

AN ANNOTATED CHECKLIST OF THE BROMELIACEAE OF COSTA RICA

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ABSTRACT. 17 genera, 192 species and 3 subspecific taxa of Bromeliaceae are recorded from Costa Rica.

The following checklist of Costa Rican bromeliad taxa is based on a review of the literature, and field and herbarium study (mostly MO, SEL, INB). This list differs from the inventory presented in Flora Mesoamericana (Davidse et al. 1994). Many of the additions are the result of recent collections that represent new country records and are footnoted "2". Some are newly described taxa that were published after the work on the Flora was completed, and are footnoted "3". A few included taxa represent differences of opinion regarding their taxonomic status (*Aechmea pittieri*, *Guzmania compacta*, *Tillandsia cauliflora* and *Vriesea castaneobulbosa*); or are not included for the same reason (*Guzmania costaricensis* = *G. condensata*). Two taxa listed in the Flora are the result of misidentification and do not occur in Costa Rica (*Guzmania dissitiflora*, Colombia and Ecuador only; *Tillandsia compressa*, the Greater Antilles only). A number of undescribed taxa in *Guzmania* and *Pitcairnia* are not included in this checklist. Endemic taxa are noted.

Additions and comments are solicited.

Aechmea Ruiz & Pav., Fl. Peruv. Prodr. 47. 1793;
nomen conservandum.

- A. angustifolia* Poepp. & Endl., Nov. Gen. & Sp. 2:43, pl. 159. 1838.
- A. aquilega* (Salisb.) Griseb., Fl. Brit. W. Indies 592. 1864.
- A. bracteata* (Sw.) Griseb., Fl. Brit. W. Indies 592. 1864.
- A. castelnavii* Baker, Handb. Bromel. 39. 1889.
- A. dactylina* Baker, J. Bot. 17:161. 1879.
- A. lingulata* (L.) Baker, J. Bot. 17:164. 1879.
- A. lueddemanniana* (K.Koch) Brongn. ex Mez in Engler, Pflanzenr. IV. Fam. 32 (Heft 100):120. 1934.¹
- A. magdalenae* (André) André ex Baker, Handb. Bromel. 65. 1889.
- A. mariae-reginae* H.Wendl., Hamb. Gartenz. 19:32. 1863.
- A. mexicana* Baker, J. Bot. 17:165. 1879.

- A. nudicaulis* (L.) Griseb., Fl. Brit. W. Indies 593. 1864.
- A. penduliflora* André, Enum. Bromel. [3]. 13 Dec 1888; Rev. Hort. 60:563. 16 Dec 1888.
- A. pittieri* Mez in C.DC., Monogr. Phan. 9:231. 1896.
- A. pubescens* Baker, J. Bot. 17:135. 1879.
- A. tonduzii* Mez & Pittier ex Mez, Bull. Herb. Boissier II. 3:132. 1903.
- A. veitchii* Baker, Bot. Mag. 103: pl. 6329. 1877.

Ananas Miller, Garden, Dict. Abr. ed. 4. 1754.

- A. ananassoides* (Baker) L.B.Sm., Bot. Mus. Leaf. 7:70. 1939.²
- A. comosus* (L.) Merrill, Interpr. Rumph. Amboin. 133. 1917. Cultivated and naturalized.

Androlepis Brongn. ex Houlet, Rev. Hort. 42: 12. 1870.

- A. skinneri* Brongn. ex Houlet, Rev. Hort. 42: 12. 1870.

Araeococcus Brongn., Ann. Sci. Nat. Bot. II. 15: 370. 1841.

- A. pectinatus* L.B.Sm., Contr. Gray Herb. 95: 41, pl. 11, fig. 6. 1931.

Billbergia Thunberg, Decad. Pl. Brasil. 3:30. 1821.

- B. macrolepis* L.B.Sm., Contr. Gray Herb. 114: 3, pl. 1, fig. 6. 1936.

Bromelia L., Sp. Pl. 285. 1753.

