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DE REBUS BROMELIACEARUM IV

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ABSTRACT. This paper contains taxonomic and publication information for Bromeliaceae that was not included in, or which appeared after, the publication of L.B. Smith and R.J. Downs' Flora Neotropica Monograph 14, Part 1 (1974), Part 2 (1977), and Part 3 (1979); Luther and Sieff (1994, 1997); and Luther (2001b). For new taxa, the current article contains scientific names and their authors, publication sources and dates, country and province of origin, and locations of type specimens. Miscellaneous supplemental information is included where considered useful.

RESUMEN. Este trabajo contiene información taxonómica sobre Bromeliaceae la cual no fue incluida o que apareció después de la publicación de L.B. Smith y R.J. Downs en Flora Neotropica Monografía 14, Parte 1 (1974), Parte 2 (1977), Parte 3 (1979); en Luther y Sieff (1994, 1997); y en Luther (2001b). Para los nuevos taxa se incluyen los nombres y los autores, las fuentes y las fechas de las publicaciones, el país y provincia de origen y la localización de los especímenes tipo. También, se incluye información complementaria donde se considera útil.

Key words: Bromeliaceae, nomenclature

INTRODUCTION

It is our intent in this paper to bring together all references to taxonomic changes for Bromeliaceae published prior to August 2009 and not included in Flora Neotropica Monograph 14 (hereinafter referred to as FNM 14) or in Luther and Sieff (1994, 1997) or Luther (2001b). Also included are selected miscellaneous references to both old and new taxa that may be useful. The authors solicit additions and corrections.

The format found here is directly comparable and supplementary to FNM 14. All entries are arranged in a numbered, systematic sequence based on that used in FNM 14. The first number given is the genus number. Whole numbers are as published in FNM 14. Genus numbers with a decimal point were not included in FNM 14 or have been reclassified since its publication. Where the original author stated an affinity, that has been followed in most cases. Where relationships were not stated or were ambiguous, the senior author has assigned the number based upon his understanding of the taxa involved.

Following the hyphen is the species number. Whole species numbers, except for new or completely revised genera, are as published in FNM 14. (*Pepinia* species 1 through 40 also retain their numbering from *Pitcairnia*.) Species with numbers containing a decimal point were not included in FNM 14 or have been reclassified since its publication. Numbers with a decimal reflect the apparent affinity of those species to taxa included in FNM 14. Where the original author stated an affinity, that has been followed here in most cases. Where a relationship was not stated or was ambiguous, the senior author has assigned a number based upon his understanding of the taxa involved. For both species and genera, the numbers to the right of the decimal point have been assigned in the order of publication, in most cases, and do not necessarily reflect the relationships among the "decimal taxa."

Directly following the species numbers are numerals or letters for infraspecific taxa, which are denoted as follows:

Subspecies are given whole Arabic numerals in parentheses, e.g., (2).
Varieties are given lower case letters, e.g., b.
Forms are given lower case Roman numerals, e.g., ii.

The sequence given infraspecific taxa is that used in FNM 14. For taxa not included there or for newly reclassified taxa, the sequence is based on publication date, in most cases, and does not necessarily reflect relationships among the infraspecific taxa.

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Validly named and described natural hybrids are denoted by a zero (0), as are validly published taxa that the senior author does not feel warrant being listed in a systematic compilation.

Following the numbers are the taxon's name and nomenclatoric author. Orthographic corrections, mostly involving gender, have been made where appropriate. For new taxa, new combinations, and changes in rank, the name and date of the publication are given. Basionyms are listed for new combinations and changes in rank.

Following the publication information for new taxa is the country of origin and, in most cases, a state, province, department, or similar geopolitical "type" locality. Locations of the holotype (HT) and isotypes (IT) are given using standard abbreviations as listed in Index Herbariorum Ed. 8 (Holmgren et al. 1990; http://sweetgum.nybg.org/ih).

References for both nomenclatoric and taxonomic synonymy are listed after the equal (=) sign.

All entries concerning reclassification, synonymy, or miscellaneous supplementary notes, if not referenced, are based upon the senior author's understanding of the taxa involved.

BROMELIACEAE A.L. deJussieu. See Barfuss, Samuel & Till (2004); Ramírez-Morillo, Fernández-Concha & Chi-May (2004a); Givnish (2007); and Luther and Benzing (2009).

0 ×HOHENMEA B.R. Silva & L.F. Sousa, J. Bromeliad Soc. 53(2): 71–77. 2003.

0-0 ×**Hohenmea itaipuana** B.R. Silva & L.F. Sousa, J. Bromeliad Soc. 53(2): 71–77. 2003. Brazil: Rio de Janeiro. [HT: HB; IT: FFP].
Natural hybrid: *Aechmea ramosa* Martius ex Schultes f. × *Hohenbergia augusta* (Vellozo) E. Morren.

0 VIRIDANTHA Espejo, Acta Bot. Mex. 60: 25–35. 2002. Type species: *Viridantha plumosa* (Baker) Espejo.

= *Tillandsia s.l.*, "*Allardtia*."

0-0 **V. atroviridipetala** (Matuda) Espejo, Acta Bot. Mex. 60: 25–35. 2002.
BASIONYM: *Tillandsia atroviridipetala* Matuda, Cact. Suc. Mex. 2: 53. 1957.
= *Tillandsia atroviridipetala* Matuda.

0-0 **V. ignesiae** (Mez) Espejo, Acta Bot. Mex. 60: 25–35. 2002.
BASIONYM: *Tillandsia ignesiae* Mez, Bull. Herb. Boissier II 3: 143. 1903.
= *Tillandsia ignesiae* Mez.

0-0 **V. lepidosepala** (L.B. Smith) Espejo, Acta Bot. Mex. 60: 25–35. 2002.
BASIONYM: *Tillandsia lepidosepala* L.B. Smith, Contr. Gray Herb. 70: 155. 1935.
= *Tillandsia lepidosepala* L.B. Smith.

0-0 **V. mauryana** (L.B. Smith) Espejo, Acta Bot. Mex. 60: 25–35. 2002.
BASIONYM: *Tillandsia mauryana* L.B. Smith, Contr. Gray Herb. 117: 31. 1937.
= *Tillandsia mauryana* L.B. Smith.

0-0 **V. plumosa** (Baker) Espejo, Acta Bot. Mex. 60: 25–35. 2002.
BASIONYM: *Tillandsia plumosa* Baker, J. Bot. 26: 13. 1888.
= *Tillandsia plumosa* Baker.

0-0 **V. tortilis** (Klotzsch ex Baker) Espejo, Acta Bot. Mex. 60: 25–35. 2002.
BASIONYM: *Tillandsia tortilis* Klotzsch ex Baker, J. Bot. 25: 237. 1887.
= *Tillandsia tortilis* Klotzsch ex Baker subsp. *tortilis*.

1 PUYA Molina.

1-0 **P.** ×**loxensis** Manzanares & W. Till, *in* Manzanares, Jewels of the Jungle, Bromeliaceae of Ecuador, Part II, Pitcairnioideae: 313–315. 2005. Ecuador: Loja. [HT: QCNE; IT: SEL].
Natural hybrid: *Puya parviflora* L.B. Smith × *Puya eryngioides* André.

1-0 **P.** ×**pichinchae** Mez & Sodiro, *in* Manzanares, J.M., Jewels of the Jungle, Bromeliaceae of Ecuador, Part II, Pitcairnioideae: 358–360. 2005.
Natural hybrid: *Puya aequatorialis* André × *Puya sodiroana* Mez.
BASIONYM: *Puya pichinchae* Mez & Sodiro, Bull. Herb. Boissier II 4: 633. 1904.

1-1.1 **P. larae** R. Vásquez & Ibisch, Bromelie 2/2007: 82–88. 2007. Bolivia: La Paz. [HT: LPB; IT: SEL, Herb. Vásquez].

1-9.2 **P. lokischmidtiae** R. Vásquez & Ibisch, Bromelie 1/2004: 9–16. 2004. Bolivia: Tarija. [HT: LPB; IT: USZ, Herb. Vásquez].

1-9.3 **P. erlenbachiana** Ibisch & R. Vásquez, Bromelie 1/2004: 12–16. 2004. Bolivia: Tarija. [HT: LPB].

1-9.4 **P. bermejana** S.E. Gómez, Slanis & A. Grau, J. Bromeliad Soc. 57(2): 58–61. 2007. Bolivia: Tarija. [HT: LIL].

1-33.1 **P. mucronata** Manzanares, Vidalia 2(1): 36, 42–45. 2004. Peru: Cajamarca. [HT: MO; IT: HAO, SEL].
SYN.: *Puya tyleriana* Sagástegui, Zapata & M.O. Dillon.

1-33.2 **P. sehuencasensis** R. Vásquez, Ibisch & R. Lara, Bromelie 3/2007: 146–155. 2008. Bolivia: Cochabamba. [HT: LPB; IT: BOLV, MO, SEL].

1-33.3 **P. tyleriana** Sagástegui, Zapata & M.O. Dillon, Arnaldoa 11(2): 30–33: "2004" 2005. Peru: Ancash. [HT: HAO; IT: BM, F, NY, US].
= *Puya mucronata* Manzanares. W. Till, pers.com., suggests that *P. mucronata* and *P. tyleriana* are synonymous, but there remains a question of priority.

1-34.1 **P. boopiensis** R. Vásquez, Ibisch & R. Lara, Bromelie 2/2007: 86–93. 2007. Bolivia: La Paz. [HT: LPB; IT: SEL, Herb. Vásquez].

1-35.1 **P. serranoensis** Rauh.
= *Puya tuberosa* Mez. See Vásquez and Ibisch (2007).

1-35.1b **P. serranoensis** var. **brevispica** Rauh.
= *Puya tuberosa* Mez. See Vásquez and Ibisch (2007).

1-35.2 **P. vallo-grandensis** Rauh.
= *Puya tuberosa* Mez. See Vásquez and Ibisch (2007).

1-35.2b **P. vallo-grandensis** var. **simplex** Rauh.
= *Puya tuberosa* Mez. See Vásquez and Ibisch (2007).

1-39.1 **P. pattersoniae** Manzanares & W. Till, *in* Manzanares, Jewels of the Jungle, Bromeliaceae of Ecuador, Part II, Pitcairnioideae: 348–350. 2005. Ecuador: Azuay. [HT: QCNE; IT: MO, SEL, WU].

1-41.1 **P. hirtzii** Manzanares & W. Till, *in* Manzanares, Jewels of the Jungle, Bromeliaceae of Ecuador, Part II, Pitcairnioideae: 354–355. 2005. Ecuador: Imbabura. [HT: QCNE].

1-45 **P. pichinchae** Mez & Sodiro.
= *Puya* ×*pichinchae* Mez & Sodiro. See Manzanares (2005: 358–360).

1-48.1 **P. joergensenii** H. Luther, Selbyana 23(1): 46–49. 2002. Ecuador: Loja. [HT: AAU; IT: QCA].

1-58 **P. fulgens** L.B. Smith.
SYN.: *Puya pseudoeryngioides* H. Luther.

1-59 **P. tuberosa** Mez.
See Vásquez and Ibisch (2007).
SYN.: *Puya hromadnikii* Rauh.
SYN.: *Puya serranoensis* Rauh.
SYN.: *Puya serranoensis* var. *brevispica* Rauh.
SYN.: *Puya vallo-grandensis* Rauh.
SYN.: *Puya vallo-grandensis* var. *simplex* Rauh.

1-59.2 **P. pachyphylla** R. Vásquez & Ibisch, J. Bromeliad Soc. 57(3): 102–104. 2007. Bolivia: Santa Cruz. [HT: LPB; IT: USZ, Herb. Vásquez].

1-64.1 **P. navarroana** Manzanares & W. Till, *in* Manzanares, Jewels of the Jungle, Bromeliaceae of Ecuador, Part II, Pitcairnioideae: 342–344. 2005. Ecuador: Azuay. [HT: QCNE; IT: MO, SEL, WU].

1-70.1 **P. pseudoeryngioides** H. Luther, Selbyana 23(1): 53, 55–56. 2002. Peru: Amazonas. [HT: SEL; IT: FTG, HUT, MO].
= *Puya fulgens* L.B. Smith. Fide W. Till.

1-72.2 **P. ibischii** R. Vásquez, J. Bromeliad Soc. 54(3): 99–102. 2004. Bolivia: Cochabamba. [HT: LPB; IT: SEL, Herb. Vásquez].

1-91.2 **P. hromadnikii** Rauh.
= *Puya tuberosa* Mez. See Vásquez and Ibisch (2007).

1-101.1 **P. tillii** Manzanares, Jewels of the Jungle, Bromeliaceae of Ecuador, Part II, Pitcairnioideae: 344–345. 2005. Ecuador: Pichincha. [HT: QCNE; IT: MO, WU].

1-101.2 **P. brackeana** Manzanares & W. Till, *in* Manzanares, Jewels of the Jungle, Bromeliaceae of Ecuador, Part II, Pitcairnioideae: 330–333. 2005. Ecuador: Azuay. [HT: QCNE; IT: MO, WU].

1-101.3 **P. dodsonii** Manzanares & W. Till, *in* Manzanares, Jewels of the Jungle, Bromeliaceae of Ecuador, Part II, Pitcairnioideae: 324–326. 2005. Ecuador: Cotopaxi. [HT: QCNE; IT: MO].

1-101.4 **P. asplundii** L.B. Smith.
Previously treated as a synonym of *Puya glomerifera* Mez & Sodiro in Smith and Downs (1974). See Manzanares (2005: 363–365).

1-110.1 **P. bravoi** Aráoz & A. Grau, J. Bromeliad Soc. 58(5): 199–202. 2008. Argentina: Salta. [HT: LIL; IT: LPB, MO].

1-122.1 **P. cajasensis** Manzanares & W. Till, *in* Manzanares, Jewels of the Jungle, Bromeliaceae of Ecuador, Part II, Pitcairnioideae: 329–330. 2005. Ecuador: Azuay. [HT: QCNE; IT: WU].

1-133 **P. tunarensis** Mez.
See Vásquez and Ibisch (2002).

1-136.2 **P. longispina** Manzanares & W. Till, *in* Manzanares, Jewels of the Jungle, Bromeliaceae of Ecuador, Part II, Pitcairnioideae: 333–335. 2005. Ecuador: Carchi. [HT: QCNE; IT: MO, WU].

1-140.1 **P. elviragrossiae** R. Vásquez & Ibisch, Bromelie 2/2005: 40–43. 2005. Bolivia: Santa Cruz. [HT: LPB].

1-142.1 **P. cuevae** Manzanares & W. Till, *in* Manzanares, Jewels of the Jungle, Bromeliaceae of Ecuador, Part II, Pitcairnioideae: 335–357. 2005. Ecuador: Loja. [HT: QCNE; IT: LOJA].

1-147 **P. humilis** Mez.
See Vásquez and Ibisch (2002).
SYN.: *Puya butcheriana* H. Luther.

1-147.2 **P. butcheriana** H. Luther.
= *Puya humilis* Mez. See Vásquez and Ibisch (2002: 158, 165).

1-155.1 **P. pizarroana** R. Vásquez, Ibisch & S. Beck, J. Bromeliad Soc. 53(3): 122–125. 2003. Bolivia: La Paz. [HT: LPB; IT: Herb. Vásquez].

1-165 **P. alpestris** (Poeppig) Gay.
SYN.: *Puya pumila*.

1-165.1 **P. pumila** P. Ravenna, Onira Botanical Leaflets 4(15): 57–61. 2000. Chile: Concepción. [HT: Herb. Ravenna; IT: BA, CONC, SGO].
= *Puya alpestris* (Poeppig) Gay. Fide W. Till.

1-166 **P. berteroniana** Mez.
See Gross (2002).

1-168 **P. raimondii** Harms.
See Ibisch, Dingler, Obando, Soria & Beck (1999) and Hornung-Leoni and Sosa (2004).

2 ENCHOLIRIUM Martius. See Forzza (2001) and (2005).

2-0 **E. bahianum** L.B. Smith & Read.
= *Encholirium spectabile* Martius ex Schultes & Schultes f. See Forzza (2001: 145).

2-0 **E. crassiscapum** E. Gross.
= *Encholirium magalhaesii* L.B. Smith. See Forzza (2001: 130–134).

2-0 **E. densiflorum** Ule.
= *Encholirium spectabile* Martius ex Schultes & Schultes f. See Forzza (2001: 144).

2-0 **E. harleyi** L.B. Smith & Read.
= *Encholirium spectabile* Martius ex Schultes & Schultes f. See Forzza (2001: 145).

2-0 **E. hoehneanum** L.B. Smith.
= *Encholirium spectabile* Martius ex Schultes & Schultes f. See Forzza (2001: 144).

2-0 **E. lutzii** L.B. Smith.
= *Encholirium spectabile* Martius ex Schultes & Schultes f. See Forzza (2001: 144).

2-0 **E. patens** L.B. Smith.
= *Encholirium spectabile* Martius ex Schultes & Schultes f. See Forzza (2001: 144).

2-0 **E. piresianum** L.B. Smith & Read.
= *Encholirium luxor* L.B. Smith & Read. See Forzza (2001: 139–143).

2-0 **E. suzannae** Rauh.
= *Encholirium magalhaesii* L.B. Smith. See Forzza (2001: 130–134).

2-1 **E. heloisae** (L.B. Smith) Forzza & Wanderley.
See Forzza (2001: 97–101).

2-2 **E. scrutor** (L.B. Smith) Rauh.
See Forzza (2001: 102–106).

SYN.: *Encholirium inerme* Rauh.

2-3 **E. pedicellatum** (Mez) Rauh.
See Forzza (2001: 107–111).

2-4 **E. vogelii** Rauh.
See Forzza (2001: 112–115).

2-5 **E. biflorum** (Mez) Forzza, Bol. Bot. Univ. São Paulo 23(1): 16. 2005.
Invalidly published earlier in Filogenia da Tribo Puyeae Wittm. E. Revisão Taxonômica do Gênero Encholirium Mart. ex Schult. & Schult. f. (Pitcairnioideae—Bromeliaceae), Pp. 116–120. Ph.D. diss., Universidade de São Paulo, Brazil, 2001.
BASIONYM: *Dyckia biflora* Mez, *in* Martius, Fl. Bras. 3: 486. 1894.

2-6 **E. reflexum** Forzza & Wanderley, Novon 11: 40–42. 2001. Brazil: Minas Gerais. [HT: SPF; IT: BHCB, US].
See Forzza (2001: 121–124).

2-7 **E. subsecundum** (Baker) Mez.
See Forzza (2001: 125–129).

2-8 **E. magalhaesii** L.B. Smith.
See Forzza (2001: 130–134).
SYN.: *Encholirium crassiscapum* E. Gross.
SYN.: *Encholirium suzannae* Rauh.

2-9 **E. irwinii** L.B. Smith.
See Forzza (2001: 135–138).

2-10 **E. luxor** L.B. Smith & Read.
See Forzza (2001: 139–143).
SYN.: *Encholirium piresianum* L.B. Smith & Read.

2-11 **E. spectabile** Martius ex Schultes & Schultes f.
See Forzza (2001: 144–152) for synonymy.
SYN.: *Encholirium bahianum* L.B. Smith & Read.
SYN.: *Encholirium densiflorum* Ule.
SYN.: *Encholirium harleyi* L.B. Smith & Read.
SYN.: *Encholirium hoehneanum* L.B. Smith.
SYN.: *Encholirium lutzii* L.B. Smith.
SYN.: *Encholirium paraibae* L.B. Smith & Read.
SYN.: *Encholirium patens* L.B. Smith.
SYN.: *Encholirium rupestre* Ule.

2-11.1 **E. belemii** L.B. Smith & Read.
Considered a dubious species by Forzza (2001: 187).

