Chevaliera* by L.B. Smith (Smith & Downs 1979), likely because of the lack of petals in the known material, and because it resembles *Aechmea digitata* L.B. Sm. & R.W. Read. This would explain why E. Pereira & Reitz were not aware of this species when they described *A. meeana* (all species of *Gravisia*, except *G. rodrigueziana* L.B. Sm. are placed in *Aechmea* subgenus *Aechmea*). The inflorescences in the types of both species are in different stages of development. The type of *A. rodrigueziana* is in fruiting stage and therefore appears more robust than the type specimen of *A. meeana* (see FIGURES 2, 3). Most of the fruits are already gone, probably taken out by birds. There is no difference in flower char-

acteristics (floral-bracts, ovary and sepals), and both have the characteristic dark brown leaf-sheets, with robust spines on the base of the blades. The typical castaneous peduncle-bracts abruptly end in a very stout spine. It is obviously the same species.

Some confusion exists regarding two of Margaret Mee's paintings in her book *In Search of Flowers of the Amazon Forests* (Mee 1988, Baensch 1994); it was also published on the cover of the Journal of the German Bromeliad Society, Die Bromelie 3/1993. The type of *Aechmea meeana* (HB, photo US) does not appear to be conspecific with the specimen used as the basis for Margaret Mee's painting. The painting was based on a collection from Rio Maráu, March 1973 (the type locality of *A. meeana*) but several months after the type was collected. This painting is more representative of *A. polyantha* E. Pereira & Reitz, which is based on a Mee collection (*M. Mee 72*, see note about *A. polyantha*). In *A. meeana*, the inflorescence spikes are fasciculate (digitate); and the floral bracts are relatively large, covering most of the flowers. The inflorescence of *A. polyantha* is more elongated (remotely branching), and the flowers much exceed the floral bracts).

***Aechmea lanjouwii*** (L.B. Sm.) L.B. Sm., Phytologia 19: 281. 1970. TYPE: Brazil, On granite flat near Voltzberg, Sep. 1933, *Lanjouw 874* (Holotype: U!; Isotype: US).

This species, previously only known from the type collection, now has been recollected at the type locality (*E.J. Gouda & J. Moonen EG99-29*, BBS, CAY, NY, US). It is only growing saxicolous in two patches, with a total of about 65 plants in secondary vegetation on the edge of the granite flat. We could not find any other specimen of this species on the Voltzberg, where we searched on both tops of this mountain (rocky outcrop with two tops at 200 and 250 m), nor could we find it growing epiphytic in the forest around it. Many of the specimen plants were flowering or fruiting. Although this species appears to be very close to *Aechmea polyantha* (based on the inflorescence characteristics), its petals are very different. Not cuculate and bluish, but yellow and erect, more resembling that of *A. aquilega* which was growing next to it. It is interesting to see that all the fruits checked (of several infructescences) did not contain any seeds, perhaps indicating that we are dealing with a natural hybrid.

***Aechmea polyantha*** E. Pereira & Reitz, Bradea 1: 385. 1994. TYPE: Brazil, Amazonas: Rio Maráu near Manaus, Sep. 1972, *M. Mee 72* (Holotype: HB!; photo of type: US!).

The type specimen of *Aechmea polyantha*, ex-

cept for the leaf, does not look much like the specimen on the well-known painting by Mee (Beansch 1994). The painting was made from a specimen from Amazonas, Rio Maráu near Manaus (type location of *A. polyantha*), January 1973. It is not known if any voucher specimen was collected of the plant in Mee's painting, which looks more like *A. eglariana*, with floral bracts inconspicuous and broad leaf-sheaths contracted in a very narrow blade. The painting of *A. meeana* (Beansch 1994, see note about this species) is probably *A. polyantha* but not from the type location, if the information on the painting is correct. Both paintings also were published on the cover of the Journal of the German Bromeliad Society, Die Bromelie 3/1993 and 1/1996.

It is interesting to note that in French Guiana, *Aechmea polyantha*, *A. rodrigueziana*, and *A. eglariana* are found growing in the same habitat, the rocky outcrop of savane Roche de Virginie, but also in the forest as they do near Manaus, Brazil.