- B. hemisphaerica* Lam., Encycl. 1:145. 1783.
- B. pinguin* L., Sp. Pl. 285. 1753.
- B. plumieri* (E.Morren) L.B.Sm., Phytologia 15:173, pl. 2, fig. 21. 1967.

¹ Report based on Utley in Davidse et al. (1994).

² New country records since preparation of Davidse et al. (1994).

- Catopsis Griseb., Fl. Brit. W. Indies 599. Oct. 1864.
- C. juncifolia Mez & Wercklé ex Mez, Bull. Herb. Boissier II. 4:1124. 1904.
- C. morreniana Mez in C.DC., Monogr. Phan. 9:628. 1896.
- C. nitida (Hook.) Griseb., Fl. Brit. W. Indies 599. 1864.
- C. nutans (Sw.) Griseb., Fl. Brit. W. Indies 599. 1864.
- C. paniculata E.Morren in Makoy, Cat. Hort. no. 121. Oct 1883; L.B.Sm., Phytologia 15:179. 1967.
- C. sessiliflora (Ruiz & Pav.) Mez in C.DC., Monogr. Phan. 9:625. 1896.
- C. wangerinii Mez & Wercklé ex Mez, Bull. Herb. Boissier II. 4:1126. 1904.
- C. wawraea Mez in C.DC., Monogr. Phan. 9:626. 1896.
- C. werckleana Mez, Bull. Herb. Boissier II. 4:1125. 1904. Endemic.
- Greigia Regel, Gartenflora 14:137. 1865.
- G. columbiana L.B.Sm., Contr. Gray Herb. 98:7. 1932.
- G. sylvicola Standl., J. Wash. Acad. Sci. 17: 160. 1927.
- Guzmania Ruiz & Pav., Fl. Peruv. 3:37, pl. 261. 1802.
- G. angustifolia (Baker) Wittm., Bot. Jahrb. Syst. 11:62. 1889.
- G. blassii Rauh, Trop. Subtrop. Pflanzenwelt 42:24-27, figs. 14, 15. 1983. Endemic.
- G. circinnata Rauh, Trop. Subtrop. Pflanzenwelt 60:48-51. 1987.²
- G. compacta Mez in C.DC., Monogr. Phan. 9:947. 1896.
- G. condensata Mez & Wercklé in Mez, Bull. Herb. Boiss. II. 3:228. 1903.
- G. coriostachya (Griseb.) Mez in C.DC., Monogr. Phan. 9:914. 1896.
- G. desautelsii R.W.Read & L.B.Sm., J. Brom. Soc. 33(1):17-18, fig. 1983.
- G. donnell-smithii Mez ex Donn.Sm., Bot. Gaz. (Crawfordsville) 35:9. 1903.
- G. glomerata Mez & Wercklé, Repert. Spec. Nov. Regni. Veg. 14:256. 1916.
- G. lingulata var. lingulata (L.) Mez in C.DC., Monogr. Phan. 9:899. 1896.
- G. lingulata var. splendens (Planch.) Mez in Engler, Pflanzenr. IV. Fam. 32:609. 1935.²
- G. minor Mez in C.DC., Monogr. Phan. 9:901. 1896.
- G. mitis L.B.Sm., Contr. Gray Herb. 98: 31, pl. 6, figs. 4,5. 1932.
- G. monostachia (L.) Rusby ex Mez in C.DC., Monogr. Phan. 9:905. 1896.
- G. musaica (Linden & André) Mez in C.DC., Monogr. Phan. 9:898. 1896.²
- G. nicaraguensis Mez & C.F.Baker ex Mez, Bull. Torrey Bot. Club 30:436. 1903.
- G. obtusiloba L.B.Sm., Contr. Gray Herb. 104: 74. 1934.
- G. patula Mez & Wercklé, Repert. Sp. Nov. Regni. Veg. 14:255. 1916.
- G. plicatifolia L.B.Sm., Contr. Gray Herb. 102 68:146. 1933.
- G. polycephala Mez & Wercklé ex Mez, Repert. Spec. Nov. Regni. Veg. 14:254. 1916.
- G. sanguinea (André) André ex Mez in C.DC., Monogr. Phan. 9:901. 1896.
- G. scherzeriana Mez in C.DC., Monogr. Phan. 9:949. 1896.
- G. skotakii H.Luther, Selbyana 12:68-9. 1991.³ Endemic
- G. spectabilis (Mez & Wercklé) Utley, Phytologia 40(1):55-57, fig 1. 1978.
- G. sprucei (André) L.B.Sm., Contr. Gray Herb. 104:75. 1934.
- G. stenostachya L.B.Sm., Contr. Gray Herb. 117:9, pl. 1, fig. 15. 1937.
- G. subcorymbosa L.B.Sm., Contr. Gray Herb. 117:10, pl. 1, fig. 16. 1937.
- G. zahnii (Hook.f.) Mez in C.DC., Monogr. Phan. 9:940. 1896.
- Mezobromelia L. B. Smith, Proc. Am. Acad. 70: 151. 1935.
- M. pleiosticha (Griseb.) Utley & H.Luther, Ann. Missouri Bot. Gard. 78:270. 1991.
- Pepinia Brongn. ex André, Ill. Hort. 17:32, pl. 1870.
- P. beachiae (Utley & Burt-Utley) H.Luther, Phytologia 74:449. 1993. Endemic.
- Pitcairnia L'Hér., Sert. Angl. 7. 1788; nomen conservandum.
- P. arcuata (André) André, Enum. Brom. 5. 1888.
- P. atrorubens (Beer) Baker, J. Bot. 19:307. 1881.
- P. brittoniana Mez in C.DC., Monogr. Phan. 9:451. 1896.
- P. funkiae M.A.Spencer & L.B.Sm., J. Bromeliad Soc. 41:214-5. 1991.³ Endemic.