2-12 **E. brachypodum** L.B. Smith & Read.
See Forzza (2001: 153–157).

2-13 **E. lymanianum** E. Pereira & Martinelli.
See Forzza (2001: 158–161).

2-14 **E. maximum** Forzza & Leme, Selbyana 23(2): 202–203. 2002. Brazil: Bahia. [HT: SPF; IT: CEPEC, HB, K, MBM, NY, SP, US].
See Forzza (2001: 162–165) and Braun and Pereira (2006a) and (2006c: 160–161).

2-15 **E. eddie-estevesii** Leme & Forzza, Selbyana 23(2): 200–202. 2002. Brazil: Goiás. [HT: HB; IT: UFG].
See Forzza (2001: 166–168) and Braun (2005).

2-16 **E. gracile** L.B. Smith.
See Forzza (2001: 169–172).

2-16.1 **E. bradeanum** L.B. Smith.
Considered a dubious species by Forzza (2001: 186).

2-17 **E. horridum** L.B. Smith.
See Forzza (2001: 173–176).

2-18 **E. longiflorum** Leme.
See Forzza (2001: 177–179).

2-19 **E. erectiflorum** L.B. Smith.
See Forzza (2001: 180–183).

2-20 **E. pernambucanum** L.B. Smith & Read.
See Siqueira Filho and Leme (2006: 320–323).

2-21 **E. paraibae** L.B. Smith & Read.

= *Encholirium spectabile* Martius ex Schultes & Schultes f. See Forzza (2001: 145).

2-23 **E. rupestre** Ule.
= *Encholirium spectabile* Martius ex Schultes & Schultes f. See Forzza (2001: 144).

2-25.2 **E. disjunctum** Forzza, Bol. Bot. Univ. São Paulo 23(1): 15–16, 19. 2005. Brazil: Goiás. [HT: SPF].

2-29 **E. inerme** Rauh.
= *Encholirium scrutor* (L.B. Smith) Rauh. See Forzza (2001: 102–106).

3 FOSTERELLA L.B. Smith. See Peters, Vásquez, Osinaga, Leme, Weising & Ibisch (''2008'' 2009); Ibisch, Read & Peters (''2008'' 2009); Ibisch, Vásquez, Gross, Krömer & Rex (2002); and Peters (2009).

3-1 **F. pearcei** (Baker) L.B. Smith.
See Peters, Vásquez, Osinaga, Leme, Weising & Ibisch (''2008'' 2009: 191).

3-1.1 **F. floridensis** Ibisch, R. Vásquez & E. Gross.
See Ibisch, Vásquez, Gross, Krömer & Rex (2002: 206–207).

3-2 **F. albicans** (Grisebach) L.B. Smith.
See Peters, Vásquez, Osinaga, Leme, Weising & Ibisch (''2008'' 2009: 182–183).
SYN.: *Fosterella fuentesii* Ibisch, R. Vásquez & E. Gross.

3-2.2 **F. cotacajensis** M. Kessler, Ibisch & E. Gross.
See Ibisch, Vásquez, Gross, Krömer & Rex (2002: 206).

3-2.3 **F. nowickii** Ibisch, R. Vásquez & E. Gross, Selbyana 23(2): 210–211. 2002. Bolivia: La Paz. [HT: LPB].
= *Fosterella weddelliana* (Brongniart ex Baker) L.B. Smith. See Peters, Vásquez, Osinaga, Leme, Weising & Ibisch (''2008'' 2009: 193–194).

3-2.4 **F. rexiae** Ibisch, R. Vásquez & E. Gross, Selbyana 23(2): 213–214. 2002. Bolivia: La Paz. [HT: LPB].

3-3.1 **F. fuentesii** Ibisch, R. Vásquez & E. Gross, Selbyana 23(2): 207. 2002. Bolivia: Santa Cruz. [HT: LPB; IT: FR, SEL].
= *Fosterella albicans* (Grisebach) L.B. Smith. See Peters, Vásquez, Osinaga, Leme, Weising & Ibisch (''2008'' 2009: 182–183).

3-4.4 **F. chaparensis** Ibisch, R. Vásquez & E. Gross.
See Ibisch, Vásquez, Gross, Krömer & Rex (2002: 205).

3-5 **F. weddelliana** (Brongniart ex Baker) L.B. Smith.
See Peters, Vásquez, Osinaga, Leme, Weising & Ibisch (''2008'' 2009: 193–194).
SYN.: *Fosterella nowickii* Ibisch, R. Vásquez & E. Gross.

3-6 **F. rusbyi** (Mez) L.B. Smith.
See Peters, Vásquez, Osinaga, Leme, Weising & Ibisch (''2008'' 2009: 193).
SYN.: *Fosterella elata* H. Luther.

3-6.1 **F. elata** H. Luther.
= *Fosterella rusbyi* (Mez) L.B. Smith. See Peters, Vásquez, Osinaga, Leme, Weising & Ibisch (''2008'' 2009: 193).

3-9.1 **F. chiquitana** Ibisch, R. Vásquez & E. Gross.
See Ibisch, Vásquez, Gross, Krömer & Rex (2002: 205–206).
= *Fosterella penduliflora* (C.H. Wright) L.B. Smith. See Peters, Vásquez, Osinaga, Leme, Weising & Ibisch (''2008'' 2009: 191–192).

3-9.2 **F. christophii** Ibisch, R. Vásquez & J. Peters, Selbyana 29(2): 185–188. ''2008'' 2009. Bolivia: Santa Cruz. [HT: LPB; IT: FR, SEL, USZ, WU].

3-10 **F. penduliflora** (C.H. Wright) L.B. Smith.
See Peters, Vásquez, Osinaga, Leme, Weising & Ibisch (''2008'' 2009: 191–192).
SYN.: *Fosterella chiquitana* Ibisch, R. Vásquez & E. Gross.
SYN.: *Fosterella latifolia* Ibisch, R. Vásquez & E. Gross.

3-10.2 **F. latifolia** Ibisch, R. Vásquez & E. Gross.
See Ibisch, Vásquez, Gross, Krömer & Rex (2002: 207–210).
= *Fosterella penduliflora* (C.H. Wright) L.B. Smith. See Peters, Vásquez, Osinaga, Leme, Weising & Ibisch (''2008'' 2009: 191–192).

3-10.3 **F. yuvinkae** Ibisch, R. Vásquez, E. Gross & S. Reichle, Selbyana 23(2): 216–218. 2002. Bolivia: Chiquitos. [HT: LPB].

3-10.4 **F. weberbaueri** (Mez) L.B. Smith.

Previously treated as a synonym of *Fosterella schidosperma* (Baker) L.B. Smith in Smith and Downs (1974). See Ibisch, Vásquez, Gross, Krömer & Rex (2002: 215–216).

3-10.5 **F. nicoliana** J. Peters & Ibisch, Bromelie 2/2008: 64–69. 2008. Peru: San Martín/Loreto. [HT: F].

3-10.6 **F. batistana** Ibisch, Leme & J. Peters, Selbyana 29(2): 183–185, 186. "2008" 2009. Brazil: Pará. [HT: HB; IT: SEL].

3-11.1 **F. windischii** L.B. Smith & Read.
See Ibisch, Vásquez, Gross, Krömer & Rex (2002: 216).

3-11.3 **F. kroemeri** Ibisch, R. Vásquez & J. Peters, Selbyana 29(2): 187, 189, 191. "2008" 2009. Bolivia: La Paz. [HT: LPB].

3-11.4 **F. elviragrossiae** Ibisch, R. Vásquez & J. Peters, Selbyana 29(2): 188–190. "2008" 2009. Bolivia: Cochabamba. [HT: LPB; IT: SEL].

3-11.5 **F. robertreadii** Ibisch & J. Peters, Selbyana 29(2): 190, 192–193. "2008" 2009. Peru: Cusco. [HT: SEL; IT: USM].

3-12.1 **F. heterophylla** Rauh.
See Ibisch, Vásquez, Gross, Krömer & Rex (2002: 207, 209).

3-13 **F. gracilis** (Rusby) L.B. Smith.
See Ibisch, Peters, Rex, Schulte, Osinaga & Vásquez (2006) and Peters, Vásquez, Osinaga, Leme, Weising & Ibisch ("2008" 2009: 189).

5.1 STEYERBROMELIA L.B. Smith.

5.1-4 **S. neblinae** B. Holst.
= *Steyerbromelia plowmanii* (L.B. Smith, Steyermark & H. Robinson) H. Robinson & D.C. Taylor. See Holst (2001).

5.1-4.1 **S. plowmanii** (L.B. Smith, Steyermark & H. Robinson) H. Robinson & D.C. Taylor. Selbyana 22(1): 75. 2001.
SYN.: *Navia diffusa* L.B. Smith.
SYN.: *Navia plowmanii* L.B. Smith, Steyermark & H. Robinson.
SYN.: *Steyerbromelia neblinae* B. Holst.

5.2 LINDMANIA Mez.

5.2-7.2 **L. vinotincta** B. Holst & Vivas, J. Bromeliad Soc. 59(2): 66–70. 2009. Venezuela: Bolívar. [HT: VEN; IT: GUYN, SEL].

5.3 SEQUENCIA Givnish. Aliso 23: 17–18. 2007. Type species: *Sequencia serrata* (L.B. Smith) Givnish.

5.3-1 **S. serrata** (L.B. Smith) Givnish, Aliso 23: 17–18. 2007.
BASIONYM: *Brocchinia serrata* L.B. Smith, Caldasia [1](4): 14, fig. 2. 1942.

6 DEUTEROCOHNIA Mez.

6-4(2) **D. scapigera** subsp. **sanctae-crucis** R. Vásquez & Ibisch, Vidalia 1(1): 43–45. "2003" 2004. Bolivia: Santa Cruz. [HT: LPB; IT: USZ].

6-4.1 **D. gableana** R. Vásquez & Ibisch, Vidalia 1(1): 39–43. "2003" 2004. Bolivia: Santa Cruz. [HT: LPB].

6-7.1 **D. pedicellata** W. Till, Vidalia 2(2): 41–43. "2004" 2005. Bolivia: Chuquisaca. [HT: WU; IT: LPB, MO].

6-11.2 **D. seramisiana** R. Vásquez, Ibisch & E. Gross, Bromelie 1/2002: 4–10. 2002. Bolivia: Chuquisaca. [HT: LPB].

6-13 **D. chrysantha** (Philippi) Mez.
See Zizka (2003).

8 PITCAIRNIA L'Héritier. See Wendt, Paz & Rios (2000); Wendt, Canela, Faria & Rios (2001); Wendt (2001); Wendt, Canela, Klein & Rios (2002); and Gouda (2009a).

8-0 **P. chocoensis** L.B. Smith ex H. Luther, Brittonia 54: 281–282. 2003. Colombia: Choco. [HT: US; IT: SEL].

= *Pitcairnia delicata* H. Luther. See Luther (2005b).

8-0 **P. holstii** (H. Luther) J.R. Grant, Vidalia 2(2): 23–25. "2004" 2005.
BASIONYM: *Pepinia holstii* H. Luther, J. Bromeliad Soc. 51(2): 71–72. 2001.
= *Pepinia holstii* H. Luther.

8-0 **P. minicorallina** (H. Luther) J.R. Grant, Vidalia 2(2): 23–25. "2004" 2005.
BASIONYM: *Pepinia minicorallina* H. Luther, Selbyana 21(1,2): 130–131. 2000.
= *Pepinia minicorallina* H. Luther.

8-0 **P. neeana** (L.B. Smith ex H. Luther) J.R. Grant, Vidalia 2(2): 23–25. "2004" 2005.
BASIONYM: *Pepinia neeana* L.B. Smith ex H. Luther, Selbyana 23(1): 46, 47. 2002.
= *Pepinia neeana* L.B. Smith ex H. Luther.

8-0 **P. peruana** (H. Luther) J.R. Grant, Vidalia 2(2): 23–25. "2004" 2005.
BASIONYM: *Pepinia peruana* H. Luther, Selbyana 23(1): 49, 51. 2002.
= *Pepinia peruana* H. Luther.

8-2.1 **P. cremersii** Gouda, Selbyana 30(1): 80–88. 2009. French Guiana: Roche Touatou. [HT: U; IT: CAY].

8-2.2 **P. saxosa** Gouda, Selbyana 30(1): 80–88. 2009. French Guiana: Haut Oyapock. [HT: U; IT: CAY, P].

8-14.1 **P. buscalionii** W. Till, Vidalia 1(1): 35–38. "2003" 2004. Brazil: Amazonas. [HT: RO].

8-25.2 **P. palaciosii** Manzanares & W. Till, *in* Manzanares, Jewels of the Jungle, Bromeliaceae of Ecuador, Part II, Pitcairnioideae: 460–461. 2005. Ecuador: Zamora-Chinchipe. [HT: QCNE; IT: MO].

8-26.1 **P. semijuncta** Baker.
Previously treated in error as a synonym of *Pitcairnia incarnata* Baker; see Gouda (2009a).
= *Pepinia*.

8-27 **P. incarnata** Baker.
= *Pepinia caricifolia* (Martius ex Schultes f.) G.S. Varadarajan & Gilmartin. See Gouda (2009a).

8-32.3 **P. lutheri** Manzanares & W. Till, *in* Manzanares, Jewels of the Jungle, Bromeliaceae of Ecuador, Part II, Pitcairnioideae: 451–453. 2005. Ecuador: Pichincha. [HT: QCNE; IT: MO, SEL, WU].

8-32.4 **P. marinii** Manzanares & W. Till, *in* Manzanares, Jewels of the Jungle, Bromeliaceae of Ecuador, Part II, Pitcairnioideae: 437–438. 2005. Ecuador: Morona-Santiago. [HT: QCNE].

8-59 **P. platystemon** Mez.
See Vásquez and Ibisch ("2004" 2005).

8-59.1 **P. chiquitana** R. Vásquez & Ibisch, Vidalia 2(2): 3–10. "2004" 2005. Bolivia: Santa Cruz. [HT: LPB; IT: Herb. Vásquez].

8-61 **P. multiramosa** Mez.
See Vásquez and Ibisch (2005: 103–104).

8-61.1 **P. cantuoides** R. Vásquez & Ibisch, J. Bromeliad Soc. 55(3): 99–104. 2005. Bolivia: Chuquisaca. [HT: LPB; IT: Herb. Vásquez].

8-66.3 **P. brackeana** Manzanares & W. Till, *in* Manzanares, Jewels of the Jungle, Bromeliaceae of Ecuador, Part II, Pitcairnioideae: 391–392. 2005. Ecuador: Pichincha. [HT: QCNE].

8-66.4 **P. goudae** Manzanares & W. Till, *in* Manzanares, Jewels of the Jungle, Bromeliaceae of Ecuador, Part II, Pitcairnioideae: 384–386. 2005. Ecuador: Pastaza. [HT: QCNE; IT: MO, U, WU].

8-67.1 **P. tillii** Manzanares, Jewels of the Jungle, Bromeliaceae of Ecuador, Part II, Pitcairnioideae: 388–389. 2005. Ecuador: Esmeraldes. [HT: QCNE; IT: WU].

8-72 **P. breedlovei** L.B. Smith.
See Guess and Guess (2001b).

8-89.1 **P. arenaria** H. Luther, Selbyana 23(1): 49, 52–53. 2002. Peru: Amazonas. [HT: SEL; IT: MO].

8-89.2 **P. filifera** L.B. Smith ex H. Luther, Brittonia 54: 284–285. 2003. Peru: Cuzco. [HT: US].

8-99b **P. aequatorialis** var. **bogneri** (Rauh) Manzanares & W. Till, *in* Manzanares, Jewels of the Jungle, Bromeliaceae of Ecuador, Part II, Pitcairnioideae: 493–497. 2005.
BASIONYM: *Pitcairnia violascens* var. *bogneri* Rauh, Trop. Subtrop. Pflanzenwelt 65: 36–42. 1988.
SYN.: *Pitcairnia violascens* L.B. Smith.

8-101 **P. violascens** L.B. Smith.
= *Pitcairnia aequatorialis* var. *bogneri* (Rauh) Manzanares & W. Till. See Manzanares (2005: 493–497).

8-101b **P. violascens** var. **bogneri** Rauh.
= *Pitcairnia aequatorialis* var. *bogneri* (Rauh) Manzanares & W. Till. See Manzanares (2005: 493–497).

8-108 **P. feliciana** (A. Chevalier) Harms & Mildbraed.
See Schulte (2007).

8-122.2 **P. condorensis** Manzanares & W. Till, *in* Manzanares, Jewels of the Jungle, Bromeliaceae of Ecuador, Part II, Pitcairnioideae: 440–441. 2005. Ecuador: Zamoro-Chinchipe. [HT: QCNE; IT: MO, WU].

8-124.1 **P. albolutea** J.R. Grant, J. Bromeliad Soc. 57(1): 16–19. 2007 [as "*albo-lutea*"]. Venezuela: Merida. [HT: US; IT: SEL].

8-127.1 **P. aureobrunnea** Rauh.
Formerly 13.2 in Luther and Sieff (1994).

8-130.1 **P. azouryi** Martinelli & Forzza, Revista Brasil. Bot. 29(4): 603–607. 2006. Brazil: Espírito Santo. [HT: RB; IT: CEPEC, K, MBM, MO, NY, SP, SPF, US].

8-132.1 **P. bakiorum** Manzanares & W. Till, *in* Manzanares, Jewels of the Jungle, Bromeliaceae of Ecuador, Part II, Pitcairnioideae: 479–481. 2005. Ecuador: Zamora-Chinchipe. [HT: QCNE].

8-132.2 **P. cataractae** Manzanares & W. Till, *in* Manzanares, Jewels of the Jungle, Bromeliaceae of Ecuador, Part II, Pitcairnioideae: 482–484. 2005. Ecuador: Zamora-Chinchipe. [HT: QCNE].

8-133c **P. flammea** var. **corcovadensis** (Wawra) L.B. Smith.
= *Pitcairnia corcovadensis* Wawra. See Wendt, Canela, Morrey-Jones, Henriques & Rios. (2000).

8-133.1 **P. corcovadensis** Wawra.
See Wendt, Canela, Morrey-Jones, Henriques & Rios. (2000).
SYN.: *Pitcairnia flammea* var. *corcovadensis* (Wawra) L.B. Smith.

8-133.2 **P. wendtiae** F. Tatagiba & B.R. Silva, Selbyana 25(1): 27–32. 2004. Brazil: Rio de Janeiro. [HT: RB; IT: R].

8-133.3 **P. nortefluminensis** Leme, J. Bromeliad Soc. 54(4): 182–185. 2004. Brazil: Rio de Janeiro. [HT: HB].

8-135.1 **P. insularis** F. Tatagiba & R.J.V. Alves, Selbyana 25(1): 27–32. 2004. Brazil: Rio de Janeiro. [HT: R].

8-145.3 **P. longissimiflora** Ibisch, R. Vásquez & E. Gross.
See Gouda (2009b).

8-151.1 **P. camposii** H. Luther, Selbyana 23(1): 53, 54. 2002. Peru: Cajamarca. [HT: SEL; IT: MO].

8-151.2 **P. neillii** Manzanares & W. Till, *in* Manzanares, Jewels of the Jungle, Bromeliaceae of Ecuador, Part II, Pitcairnioideae: 448–450. 2005. Ecuador: Morona-Santiago. [HT: QCNE].

8-155.1 **P. susannae** Manzanares & W. Till, *in* Manzanares, Jewels of the Jungle, Bromeliaceae of Ecuador, Part II, Pitcairnioideae: 445–447. 2005. Ecuador: Esmeraldes. [HT: QCNE].