### *Ananas*

The complex of *Ananas* species including *A. ananassoides* (Baker) L.B. Sm., *A. nanus* (L.B. Sm.) L.B. Sm., and *A. parguazensis* has been a source of problems for many years. Based on the ample herbarium material available at US and personal observations on living collections, the following characteristics were helpful in identifying the species involved. Some specimens studied were, however, too fragmentary or seemed to be intermediate between the species.

***Ananas ananassoides*** (Baker) L.B. Sm. is the most common species of the three in this complex, especially in French Guiana and Surinam; though in the last monograph of the family, it was not indicated at all for the Guianas (Smith & Downs 1979).

Distinguishing characters of *Ananas ananassoides*: plant flowering often 1–1.5 m tall, with narrow leaves, strongly channeled and revolute (folded when dried), with antrorse spines ending in an attenuate narrow tip (subfiliform); upper scape bracts very finely serrulate at base; inflorescence many-flowered with nearly no coma at anthesis, though the coma developing in fruit. Selected specimens examined: *J.J. de Granville* 325, 3957 (US, CAY); *G. Cremers* 7481 (US, CAY), 8279 (U), 10865 (US, CAY, P), 15294 (U); *D. Fairchild* 3680 (US); *B. Maguire et al.* 53993 (US); *T. McDowell & D. Gopaul* 2414 (US); *W. Hahn et al.* 4594 (US); *H.S. Irwin et al.* 55788 (U); *M.J. Jansen-Jacobs et al.* 3747 (U); *J.G. Wessels Boer* 1463 (U).

***Ananas nanus*** (L.B. Sm.) L.B. Sm. is the smallest of these three species and probably restricted to central and northern Brazil. The material cited from the Guianas in Smith and Downs (1979) is more appropriately placed under *A. ananassoides*.

Distinguishing characters of *Ananas nanus*: leaves are not strongly channeled as in *A. ananassoides* nor strongly revolute (when dry), relatively wider and more abruptly ending in a spinose point; upper scape-bracts serrulate (not as fine as *A. ananassoides*), relatively short and ending in a spinose point; the inflorescences are few-flowered (about 10) and bear a distinct coma at anthesis.

***Ananas parguazensis*** Camargo & L.B. Sm. can be as large as *A. ananassoides* or even larger, but also as small as *A. nanus*. Most *Ananas* specimens from Surinam, previously identified as *A. parguazensis*, are better placed in *A. ananassoides*. One collection (verified) was already known from Guyana and four other specimens from Guyana have been identified as this species, in addition to a few collections from Surinam and one from French Guiana (see new collections). *A. parguazensis* is distributed from Venezuela into the Guianas.

Distinguishing characters of *Ananas parguazensis*: inner leaves and those of the crown narrowed at the base, less strongly channeled and stoutly retrorse serrate at base, spines soon antrorse, margins sinuous (caused by broad spines); upper scape bracts large and wide also with retrorse spines at base; crown as in *A. ananassoides*. Selected specimens examined: *W. Hahn et al.* 3937, 4594 (US); *D. Clarke* 376, 1505, 2766 (US); *G. Cremers* 7116 (US, CAY); *G.T. Prance et al.* 4111 (US); *T. McDowell et al.* 2024, 3380 (US); *L.P. Kvist et al.* 73 (US); *P. Mutchnick & B. Allicock* 559, 737 (US).

***Ananas lucidus*** Miller has been cited for French Guiana based on *Sagot* 555 (P), but that specimen was not studied for this work, and the identification cannot be confirmed. This species is spineless.

### *Disteganthus*

***Disteganthus basilateralis*** Lem., Fl. Serres 3: pl.227, 1847. TYPE: French Guiana, cultivated in Paris Hortus, *Melinon s.n.* (Holotype: P).

***Disteganthus calatheoides*** (L.B. Sm.) L.B. Sm. & R.W. Read, syn. nov. TYPE: Brazil. Amapá: Rio Oiapoque, E of Colonia Agricola do Oiapoque, 3°43'N, 51°55'W, about 4 km N of mouth of Cricu River, *H.S. Irwin et al.* 47527 (Holotype: NY!).