³ New taxa described since preparation of Davidse et al. (1994).

- P. guzmanioides* L.B.Sm., Contr. U.S. Natl. Herb. 29:306. 1949.¹
- P. halophila* L.B.Sm., Phytologia 10:32, pl. 1, figs. 6,7. 1964. Endemic.
- P. heterophylla* (Lindl.) Beer, Bromel. 68. 1857.
- P. kalbreyeri* Baker, J. Bot. 19:273. 1881.
- P. lyman-smithiana* H.Luther, J. Bromeliad Soc. 37:212. 1987.²
- P. maidifolia* (C.Morren) Decne. in Planch., Fl. Serres Jard. Eur. 9:151, pl. 915. 1854.
- P. megasepala* Baker, J. Bot. 19:229. 1881.
- P. membranifolia* Baker, Handb. Bromel. 109. 1889. Endemic.
- P. saxicola* L.B.Sm., Contr. Gray Herb. 117:29. 1937.²
- P. valerioi* Standl., J. Wash. Acad. Sci. 17:246. 1927.
- P. wendlandii* Baker, J. Bot. 19:306. 1881.
- Puya* Molina, Saggio Chile 160, 351. 1782.
- P. dasyliroides* Standl., J. Wash. Acad. Sci. 17:159. 1927. Endemic.
- P. floccosa* (Linden) E.Morren ex Mez in C.DC., Monogr. Phan. 9:478. 1896.
- Racinaea* M.A.Spencer & L.B.Sm., Phytologia 74:151-160. 1993. This is the former *Tillandsia* subgenus *Pseudocatopsis*.
- R. adpressa* ssp. *orthiantha* (Standl.) J.R.Grant, Novon 4:362-364. 1994.
- R. contorta* (Mez) M.A.Spencer & L.B.Sm., Phytologia 74:151-160. 1993.
- R. rothschuhiana* (Mez) M.A.Spencer & L.B.Sm., Phytologia 74:151-160. 1993.
- R. schumanniana* (Wittm.) J.R.Grant, Novon 4:362-364. 1994.
- R. spiculosa* (Griseb.) M.A.Spencer & L.B.Sm., Phytologia 74:151-160. 1993.
- R. tetrantha* var. *caribaea* (L.B.Sm.) M.A.Spencer & L.B.Sm., Phytologia 74:151-160. 1993.
- Ronnbergia* E. Morren, Ill. Hort. 21:120, pl. 177. 1874.
- R. hathewayi* L.B.Sm., Phytologia 15:196, pl. 3, figs. 38,39. 1967.
- Tillandsia* L., Sp. Pl. 286. 1753.
- T. abdita* L.B.Sm., Phytologia 8:10, pl. 1, fig. 15-17. 1961.
- T. acostae* Mez & Tonduz ex Mez, Repert. Spec. Nov. Regni. Veg. 14:252. 1916.
- T. anceps* Lodd., Bot. Cab. 8: pl. 771. 1823.
- T. balbisiana* Schultesf. in Roemer & Schultes, Syst. 7(2): 1212. 1830.
- T. biflora* Ruiz & Pav., Fl. Peruv. 3:41, pl. 268, fig. b. 1802.