8-158.2 **P. delicata** H. Luther, Brittonia 57: 202. 2005.
New name for *Pitcairnia chocoensis* L.B. Smith ex H. Luther, an invalid homonym of *Pitcairnia chocoensis* L.B. Smith, 1949.
BASIONYM: *Pitcairnia chocoensis* L.B. Smith ex H. Luther, Brittonia 54: 281–282. 2003.

8-161.1 **P. deroosei** Manzanares & W. Till, *in* Manzanares, Jewels of the Jungle, Bromeliaceae of Ecuador, Part II, Pitcairnioideae: 466–467. 2005. Ecuador: Carchi. [HT: QCNE; IT: MO, WU].

8-162.1 **P. bifurcatispina** Manzanares & W. Till, *in* Manzanares, Jewels of the Jungle, Bromeliaceae of Ecuador, Part II, Pitcairnioideae: 396–397. 2005. Ecuador: Imbabura. [HT: QCNE; IT: US, WU].

8-166.1 **P. cofanorum** Manzanares & W. Till, *in* Manzanares, Jewels of the Jungle, Bromeliaceae of Ecuador, Part II, Pitcairnioideae: 444–445. 2005. Ecuador: Sucumbíos. [HT: QCNE; IT: F].

8-167.2 **P. ocotensis** Beutelspacher & López Velázquez, Lacandonia 2(2): 29–31. 2008. Mexico: Chiapas. [HT: CHIP].

8-190d **P. brongniartiana** var. **variegata** Manzanares & W. Till, *in* Manzanares, Jewels of the Jungle, Bromeliaceae of Ecuador, Part II, Pitcairnioideae: 403–405. 2005. Ecuador: Esmeraldes. [HT: QCNE].

8-190e **P. brongniartiana** var. **ornata** Manzanares & W. Till, *in* Manzanares, Jewels of the Jungle, Bromeliaceae of Ecuador, Part II, Pitcairnioideae: 404–405. 2005. Ecuador: Esmeraldas. [HT: QCNE].

8-211.1 **P. oliva-estevae** J.R. Grant, J. Bromeliad Soc. 57(1): 19–21. 2007. Venezuela: Trujillo. [HT: US; IT: SEL].

8-217.1 **P. rojasii** H. Luther, Selbyana 28(1): 5–12. 2007. Peru: Amazonas. [HT: SEL; IT: MO].

8-222aii **P. pungens** var. **pungens** f. **alba** Manzanares & W. Till, *in* Manzanares, Jewels of the Jungle, Bromeliaceae of Ecuador, Part II, Pitcairnioideae: 503. 2005. Ecuador: Pichincha. [HT: QPLS].

8-222.6 **P. oxapampae** H. Luther, Selbyana 28(1): 5–12. 2007. Peru: Pasco. [HT: SEL; IT: MO].

8-229.1 **P. vallisoletana** Lexarza, *in* La Llave & Lexarza, Nov. Veg. Descr. 1: 19. 1824. Mexico: Michoacán. [Neotype: UAMIZ; Isoneotypes: ENCB,IEB,UAMIZ,US].
See Espejo-Serna, López-Ferrari & Flores-Cruz (1993).

8-240 **P. palmeri** S. Watson.
SYN.: *Pitcairnia palmeri* var. *longebracteata* L.B. Smith.

8-240b **P. palmeri** var. **longebracteata** L.B. Smith, Wrightia 2: 65. 1960.
= *Pitcairnia palmeri* S. Watson. See McVaugh (1989: 34–35).

8-243.2 **P. mohammadii** Ibisch & R. Vásquez, Bromelie 1/2003: 4–8. 2003. Bolivia: Santa Cruz. [HT: LPB; IT: Herb. Vásquez].

8-248b **P. alata** var. **andreetae** (H. Luther) Manzanares & W. Till, *in* Manzanares, Jewels of the Jungle, Bromeliaceae of Ecuador, Part II, Pitcairnioideae: 488–489. 2005.
BASIONYM: *Pitcairnia andreetae* H. Luther, Selbyana 12: 82–83. 1991.

8-248.1 **P. andreetae** H. Luther.
= *Pitcairnia alata* var. *andreetae* (H. Luther) Manzanares & W. Till. See Manzanares (2005: 488–489).

8.1 PEPINIA Brongniart ex André.

8.1-15.1 **P. martinellii** H. Luther, Selbyana 30(1): 89–90. 2009. Brazil: Pará. [HT: RB; IT: NY, SEL].

8.1-24.3 **P. leopoldii** W. Till & S. Till.
See Oliva-Esteve (2001a).

8.1-24.4 **P. werffii** H. Luther, Selbyana 28(1): 5–12. 2007. Peru: Pasco. [HT: SEL; IT: MO].

8.1-25.3 **P. verrucosa** E. Gross.
See Marx (2007).

8.1-26 **P. caricifolia** (Martius ex Schultes f.) G.S. Varadarajan & Gilmartin.
See Gouda (2009a).
SYN.: *Pitcairnia incarnata* Baker.
SYN.: *Pepinia incarnata* (Baker) G.S. Varadarajan & Gilmartin.

8.1-27 **P. incarnata** (Baker) G.S. Varadarajan & Gilmartin.
= *Pepinia caricifolia* (Martius ex Schultes f.) G.S. Varadarajan & Gilmartin. See Gouda (2009a).

8.1-33.3 **P. peruana** H. Luther, Selbyana 23(1): 49, 51. 2002. Peru: Cajamarca. [HT: SEL; IT: MO].
SYN.: *Pitcairnia peruana* (H. Luther) J.R. Grant.

8.1-35.4 **P. holstii** H. Luther, J. Bromeliad Soc. 51(2): 71–72. 2001. Peru: Cuzco. [HT: SEL; IT: USM].
SYN.: *Pitcairnia holstii* (H. Luther) J.R. Grant.

8.1-35.5 **P. minicorallina** H. Luther.
SYN.: *Pitcairnia minicorallina* (H. Luther) J.R. Grant.

8.1-40.1 **P. neeana** L.B. Smith ex H. Luther, Selbyana 23(1): 46, 47. 2002. Brazil: Rondônia. [HT: INPA; IT: NY, US].
SYN.: *Pitcairnia neeana* (L.B. Smith ex H. Luther) J.R. Grant.

9 BROCCHINIA Schultes f. ex Schultes & Schultes f.

9-1 **B. serrata** L.B. Smith.
= *Sequencia serrata* (L.B. Smith) Givnish. See Givnish, Millam, Berry & Sytsma (2007: 17–18).

9-2.1 **B. uaipanensis** (Maguire) Givnish, Aliso 23: 15. 2007.
BASIONYM: *Barbacenia uaipanensis* Maguire, Mem. New York Bot. Gard. 9: 477, fig. 117. 1957.
SYN.: *Ayensua uaipanensis* (Maguire) L.B. Smith.

10 AYENSUA L.B. Smith.

10-1 **A. uaipanensis** (Maguire) L.B. Smith.
= *Brocchinia uaipanensis* (Maguire) Givnish. See Givnish, Millam, Berry & Sytsma (2007: 15).

11 NAVIA Martius ex Schultes & Schultes f.

11-3.1 **N. plowmanii** L.B. Smith, Steyermark & H. Robinson.
= *Steyerbromelia plowmanii* (L.B. Smith, Steyermark & H. Robinson) Holst. See Holst (2001).

11-8 **N. diffusa** L.B. Smith.
= *Steyerbromelia plowmanii* (L.B. Smith, Steyermark & H. Robinson) Holst. See Holst (2001).

11-52.2 **N. pilarica** Betancur, Caldasia 23: 143–145. 2001. Colombia: Caquetá. [HT: COL; IT: COAH, HUA, SEL].

11-57.2 **N. axillaris** Betancur, Caldasia 23: 140–142. 2001. Colombia: Caquetá. [HT: COL; IT: COAH, HUA, SEL].

11-60.1 **N. lactea** L.B. Smith, Steyermark & H. Robinson.
Treated erroneously as a synonym of *Navia ocellata* L.B. Smith in Luther and Sieff (1994).

12 DYCKIA Schultes f.

12-2.3 **D. delicata** Larocca & Sobral, Novon 12: 234–236. 2002. Brazil: Rio Grande do Sol. [HT: ICN; IT: MBM, US, ZSS].

12-2.4 **D. domfelicianensis** Strehl, Vidalia 2(2): 26–36. "2004" 2005. Brazil: Rio Grande do Sul. [HT: HAS].

12-2.5 **D. nigrospinulata** Strehl, Bromeliaceae (Queensland) 42(5): 9–14. 2008. Brazil: Rio Grande do Sul. [HT: HAS].

12-12.4 **D. waechteri** Strehl, Bromeliaceae (Queensland) 42(5): 15–19, 22. 2008. Brazil: Rio Grande do Sul. [HT: HAS].

12-17.2 **D. rigida** Strehl, Vidalia 2(2): 26–36. "2004" 2005. Brazil: Rio Grande do Sul. [HT: HAS].

12-18.1 **D. edwardii** P.J. Braun, E. Esteves & Scharf, Bromelie 3/2008: 116–123. 2009. Brazil: Goiás. [HT: UFG].

12-22.1 **D. jonesiana** Strehl, Bromeliaceae (Queensland) 42(5): 8–10, 14. 2008. Brazil: Rio Grande do Sul. [HT: HAS; IT: HAS].

12-22.2 **D. vicentensis** Strehl, Bromeliaceae (Queensland) 42(5): 13–16, 18. 2008. Brazil: Rio Grande do Sul. [HT: HAS].

12-35.1 **D. paucispina** Leme & E. Esteves, Vidalia 1(1): 28–30. "2003" 2004. Brazil: Mato Grosso do Sul. [HT: HB; IT: UFG].
See Braun and Pereira (2006b: 33–34).

12-35.2 **D. grandidentata** P.J. Braun & E. Esteves, Cact. Succ. J. (Los Angeles) 80(6): 319–324. 2008. Brazil: Mato Grosso do Sul. [HT: UFG; IT: HAL].

12-38.1 **D. martinellii** B.R. Silva & Forzza, Novon 14: 168–170. 2004. Brazil: Rio de Janeiro. [HT: RB].

12-43.3 **D. julianae** Strehl, Vidalia 2(2): 26–36. "2004" 2005. Brazil: Rio Grande do Sul. [HT: HAS].

12-48.3 **D. mirandiana** Leme & Z.J.G. Miranda, J. Bromeliad Soc. 59(2): 75–79. 2009. Brazil: Goiás. [HT: HB].

12-49.2 **D. goehringii** E. Gross & Rauh.
The original collection was from Goiás, not Minas Gerais; see Braun and Pereira (2004) and (2006c: 162–164).

12-64 **D. biflora** Mez.
= *Encholirium biflorum* (Mez) Forzza. See Forzza (2001: 116–120).

12-71.3 **D. joanae-marcioi** P.J. Braun, E. Esteves & Scharf, Bromelie 1/2008: 33–46. 2008. Brazil: Minas Gerais. [HT: UFG; IT: HAL].

12-74.1 **D. richardii** P.J. Braun & E. Esteves, Cact. Succ. J. (Los Angeles) 80(6): 319–324. 2008. Brazil: Goiás. [HT: UFG].

13 HECHTIA Klotzsch.

13-2.1 **H. perotensis** I. Ramírez & Martínez-Correa, Acta Bot. Mex. 78: 97–109. 2007. Mexico: Puebla. [HT: CICY; IT: UAMIZ].

13-12.1 **H. zamudioi** Espejo, López-Ferrari & I. Ramírez, Acta Bot. Mex. 83: 49–61. 2008. Mexico: Querétaro. [HT: IEB; IT: UAMIZ].

13-14.1 **H. caulescens** López-Ferrari, Espejo & Martínez-Correa, Novon 19(2): 197–200. 2009. Mexico: Puebla. [HT: UAMIZ; IT: IEB, MEXU].

13-24.1 **H. pretiosa** Espejo & López-Ferrari, Acta Bot. Mex. 83: 49–61. 2008. Mexico: Guanajuato. [HT: UAMIZ; IT: IEB].

13-36.1 **H. nuusaviorum** Espejo & López-Ferrari, Acta Bot. Mex. 78: 97–109. 2007. Mexico: Oaxaca. [HT: UAMIZ].

13-36.2 **H. lepidophylla** I. Ramírez, Acta Bot. Mex. 85: 63–74. 2008. Mexico: Querétaro. [HT: MO; IT: IEB, QMEX, XAL].

13-37 **H. desmetiana** (Baker) Mez.
= *Hechtia rosea* E. Morren ex Baker. See Espejo-Serna, López-Ferrari, Ramírez-Morillo, Holst, Luther & Till (2004: 45–46, 81).

13-38 **H. macdougallii** L.B. Smith.
= *Hechtia rosea* E. Morren ex Baker. See Espejo-Serna, López-Ferrari, Ramírez-Morillo, Holst, Luther & Till (2004: 45–46, 81).

13-39 **H. rosea** E. Morren ex Baker.
See Espejo-Serna, López-Ferrari, Ramírez-Morillo, Holst, Luther & Till (2004: 45–46, 81) and Guess and Guess (2005).
SYN.: *Hechtia desmetiana* Baker (Mez).
SYN.: *Hechtia macdougallii* L.B. Smith.
SYN.: *Hechtia meziana* L.B. Smith.

13-40 **H. meziana** L.B. Smith.
= *Hechtia rosea* E. Morren ex Baker. See Espejo-Serna, López-Ferrari, Ramírez-Morillo, Holst, Luther & Till (2004: 45–46, 81).

14 TILLANDSIA Linnaeus. See Roguenant (2001), Tardivo (2002), and Espejo-Serna (2002).

14-0 **T. appenii** (Rauh) J.R. Grant, Vidalia 2(2): 23–25. "2004" 2005.
BASIONYM: *Vriesea appenii* Rauh, Bromeliad Soc. Bull. 19: 111–113. 1969.
= *Vriesea appenii* Rauh.

14-0 **T. clavigera** sensu L.B. Smith et auct. pro parte non Mez.
= *Tillandsia francisci* W. Till & J.R. Grant.

14-0 **T. ×cuchnichim** R. Guess & V. Guess, J. Bromeliad Soc. 55(1): 23–27. 2005. Mexico: Chiapas. [HT: NY].
Natural hybrid: *Tillandsia carlsoniae* L.B. Smith × *Tillandsia eizii* L.B. Smith.

14-0 **T. frank-hasei** J.R. Grant, Vidalia 2(2): 23–25. "2004" 2005.
New name for *Vriesea hasei* Ehlers, Bromelie 2/1998: 55–58. 1998. Not *Tillandsia hasei* Ehlers & L. Hromadnik.
= *Vriesea hasei* Ehlers.

14-0 **T. gruberi** (Ehlers) J.R. Grant, Vidalia 2(2): 23–25. "2004" 2005.
BASIONYM: *Vriesea gruberi* Ehlers, Bromelie 1/1999: 10–13. 1999.
= *Vriesea gruberi* Ehlers.

14-0 **T. lutheri** (Manzanares & W. Till) J.R. Grant, Vidalia 2(2): 23–25. "2004" 2005.
BASIONYM: *Vriesea lutheri* Manzanares & W. Till, J. Bromeliad Soc. 50(4): 169–172. 2000.
= *Vriesea lutheri* Manzanares & W. Till.

14-0 **T. maya** I. Ramírez & Carnevali, Novon 13: 209–211. 2003. Mexico: Yucatán. [HT: CICY].
Nat. hyb.: *Tillandsia balbisiana* × *T. brachycaulos* (H.E. Luther, pers. obs.)

14-0 **T. piepenbringii** (Rauh) J.R. Grant, Vidalia 2(2): 23–25. "2004" 2005.
BASIONYM: *Vriesea piepenbringii* Rauh, Trop. Subtrop. Pflanzenwelt 42: 12–21. 1983.
= *Vriesea piepenbringii* Rauh.

14-0 **T. ×polita** L.B. Smith.
= *Tillandsia polita* L.B. Smith var. *polita*.

14-0 **T. ×van-den-bergii** Ehlers & Hase, Bromelie 3/2004: 75–77. 2004. Costa Rica: San José. [HT: CR].

Natural hybrid: *Tillandsia variabilis* Schlechtendal × *Tillandsia* (= *Vriesea*) *incurva* Grisebach.

14-0 **T. walter-tillii** J.R. Grant, Vidalia 2(2): 23–25. "2004" 2005.
New name for *Vriesea tillii* Manzanares, J. Bromeliad Soc. 48(4): 169–171. 1998. Not *Tillandsia tillii* Ehlers.
= *Vriesea tillii* Manzanares.

14-0 **T. ×wilinskii** Gouda, J. Bromeliad Soc. 52(3): 125–127. 2002. Venezuela: Mérida. [HT: U; IT: VEN].
Natural hybrid: *Tillandsia flexuosa* Swartz × *Tillandsia funckiana* Baker.

14-1.1 **T. francisci** W. Till & J.R. Grant, J. Bromeliad Soc. 53(5): 195–199, cover. "2003" 2004. Venezuela: Mérida. [HT: US; IT: NY, SEL].
SYN.: *Tillandsia clavigera* sensu L.B. Smith et auct. pro parte non Mez.

14-11.1 **T. sangii** Ehlers, Bromelie 3/2003: 65–67. 2004. Colombia: Narino. [HT: WU].

14-12.1 **T. pallescens** Betancur & Néstor García, Caldasia 24: 1–7. 2002. Columbia: Aruaca. [HT: HUA; IT: SEL].

14-12.2 **T. dorotheehaseae** Hase, Bromelie 1/2006: 15–18. 2006. Ecuador: Azuay. [HT: QCNE; IT: WU].

14-15.2 **T. santieusebii** Morillo & Oliva-Esteve, J. Bromeliad Soc. 57(4): 162–168. 2007. Venezuela: Merida. [HT: MER; IT: VEN].

14-20.2 **T. hoeijeri** H. Luther, J. Bromeliad Soc. 53(2): 57–58. 2003. Ecuador: Loja. [HT: SEL; IT: QCNE].

14-21 **T. clavigera** Mez.
See Till and Grant (2003).

14-21a **T. clavigera** Mez var. **clavigera**.
See Till and Grant (2003).
SYN.: *Tillandsia brevicapsula* Gilmartin.

14-22 **T. brevicapsula** Gilmartin.
= *Tillandsia clavigera* Mez var. *clavigera*. See Till and Grant (2003).

14-36 **T. lucida** E. Morren ex Baker.
See Guess and Guess (2002b).

14-37.1 **T. australis** Mez.
See Haugg (2001).

14-61.1 **T. rudolfii** E. Gross & Hase, Bromelie 3/2003: 76–78. 2003. Ecuador: Azuay. [HT: FR].

14-78 **T. biflora** Ruiz & Pavón.
See Zipp, Schneider, Gaviria & Zizka (2003).

14-93.1 **T. breviturneri** Betancur & Néstor García, Caldasia 24: 1–7. 2002. Columbia: Cundinamarca. [HT: HUA; IT: SEL].

14-102 **T. chaetophylla** Mez.
See López-Ferrari, Espejo Serna & Caleya (2006: 77–83).

14-102.3 **T. loxichaensis** Ehlers, Bromelie 3/2002: 78–83. 2002. Mexico: Oaxaca. [HT: MEXU].

14-106b **T. incarnata** var. **margaritacea** Roguenant & Raynal-Roques, J. Bromeliad Soc. 54(4): 180–181. 2004. Ecuador: Tungurahua. [HT: SEL].

14-108.1 **T. gerdae** Ehlers.
SYN.: *Tillandsia jarmilae* Halda.

14-108.4 **T. jarmilae** Halda, Acta Musei Richnoviensis Sect. Natur. 12(2): 58–59, 63–64. 2005. Bolivia: Oruro. [HT: PR].
= *Tillandsia gerdae* Ehlers. Personal communication with W. Till, April 2008.