*Disteganthus calatheoides* (basionym: *Aech-*

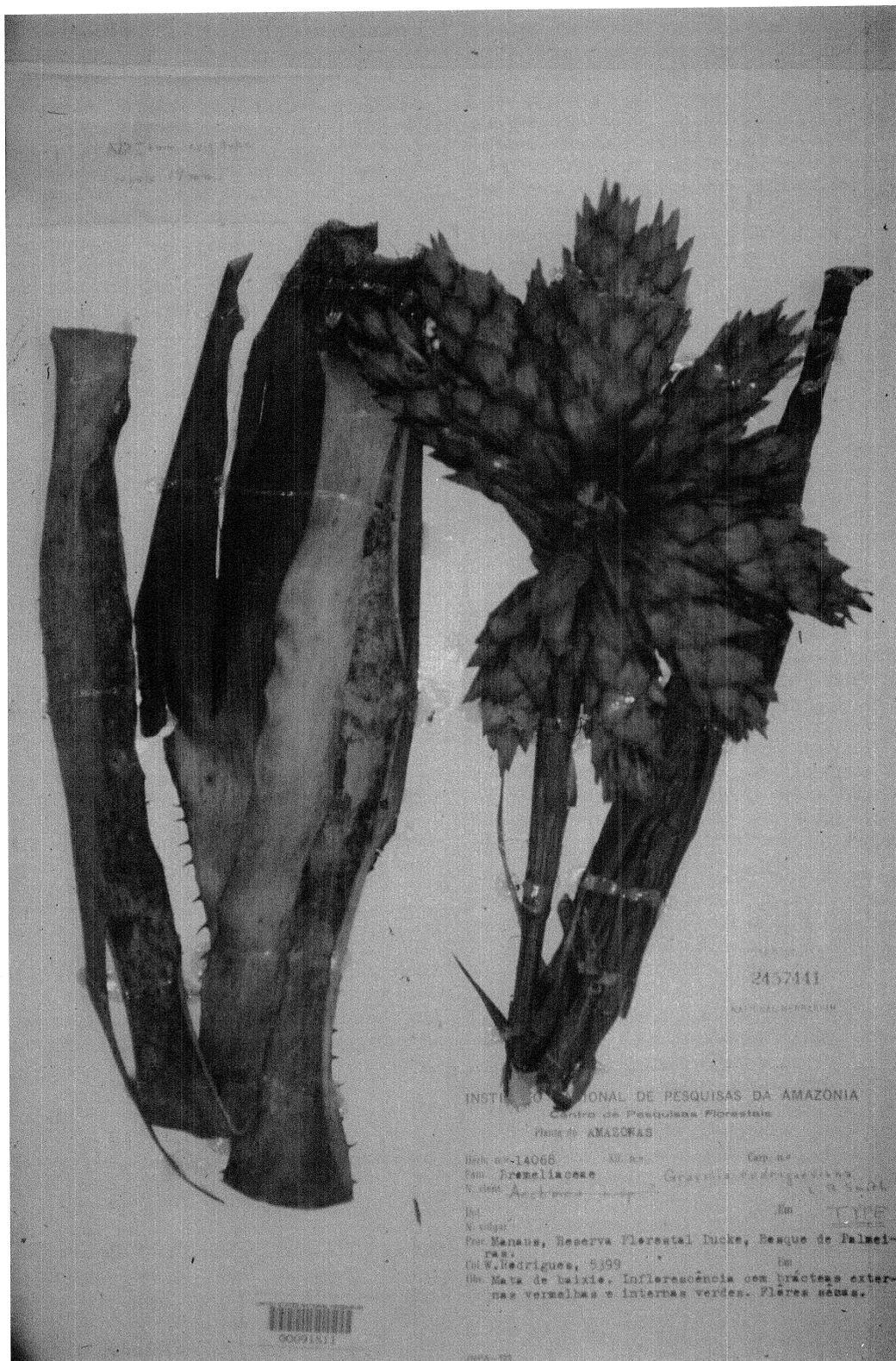


FIGURE 2. Type specimen of *Aechmea rodrigueziana*, photo by author.