- T. brachycaulos* Schltdl., Linnaea 18:422. 1844.
- T. bulbosa* Hook.f., Exot. Fl. 3: pl. 173. 1826.
- T. butzii* Mez, Pflanzenreich IV. Fam. 32:636. 1935.
- T. caput-medusae* E.Morren, Belgique Hortic. 30:90. 1880.
- T. cauliflora* Mez & Wercklé ex Mez, Bull. Herb. Boissier II. 5:100. 1905. Endemic.
- T. complanata* Benth., Bot. Sulph. 173. 1846.
- T. dexteri* H.Luther, Selbyana 11:54-57. 1989.³ Endemic.
- T. excelsa* Griseb., Fl. Brit. W. Indies 597. 1864.
- T. fasciculata* var. *fasciculata* Sw., Prod. Veg. Ind. Occ. 56. 1788.
- T. fasciculata* var. *densispica* Mez in C.DC., Monogr. Phan. 9:683. 1896.
- T. festucoides* Brongn. ex Mez in C.DC., Monogr. Phan. 9:678. 1896.
- T. filifolia* Schltdl. & Chamisso, Linnaea 6:53. 1831.
- T. flexuosa* Sw., Prod. Veg. Ind. Occ. 56. 1788.²
- T. insignis* (Mez) L.B.Sm. & Pittendr., J. Wash. Acad. Sci. 43:402. 1953.
- T. ionantha* Planch., Fl. Serres Jard. Eur. 10:101, pl. 1006. 1855.
- T. juncea* (Ruiz & Pav.) Poirer, Encycl. Suppl. 5:309. 1817.
- T. lampropoda* L.B.Sm. in Yuncker, Field Mus. Nat. Hist., Bot. Ser. 17:320, pl. 9. 1938.
- T. leiboldiana* Schltdl., Linnaea 18:414. 1844.
- T. longifolia* Baker, Handb. Bromel. 185. 1889.
- T. makoyana* Baker, Handb. Bromel. 189. 1889.
- T. monadelphica* (E.Morren) Baker, J. Bot. 25:281. 1887.
- T. multicaulis* Steud., Nom. Bot. ed. 2. 2:688. 1841.
- T. oerstediana* L.B.Sm., Phytologia 13:141, pl. 6, fig. 5. 1966.
- T. paucifolia* Baker, Gard. Chron. II. 10:748. 1878.
- T. pruinosa* Sw., Fl. Ind. Occ. 1:594. 1797.
- T. punctulata* Schltdl. & Cham., Linnaea 6:53. 1831.
- T. x rectifolia* (Wiley) H.Luther, Selbyana 11:57. 1989.²
- T. recurvata* (L.) L., Sp. Pl. ed. 2. 410. 1762.
- T. schiediana* Steud., Nom. Bot. ed. 2. 2:688. 1841.
- T. singularis* Mez & Wercklé in Mez, Bull. Herb. Boissier II. 5:103. 1905.
- T. streptophylla* Scheidw. ex Morren, Hort. Belge 3:252. 1836.²
- T. subulifera* Mez, Repert. Sp. Nov. Regni. Veg. 16:74. 1919.²