14-109 **T. archeri** L.B. Smith.
Previously treated as a synonym of *Tillandsia turneri* Baker in Luther and Sieff (1994).

14-123 **T. plumosa** Baker.
SYN.: *Viridantha plumosa* (Baker) Espejo.

14-123.1 **T. atroviridipetala** Matuda.
SYN.: *Viridantha atroviridipetala* (Matuda) Espejo.

14-123.2(1) **T. tortilis** Klotzsch ex Baker subsp. **tortilis**.
SYN.: *Viridantha tortilis* (Klotzsch ex Baker) Espejo.

14-123.3 **T. mauryana** L.B. Smith.
SYN.: *Viridantha mauryana* (L.B. Smith) Espejo.

14-123.4 **T. ignesiae** Mez.
SYN.: *Viridantha ignesiae* (Mez) Espejo.

14-123.5 **T. penascoensis** Ehlers & Lautner, Bromelie 1/2004: 4–7. 2004. Mexico: Oaxaca. [HT: MEXU; IT: SEL, WU].
See Kretz (2006).

14-125 **T. edithae** Rauh [as "*edithiae*"].
SYN.: *Tillandsia barborkae* Halda & Heřtus.

14-125.1 **T. barborkae** Halda & Heřtus, Acta Musei Richnoviensis Sect. Natur. 14(4): 112–118, 122, 126. 2007. Bolivia: Chuquisaca. [HT: PR].
= *Tillandsia edithae* Rauh.

14-138 **T. tectorum** E. Morren.
See Hromadnik (2005a: 17–19).

14-138aii **T. tectorum** var. **tectorum** f. **gigantea** L. Hromadnik, Bromelie—Sonderheft 5: 28–32. 2005. Ecuador: Azuay. [HT: QCNE; IT: WU].

14-138b **T. tectorum** var. **globosa** L. Hromadnik, Bromelie—Sonderheft 5: 20–24. 2005. Ecuador: Loja. [HT: QCNE; IT: WU].

14-138c **T. tectorum** var. **viridula** L. Hromadnik, Bromelie—Sonderheft 5: 24–28. 2005. Peru: Amazonas. [HT: USM; IT: WU].

14-138.1 **T. balsasensis** Rauh.
See Hromadnik (2005a: 44–47).

14-138.2 **T. lithophila** L. Hromadnik, Bromelie—Sonderheft 5: 48–51. 2005. Peru: La Libertad. [HT: USM; IT: WU].

14-138.3 **T. chusgonensis** L. Hromadnik, Bromelie—Sonderheft 5: 52–56. 2005. Peru: La Libertad. [HT: USM; IT: WU].

14-138.4 **T. oblivata** L. Hromadnik, Bromelie—Sonderheft 5: 76–80. 2005. Peru: Cajamarca. [HT: USM; IT: WU].

14-138.5 **T. rupicola** Baker.
Formerly 206 in Smith and Downs (1977). Previously treated as a synonym of *Tillandsia tectorum* E. Morren in Luther and Sieff (1994). See Hromadnik (2005a: 80–84) and (2006).

14-138.6 **T. stellifera** L. Hromadnik, Bromelie—Sonderheft 5: 62–66. 2005. Peru: Ancash. [HT: USM; IT: WU].

14-138.7 **T. tomekii** L. Hromadnik, Bromelie—Sonderheft 5: 57–61. 2005. Peru: Ancash. [HT: USM; IT: WU].

14-138.8 **T. malyi** L. Hromadnik, Bromelie—Sonderheft 5: 67–71. 2005. Peru: Ancash. [HT: USM; IT: WU].

14-138.9 **T. reducta** L.B. Smith.
Formerly 100 in Smith and Downs (1977). See Hromadnik (2005a: 84–87).

14-139.4 **T. rubia** Ehlers & L. Colgan, J. Bromeliad Soc. 54(2): 55–59. 2004. Bolivia: La Paz. [HT: LPB].

14-139.5 **T. ermitae** L. Hromadnik, Bromelie 1/2007: 16–23. 2007. Peru: Lima. [HT: USM].

14-141 **T. insignis** (Mez) L.B. Smith & Pittendrigh.
= *Werauhia insignis* (Mez) W. Till, Barfuss & R. Samuel. See Barfuss, Samuel & Till (2004: 13–14).

14-146b **T. cardenasii** var. **major** Ehlers & L. Hromadnik, Bromelie 1/2005: 19–23. 2005. Bolivia: Chuquisaca. [HT: LPB; IT: WU].

14-150.5 **T. rosacea** L. Hromadnik & W. Till, Bromelie 3/2005: 88–90. 2005. Bolivia: Santa Cruz. [HT: LPB; IT: WU].

14-151.6 **T. afonsoana** Strehl, Iheringia, Sér. Bot. 54: 23–24, 33, 40. 2000. Brazil: Rio Grande do Sul. [HT: HAS].

14-151.7 **T. barfussii** W. Till, Bromelie 1/2009: 36–40. 2009. Paraguay: Dept. Cordillera. [HT: FCQ].

14-158 **T. heteromorpha** Mez.
See Hromadnik (2005a: 33–37).

14-158b **T. heteromorpha** var. **rauhii** L. Hromadnik, Bromelie—Sonderheft 5: 38–43. 2005. Peru: Cajamarca. [HT: USM; IT: WU].

14-160.2 **T. dorisdaltoniae** Ibisch, R. Vásquez, I.G. Vargas & W. Till, Revista Soc. Boliv. Bot. 4(1): 45–49. 2003. Bolivia: Cochabamba. [HT: WU].

14-162.3 **T. mereliana** Schinini, Rojasiana 8(1): 73–76. 2008. Paraguay: Dept. Presidente Hayes. [HT: FCQ].

14-164.11 **T. colorata** L. Hromadnik, Bromelie 1/2009: 17–24. 2009. Argentina: Salta. [HT: MCNS; IT: WU].

14-164.11ii **T. colorata** f. **flavescens** L. Hromadnik, Bromelie 1/2009: 21–22. 2009. Argentina: Salta. [HT: MCNS; IT: WU].

14-164.7 **T. markusii** L. Hromadnik, Bromelie 3/2002: 67–70. 2002. Argentina: Salta. [HT: MCNS; IT: WU].

14-164.8 **T. rosarioae** L. Hromadnik, Bromelie 2/2005: 49–51. 2005. Argentina: Salta. [HT: MCNS; IT: WU].

14-164.9 **T. krystofii** Halda & Heřtus, Acta Musei Richnoviensis Sect. Natur. 14(4): 116–126. 2007. Bolivia: Chuquisaca. [HT: PR].
Tab. VI, 4 appears to represent *Tillandsia cardenasii* (!W. Till, H.E. Luther).

14-170.3 **T. minasgeraisensis** Ehlers & W. Till, J. Bromeliad Soc. 58(6): 245–249. "2008" 2009. Brazil: Minas Gerais. [HT: HB].

14-175.4 **T. catimbauensis** Leme, W. Till & J.A. Siqueira, Fragmentos de Mata Atlântica do Nordeste: 335. 2006. Brazil: Pernambuco. [HT: UFP].

14-180d **T. aeranthos** var. **rosea** Strehl, Iheringia, Sér. Bot. 54: 22–23, 32, 39. 2000. Brazil: Rio Grande do Sul. [HT: HAS].

14-180e **T. aeranthos** var. **aemula** Strehl, Iheringia, Sér. Bot. 54: 21–22, 31, 38. 2000. Brazil: Rio Grande do Sul. [HT: HAS].

14-180f **T. aeranthos** var. **albeobracteata** Strehl, Divulg. Mus. Ci. Tecnol. UBEA/PUCRS 9: 28, 32. 2004. Brazil: Rio Grande do Sul. [HT: HAS].

14-180g **T. aeranthos** var. **flava** Strehl, Divulg. Mus. Ci. Tecnol. UBEA/PUCRS 9: 28, 31. 2004. Brazil: Rio Grande do Sul. [HT: HAS].

14-180.2 **T. jonesii** Strehl, Iheringia, Sér. Bot. 54: 27–28, 36, 43. 2000. Brazil: Rio Grande do Sul. [HT: HAS].

14-180.3 **T. bella** Strehl, Iheringia, Sér. Bot. 54: 24–25, 34, 41. 2000. Brazil: Rio Grande do Sul. [HT: HAS].

14-180.4 **T. itaubensis** Strehl, Iheringia, Sér. Bot. 54: 25–26, 35, 42. 2000. Brazil: Rio Grande do Sul. [HT: HAS].

14-180.5 **T. rohdenardini** Strehl, Vidalia 2(2): 26–36. "2004" 2005. Brazil: Rio Grande do Sul. [HT: HAS].

14-181.1 **T. winkleri** Strehl, Iheringia, Sér. Bot. 54: 28–29, 37, 44. 2000. Brazil: Rio Grande do Sul. [HT: HAS].

14-201 **T. streptocarpa** Baker.
SYN.: *Tillandsia duratii* subsp. *streptocarpa* (Baker) Halda.

14-202 **T. reichenbachii** Baker.
SYN.: *Tillandsia duratii* subsp. *reichenbachii* (Baker) Halda.

14-203(2) **T. duratii** subsp. **streptocarpa** (Baker) Halda, Acta Musei Richnoviensis Sect. Natur. 12(2): 61, 67–68. 2005.
BASIONYM: *Tillandsia streptocarpa* Baker, J. Bot. 25: 241. 1887.
= *Tillandsia streptocarpa* Baker.

14-203(3) **T. duratii** subsp. **reichenbachii** (Baker) Halda, Acta Musei Richnoviensis Sect. Natur. 12(2): 61, 67. 2005.
BASIONYM: *Tillandsia reichenbachii* Baker, Handb. Bromel. 166. 1889.
= *Tillandsia reichenbachii* Baker.

14-232.1 **T. virescens** Ruiz & Pavón.
SYN.: *Tillandsia tomasii* Halda.

14-232.3 **T. tomasii** Halda, Acta Musei Richnoviensis Sect. Natur. 12(2): 59–60, 65–66, 69. 2005. Bolivia: Potosí. [HT: PR].
= *Tillandsia virescens* Ruiz & Pavón. Personal communication with W. Till, April 2008.

14-234.2 **T. tonalaensis** Ehlers, J. Bromeliad Soc. 53(1): 16–20. 2003. Mexico: Oaxaca. [HT: MEXU].

14-234.3 **T. zacualpanensis** Ehlers & Wülfinghoff, Bromelie 1/2005: 12–16. 2005. Mexico: Mexico. [HT: WU; IT: MEXU, WU].

14-244.2 **T. candelifera** Rohweder.
See Butcher and Ehlers (2002).

14-246b **T. ionantha** var. **scaposa** L.B. Smith.
= *Tillandsia scaposa* (L.B. Smith) Ehlers.

14-246.5 **T. scaposa** (L.B. Smith) Ehlers.
Previously treated as a synonym of *Tillandsia kolbii* W. Till & Schatzl in Luther (2001b).
SYN.: *Tillandsia ionantha* var. *scaposa* L.B. Smith.

14-247.2 **T. kolbii** W. Till & Schatzl.

Previously included *Tillandsia scaposa* (L.B. Smith) Ehlers (*Tillandsia ionantha* var. *scaposa* L.B. Smith) as a synonym.

14-251.3 **T. sessemocinoi** López-Ferrari, Espejo & P. Blanco, Acta Bot. Mex. 76: 77–88. 2006. Mexico: Michoacán. [HT: UAMIZ; IT: IEB, UAMIZ].

14-255.8 **T. atenangoensis** Ehlers & Wülfinghoff, Bromelie 2/2001: 45–48. 2001. Mexico: Oaxaca. [HT: MEXU; IT: SEL, WU].

14-255.9 **T. coalcomanensis** Ehlers, Bromelie 1/2008: 4–7. 2008. Mexico: Michoacan. [HT: MEXU].

14-257.1 **T. juerg-rutschmannii** Rauh.
See Guess and Guess (2001a).

14-258 **T. xerographica** Rohweder.
See Hromadnik (2005b).

14-259 **T. exserta** Fernald.
See Luther (''2005'' 2006).

14-260 **T. lepidosepala** L.B. Smith.
SYN.: *Viridantha lepidosepala* (L.B. Smith) Espejo.

14-263.3 **T. santosiae** Ehlers, Bromelie 1/2009: 4–13. 2009. Mexico: Oaxaca. [HT: MEXU].

14-269.3 **T. lagunaensis** Ehlers, Bromelie 3/2005: 80–84. 2005. Mexico: Oaxaca. [HT: MEXU; IT: WU].

14-273.1 **T. loma-blancae** Ehlers & Lautner, Bromelie 1/2003: 18–24. 2003. Mexico: Jalisco. [HT: MEXU; IT: SEL, W, WU].

14-273.2 **T. sierrahalensis** Espejo & López-Ferrari, Acta Bot. Mex. 80: 41–49. 2007. Mexico: Jalisco. [HT: UAMIZ].

14-274.4 **T. macvaughii** Espejo & López-Ferrari, Acta Bot. Mex. 72: 53–64. 2005. Mexico: Jalisco. [HT: UAMIZ].

14-275.2 **T. crista-gallii** Ehlers, Bromelie 2/2002: 32–36. 2002. Mexico: Chiapas. [HT: MEXU; IT: WU].

14-276.1 **T. kretzii** Ehlers & Lautner, Bromelie 2/2004: 36–38. 2004. Guatemala: Huehuetenango. [HT: USCG].

14-277.8 **T. celata** Ehlers & Lautner, Bromelie 1/2006: 8–12. 2006. Mexico: Oaxaca. [HT: MEXU].

14-281b **T. lampropoda** var. **major** L.B. Smith.
See Guess and Guess (2003a).

14-282.11 **T. copalaensis** Ehlers, Bromelie 3/2001: 64–66. 2002. Mexico: Oaxaca. [HT: MEXU; IT: WU].

14-282.12 **T. zoquensis** Ehlers, Bromelie 1/2002: 18–21. 2002. Mexico: Chiapas. [HT: MEXU].

14-282.13 **T. botteri** E. Morren ex Baker.
Previously treated as a synonym of *Tillandsia tricolor* Schlechtendal & Chamisso in Smith and Downs (1977). See Espejo-Serna, López-Ferrari & Ramírez-Morillo (2005: 147–150). Misdetermined in most exsiccates as *Tillandsia fasciculata* var. *clavispica* Mez; the latter taxon is restricted to the Greater Antilles.

14-282.14 **T. flavobracteata** Matuda.
Previously treated as a synonym of *Tillandsia fasciculata* Swartz in Luther and Sieff (1994). See Espejo-Serna, López-Ferrari & Ramírez-Morillo (2005: 182–184).

14-282.15 **T. grossispicata** Espejo, López-Ferrari & W. Till, Acta Bot. Mex. 85: 45–62. 2008. Mexico: Jalisco. [HT: UAMIZ].

14-282.16 **T. inopinata** Espejo, López-Ferrari & W. Till, Acta Bot. Mex. 85: 45–62. 2008. Mexico: Hidalgo. [HT: UAMIZ; IT: IEB, MEXU].

14-282.17 **T. magnispica** Espejo & López-Ferrari, Acta Bot. Mex. 86: 1–7. 2009. Mexico: Oaxaca. [HT: UAMIZ; IT: IEB].

14-284 **T. polita** L.B. Smith.
Previously treated as a natural hybrid, *Tillandsia* ×*polita* L.B. Smith in Luther and Sieff (1994).

14-284a **T. polita** L.B. Smith var. **polita**.
SYN.: *Tillandsia* ×*polita* L.B. Smith.

14-284b **T. polita** var. **elongata** Ehlers, Bromelie 2/2003: 45–48. 2003. Mexico: Chiapas. [HT: MEXU].

14-285.7 **T. yutaninoensis** Ehlers & Lautner, Bromelie 2/2007: 56–63. 2007. Mexico: Oaxaca. [HT: MEXU; IT: SEL, WU].

14-290b **T. pueblensis** var. **glabrior** L.B. Smith.
= *Tillandsia glabrior* (L.B. Smith) López-Ferrari, Espejo & I. Ramírez. See Espejo-Serna, López-Ferrari, Ramírez-Morillo, Holst, Luther & Till (2004: 60, 85).

14-290.1b **T. mitlaensis** var. **tulensis** Lautner & Ehlers, Bromelie 1/2001: 20–22. 2001. Mexico: Oaxaca. [HT: MEXU].

14-290.2 **T. glabrior** (L.B. Smith) López-Ferrari, Espejo & I. Ramírez, Selbyana 25(1): 60. 2004.
BASIONYM: *Tillandsia pueblensis* var. *glabrior* L.B. Smith, Phytologia 6: 257. 1958.
SYN.: *Tillandsia schiedeana* subsp. *glabrior* (L.B. Smith) Gardner.

14-291 **T. canescens** Swartz.
See Schwesinger (2005).

14-296 **T. parryi** Baker.
See Sill (2002) and Espejo-Serna, López-Ferrari & Till (2007).
SYN.: *Tillandsia sueae* Ehlers.

14-296.1 **T. sueae** Ehlers.
See Sill (2002).
= *Tillandsia parryi* Baker. See Espejo-Serna, López-Ferrari & Till (2007).

14-296.3 **T. suesilliae** Espejo, López-Ferrari & W. Till, Acta Bot. Mex. 78: 85–95. 2007. Mexico: San Luis Potosi. [HT: UAMIZ; IT: IEB, MEXU, WU].

14-297.4 **T. zaragozaensis** Ehlers, Bromelie 2/2005: 44–48. 2005. Mexico: Nuevo Leon. [HT: MEXU; IT: WU].

14-304 **T. dasyliriifolia** Baker.
See Ramírez-Morillo, Fernández-Concha & Chi-May (2004b).

14-304.1 **T. limbata** Schlechtendal.
See Espejo-Serna, López-Ferrari & Ramírez-Morillo (2005: 218).
SYN.: *Tillandsia drepanoclada* Baker.
SYN.: *Tillandsia simplexa* Matuda.

14-304.2 **T. simplexa** Matuda.
= *Tillandsia limbata* Schlechtendal. See Espejo-Serna, López-Ferrari & Ramírez-Morillo (2005: 218).

14-304.3 **T. drepanoclada** Baker.
= *Tillandsia limbata* Schlechtendal. See Espejo-Serna, López-Ferrari & Ramírez-Morillo (2005: 218).

14-304.4 **T. huamenulaensis** Ehlers, J. Bromeliad Soc. 56(2): 56–59. 2006. Mexico: Oaxaca. [HT: MEXU; IT: WU].

14-304.5 **T. cucaensis** Wittmack.
Previously treated as a synonym of *Tillandsia makoyana* Baker in Smith and Downs (1977). See Ehlers (2006) and (2007).

14-304.6 **T. comitanensis** Ehlers, J. Bromeliad Soc. 56(3): 116–119. 2006. Mexico: Chiapas. [HT: MEXU].

14-306 **T. utriculata** Linnaeus.
See Guess and Guess (2003b).

14-307.1 **T. nicolasensis** Ehlers, J. Bromeliad Soc. 56(2): 70–72. 2006. Mexico: Jalisco. [HT: MEXU; IT: WU].

14-307.2 **T. aesii** I. Ramírez & Carnevali, Novon 17: 27–28. 2007. Mexico: Jalisco. [HT: CICY].

14-307.3 **T. pinicola** I. Ramírez & Carnevali, Novon 17: 72–78. 2007. Mexico: Oaxaca. [HT: CICY; IT: MO].

14-307.4 **T. tehuacana** I. Ramírez & Carnevali, Novon 17: 383–385. 2007. Mexico: Puebla. [HT: CICY].