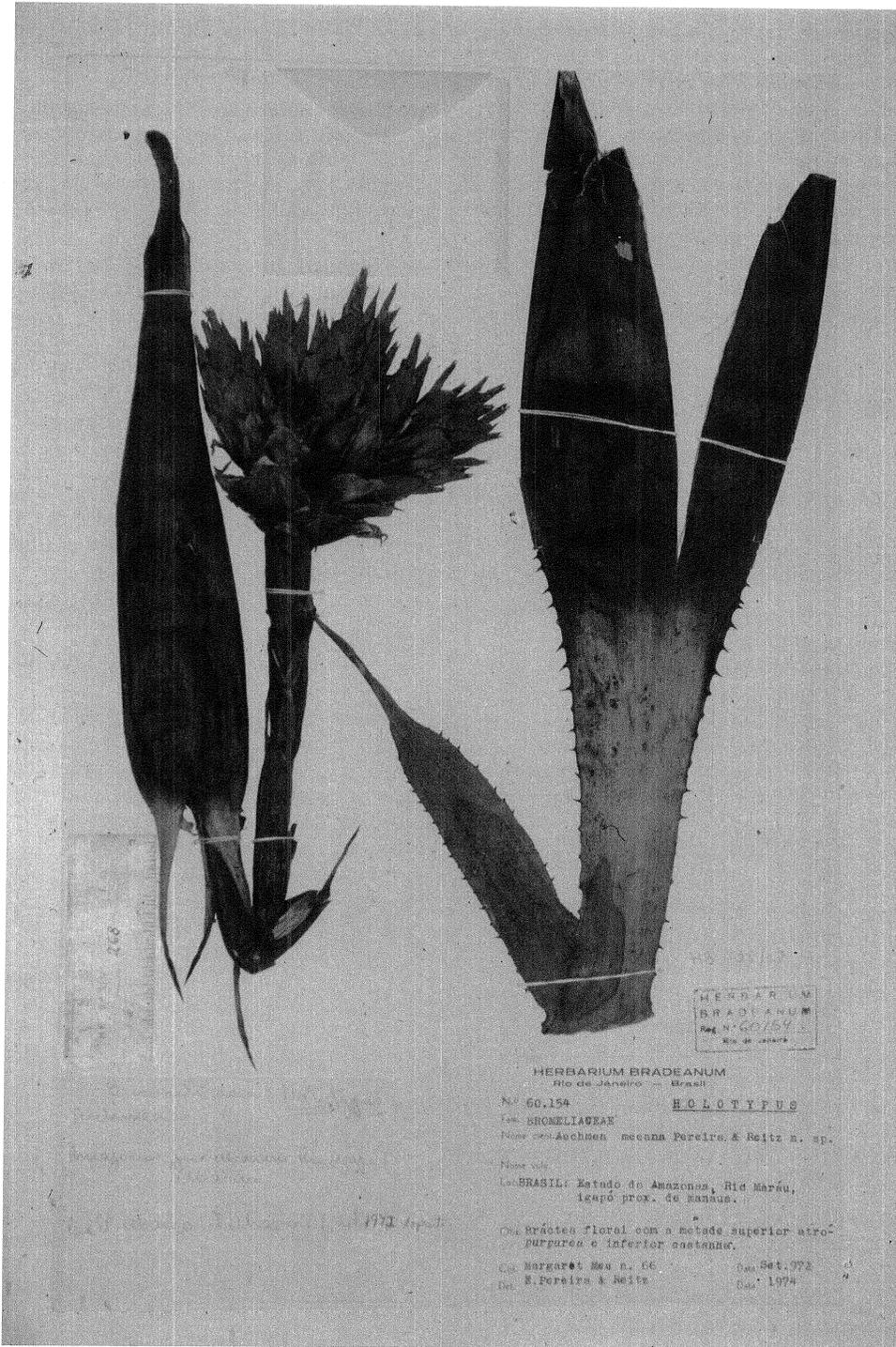


FIGURE 3. Type specimen of *Aechmea meana*, photo by author.

*mea calatheoides* L.B. Sm.) no longer can be distinguished from *D. basilateralis* Lem. *Disteganthus basilateralis* was known from a single specimen at time of description of *D. calatheoides*; additional collections have shown that characters merge. The difference between the two species was based on serrulate or entire sepal margins (Smith & Downs 1979), and this character has shown to vary from loosely serrulate to entire within a population. This species name must be considered a synonym of *D. basilateralis*. Selected specimens examined: *G. Creemers* 8272 (CAY, NY, US), 10854 (CAY, P, U, US), 11511 (CAY, US), 12337 (B, CAY, US); *J.J. de Granville et al.* B.4725 (CAY, US), 10182

(CAY, P, US), 11077 (CAY, P, U, US); *D. Larpin* 656 (CAY, US); *W.J. Kress et al.* 88-2522, 88-2536 (US); *C. Feuillet* 9947 (US).