14-311ii **T. flexuosa** f. **alba** H. Takizawa, J. Bromeliad Soc. 53(2): 52–55. 2003. Costa Rica: Puntarenas. [HT: SEL].

14-323b **T. butzii** var. **roseiflora** Ehlers, Bromelie 2/2002: 55–56. 2002. Mexico: Oaxaca. [HT: MEXU].

14-324ii **T. bulbosa** f. **alba** H. Takizawa,
J. Bromeliad Soc. 53(2): 51–52. 2003. Costa Rica: Cartago. [HT: SEL].

14-327.1(1)ii **T. pseudobaileyi** subsp. **pseudobaileyi** f. **alba** H. Takizawa, J. Bromeliad Soc. 53(2): 54, 56. 2003. Honduras: Lempira. [HT: SEL].

14-330.2 **T. bradeana** Mez & Tonduz.
Previously treated as a synonym of *Tillandsia brachycaulos* Schlechtendal in Luther and Sieff (1997).
SYN.: *Tillandsia abdita* L.B. Smith.

14-331 **T. abdita** L.B. Smith.
= *Tillandsia bradeana* Mez & Tonduz.

14-333.1b **T. erubescens** var. **arroyoensis** W. Weber & Ehlers.
= *Tillandsia arroyoensis* (W. Weber & Ehlers) Espejo & López-Ferrari. See Espejo-Serna, López-Ferrari, Ramírez-Morillo, Holst, Luther & Till (2004: 53, 84).

14-333.3 **T. hondurensis** Rauh.
See House (2008).

14-333.8 **T. arroyoensis** (W. Weber & Ehlers) Espejo & López-Ferrari, Selbyana 25(1): 53. 2004.
BASIONYM: *Tillandsia erubescens* var. *arroyoensis* W. Weber & Ehlers, Feddes Repert. 94: 604–607. 1983.

14-337.1 **T. rangelensis** L. Hechavarria, Selbyana 29(2): 179–180. "2008" 2009. Cuba: Pinar del Rio. [HT: HAC; IT: HAC].

14-339.1 **T. cossonii** Baker.
See Sill (2001).

14-339.5 **T. huajuapanensis** Ehlers & Lautner, Bromelie 3/2007: 120–128. 2008. Mexico: Oaxaca. [HT: MEXU; IT: SEL, WU].

14-340 **T. violacea** Baker.
See Castaño-Meneses, García-Franco & Palacios-Vargas (2003).

14-342.1 **T. alfredo-laui** Rauh & Lehmann.
See Espejo-Serna & López-Ferrari (2004).

14-342.2 **T. borealis** López-Ferrari & Espejo-Serna, Bol. Soc. Bot. Mex. 80: 63–71. 2007. Mexico: Sinaloa. [HT: UAMIZ; IT: IEB, MO].

14-345.2 **T. pseudooaxacana** Ehlers, Bromelie 3/2006: 92–95. 2006. Mexico: Oaxaca. [HT: MEXU; IT: SEL, WU].

14-347(2) **T. schiedeana** subsp. **glabrior** (L.B. Smith) Gardner.
= *Tillandsia glabrior* (L.B. Smith) López-Ferrari, Espejo & I. Ramírez. See Espejo-Serna, López-Ferrari, Ramírez-Morillo, Holst, Luther & Till (2004: 60, 85).

14-356b **T. seemannii** var. **mezii** (André ex Mez) L.B. Smith.
= *Racinaea pulchella* (André) Gouda & Manzanares. See Gouda and Manzanares (2006).

14.1 RACINAEA M.A. Spencer & L.B. Smith. See Roguenant (2001).

14.1-2.1 **R. pulchella** (André) Gouda & Manzanares, J. Bromeliad Soc. 56(4): 150–155. 2006.
BASIONYM: *Caraguata pulchella* André, Énum. Bromél. 5. 13 December 1888; Rev. Hort. 60: 566. 16 December 1888.
SYN.: *Tillandsia seemannii* var. *mezii* (André ex Mez) L.B. Smith.

14.1-11.1 **R. wuelfinghoffii** Höpfel & Scharf, Bromelie 3/2008: 136–142. 2009. Ecuador: Azuay. [HT: HAL; IT: WU].

14.1-13.1 **R. macrantha** H. Luther, Selbyana 28(1): 5–12. 2007. Peru: Pasco. [HT: SEL; IT: MO].

14.1-27 **R. hauggiae** (Rauh) J.R. Grant.
See Höpfel (2008).

14.1-34.1 **R. penduliflora** Gouda & Manzanares, J. Bromeliad Soc. 58(4): 156–158. 2008. Peru: Pasco. [HT: MO].

14.1-35.1 **R. pattersoniae** Manzanares & W. Till, J. Bromeliad Soc. 57(5): 198–203. 2007. Ecuador: Loja. [HT: QCNE].

14.1-49.1 **R. marioportillae** Höpfel & Scharf, Bromelie 2/2008: 96–100. 2008. Ecuador: Cañar. [HT: HAL; IT: HAL, U].

15 VRIESEA Lindley.

15-0 **V. simulans** J.F. Morales.
= *Werauhia moralesii* H. Luther. See Luther ("2002" 2003).

15-2.2 **V. croceana** Leme & G.K. Brown, Vidalia 2(1): 3–11. 2004. Brazil: Rio de Janeiro. [HT: HB].

15-8 **V. camptoclada** Mez & Wercklé.
= *Werauhia camptoclada* (Mez & Wercklé) J.F. Morales. See Morales (2003a: 360).

15-21 **V. cacuminis** L.B. Smith.
See Gouda (2006).

15-26.1 **V. revoluta** B.R. Silva, J. Bromeliad Soc. 55(2): 79–82. 2005. Brazil: Espírito Santo. [HT: RB].

15-33.1 **V. citrina** (Baker) L.B. Smith.
= *Vriesea minarum* L.B. Smith. See Grant, Leme & Roguenant (2002).

15-33.2 **V. minarum** L.B. Smith.
Previously treated as a synonym of *Vriesea citrina* (Baker) L.B. Smith in Luther (2001b). See Grant, Leme & Roguenant (2002).
SYN.: *Vriesea citrina* (Baker) L.B. Smith.

15-41.1 **V. barii** J.F. Morales.
= *Werauhia barii* (J.F. Morales) J.F. Morales. See Morales (2003b).

15-47.1 **V. vulcanicola** J.F. Morales.
= *Werauhia vulcanicola* (J.F. Morales) J.F. Morales. See Morales (2003b).

15-55.3 **V. fontourae** B.R. Silva, J. Bromeliad Soc. 55(2): 77–80. 2005. Brazil: Rio de Janeiro. [HT: RB].

15-56 **V. fosteriana** L.B. Smith.
See Butcher (2003).

15-57.3 **V. linharesiae** Leme & J.A. Siqueira, Selbyana 22(2): 152–154. 2001. Brazil: Bahia. [HT: HB].

15-59.4 **V. cipoensis** O.B.C. Ribeiro, C.C. Paula & Guarçoni, J. Bromeliad Soc. 59(1): 7–11. 2009. Brazil: Minas Gerais. [HT: VIC].

15-61 **V. nutans** L.B. Smith.
Previously treated as a synonym of *Werauhia viridiflora* (Regel) J.R. Grant in Luther and Sieff (1997).
= *Werauhia nutans* (L.B. Smith) J.R. Grant. See Krömer, Espejo, López-Ferrari & Acebey (2005).

15-65b **V. sparsiflora** var. **breviscapa** E. Pereira & I.A. Penna.
= *Vriesea breviscapa* (E. Pereira & I.A. Penna) Leme. See Leme (2002b).

15-83.1 **V. dictyographa** Leme, Bromélia 6(1–4): 4–6. 2001. Brazil: Bahia. [HT: HB].

15-89.5 **V. longistaminea** C.C. Paula & Leme, Vidalia 2(1): 21–29. 2004. Brazil: Minas Gerais. [HT: HB].

15-89.6 **V. sanfranciscana** Versieux & Wanderley, Acta Bot. Brasil. 22(1): 71–74. 2008. Brazil: Minas Gerais. [HT: SP; IT: HUFU].

15-89.7 **V. medusa** Versieux, Bot. J. Linn. Soc. 158: 709–715. 2008. Brazil: Minas Gerais. [HT: SP; IT: BHCB, R].

15-97.1 **V. haberi** J.F. Morales.
= *Werauhia haberi* (J.F. Morales) J.F. Morales. See Morales (2003b).

15-98.1 **V. tiquirensis** J.F. Morales.
= *Werauhia tiquirensis* (J.F. Morales) J.F. Morales. See Morales (2003b).

15-106.2 **V. osaensis** J.F. Morales.
= *Werauhia osaensis* (J.F. Morales) J.F. Morales. See Morales (2003b).

15-113.1 **V. zonata** Leme & J.A. Siqueira, Fragmentos de Mata Atlântica do Nordeste: 374–376. 2006. Brazil: Alagoas. [HT: HB; IT: UFP].

15-113.2 **V. freicanecana** J.A. Siqueira & Leme, Fragmentos de Mata Atlântica do Nordeste: 377–378. 2006. Brazil: Pernambuco. [HT: UFP; IT: UNIVASF].

15-113.3 **V. vellozicola** Leme & J.A. Siqueira, Fragmentos de Mata Atlântica do Nordeste: 406–407. 2006. Brazil: Espírito Santo. [HT: HB].

15-119 **V. macrochlamys** Mez & Wercklé.
Previously treated as a synonym of *Werauhia gladioliflora* (H. Wendland) J.R. Grant in Luther and Sieff (1997).
= *Werauhia macrochlamys* (Mez & Wercklé) J.F. Morales. See Morales (2003c).

15-120 **V. oligantha** (Baker) Mez.
See Paula & Guarçoni ("2005" 2006).

15-162.1 **V. piepenbringii** Rauh.
SYN.: *Tillandsia piepenbringii* (Rauh) J.R. Grant.

15-162.2 **V. tillii** Manzanares.
SYN.: *Tillandsia walter-tillii* J.R. Grant.

15-163 **V. appenii** Rauh.
SYN.: *Tillandsia appenii* (Rauh) J.R. Grant.

15-168.3 **V. costae** B.R. Silva & Leme, J. Bromeliad Soc. 51(4): 149, 151–153. 2001. Brazil: Rio de Janeiro. [HT: HB].

15-168.4 **V. harrylutheri** Leme & G.K. Brown, Vidalia 2(1): 3–11. 2004. Brazil: Espírito Santo. [HT: HB].

15-168.5 **V. fontellana** Leme & G.K. Brown, Vidalia 2(1): 3–11. 2004. Brazil: Espírito Santo. [HT: HB].

15-168.6 **V. gastiniana** Leme & G.K. Brown, Vidalia 2(1): 3–11. 2004. Brazil: Rio de Janeiro. [HT: HB].

15-174.1 **V. blackburniana** Leme, J. Bromeliad Soc. 55(1): 19–22. 2005. Brazil: Bahia. [HT: HB; IT: RB].

15-191c **V. incurvata** var. **albina** Strehl, Divulg. Mus. Ci. Tecnol. UBEA/PUCRS 9: 29, 32. 2004. Brazil: Rio Grande do Sul. [HT: HAS].

15-194e **V. splendens** var. **chlorostychya** Oliva-Esteve, J. Bromeliad Soc. 51(4): 184–185. 2001. Venezuela: Yaracuy.
Nom. invalid.
= *Vriesea splendens* var. *chlorostachya* Oliva-Esteve. See Oliva-Esteve (2006).

15-194i **V. splendens** var. **chlorostachya** Oliva-Esteve, J. Bromeliad Soc. 56(5): 199–200. 2006. Venezuela: Yaracuy. [HT: VEN].
See Oliva-Esteve (2001b).
SYN.: *Vriesea splendens* var. *chlorostychya* Oliva-Esteve.

15-202.2 **V. speckmaieri** W. Till, J. Bromeliad Soc. 58(6): 250–254. "2008" 2009. Venezuela: Carabobo. [HT: VEN; IT: WU].

15-203.2 **V. flava** A.F. Costa, H. Luther & Wanderley, Novon 14: 36–39. 2004. Brazil: São Paulo. [HT: SP; IT: R].

15-205.2 **V. silvana** Leme, J. Bromeliad Soc. 52(5): 219–221. 2002. Brazil: Bahia. [HT: HB].

15-215.1 **V. barbosae** J.A. Siqueira & Leme, Fragmentos de Mata Atlântica do Nordeste: 362–363. 2006. Brazil: Pernambuco. [HT: HB; IT: UFP].

15-217.2 **V. breviscapa** (E. Pereira & I.A. Penna) Leme, J. Bromeliad Soc. 52(5): 216–220. 2002.
BASIONYM: *Vriesea sparsiflora* var. *breviscapa* E. Pereira & I.A. Penna, Bol. Mus. Bot. Mun. Curitiba 62: 4. 1985.

15-224.1 **V. gruberi** Ehlers.
SYN.: *Tillandsia gruberi* (Ehlers) J.R. Grant.

15-228.2 **V. hasei** Ehlers.
SYN.: *Tillandsia frank-hasei* J.R. Grant.

15-229.2 **V. lutheri** Manzanares & W. Till.
SYN.: *Tillandsia lutheri* (Manzanares & W. Till) J.R. Grant.

15.1 ALCANTAREA (E. Morren ex Mez) Harms. See Leme (2007).

15.1-1.1 **A. turgida** Versieux & Wanderley, Brittonia 59(1): 58–61. 2007. Brazil: Minas Gerais. [HT: SP; IT: BHCB, MBM, RB, SEL, SPF, VIC].

15.1-1.2 **A. distractila** Leme & C.C. Paula, J. Bromeliad Soc. 58(1): 5–8. 2008. Brazil: Minas Gerais. [HT: HB].

15.1-1.3 **A. lurida** Leme, J. Bromeliad Soc. 58(1): 8–11. 2008. Brazil: Minas Gerais. [HT: HB; IT: RB].

15.1-1.4 **A. nigripetala** Leme & L. Kollmann, J. Bromeliad Soc. 58(5): 211–215. 2008. Brazil: Minas Gerais. [HT: HB; IT: MBML].

15.1-1.5 **A. simplicisticha** Leme & A.P. Fontana, J. Bromeliad Soc. 58(5): 209–211. 2008. Brazil: Espírito Santo. [HT: HB; IT: MBML].

15.1-1.6 **A. mucilaginosa** Leme, J. Bromeliad Soc. 59(1): 12–15. 2009. Brazil: Espírito Santo. [HT: HB; IT: RB].

15.1-3.1 **A. vasconcelosiana** Leme, J. Bromeliad Soc. 59(1): 19–27. 2009. Brazil: Minas Gerais. [HT: HB; IT: RB].

15.1-4.1 **A. heloisae** J.R. Grant, Vidalia 1(1): 31–33. "2003" 2004. Brazil: Rio de janeiro. [HT: HB; IT: US].

15.1-4.2 **A. patriae** Versieux & Wanderley, Hoehnea 34(3): 409–413. 2007. Brazil: Espírito Santo. [HT: SP; IT: BHCB, HUEFS, MBM, MBML, R, SPF].

15.1-4.3 **A. longibracteata** Leme & Fraga, J. Bromeliad Soc. 58(5): 205–208. 2008. Brazil: Espírito Santo. [HT: RB; IT: MBML].

15.1-14.1 **A. tortuosa** Versieux & Wanderley, Brittonia 59(1): 61–64. 2007. Brazil: Rio de Janeiro. [HT: SP].

15.1-16 **A. roberto-kautskyi** Leme.
See Leme (2009).

15.2 WERAUHIA J.R. Grant.

15.2-0 **W. clandestina** J.F. Morales, Polibotánica 15: 102. 2003.
= *Werauhia moralesii* H. Luther. See Morales (2003b).

15.2-0 **W. macrantha** (Mez & Wercklé) J.F. Morales, Lundiana 4: 65. 2003.
= *Werauhia macrantha* (Mez & Wercklé) J.R. Grant.

15.2-0 **W. rauhii** J.R. Grant, Vidalia 2(2): 23–25. "2004" 2005.
BASIONYM: *Vriesea patzeltii* var. *panamaensis* Rauh, Trop. Subtrop. Pflanzenwelt 60: 86–89. 1987.
= *Werauhia greenbergii* (J. Utley) J.R. Grant.

15.2-1 **W. werckleana** (Mez) J.R. Grant.
See Guess and Guess (2001b).

15.2-1.1 **W. moralesii** H. Luther, Brittonia 54: 281. 2003.
New name for *Vriesea simulans* J.F. Morales, which when published (1999) was an invalid homonym for *Vriesea simulans* Leme (1997).
BASIONYM: *Vriesea simulans* J.F. Morales, Novon 9: 404–405. 1999.
SYN.: *Werauhia clandestina* J.F. Morales.

15.2-16.1 **W. dalstroemii** H. Luther, J. Bromeliad Soc. 52(2): 88–89. 2002. Ecuador: Pastaza. [HT: SEL; IT: QCNE].

15.2-16.2 **W. osaensis** (J.F. Morales) J.F. Morales, Polibotánica 15: 102: 2003.
BASIONYM: *Vriesea osaensis* J.F. Morales, Novon 9: 403–404. 1999.

15.2-16.3 **W. anitana** J.F. Morales, Novon 15: 332–334. 2005. Costa Rica: San José. [HT: INB].

15.2-16.4 **W. nutans** (L.B. Smith) J.R. Grant.
Previously treated as a synonym of *Werauhia viridiflora* (Regel) J.R. Grant in Luther and Sieff (1997). See Krömer, Espejo, López-Ferrari & Acebey (2005).
SYN.: *Vriesea nutans* L.B. Smith.

15.2-24.1 **W. vulcanicola** (J.F. Morales) J.F. Morales, J.F. Morales in Polibotánica 15: 102. 2003.
BASIONYM: *Vriesea vulcanicola* J.F. Morales, Novon 9: 405–406. 1999.

15.2-25 **W. macrantha** (Mez & Wercklé) J.R. Grant.
SYN.: *Werauhia macrantha* (Mez & Wercklé) J.F. Morales.

15.2-25.1 **W. macrochlamys** (Mez & Wercklé) J.F. Morales, Lundiana 4: 65. 2003.
BASIONYM: *Vriesea macrochlamys* Mez & Wercklé, Bull. Herb. Boissier II 4: 865. 1904.

15.2-25.2 **W. barii** (J.F. Morales) J.F. Morales, J.F. Morales in Polibotánica 15: 102. 2003.
BASIONYM: *Vriesea barii* J.F. Morales, Novon 9: 401–402. 1999.

15.2-27.1 **W. tiquirensis** (J.F. Morales) J.F. Morales, J.F. Morales in Polibotánica 15: 102. 2003.
BASIONYM: *Vriesea tiquirensis* J.F. Morales, Novon 9: 405. 1999.

15.2-29.1 **W. haberi** (J.F. Morales) J.F. Morales, J.F. Morales in Polibotánica 15: 102. 2003.
BASIONYM: *Vriesea haberi* J.F. Morales, Novon 9: 402–403. 1999.

15.2-30.1 **W. noctiflorens** T. Krömer, Espejo, López-Ferrari & Acebey, Novon 17: 336–340. 2007. Mexico: Veracruz. [HT: MEXU; IT: MO, SEL, UAMIZ].

15.2-39 **W. greenbergii** (J. Utley) J.R. Grant.
SYN.: *Werauhia rauhii* J.R. Grant.

15.2-43.1 **W. camptoclada** (Mez & Wercklé) J.F. Morales, Manual de Plantas de Costa Rica, Vol. II: 360. 2003.
BASIONYM: *Vriesea camptoclada* Mez & Wercklé, Repert. Spec. Nov. Regni Veg. 14: 247. 1916.

15.2-47 **W. sintenisii** (Baker) J.R. Grant.
See Lasso and Ackerman (2003).

15.2-64.1 **W. insignis** (Mez) W. Till, Barfuss & R. Samuel, J. Bromeliad Soc. 54(1): 13–14. 2004.
BASIONYM: *Guzmania insignis* Mez, Mez in C. DC., Monogr. Phan. 9: 916. 1896.
SYN.: *Tillandsia insignis* (Mez) L.B. Smith & Pittendrigh.

15.2-69.1 **W. jenii** S. Pierce, J. Bromeliad Soc. 51(5): 213–217. 2001. Panama: Panama. [HT: SEL; IT: SCZ].

16 GUZMANIA Ruiz & Pavón. See Krömer ("2003" 2004).

16-5.3 **G. lemeana** Manzanares, Vidalia 2(1): 36, 39–42. 2004. Ecuador: Morona-Santiago. [HT: QCNE].

16-20.1 **G. diazii** H. Luther, Brittonia 54: 281, 283, 285. 2003. Peru: Amazonas. [HT: SEL; IT: MO].

16-20.2 **G. gracilis** H. Luther, Selbyana 28(1): 5–12. 2007. Peru: Pasco. [HT: SEL; IT: MO].

16-30b **G. virescens** var. **laxior** L.B. Smith.
= *Guzmania flagellata* S. Pierce & J.R. Grant. See Pierce and Grant (2002).

16-35 **G. confusa** L.B. Smith.
SYN.: *Guzmania confusa* var. *foetida* Rauh.

16-35b **G. confusa** var. **foetida** Rauh.
= *Guzmania confusa* L.B. Smith.

16-39.5 **G. loraxiana** J.R. Grant, J. Bromeliad Soc. 51(3): 125–129. 2001. Panama: Chiriqui. [HT: US].

16-44.1 **G. flagellata** S. Pierce & J.R. Grant, J. Bromeliad Soc. 52(1): 3–8. 2002.
New name for *Guzmania virescens* var. *laxior* L.B. Smith, Phytologia 22: 85. 1971.

16-51.6 **G. pattersonae** Manzanares, J. Bromeliad Soc. 52(2): 64, 67–69. 2002. Ecuador: Zamora-Chinchipe. [HT: QCNE; IT: SEL, WU].

16-51.7 **G. brackeana** Manzanares, J. Bromeliad Soc. 52(2): 63–66. 2002. Ecuador: Zamora-Chinchipe. [HT: QCNE].

16-69b **G. morreniana** var. **tenuifolia** H. Luther.
= *Guzmania tenuifolia* (H. Luther) Betancur & Salinas. See Betancur and Salinas (2003).

16-69.1 **G. tenuifolia** (H. Luther) Betancur & Salinas, Revista Acad. Colomb. Ci. 27(102): 23. 2003.
BASIONYM: *Guzmania morreniana* var. *tenuifolia* H. Luther, Selbyana 11(1): 57. 1989.

16-71.2 **G. vinacea** H. Luther & K.F. Norton, J. Bromeliad Soc. 58(5): 203–204. 2008. Peru: Amazonas. [HT: USM; IT: SEL].

16-73.1 **G. longibracteata** Betancur & Salinas, Revista Acad. Colomb. Ci. (27)102: 15–24. 2003. Colombia: Vaupés. [HT: COL].

16-73.2 **G. conglomerata** H. Luther, J. Bromeliad Soc. 56(4): 163–66. 2006. Ecuador: Los Rios. [HT: SEL].

16-74.3 **G. cerrohoyaensis** H. Luther, J. Bromeliad Soc. 51(4): 169–170. 2001. Panama: Veraguas. [HT: SEL].

16-80.5 **G. teucamae** H. Luther & K.F. Norton, J. Bromeliad Soc. 57(6): 245–247. 2007. Panama: Darien. [HT: PMA; IT: SEL].

16-90 **G. fusispica** Mez & Sodiro.
= *Guzmania osyana* (E. Morren) Mez. Personal communication with Jose Manzanares, August 2001. Description in Smith and Downs (1977) appears to be based on features of two taxa.

16-90.1 **G. osyana** (E. Morren) Mez.
Formerly 68 in Smith and Downs (1977).
SYN.: *Guzmania fusispica* Mez & Sodiro.

16-92 **G. monostachia** (Linnaeus) Rusby ex Mez.
See Schwesinger (2004).

16-95.1 **G. cinnabarina** H. Luther & K.F. Norton, J. Bromeliad Soc. 56(3): 103–104. 2006. Panama: Cocle. [HT: PMA; IT: SEL].

16-105ii **G. squarrosa** f. **lutea** Oliva-Esteve.
= *Guzmania gloriosa* (André) André ex Mez.

16-105.2 **G. kressii** H. Luther & K.F. Norton, J. Bromeliad Soc. 57(2): 55–57. 2007. Colombia: Choco. [HT: HUA; IT: CHOCO, MO, SEL, US].

16-105.3 **G. kareniae** H. Luther & K.F. Norton, J. Bromeliad Soc. 57(3): 112–113. 2007. Ecuador: Imbabura. [HT: SEL; IT: QCNE].

16-109 **G. gloriosa** (André) André ex Mez.
SYN.: *Guzmania squarrosa* f. *lutea* Oliva-Esteve.

16-113a **G. lingulata** (Linnaeus) Mez var. **lingulata**.
See Cedeño-Maldonado (2005: 209).
SYN.: *Guzmania lingulata* var. *splendens* (Planchon) Mez.

16-113b **G. lingulata** var. **splendens** (Planchon) Mez.
= *Guzmania lingulata* (Linnaeus) Mez var. *lingulata*. See Cedeño-Maldonado (2005: 209).

16-113f **G. lingulata** var. **concolor** Proctor & Cedeño-Maldonado, Contr. U.S. Natl. Herb. 52: 209. 2005. US: Puerto Rico. [HT: US].
SYN.: *Guzmania lingulata* var. *lingulata* sensu Mez et auct.

16-114.2 **G. eduardii** André ex Mez.
Formerly 73 in Smith and Downs (1977); description there is a mixture of characters of two unrelated species.

16-119.3 **G. pseudodissitiflora** H. Luther & K.F. Norton, J. Bromeliad Soc. 58(6): 255–256. "2008" 2009. Ecuador: Zamora-Chinchipe. [HT: QCNE; IT: SEL].

18 CATOPSIS Grisebach. See Marx (2006).

21 RONNBERGIA E. Morren & André.

21-6.4 **R. silvana** Leme, J. Bromeliad Soc. 53(2): 62–66. 2003. Brazil: Bahia. [HT: HB; IT: CEPEC].

21.1 LYMANIA Read. See Sousa, Wendt, Brown, Tuthill & Evans (2007); Sousa (2004); and Sousa and Wendt (2008).

21.1-1.1 **L. languida** Leme, J. Bromeliad Soc. 56(1): 42–45. 2006. Brazil: Bahia. [HT: HB; IT: CEPEC].

21.1-1.2 **L. brachycaulis** (E. Morren ex Baker) L.F. Sousa, Bot. J. Linn. Soc. 157: 47–66. 2008.
Previously treated (as *Aechmea brachycaulis*) as a synonym of *Lymania corallina* (Brongniart ex Beer) Read in Luther and Sieff (1994). See Sousa (2004).
BASIONYM: *Aechmea brachycaulis* E. Morren ex Baker, Handb. Bromel. 53. 1889.

21.1-3.2 **L. spiculata** Leme & Forzza, J. Bromeliad Soc. 51(5): 195–198. 2001. Brazil: Bahia. [HT: HB].

22 ARAEOCOCCUS Brongniart.

22-5.3 **A. chlorocarpus** (Wawra) Leme & J.A. Siqueira, Fragmentos de Mata Atlântica do Nordeste: 251–254. 2006.
Previously treated (as *Lamprococcus chlorocarpus*) as a synonym of *Araeococcus parviflorus* (Martius ex Schultes & Schultes f.) Lindman in Smith and Downs (1979).
BASIONYM: *Lamprococcus chlorocarpus* Wawra, Oesterr. Bot. Z. 12: 382. 1862.

22-5.4 **A. sessiliflorus** Leme & J.A. Siqueira, Fragmentos de Mata Atlântica do Nordeste: 395–396. 2006. Brazil: Bahia. [HT: CEPEC; IT: NY].

22-5.5 **A. nigropurpureus** Leme & J.A. Siqueira, Fragmentos de Mata Atlântica do Nordeste: 399–400. 2006. Brazil: Bahia. [HT: HB; IT: CEPEC].

23.1 PSEUDAECHMEA L.B. Smith & Read.

23.1-1 **P. ambigua** L.B. Smith & Read.
SYN.: *Billbergia ambigua* (L.B. Smith & Read) Betancur & Salinas.

25 OCHAGAVIA R. Philippi. See Zizka, Trumpler & Zöllner (2002).

25-0 **O. chamissonis** (Mez) L.B. Smith & Looser.
= *Ochagavia carnea* (Beer) L.B. Smith & Looser. See Zizka, Trumpler & Zöllner (2002: 334, 344–347).

25-2 **O. litoralis** (Philippi) Zizka, Trumpler & Zoellner, Willdenowia 32: 334, 340–343. 2002.
BASIONYM: *Rhodostachys litoralis* Philippi, Linnaea 30: 201. 1859.
SYN.: *Fascicularia litoralis* (Philippi) Mez.
SYN.: *Fascicularia pitcairniifolia* (Berlin hortus ex Verlot) Mez.

25-3 **O. andina** (Philippi) Zizka, Trumpler & Zoellner, Willdenowia 32: 343–345. 2002.
Previously treated as a synonym (as *Rhodostachys andina*) of *Ochagavia carnea* (Beer) L.B. Smith & Looser, in Smith and Downs (1979).
BASIONYM: *Rhodostachys andina* Philippi, Linnaea 29: 58. 1858.

25-4 **O. carnea** (Beer) L.B. Smith & Looser.
SYN.: *Ochagavia chamissonis* (Mez) L.B. Smith & Looser.

26 NEOREGELIA L.B. Smith.

26-20.2 **N. camorimiana** E. Pereira & I.A. Penna.
See Luther (2008).

26-41.2 **N. ruschii** Leme & B.R. Silva, J. Bromeliad Soc. 51(4): 147–148, 150–151. 2001. Brazil: Espírito Santo. [HT: HB; IT: MBML].

26-42.4 **N. guttata** Leme, J. Bromeliad Soc. 53(2): 59–62, 66. 2003. Brazil: Espírito Santo. [HT: HB; IT: MBML].

26-50ii **N. laevis** f. **maculata** H. Luther, J. Bromeliad Soc. 51(6): 269–271. "2001" 2002. Brazil: Paraná. [HT: SEL; IT: HB].

26-105.2 **N. gigas** Leme & L. Kollmann, Fragmentos de Mata Atlântica do Nordeste: 403–405. 2006. Brazil: Espírito Santo. [HT: MBML; IT: HB].

26-105.3 **N. silvomontana** Leme & J.A. Siqueira, Fragmentos de Mata Atlântica do Nordeste: 400–403. 2006. Brazil: Bahia. [HT: HB; IT: CEPEC].

27 CRYPTANTHUS Otto & A. Dietrich. See Ramírez-Morillo (2001) and Ramírez-Morillo and Brown (2001).

27-4.6 **C. lavrasensis** Leme, J. Bromeliad Soc. 57(6): 259–261, 271. 2007. Brazil: Minas Gerais. [HT: HB].

27-4.7 **C. regius** Leme, J. Bromeliad Soc. 57(6): 262, 267–268, 271. 2007. Brazil: Minas Gerais. [HT: HB].

27-4.8 **C. tiradentesensis** Leme, J. Bromeliad Soc. 57(6): 268–271. 2007. Brazil: Minas Gerais. [HT: HB].

27-5.8 **C. argyrophyllus** Leme, Cryptanthus Soc. J. 16(1): 12–14. 2001. Brazil: Bahia. [HT: HB].

27-6.7 **C. sanctaluciae** Leme & L. Kollmann, J. Bromeliad Soc. 58(1): 12–14. 2008. Brazil: Espírito Santo. [HT: MBML].

27-7 **C. sinuosus** L.B. Smith.
SYN.: *Cryptanthus acaulis* var. *argenteus* Beer.

27-7.3 **C. crassifolius** Leme, J. Bromeliad Soc. 58 (1): 17–19. 2008. Brazil: Bahia. [HT: HB].

27-8 **C. acaulis** (Lindley) Beer.
See Luther (2001a).

27-8b **C. acaulis** var. **argenteus** Beer.
= *Cryptanthus sinuosus* L.B. Smith.

27-8.3 **C. osiris** W. Weber.
See Luther ("2000" 2001).
SYN.: *Cryptanthus bromelioides* var. *tricolor* M.B. Foster.

27-8.11 **C. bibarrensis** Leme, Cryptanthus Soc. J. 17(3): 86–88. 2002. Brazil: Bahia. [HT: HB].

27-8.12 **C. reisii** Leme, Cryptanthus Soc. J. 17(3): 87, 89. 2002. Brazil: Bahia. [HT: HB].

27-8.13 **C. reptans** Leme & J.A. Siqueira, Fragmentos de Mata Atlântica do Nordeste: 287. 2006. Brazil: Pernambuco. [HT: HB; IT: UFP].

27-9 **C. bromelioides** Otto & A. Dietrich.
See Luther ("2000" 2001).

27-9b **C. bromelioides** var. **tricolor** M.B. Foster.
= *Cryptanthus osiris* W. Weber.

27-13.1 **C. giganteus** Leme & A.P. Fontana, J. Bromeliad Soc. 58(1): 15–17. 2008. Brazil: Espírito Santo. [HT: HB; IT: MBML].

27-17.2 **C. teretifolius** Leme, Cryptanthus Soc. J. 17(1): 15–16. 2002. Brazil: Espírito Santo. [HT: HB].

27-19.3 **C. alagoanus** Leme & J.A. Siqueira, Selbyana 22(2): 151–152. 2001. Brazil: Alagoas. [HT: HB].

27-19.4 **C. felixii** J.A. Siqueira & Leme, Fragmentos de Mata Atlântica do Nordeste: 285–286. 2006. Brazil: Pernambuco. [HT: UFP].

28 NIDULARIUM Lemaire. See Moreira (2002).

28-0 **N. selloanum** (Baker) E. Pereira & Leme.
= *Eduandrea selloana* (Baker) Leme, W. Till, G.K. Brown, J.R. Grant & Govaerts. See Leme, Till, Brown, Grant & Govaerts (2008).

28-28 **N. corallinum** (Leme) Leme.
See Leme (2002a).

28-44 **N. krisgreeniae** Leme.
See Leme (2002a).

28.1 CANISTROPSIS (Mez) Leme. See Moreira (2002).

28.1-8b **C. seidelii** var. **welteri** A. Seidel ex Roeth, Bromelie 1/2006: 20–21. 2006. Brazil: São Paulo. [HT: HAL].

28.1-12 **C. selloana** (Baker) Leme.
= *Eduandrea selloana* (Baker) Leme, W. Till, G.K. Brown, J.R. Grant & Govaerts. See Leme, Till, Brown, Grant & Govaerts (2008).

28.3 EDUANDREA Leme, W. Till, G.K. Brown, J.R. Grant & Govaerts, J. Bromeliad Soc. 58(2): 61–64. 2008. Type species: *Eduandrea selloana* (Baker) Leme, W. Till, G.K. Brown, J.R. Grant & Govaerts.

28.3-1 **E. selloana** (Baker) Leme, W. Till, G.K. Brown, J.R. Grant & Govaerts, J. Bromeliad Soc. 58(2): 61–64. 2008. Brazil. [HT: B].
See Guarçoni and Paula (2008).
BASIONYM: *Quesnelia selloana* Baker, Handb. Bromel. 87. 1889.
SYN.: *Andrea selloana* (Baker) Mez.
SYN.: *Canistropsis selloana* (Baker) Leme.
SYN.: *Nidularium selloanum* (Baker) E. Pereira & Leme.

29 GREIGIA Regel. See Romero and Leal (2007).

29-11.3 **G. acebeyi** B. Will, T. Krömer, M. Kessler, Karger & H. Luther, Selbyana 30(1): 91–100. 2009. Bolivia: La Paz. [HT: GOET; IT: LPB, SEL].

29-11.4 **G. membranacea** B. Will, T. Krömer, M. Kessler, Karger & H. Luther, Selbyana 30(1): 91–100. 2009. Bolivia: La Paz. [HT: GOET; IT: LPB, SEL].

29-11.5 **G. marioae** B. Will, T. Krömer, M. Kessler, Karger & H. Luther, Selbyana 30(1): 91–100. 2009. Bolivia: La Paz. [HT: GOET; IT: LPB, SEL].

29-22.2 **G. leymebambana** H. Luther, Selbyana 23(1): 49, 50. 2002. Peru: Amazonas. [HT: SEL; IT: DIVA, HAO, HUT, MO].

31 BROMELIA Linnaeus.

31-1.1 **B. arubaiensis** Ibisch & R. Vásquez, Revista Soc. Boliv. Bot. 4(1): 51–65. 2003. Bolivia: Santa Cruz. [HT: USZ].

31-8.1 **B. ignaciana** R. Vásquez & Ibisch, Revista Soc. Boliv. Bot. 4(1): 51–65. 2003. Bolivia: Santa Cruz. [HT: USZ].

31-22.1 **B. horstii** Rauh.
See Braun (2007).

31-27.1 **B. estevesii** Leme.
See Braun and Pereira (2006b: 34–35).

31-27.2 **B. braunii** Leme & E. Esteves, Vidalia 1(1): 21–28. "2003" 2004. Brazil: Tocantins. [HT: HB].
See Braun (2004) and Braun and Pereira (2005).

31-27.3 **B. lindevaldae** Leme & E. Esteves, Vidalia 1(1): 24–26. "2003" 2004. Brazil: Bahia. [HT: HB].

31-27.4 **B. minima** Leme & E. Esteves, Vidalia 1(1): 26–28. "2003" 2004. Brazil: Goiás. [HT: HB].

31-27.5 **B. araujoi** P.J. Braun, E. Esteves & Scharf, Bromelie 2/2008: 88–95. 2008. Brazil: Maranhão. [HT: UFG; IT: HAL].

31-27.6 **B. charlesii** P.J. Braun, E. Esteves & Scharf, Bromelie 1/2009: 26–35. 2009. Brazil: Bahia. [HT: UFG].

31.1 DEINACANTHON Mez. See Luther (2005a).

31.1-1 **D. urbanianum** (Mez) Mez.
See Luther (2005a).

34 ORTHOPHYTUM Beer.

34-1.1 **O. zanonii** Leme, J. Bromeliad Soc. 54(2): 70–74. 2004. Brazil: Espírito Santo. [HT: HB].

34-1.2 **O. pseudovagans** Leme & L. Kollmann, J. Bromeliad Soc. 57(4): 155–158. 2007. Brazil: Espírito Santo. [HT: MBML; IT: HB].

34-2.1 **O. burle-marxii** L.B. Smith & Read.
See Braun and Pereira (2006c: 161–163).

34-2.3 **O. supthutii** E. Gross & Barthlott.
= *Lapa duartei* (L.B. Smith) Louzada & Versieux. See Louzada (2008).

34-2.4 **O. itambense** Versieux & Leme, Novon 17: 130–134. 2007. Brazil: Minas Gerais. [HT: HB; IT: BHCB, RFA, SEL, SP].
= *Lapa itambensis* (Versieux & Leme) Louzada & Versieux. See Louzada (2008).

34-2.5 **O. ophiuroides** Louzada & Wanderley, Hoehnea 35(3): 405–410. 2008. Brazil: Bahia. [HT: SP; IT: HUEFS].