***Disteganthus lateralis*** (L.B. Sm.) Gouda, *Brittonia* 46(2): 134. 1994. —*Aechmea lateralis* L.B. Sm., *Contr. U.S. Nat. Herb.* 29: 525. 1954. TYPE: Surinam. Paramaribo, without specific locality, 2 Oct. 1948, *Foster* 2387 (Holotype: US; Isotype: U!).

*Disteganthus bromeliifolius* L.B. Sm., nom. nud. Boggan (1992) listed *D. bromeliifolius* L.B. Sm., sp. nov. ined., based on *J.J. de Granville* 7270 (CAY, US), French Guiana, Montagne de Kaw camp Caiman, but it has not been validly published (Gouda 1994).

#### CHECKLIST OF BROMELIACEAE OF THE GUIANAS

Selected synonyms and comments are in brackets after the accepted name. Country abbreviations are Guyana (GU), Surinam (SU), and French Guiana (FG). Unverified country records or records probably based on material of cultivated origin are marked with a "?". The checklist is followed by notes on excluded taxa and taxa expected to occur in the Guianas.

Species	Country
<i>Aechmea angustifolia</i> Poepp. & Endl.	GU, FG
<i>Aechmea aquilega</i> (Salisb.) Griseb.	GU, SU, FG
<i>Aechmea brassicoides</i> Baker	GU
<i>Aechmea bromeliifolia</i> (Rudge) Baker	GU, SU, FG
<i>Aechmea campanulata</i> L.B. Sm.	GU
<i>Aechmea castelnavii</i> Baker	SU
<i>Aechmea contracta</i> (Mart. ex Schult.f.) Baker	GU
<i>Aechmea eglariana</i> L.B. Sm.	FG
<i>Aechmea lanjouwii</i> (L.B. Sm.) L.B. Sm.	SU
<i>Aechmea lingulata</i> (L.) Baker	GU, SU, FG
<i>Aechmea melinonii</i> Hook.	GU, SU, FG
<i>Aechmea mertensii</i> (Mey.) Schult.f.	GU, SU, FG
<i>Aechmea nudicaulis</i> (L.) Griseb.	GU
var. <i>cuspidata</i> Baker	
var. <i>nudicaulis</i>	GU, SU, FG
<i>Aechmea pallida</i> L.B. Sm.	GU
<i>Aechmea penduliflora</i> André	GU
<i>Aechmea politii</i> L.B. Sm.	GU, FG
<i>Aechmea polyantha</i> E. Pereira & Reitz	FG
<i>Aechmea rodrigueziana</i> (L.B. Sm.) L.B. Sm. [syn. <i>A. meeana</i> ]	FG
<i>Aechmea setigera</i> Mart. ex Schult.f.	SU, FG
<i>Aechmea tillandsioides</i> (Mart. ex Schult.f.) Baker	GU, SU
<i>Aechmea tocantina</i> Baker	GU, SU, FG
<i>Ananas ananassoides</i> (Baker) L.B. Sm.	GU, SU, FG
<i>Ananas comosus</i> (L.) Merrill [cultivated, naturalized]	GU, SU, FG
<i>Ananas lucidus</i> Mill.	FG
<i>Ananas parguazensis</i> Camargo & L.B. Sm.	GU, SU, FG
<i>Araeococcus flagellifolius</i> Harms	SU, FG
<i>Araeococcus goeldianus</i> L.B. Sm.	FG
<i>Araeococcus micranthus</i> Brongn.	GU, SU, FG
<i>Billbergia macrolepis</i> L.B. Sm.	GU
<i>Billbergia pyramidalis</i> (Sims) Lind.	FG
<i>Billbergia violacea</i> Beer	GU, SU, FG

<i>Brocchinia acuminata</i> L.B. Sm.	GU
<i>Brocchinia hechtioides</i> Mez	GU
<i>Brocchinia micrantha</i> (Baker) Mez	GU
<i>Brocchinia reducta</i> Baker	GU
<i>Brocchinia steyermarkii</i> L.B. Sm.	GU
<i>Brocchinia tatei</i> L.B. Sm.	GU
<i>Bromelia agavifolia</i> Brongn. ex Houlett	FG
<i>Bromelia alta</i> L.B. Sm.	GU, SU
<i>Bromelia fosteriana</i> L.B. Sm.	SU
<i>Bromelia granvillei</i> L.B. Sm. & Gouda	FG
<i>Bromelia humilis</i> Jacq.	SU?
<i>Bromelia oleveiriae</i> L.B. Sm.	FG?
<i>Bromelia pinguin</i> L. [cultivated only?]	GU, SU
<i>Bromelia plumieri</i> (E. Morren) L.B. Sm.	GU, SU, FG
<i>Bromelia serra</i> Griseb.	FG
<i>Bromelia tubulosa</i> L.B. Sm.	FG?
<i>Catopsis berteroniana</i> (Schult.f.) Mez	GU, SU, FG
<i>Catopsis sessiliflora</i> (Ruiz & Pav.) Mez	GU, SU, FG
<i>Connellia augustae</i> (Rich. Schomb.) N.E. Br.	GU
<i>Connellia quelchii</i> N.E. Br.	GU
<i>Disteganthus basilateralis</i> Lem.	FG
<i>Disteganthus lateralis</i> (L.B. Sm.) Gouda [ <i>D. bromeliifolius</i> , <i>nom. nud.</i> ]	SU, FG
<i>Guzmania altsonii</i> L.B. Sm.	GU, SU, FG
<i>Guzmania calothyrsus</i> Mez	GU
<i>Guzmania lingulata</i> (L.) Mez	GU, SU, FG
<i>Guzmania melinonis</i> Regel	GU, SU, FG
<i>Guzmania plumieri</i> (Griseb.) Mez	GU?, SU?, FG
<i>Guzmania retusa</i> L.B. Sm.	GU
<i>Guzmania roezlii</i> (E. Morren) Mez	GU
<i>Guzmania sphaeroidea</i> (André) André ex Mez	GU
<i>Guzmania squarrosa</i> (Mez & Sodiro) L.B. Sm. & Pittendrigh	GU
<i>Lindmania geniculata</i> L.B. Sm. (syn. <i>L. guianensis</i> ? See Holst 1997)	GU
<i>Lindmania guianensis</i> (Beer) Mez	GU
<i>Navia angustifolia</i> (Baker) Mez	GU
<i>Navia arida</i> L.B. Sm. & Steyerm.	GU
<i>Navia barbellata</i> L.B. Sm.	GU
<i>Navia brachyphylla</i> L.B. Sm.	GU?
<i>Navia cataractarum</i> Sandw.	GU
<i>Navia duidae</i> L.B. Sm.	GU?
<i>Navia gleasonii</i> L.B. Sm.	GU
<i>Navia maguirei</i> L.B. Sm.	SU
<i>Navia rupestris</i> (Gleason) Sandw.	GU
<i>Navia sandwithii</i> L.B. Sm.	GU
<i>Navia splendens</i> L.B. Sm.	GU
<i>Pitcairnia brittoniana</i> Mez	GU
<i>Pitcairnia caricifolia</i> Mart. ex Schult.f. [syn. <i>Pepinia caricifolia</i> ]	GU, SU, FG
<i>Pitcairnia geyskesii</i> L.B. Sm. [syn. <i>Pepinia geyskesii</i> ]	GU, SU, FG
<i>Pitcairnia incarnata</i> Baker [syn. <i>Pepinia incarnata</i> ]	FG
<i>Pitcairnia leprieurii</i> Baker	GU, FG
<i>Pitcairnia maidifolia</i> (C. Morren) Decne.	GU, SU
<i>Pitcairnia nuda</i> Baker [syn. <i>Pepinia nuda</i> ]	GU, SU
<i>Pitcairnia patentiflora</i> L.B. Sm. [syn. <i>Pepinia patentiflora</i> ]	FG
<i>Pitcairnia pusilla</i> Mez	FG
<i>Pitcairnia rubiginosa</i> (Brongn.) Baker [syn. <i>Pepinia rubiginosa</i> ]	FG
<i>Pitcairnia sastrei</i> L.B. Sm. & R.W. Read	SU?, FG