34-3 **O. humile** L.B. Smith.
See Castro Ribeiro and Paula (2008).

34-3.1 **O. mucugense** Wanderley & Conceição, Sitientibus Sér. Ci. Biol. 6(1): 3–8. 2006. Brazil: Bahia. [HT: SP; IT: HUEFS].

34-4.2 **O. heleniceae** Leme, J. Bromeliad Soc. 54(2): 66–70. 2004. Brazil: Bahia. [HT: HB].

34-5.2 **O. harleyi** Leme & M. Machado, J. Bromeliad Soc. 56(3): 108–111. 2006. Brazil: Bahia. [HT: HB; IT: CEPEC].

34-5.3 **O. conquistense** Leme & M. Machado, J. Bromeliad Soc. 56(3): 105–107, 111. 2006. Brazil: Bahia. [HT: HB].

34-5.4 **O. triunfense** J.A. Siqueira & Leme, Fragmentos de Mata Atlântica do Nordeste: 311–312. 2006. Brazil: Pernambuco. [HT: UFP; IT: HB].

34-6.2 **O. schultzianum** Leme & M. Machado, J. Bromeliad Soc. 55(4): 175–178. 2005. Brazil: Minas Gerais. [HT: HB].

34-6.3 **O. graomogolense** Leme & C.C. Paula, J. Bromeliad Soc. 58(3): 106–117. 2008. Brazil: Minas Gerais. [HT: HB; IT: RB].

34-6.4 **O. piranianum** Leme & C.C. Paula, J. Bromeliad Soc. 58(3): 112–117. 2008. Brazil: Minas Gerais. [HT: HB; IT: RB].

34-6.5 **O. diamantinense** Leme, J. Bromeliad Soc. 58(6): 257–261. "2008" 2009. Brazil: Minas Gerais. [HT: HB].

34-8b **O. fosterianum** var. **estevesii** Rauh.
= *Orthophytum estevesii* (Rauh) Leme. See Leme (2004: 37–39, 41).

34-8.2 **O. grossiorum** Leme & C.C. Paula, Vidalia 1(1): 1–5. "2003" 2004. Brazil: Minas Gerais. [HT: HB; IT: VIC].

34-8.3 **O. estevesii** (Rauh) Leme, J. Bromeliad Soc. 54(1): 37–39, 41. 2004.
Type locality is Minas Gerais, erroneously reported by Rauh as Espírito Santo. *Orthophytum fosterianum* var. *estevesii* Rauh was treated as a synonym of *Orthophytum sucrei* by Luther (1997).
BASIONYM: *Orthophytum fosterianum* var. *estevesii* Rauh, Trop. Subtrop. Pflanzenwelt 79: 27–29. 1991.

34-8.4 **O. striatifolium** Leme & L. Kollmann, J. Bromeliad Soc. 57(4): 152–154. 2007. Brazil: Espírito Santo. [HT: MBML; IT: HB].

34-8.5 **O. boudetianum** Leme & L. Kollmann, J. Bromeliad Soc. 57(4): 149–152. 2007. Brazil: Espírito Santo. [HT: MBML; IT: HB, RB].

34-10.1 **O. rubiginosum** Leme, J. Bromeliad Soc. 55(4): 158–163. 2005. Brazil: Espírito Santo. [HT: HB; IT: RB].

34-12.2 **O. catingae** Leme, J. Bromeliad Soc. 57(5): 204–207. 2007. Brazil: Bahia. [HT: HB].

34-13.2 **O. falconii** Leme, J. Bromeliad Soc. 53(1): 20–24, 28. 2003. Brazil: Bahia. [HT: HB].

34-13.3 **O. horridum** Leme, J. Bromeliad Soc. 54(1): 39–43. 2004. Brazil: Minas Gerais. [HT: HB; IT: SEL].
See Braun and Pereira (2006b: 31–33).

34-14.1 **O. riocontense** Leme, J. Bromeliad Soc. 156–158, 162. 2005. Brazil: Bahia. [HT: HB].

34-15.3 **O. toscanoi** Leme, J. Bromeliad Soc. 53(1): 20, 23–24, 28. 2003. Brazil: Bahia. [HT: HB].

34-15.4 **O. macroflorum** Leme & M. Machado, J. Bromeliad Soc. 55(4): 171–175. 2005. Brazil: Bahia. [HT: HB].

34-16.2 **O. jabrense** Baracho & J.A. Siqueira, Vidalia 2(1): 46–51. 2004. Brazil: Paraíba. [HT: JPB; IT: MO, NY].

34-16.3 **O. atalaiense** J.A. Siqueira & Leme, Fragmentos de Mata Atlântica do Nordeste: 309–310. 2006. Brazil: Alagoas. [HT: UFP; IT: HB].

34-17.1 **O. lanuginosum** Leme & C.C. Paula, J. Bromeliad Soc. 55(4): 161–165. 2005. Brazil: Minas Gerais. [HT: HB; IT: RB].

34.1 LAPA Louzada & Versieux. Louzada, R.B. Taxonomia e citogenética das especies de inflorescência séssil do gênero *Orthophytum* Beer (Bromeliaceae). Master's diss., Instituto de Botânica, São Paulo, Brazil. 2008. Type species: *Lapa duartei* (L.B. Smith) Louzada & Versieux. There are questions regarding the validity of this name (W. Till, pers. com.).

34.1-1 **L. duartei** (L.B. Smith) Louzada & Versieux, Taxonomia e citogenética das especies de inflorescência sessil do gênero *Orthophytum* Beer. Master's diss., Instituto de Botânica, São Paulo, Brazil. 2008.
There are questions regarding the validity of this name (W. Till, pers. com.).
BASIONYM: *Cryptanthus duartei* L.B. Smith, Smithsonian Misc. Collect. 126: 23, 159, fig. 67. 1955.
SYN.: *Orthophytum supthutii* E. Gross & Barthlott.

34.1-2 **L. itambensis** (Versieux & Leme) Louzada & Versieux, Taxonomia e citogenética das especies de inflorescência sessil do gênero *Orthophytum* Beer. Master's diss., Instituto de Botânica, São Paulo, Brazil. 2008.
There are questions regarding the validity of this name (W. Till, pers. com.).
BASIONYM: *Orthophytum itambense* Versieux & Leme, Novon 17: 130–134. 2007.

35 FASCICULARIA Mez.

35-1 **F. pitcairniifolia** (Berlin hortus ex Verlot) Mez.
= *Ochagavia litoralis* (Philippi) Zizka, Trumpler & Zoellner. See Zizka, Trumpler & Zöllner (2002: 334, 340–343).

35-4 **F. litoralis** (Philippi) Mez.
= *Ochagavia litoralis* (Philippi) Zizka, Trumpler & Zoellner. See Zizka, Trumpler & Zöllner (2002: 334, 340–343).

36 CANISTRUM E. Morren.

36-0 **C. flavipetalum** Wanderley, Hoehnea 35(4): 537–541. 2008. Brazil: Bahia. [HT: SPF; IT: SP].
= *Wittrockia* species.

36-1 **C. aurantiacum** E. Morren.
See Siqueira Filho and Machado (2001).

36-1.1 **C. pickelii** (A. Lima & L.B. Smith) Leme & J.A. Siqueira, J. Bromeliad Soc. 52(3): 105–121. 2002.
BASIONYM: *Portea pickelii* A. Lima & L.B. Smith, Phytologia 20: 180, pl. 2, figs. 4–6. 1970.

36-1.2 **C. alagoanum** Leme & J.A. Siqueira, J. Bromeliad Soc. 52(3): 112–121. 2002. Brazil: Alagoas. [HT: HB].

36-2.4 **C. improcerum** Leme & J.A. Siqueira, Fragmentos de Mata Atlântica do Nordeste: 268–269. 2006. Brazil: Alagoas. [HT: HB; IT: MAC, UFP].

38 HOHENBERGIA Schultes f.

38-5c **H. catingae** var. **horrida** (Harms) L.B. Smith & Read.
= *Hohenbergia horrida* Harms. See Siqueira Filho and Leme (2006: 295–297).

38-5.1 **H. flava** Leme & C.C. Paula, Vidalia 2(1): 21–29. 2004. Brazil: Bahia. [HT: HB; IT: VIC].

38-5.2 **H. horrida** Harms.
Previously treated as a synonym of *Hohenbergia catingae* var. *horrida* (Harms) L.B. Smith & Read in Smith and Downs (1979). Also see Siqueira Filho and Leme (2006: 295–297).
SYN.: *Hohenbergia catingae* var. *horrida* (Harms) L.B. Smith & Read.

38-6.2 **H. conquistensis** Leme, J. Bromeliad Soc. 53(4): 169–174. 2003. Brazil: Bahía. [HT: HB].

38-11 **H. disjuncta** L.B. Smith.
= *Aechmea disjuncta* (L.B. Smith) Leme & J.A. Siqueira. See Siqueira Filho and Leme (2006: 384–386).

38-12.1 **H. sandrae** Leme, J. Bromeliad Soc. 53(4): 174–177. 2003. Brazil: Bahia. [HT: HB; IT: CEPEC].

38-15.2 **H. mutabilis** Leme & L. Kollmann, J. Bromeliad Soc. 59(2): 60–65. 2009. Brazil: Espírito Santo. [HT: MBML; IT: HB].

38-18.3 **H. lemei** H. Luther & K.F. Norton, Vidalia 2(2): 37–40. "2004" 2005. Brazil: Bahia. [HT: HB; IT: SEL].

40 AECHMEA Ruiz & Pavón. See Faria, Wendt & Brown (2004); Canela, Paz & Wendt (2003); and Silva (2003).

40-0 **A. ×lanjouwii** (L.B. Smith) Gouda & Moonen, J. Bromeliad Soc. 52(1): 32–33. 2002.
Natural hybrid: *Aechmea aquilega* (Salisbury) Grisebach × *Aechmea moonenii* Gouda.
BASIONYM: *Gravisia lanjouwii* L.B. Smith, Acta Bot. Neerl. 5: 93. 1956.
SYN.: *Aechmea lanjouwii* (L.B. Smith) L.B. Smith.

40-0 **A. seidelii** (Leme) L.B. Smith & M.A. Spencer.
Formerly 52.3 in Luther and Sieff (1994). Reduced pollen viability (ca. 10%) indicates a hybrid origin for this taxon (B.R. Silva, personal communication).

40-0 **A. tricolor** Silveira, Floralia Montium 2, Add. 1931.
= *Aechmea nudicaulis* var. *aureorosea* (Antoine) L.B. Smith.

40-0 **A. triticina** sensu L.B. Smith et auct. non Mez.
= *Aechmea roberto-seidelii* E. Pereira.

40-8 **A. brachycaulis** E. Morren ex Baker.
= *Lymania brachycaulis* (E. Morren ex Baker) L.F. Sousa. See Sousa (2004).

40-12b **A. racinae** var. **tubiformis** E. Pereira.
SYN.: *Lamprococcus racinae* var. *luteocarpa* Roeth.

40-19.9 **A. marginalis** Leme & J.A. Siqueira, Selbyana 22(2): 149–151. 2001. Brazil: Alagoas. [HT: HB].

40-25.3 **A. curranii** (L.B. Smith) L.B. Smith & M.A. Spencer.
= *Aechmea turbinocalyx* Mez.

40-29.1 **A. amicorum** B.R. Silva & H. Luther, J. Bromeliad Soc. 52(5): 221–225. 2002. Brazil: Bahia. [HT: HB; IT: CEPEC, R, SEL].

40-29.2 **A. sucreana** Martinelli & C.M. Vieira, Novon 15: 173–175. 2005. Brazil: Espírito Santo. [HT: RB].

40-34 **A. pubescens** Baker.
See Morales (2003a: 304–305).
SYN.: *Aechmea standleyi* Cufodontis.

40-44.9 **A. koesteri** Manzanares, Vidalia 2(1): 36–39. 2004. Ecuador: Orellana. [HT: QCNE].

40-46.2 **A. catendensis** J.A. Siqueira & Leme, Fragmentos de Mata Atlântica do Nordeste: 205–207. 2006. Brazil: Pernambuco. [HT: UFP; IT: HB].

40-46.3 **A. guainumbiorum** J.A. Siqueira & Leme, Fragmentos de Mata Atlântica do Nordeste: 207–209. 2006. Brazil: Pernambuco. [HT: UFP; IT: HB].

40-48 **A. lanjouwii** (L.B. Smith) L.B. Smith.
= *Aechmea ×lanjouwii* (L.B. Smith) Gouda & Moonen. See Gouda and Moonen (2002: 32–33).

40-49.2 **A. moonenii** Gouda, J. Bromeliad Soc. 52(1): 21–24. 2002. French Guiana. [HT: U; IT: CAY].

40-51.4 **A. chrysocoma** Baker.
Previously treated as a synonym of *Aechmea aquilega* (Salisbury) Grisebach in Smith and Downs (1979). See Siqueira Filho and Leme (2006: 196–199).

40-51.5 **A. cephaloides** J.A. Siqueira & Leme, Fragmentos de Mata Atlântica do Nordeste: 202–204. 2006. Brazil: Pernambuco. [HT: UFP; IT: UFP].

40-51.6 **A. lactifera** Leme & J.A. Siqueira, Fragmentos de Mata Atlântica do Nordeste: 199–202. 2006. Brazil: Pernambuco. [HT: UFP; IT: HB].

40-52.3 **A. disjuncta** (L.B. Smith) Leme & J.A. Siqueira, Fragmentos de Mata Atlântica do Nordeste: 384–386. 2006.

BASIONYM: *Hohenbergia disjuncta* L.B. Smith, Contr. Gray Herb. 129: 33, pl. 3, figs. 7–10. 1940.

40-52.4 **A. atrovittata** Leme & J.A. Siqueira, Fragmentos de Mata Atlântica do Nordeste: 228–230. 2006. Brazil: Alagoas. [HT: HB; IT: UFP].

40-56b **A. lingulata** var. **patentissima** (Martius ex Schultes & Schultes f.) L.B. Smith.
= *Aechmea patentissima* (Martius ex Schultes & Schultes f.) Baker. See Siqueira Filho and Leme (2006: 222–225).

40-56c **A. lingulata** var. **froesii** L.B. Smith.
= *Aechmea froesii* (L.B. Smith) Leme & J.A. Siqueira. See Siqueira Filho and Leme (2006: 225–227).

40-56.11 **A. turbinocalyx** Mez.
Formerly 145 in Smith and Downs (1979). See Faria and Wendt (2004) with corrections in Errata, J. Bromeliad Soc. 55(2): 91. 2005.
SYN.: *Aechmea curranii* (L.B. Smith) L.B. Smith & M.A. Spencer.

40-56.12 **A. laevigata** Leme, J. Bromeliad Soc 55(1): 13–16, 18. 2005. Brazil: Bahia. [HT: HB].

40-56.13 **A. froesii** (L.B. Smith) Leme & J.A. Siqueira, Fragmentos de Mata Atlântica do Nordeste: 225–227. 2006.
BASIONYM: *Aechmea lingulata* var. *froesii* L.B. Smith, Smithsonian Misc. Collect. 126: 15. 1955.

40-56.14 **A. patentissima** (Martius ex Schultes & Schultes f.) Baker.
Previously treated as a variety of *Aechmea lingulata* (Linnaeus) Baker in Smith and Downs (1979). See Siqueira Filho and Leme (2006: 222–225).
SYN.: *Aechmea lingulata* var. *patentissima* (Martius ex Schultes & Schultes f.) L.B. Smith.

40-56.15 **A. pernambucentris** J.A. Siqueira & Leme, Fragmentos de Mata Atlântica do Nordeste: 227–228. 2006. Brazil: Pernambuco. [HT: UFP].

40-56.16 **A. sulbahianensis** Leme, Amorim & J.A. Siqueira, Fragmentos de Mata Atlântica do Nordeste: 392–393. 2006. Brazil: Bahia. [HT: HB; IT: CEPEC].

40-56.17 **A. tentaculifera** Leme, Amorim & J.A. Siqueira, Fragmentos de Mata Atlântica do Nordeste: 391–392. 2006. Brazil: Bahia. [HT: CEPEC; IT: NY].

40-56.8 **A. andersoniana** Leme & H. Luther, J. Bromeliad Soc. 53(1): 3–4, 6–7. 2003. Brazil: Bahia. [HT: HB].

40-56.9 **A. viridostigma** Leme & H. Luther, J. Bromeliad Soc. 53(1): 5–9. 2003. Brazil: Bahia. [HT: HB].

40-69 **A. costantinii** (Mez) L.B. Smith.
See Siqueira Filho and Leme (2006: 219–222).
SYN.: *Aechmea megalantha* Harms.
SYN.: *Aechmea stelligera* L.B. Smith.

40-70 **A. stelligera** L.B. Smith.
= *Aechmea costantinii* (Mez) L.B. Smith. See Siqueira Filho and Leme (2006: 219–222).

40-71.1 **A. jungurudoensis** H. Luther & K.F. Norton, J. Bromeliad Soc. 58(2): 53–55. 2008. Panama: Darien. [HT: SEL].

40-77.2 **A. leptantha** (Harms) Leme & J.A. Siqueira, Fragmentos de Mata Atlântica do Nordeste: 213–216. 2006.
BASIONYM: *Portea leptantha* Harms, Notizbl. Bot. Gart. Berlin-Dahlem 10: 786. 1929.

40-78 **A. megalantha** Harms.
= *Aechmea costantinii* (Mez) L.B. Smith. See Siqueira Filho and Leme (2006: 219–222).

40-85.1 **A. standleyi** Cufodontis.
= *Aechmea pubescens* Baker. See Morales (2003a: 304–305).

40-86 **A. castelnavii** Baker.
SYN.: *Aechmea matudae* L.B. Smith.

40-86.1 **A. matudae** L.B. Smith.
Previously 40–75 in Smith and Downs (1979). Also see Guess and Guess (2002a).
= *Aechmea castelnavii* Baker.

40-91 **A. egleriana** L.B. Smith.
SYN.: *Aechmea egleriana* var. *major* L.B. Smith.

40-91b **A. egleriana** var. **major** L.B. Smith.
= *Aechmea egleriana* L.B. Smith. !H.E. Luther and personal communication with E. Gouda.

40-92 **A. guaratubensis** E. Pereira.

See Luther (''2003''a 2004).

40-93d **A. recurvata** var. **albobracteata** Strehl, Divulg. Mus. Ci. Tecnol. UBEA/PUCRS 9: 28, 31. 2004. Brazil: Rio Grande do Sul. [HT: HAS].

40-94.2 **A. joannis** Strehl, Divulg. Mus. Ci. Tecnol. UBEA/PUCRS 9: 26–27, 30. 2004. Brazil: Rio Grande do Sol. [HT: HAS].

40-94.2b **A. joannis** var. **albipetala** Strehl, Divulg. Mus. Ci. Tecnol. UBEA/PUCRS 9: 27, 30. 2004 [as ''*alvipetala*'']. Brazil: Rio Grande do Sul. [HT: HAS].

40-95 **A. candida** E. Morren ex Baker.
See Luther (''2003''b 2004).

40-96.1 **A. leppardii** Philcox.
= *Aechmea kertesziae* Reitz var. *kertesziae*.

40-103a **A. kertesziae** Reitz var. **kertesziae**.
SYN.: *Aechmea leppardii* Philcox.

40-105b **A. calyculata** var. **variegata** Strehl, Divulg. Mus. Ci. Tecnol. UBEA/PUCRS 9: 27–28, 31. 2004. Brazil: Rio Grande do Sul. [HT: HAS].

40-119.1 **A. reclinata** C. Sastre & R. Brithmer, Biogeographica 75(1): 41–46. 1999. Martinique: Commune de Riviere Salée. [HT: P].

40-138.3 **A. triticina** Mez.
Formerly 142 in Smith and Downs (1979).