<i>Pitcairnia sprucei</i> Baker [syn. <i>Pepinia sprucei</i> ]	FG
<i>Racinaea jenmanii</i> (Baker) Spencer & L.B. Sm. [syn. <i>Tillandsia jenmanii</i> ]	GU
<i>Racinaea spiculosa</i> (Griseb.) Spencer & L.B. Sm. [syn. <i>Tillandsia spiculosa</i> ]	
var. <i>micrantha</i> (Baker) Spencer & L.B. Sm.	GU
var. <i>spiculosa</i>	GU, SU, FG
var. <i>stenoglossa</i> (L.B. Sm.) Spencer & L.B. Sm.	GU
<i>Racinaea tetrantha</i> (Ruiz & Pavon) Spencer & L.B. Sm. [syn. <i>Tillandsia tetrantha</i> ]	
var. <i>caribaea</i> (L.B. Sm.) Spencer & L.B. Sm.	GU
<i>Streptocalyx longifolius</i> (Rudge) Baker [syn. <i>Aechmea longifolia</i> ]	SU, FG
<i>Streptocalyx poeppigii</i> Beer [syn. <i>Aechmea beeriana</i> ]	SU, FG
<i>Streptocalyx poitaei</i> Baker [syn. <i>Aechmea poitaei</i> ]	FG
<i>Tillandsia adpressiflora</i> Mez	GU?, SU, FG
<i>Tillandsia anceps</i> Lodd.	GU, SU, FG
<i>Tillandsia bulbosa</i> Hook.	GU, SU, FG
<i>Tillandsia complanata</i> Benth.	GU
<i>Tillandsia fasciculata</i> Swartz	GU?, SU, FG
<i>Tillandsia fendleri</i> Griseb.	
var. <i>fendleri</i>	GU
var. <i>reducta</i> (L.B. Sm.) L.B. Sm.	GU
<i>Tillandsia flexuosa</i> Swartz	GU, SU, FG
<i>Tillandsia geminiflora</i> Brongn.	SU
<i>Tillandsia kegeliana</i> Mez	GU, SU, FG
<i>Tillandsia monadelphica</i> (E. Morren) Baker	GU, SU, FG
<i>Tillandsia paraensis</i> Mez	GU, SU, FG
<i>Tillandsia pruinosa</i> Swartz	GU?, SU
<i>Tillandsia stricta</i> Solander ex Ker-Gawl.	GU, SU
<i>Tillandsia tenuifolia</i> L.	GU, SU, FG
<i>Tillandsia turneri</i> Baker var. <i>orientalis</i> L.B. Sm.	GU
<i>Tillandsia usneoides</i> (L.) L.	GU, SU, FG
<i>Vriesea duidae</i> (L.B. Sm.) Gouda	GU
<i>Vriesea heliconioides</i> (Kunth) Hook. ex Walp.	GU, SU, FG
<i>Vriesea incurva</i> (Griseb.) R.W. Read [syn. <i>Tillandsia incurva</i> ]	GU
<i>Vriesea jonghei</i> (C. Koch) E. Morren	FG
<i>Vriesea platynema</i> Gaudich.	GU
<i>Vriesea pleiosticha</i> (Griseb.) Gouda [syn. <i>Mezobromelia pleiosticha</i> ]	GU, SU, FG
<i>Vriesea procera</i> (Mart. ex Schult.f.) Wittmack	GU, SU, FG
<i>Vriesea rubra</i> (Ruiz & Pav.) Beer	GU
<i>Vriesea soderstromii</i> L.B. Sm.	GU
<i>Vriesea splendens</i> (Brongn.) Lem.	
var. <i>formosa</i> Suringar ex Witte	GU
var. <i>splendens</i>	GU, SU, FG
<i>Werauhia gigantea</i> (Mart. ex Schult. f.) J.R. Grant [syn. <i>Vriesea amazonica</i> ]	SU, FG
<i>Werauhia gladioliflora</i> (Wendl.) J.R. Grant [syn. <i>Vriesea gladioliflora</i> ]	GU, SU, FG
<i>Werauhia hygrometrica</i> (André) J.R. Grant [syn. <i>Vriesea hygrometrica</i> , <i>V. johnstonii</i> ]	GU
<i>Werauhia viridiflora</i> (Regel) J.R. Grant [syn. <i>Vriesea viridiflora</i> ]	GU

#### Excluded Taxa

*Aechmea megalantha* Harms was listed for French Guiana (Boggan 1992, 1997), probably based on *J.J. de Granville 6741* (CAY, US), which is a specimen of *A. melinonii* Hook. This species was described from cultivation, but its place of origin is not clear. The color picture

published in Richter (1962) is not *A. megalantha* but probably *A. tomentosa* Mez from Brazil.

*Aechmea tillandsioides* (Mart. ex Schult. f.) Baker var. *kienastii* (E. Morren ex Mez) L.B. Sm., treated many times as a synonym of the typical variety, is not recognized as a distinct variety for the Flora of the Guianas. The species seems to be variable in size and composition of

the inflorescence (from simple to elongate with many spikes).

*Guzmania erythrolepis* Brongn. ex Planch. was listed for French Guiana (Boggan 1992, 1997), likely based on *R.C. Ek 162* (CAY, NY, U), which is actually a specimen of *G. melinonis* Regel, or on *Sabatier 917* (photo US, not verified), collected in French Guiana in 1984 (Gouda 1987, see note following description of *G. melinonis*). *Guzmania erythrolepis* presently is known from the Greater Antilles.

*Vriesea heterandra* (André) L.B. Sm., known from Colombia to Venezuela and Bolivia, was listed for Surinam (Boggan 1992, 1997). This is based on a specimen from Bailey Hortorium (US, without collector or number), stated to be collected in Surinam (doubtful!). Lyman Smith noted on the specimen sheet that he could not find any ligules on the petals. The inflorescence does resemble *Tillandsia polystachia* (L.) L., but the plant is more like one of the *Tillandsia*-like *Vrieseas*. It is certainly not *V. heterandra* (inflorescence digitately compound and floral bracts only lepidote near apex), but could be *V. crenulipetala* (Mez) L.B. Sm., only known from northern Colombia.

*Werauhia ringens* (Grisebach) J.R. Grant [basonym: *Vriesea ringens*], known from Central America, NW South America and the West Indies, was listed for Guyana (Boggan 1992 and 1997). This record is probably based on *J.J. Pi-poly & G. Gharbarran 10165* (US) from Guyana, Potaro-Siparuni, Kaieteur Falls National Park, trail to Johnson's view, cliff area proceeding S, 360–400 m, 28 Jan. 1987. The specimen resembles *W. ringens*, except that the bracts are relatively short and stiff-coriaceous, and a bracteate peduncle of the apical spike is lacking. More study on *Werauhia* has to be done.

#### Taxa Expected to Occur in the Guianas

Because of their proximity to the borders of the Guianas, the following taxa may be expected to occur in Guyana, Surinam, and French Guiana.

**Guyana.** *Aechmea prancei* L.B. Sm., *Brocchinia melanacra* L.B. Sm., *Bromelia chrysantha* Jacq., *B. goeldiana* L.B. Sm., *B. rondoniana* L.B. Sm., *Connellia caricifolia* L.B. Sm., *C. nutans* L.B. Sm., *Guzmania angustifolia* (Baker) Wittmack, *G. brasiliensis* Ule, *G. steyermarkii* L.B. Sm., *Hohenbergia stellata* Schult.f., *Lindmania gracillima* (L.B. Sm.) L.B. Sm., *L. paludosa* L.B. Sm. (= *L. guianensis*? See Holst 1997), *Pitcairnia ctenophylla* L.B. Sm., *P. heterophylla* (Lindl.) Beer, *Tillandsia balbisiana*

Schult.f., *T. compacta* Griseb., *T. elongata* Kunth var. *subimbricata* (Baker) L.B. Sm., *Mezobromelia capituligera* (Griseb.) J.R. Grant [= *Vriesea capituligera*].

**Surinam.** *Billbergia rosea* Hort. ex Beer.

**French Guiana.** *Billbergia brachysiphon* L.B. Sm., *Bromelia morreniana* (Regel) Mez.

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