40-141.1 **A. guarapariensis** E. Pereira & Leme.
Previously treated as a synonym of *Aechmea triticina* Mez in Luther and Sieff (1997).
= *Aechmea roberto-seidelii* E. Pereira. See Wendt (2007).

40-141.2 **A. roberto-seidelii** E. Pereira.
Previously treated as a synonym of *Aechmea triticina* Mez in Luther (2001b). See Wendt (2007).
SYN.: *Aechmea guarapariensis* E. Pereira & Leme.
SYN.: *Aechmea triticina* sensu L.B. Smith et auct. non Mez.

40-143c **A. nudicaulis** var. **aureorosea** (Antoine) L.B. Smith.
Pl. CXXX in Floralia Montium 2, Add., 1931 is labeled *Vriesea tricolor* A.A. da Silveira.
SYN.: *Aechmea tricolor* Silveira.

40-143m **A. nudicaulis** var. **nordestina** J.A. Siqueira & Leme, Fragmentos de Mata Atlântica do Nordeste: 243. 2006. Brazil: Pernambuco. [HT: UFP; IT: HB].

40-152 **A. germinyana** (Carrière) Baker.
See Silva (2003: 45–48, 54–56).

40-153 **A. veitchii** Baker.
See Silva (2003: 45–48, 53–55).

40-155 **A. magdalenae** (André) André ex Baker.
See Silva (2003: 45–48, 60–62).

40-156 **A. fernandae** (E. Morren) Baker.
See Silva (2003: 45–48, 59–61).

40-157 **A. rubiginosa** Mez.
See Silva (2003: 45–48, 57–59).

40-157.1 **A. tayoensis** Gilmartin.
See Silva (2003: 45–48, 52–53).

40-158 **A. strobilacea** L.B. Smith.
See Silva (2003: 45–48, 51, 56–58).

40-159 **A. multiflora** L.B. Smith.
See Canela, Paz & Wendt (2003).

40-159.1 **A. frassyi** Leme & J.A. Siqueira, Selbyana 22(2): 146–147. 2001. Brazil: Alagoas. [HT: HB].

40-160 **A. depressa** L.B. Smith.
See Canela, Paz & Wendt (2003).

40-161 **A. saxicola** L.B. Smith.
See Canela, Paz & Wendt (2003).
SYN.: *Aechmea hostilis* E. Pereira.

40-162 **A. hostilis** E. Pereira.
= *Aechmea saxicola* L.B. Smith. See Canela, Paz & Wendt (2003).

40-162.1 **A. gustavoi** J.A. Siqueira & Leme, Selbyana 22(2): 147–149. 2001. Brazil: Pernambuco. [HT: UFP; IT: HB].

40-163.1 **A. serragrandensis** Leme & J.A. Siqueira, Fragmentos de Mata Atlântica do Nordeste: 241–243. 2006. Brazil: Alagoas. [HT: UFP; IT: HB].

40-166 **A. perforata** L.B. Smith.
See Butcher (2004).

40-167 **A. sphaerocephala** Baker.
See Paula and Guarçoni (2007b).

40-168.1 **A. mira** Leme & H. Luther, J. Bromeliad Soc. 57(6): 248–252. 2007. Brazil: Bahia. [HT: HB; IT: RB].

40-171.1 **A. aguadocensis** Leme & L. Kollmann, J. Bromeliad Soc. 59(2): 55–61. 2009. Brazil: Espírito Santo. [HT: HB; IT: MBML].

40.1 ANDREA Mez = *Eduandrea* Leme, W. Till, G.K. Brown, J.R. Grant & Govaerts. See Leme, Till, Brown, Grant & Govaerts (2008) and Brown and Leme (2005).

40.1-1 **A. selloana** (Baker) Mez.
= *Eduandrea selloana* (Baker) Leme, W. Till, G.K. Brown, J.R. Grant & Govaerts. See Leme, Till, Brown, Grant & Govaerts (2008).

40.2 LAMPROCOCCUS Beer.

40.2-0 **L. chlorocarpus** Wawra.
Previously treated as a synonym of *Araeococcus parviflorus* (Martius ex Schultes & Schultes f.) Lindman in Smith and Downs (1979).
= *Araeococcus chlorocarpus* (Wawra) Leme & J.A. Siqueira. See Siqueira Filho and Leme (2006).

40.2-12e **L. racinae** var. **luteocarpa** Roeth, Bromelie 1/2003: 10–11. 2003. Brazil: Espírito Santo. [HT: HAL].
= *Aechmea racinae* var. *tubiformis* E. Pereira.

41 QUESNELIA Gaudichaud. See Vieira (1999).

41-2.1 **Q. conquistensis** Leme, J. Bromeliad Soc. 58(6): 269–271. "2008" 2009. Brazil: Bahia. [HT: HB; IT: RB].

41-5.1 **Q. violacea** Wanderley & S.L. Proença, Hoehnea 33: 111–113. 2006. Brazil: São Paulo. [HT: SP; IT: UEC].

41-6.1 **Q. dubia** Leme, J. Bromeliad Soc. 55(1): 15–20. 2005. Brazil: Bahia. [HT: HB].

41-6.2 **Q. koltesii** Amorim & Leme, Brittonia 61(1): 14–21. 2009. Brazil: Bahia. [HT: CEPEC; IT: HB, MBM, NY, RB].

41-6.3 **Q. clavata** Amorim & Leme, Brittonia 61(1): 14–21. 2009. Brazil: Bahia. [HT: CEPEC; IT: NY].

41-9 **Q. blanda** Schott ex Mez.
= *Quesnelia strobilispica* Wawra. See Vieira (1999: 101–108).

41-9.2 **Q. strobilispica** Wawra.
See Vieira (1999: 101–108).
SYN.: *Quesnelia blanda* (Schott ex Beer) Mez.

41-10.1 **Q. alvimii** Leme.
See Leme (2001).

42 BILLBERGIA Thunberg.

42-0 **B. ambigua** (L.B. Smith & Read) Betancur & Salinas, Caldasia 28(2): 157–164. 2006.
BASIONYM: *Pseudaechmea ambigua* L.B. Smith & Read, Phytologia 52: 53–54, 59. 1982.
= *Pseudaechmea ambigua* L.B. Smith & Read.

42-7b **B. nutans** var. **schimperiana** (Wittmack) Baker.
SYN.: *Billbergia amandae* W. Weber.

42-7.1 **B. amandae** W. Weber.
= *Billbergia nutans* var. *schimperiana* (Wittmack) Baker.

42-15 **B. fosteriana** L.B. Smith.

Previously treated as a synonym of *Billbergia saundersii* W. Bull in Luther and Sieff (1994).

42-35.1 **B. acreana** H. Luther, Brittonia 54: 279–281. 2003. Brazil: Acre. [HT: HPZ; IT: NY].

42-38.1 **B. jandebrabanderi** R. Vásquez & Ibisch, Bromelie 2/2003: 32–35. 2003. Bolivia: Santa Cruz. [HT: LPB; IT: SEL, USZ].

42-42.1 **B. issingiana** T. Krömer & E. Gross, Bromelie 1/2001: 4–7. 2001. Bolivia: La Paz. [HT: LPB; IT: GOET].

42-53 **B. pallidiflora** Liebmann.
See McVaugh (1989: 10–12).
SYN.: *Billbergia mexicana* Mez.

42-54 **B. mexicana** Mez.
= *Billbergia pallidiflora* Liebmann. See McVaugh (1989: 10–12).

43.1 NEOGLAZIOVIA Mez.

43-1 **N. variegata** (Arruda da Camara) Mez.
See Paula and Guarçoni (2007a).

44 PORTEA Brongniart.

44-1.2 **P. nana** Leme & H. Luther, J. Bromeliad Soc. 53(3): 115–120. 2003. Brazil: Bahia. [HT: HB; IT: SEL, WU].

44-2 **P. pickelii** A. Lima & L.B. Smith.
= *Canistrum pickelii* (A. Lima & L.B. Smith) Leme & J.A. Siqueira. See Siqueira Filho and Leme (2002).

44-3 **P. leptantha** Harms.
= *Aechmea leptantha* (Harms) Leme & J.A. Siqueira. See Siqueira Filho and Leme (2006: 213–216).

44-5b **P. petropolitana** var. **extensa** L.B. Smith.
= *Portea orthopoda* (Baker) Coffani-Nunes & Wanderley. See Coffani-Nunes (2004).

44-5.2 **P. orthopoda** (Baker) Coffani-Nunes & Wanderley, *in* Coffani-Nunes, Revisão taxonômica e filogenia de *Portea* Brongn. ex K. Koch (Bromelioideae—Bromeliaceae). Ph.D. diss., Universidade de São Paulo, Brazil, 2004.
There are questions regarding the validity of this name (W. Till, pers. com.).
BASIONYM: *Streptocalyx orthopoda* Baker, Kew Bull. 198. 1892.
SYN.: *Portea petropolitana* var. *extensa* L.B. Smith.

45 PSEUDANANAS Hassler ex Harms. See Coppens d'Eeckenbrugge and Leal (2003).

45-1 **P. sagenarius** (Arruda da Camara) Camargo.
Treated as *Ananas macrodontes* E. Morren by Coppens d'Eeckenbrugge and Leal (2003).

46 ANANAS Miller. See Coppens d'Eeckenbrugge and Leal (2003) and Duval (2003).

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INDEX TO DE REBUS BROMELIACEARUM IV

(Entries in italics are taxa that have been synonymized or invalid names)

16 GUZMANIA 167

16-51.7 G. brackeana 168
16-74.3 G. cerrohoyaensis 168
16-95.1 G. cinnabarina 168
16-35 G. confusa 168
16-35b *G. confusa* var. *foetida* 168
16-73.2 G. conglomerata 168
16-20.1 G. diazii 167
16-114.2 G. eduardii 168
16-44.1 G. flagellata 168
16-90 *G. fusispica* 168
16-109 G. gloriosa 168
16-20.2 G. gracilis 168
16-105.3 G. kareniae 168
16-105.2 G. kressii 168
16-5.3 G. lemeana 167
16-113f *G. lingulata* var. *concolor* 168
16-113a G. lingulata var. lingulata 168
16-113b *G. lingulata* var. *splendens* 168
16-73.1 G. longibracteata 168
16-39.5 G. loraxiana 168
16-92 G. monostachia 168
16-69b *G. morreniana* var. *tenuifolia* 168
16-90.1 G. osyana 168
16-51.6 G. pattersonae 168
16-119.3 G. pseudodissitiflora 169
16-105ii *G. squarrosa* f. *lutea* 168
16-69.1 G. tenuifolia 168
16-80.5 G. teucamae 168
16-71.2 G. vinacea 168
16-30b *G. virescens* var. *laxior* 168

13 HECHTIA 158

13-14.1 H. caulescens 158
13-37 *H. desmetiana* 158
13-36.2 H. lepidophylla 158
13-38 *H. macdougallii* 158
13-40 *H. meziana* 158
13-36.1 H. nuusaviorum 158
13-2.1 H. perotensis 158
13-24.1 H. pretiosa 158
13-39 H. rosea 158
13-12.1 H. zamudioi 158

38 HOHENBERGIA 173

38-5c *H. catingae* var. *horrida* 173
38-6.2 H. conquistensis 174
38-11 *H. disjuncta* 174
38-5.1 H. flava 173
38-5.2 H. horrida 173
38-18.3 H. lemei 174
38-15.2 H. mutabilis 174
38-12.1 H. sandrae 174

0 ×HOHENMEA 148

0-0 ×Hohenmea itaipuana 148

40.2 LAMPROCOCCUS 177

40.2-0 *L. chlorocarpus* 177
40.2-12e *L. racinae* var. *luteocarpa* 177

34.1 LAPA 173

34.1-1 L. duartei 173
34.1-2 L. itambensis 173

5.2 LINDMANIA 153

5.2-7.2 L. vinotincta 153

21.1 LYMANIA 169

21.1-1.2 L. brachycaulis 169
21.1-1.1 L. languida 169
21.1-3.2 L. spiculata 169

11 NAVIA 157

11-57.2 N. axillaris 157
11-8 *N. diffusa* 157
11-60.1 N. lactea 157
11-52.2 N. pilarica 157
11-3.1 *N. plowmanii* 157

43.1 NEOGLAZIOVIA 178

43-1 N. variegata 178

26 NEOREGELIA 169

26-20.2 N. camorimiana 169
26-105.2 N. gigas 170
26-42.4 N. guttata 170
26-50ii N. laevis f. maculata 170
26-41.2 N. ruschii 170
26-105.3 N. silvomontana 170

28 NIDULARIUM 170

28-28 N. corallinum 170
28-44 N. krisgreeniae 170
28-0 *N. selloanum* 170

25 OCHAGAVIA 169

25-3 O. andina 169
25-4 O. carnea 169
25-0 *O. chamissonis* 169
25-2 O. litoralis 169

34 ORTHOPHYTUM 172

34-16.3 O. atalaiense 173
34-8.5 O. boudetianum 172
34-2.1 O. burle-marxii 172
34-12.2 O. catingae 172
34-5.3 O. conquistense 172
34-6.5 O. diamantinense 172
34-8.3 O. estevesii 172
34-13.2 O. falconii 172
34-8b *O. fosterianum* var. *estevesii* 172
34-6.3 O. graomogolense 172

15 VRIESEA 164

15-163 V. appenii 165
15-215.1 V. barbosae 166
15-41.1 *V. barii* 165
15-174.1 V. blackburniana 166
15-217.2 V. breviscapa 166
15-21 V. cacuminis 164
15-8 *V. camptoclada* 164
15-59.4 V. cipoensis 165
15-33.1 *V. citrina* 165
15-168.3 V. costae 165
15-2.2 V. croceana 164
15-83.1 V. dictyographa 165
15-203.2 V. flava 166
15-168.5 V. fontellana 166
15-55.3 V. fontourae 165
15-56 V. fosteriana 165
15-113.2 V. freicanecana 165
15-168.6 V. gastiniana 166
15-224.1 V. gruberi 166
15-97.1 *V. haberi* 165
15-168.4 V. harrylutheri 166
15-228.2 V. hasei 166
15-191c V. incurvata var. albina 166
15-57.3 V. linharesiae 165
15-89.5 V. longistaminea 165
15-229.2 V. lutheri 166
15-119 *V. macrochlamys* 165
15-89.7 V. medusa 165
15-33.2 V. minarum 165
15-61 *V. nutans* 165
15-120 V. oligantha 165
15-106.2 *V. osaensis* 165
15-162.1 V. piepenbringii 165
15-26.1 V. revoluta 164
15-89.6 V. sanfranciscana 165
15-205.2 V. silvana 166
15-0 *V. simulans* 164
15-65b *V. sparsiflora* var. *breviscapa* 165
15-202.2 V. speckmaieri 166
15-194i V. splendens var. chlorostachya 166
15-194e *V. splendens* var. *chlorostychya* 166
15-162.2 V. tillii 165
15-98.1 *V. tiquirensis* 165
15-113.3 V. vellozicola 165
15-47.1 *V. vulcanicola* 165
15-113.1 V. zonata 165

15.2 WERAUHIA 167

15.2-16.3 W. anitana 167
15.2-25.2 W. barii 167
15.2-43.1 W. camptoclada 167
15.2-0 *W. clandestina* 167
15.2-16.1 W. dalstroemii 167
15.2-39 W. greenbergii 167
15.2-29.1 W. haberi 167
15.2-64.1 W. insignis 167
15.2-69.1 W. jenii 167
15.2-0 *W. macrantha* 167
15.2-25 W. macrantha 167
15.2-25.1 W. macrochlamys 167
15.2-1.1 W. moralesii 167
15.2-30.1 W. noctiflorens 167
15.2-16.4 W. nutans 167
15.2-16.2 W. osaensis 167
15.2-0 *W. rauhii* 167
15.2-47 W. sintenisii 167
15.2-27.1 W. tiquirensis 167
15.2-24.1 W. vulcanicola 167
15.2-1 W. werckleana 167

Selbyana 30(2): 190–194. 2010.

DRYMONIA DROSEROIDES (GESNERIACEAE), A NEW SPECIES FROM THE PACIFIC ANDEAN FORESTS OF COLOMBIA

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ABSTRACT. Recent field expeditions and preliminary work on revising *Drymonia* and closely related genera have resulted in the discovery of a new plant species from Colombia. The new species, *Drymonia droseroides* (Gesneriaceae), is an unbranched terrestrial herb with reflexed spatulate calyx lobes that are covered with gland-tipped trichomes. It is only known from the type locality in the Cerro El Inglés Nature Reserve in the Serranía de los Paraguas, a mountain range on the border of the departments of Chocó and Valle del Cauca.

RESUMEN. La revisión preliminar de *Drymonia* y de sus géneros más relacionados, y el reciente trabajo de campo han llevado al descubrimiento de una especie nueva para la flora de Colombia. Esta especie nueva, *Drymonia droseroides* (Gesneriaceae), es una hierba terrestre, no ramificada, con los lóbulos del cáliz espatulados y cubiertos por tricomas glandulares. Es conocida únicamente de la localidad tipo en la Reserva Natural Cerro El Inglés, Serranía de los Paraguas, en el límite entre los departamentos de Chocó y Valle del Cauca.

Key words: Gesneriaceae, *Drymonia*, Flora of Colombia, taxonomy, Cerro El Inglés, Serranía de los Paraguas

INTRODUCTION

The Gesneriaceae is a prominent plant family in the Andean cloud forests of South America and they are particularly diverse in cloud forests between 1000 and 2000 meters elevation where the species described here was recently discovered. Colombia is the most species-diverse country in the New World tropics for the Gesneriaceae with 32 genera and over 400 species (Kvist et al. 1998). The second and third most diverse countries for the Gesneriaceae are Ecuador with 29 genera and 240 species (Skog & Kvist 1997) and Peru with 28 genera and 150 species (Kvist et al. 2005). The new species described here was discovered during the preparation of the Gesneriaceae treatment for the Catálogo de las Plantas de Colombia and recent fieldwork to the Cerro El Inglés Nature Reserve in the Serranía de los Paraguas.

Drymonia is a monophyletic lineage with well-defined morphological synapomorphies that were outlined in recent phylogenetic studies (Clark & Zimmer 2003, Clark et al. 2006). The genus was described by Martius (1829) and re-circumscribed by Wiehler (1983) and Moore (1973) by the unique poricidal anther dehiscence. Wiehler (1983) described the anthers in *Drymonia* as being "shaker-like." In bud, the anthers are grouped coherently around the style, with their pore-like thecae facing inward. As the anthers mature, they become connate along the length of the thecae margins and at their upper ends. The individual thecae open by a short basal pore. Just before anthesis, the curvature and the differential length of the filament pairs cause the anthers to invert and pivot 180°. As the anthers are inverted, pollen falls out of the pores and is usually deposited on the thoracic dorsum of bees (Steiner 1985).

TAXONOMIC TREATMENT

Drymonia droseroides J.L. Clark & L. Clavijo, sp. nov. TYPE: Colombia—Valle del Cauca: municipio El Cairo, corregimiento El Boquerón, vereda El Brillante, sector La Pradera, Reserva Natural Cerro El Inglés. 4°44′–4°45′N, 76°16′–76°17′W, 2118–2150 meters, 28 Dec 2007, *L. Clavijo, J. Betancur, A. Zuluaga, N.R. Salinas & R. Arévalo 1156* (Holotype: COL). FIGURES 1, 2.

Drymonia droseroides ab omnibus aliis speciebus Drymoniae praesentia loborum reflexorum spatulatorum qui trichomatibus glandulosis teguntur in calyce differt.

Plant a terrestrial herb; stem erect, ca. 40 cm tall, unbranched, succulent, subquadrangular in

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