- T. tricolor var. tricolor Schltld. & Cham., *Linnaea* 6:54. 1831.
- T. tricolor var. melanocrater (L.B.Sm.) L.B.Sm., *J. Wash. Acad. Sci.* 43:68. 1958.
- T. usneoides (L.) L., *Sp. Pl. ed. 2.* 411. 1762.
- T. utriculata L., *Sp. Pl.* 286. 1753.
- T. variabilis Schltld., *Linnaea* 18:418. 1844.
- T. venusta Mez & Wercklé in Mez, *Bull. Herb. Boissier II.* 5:108. 1905.
- Vriesea* Lindl., *Edward's Bot. Reg.* 29: pl. 10. 1843; nomen conservandum. The "Thecophylloid" vrieseas and allies have been transferred to the new genus, *Werauhia*, by J.R.Grant (1995).
- V. acuminata Mez & Wercklé in Mez, *Bull. Herb. Boissier II.* 4:868. 1904.⁴
- V. ampla L.B.Sm., *Phytologia* 8:497, pl. 1, figs. 4-6. 1963.⁴ Endemic.
- V. apiculata L.B.Sm., *Phytologia* 8:221, pl. 2, figs. 1-3. 1962.⁴ Endemic.
- V. attenuata L.B.Sm. & Pittendr., *J. Wash. Acad. Sci.* 43:401. 1953.⁴
- V. balanophora (Mez) L.B.Sm. & Pittendr., *J. Wash. Acad. Sci.* 43:402. 1953.⁴ Endemic.
- V. bicolor L.B.Sm., *Phytologia* 7:174, pl. 2, figs. 4,5. 1960.⁴ Endemic.
- V. bracteosa (Mez & Wercklé) L.B.Sm. & Pittendr., *J. Wash. Acad. Sci.* 43:402. 1953.⁴ Endemic.
- V. brunei Mez & Wercklé in Mez, *Bull. Herb. Boissier II.* 4:865. 1904.⁴ Endemic.
- V. burgeri L.B.Sm., *Phytologia* 28:326, pl. 2. 1974.⁴
- V. camptoclada Mez & Wercklé in Mez, *Repert. Spec. Nov. Regni. Veg.* 14:247. 1916. Endemic.
- V. capitata (Mez & Wercklé) L.B.Sm. & Pittendr., *J. Wash. Acad. Sci.* 43:402. 1953.⁴
- V. castaneobulbosa (Mez & Wercklé) J.R. Grant, *J. Bromeliad Soc.* 42:14-19. 1992.
- V. chontalensis (Baker) L.B.Sm., *Contr. U.S. Natl. Herb.* 29:518, fig. 76. 1951.
- V. comata (Mez & Wercklé) L.B.Sm. & Pittendr., *J. Wash. Acad. Sci.* 43:402. 1953.⁴
- V. diffusa L.B.Sm. & Pittendr., *J. Wash. Acad. Sci.* 43:402. 1953.⁴
- V. dodsonii L.B.Sm., *Phytologia* 16:80, pl. 2, figs. 1,2. 1968. Endemic.
- V. gladioliflora (Wendl.) Antoine, *Wiener Ill. Gart.-Zeitung* 5:98, pl. 1. 1880.⁴
- V. graminifolia Mez & Wercklé in Mez, *Bull. Herb. Boissier II.* 4:868. 1904.⁴
- V. greenbergii Utley, *Tulane Studies Zool. & Bot.* 24(1):30-32 fig. 18. 1983.⁴
- V. hainesiorum L.B.Sm., *Phytologia* 8:498, pl. 1, figs. 7-10. 1963.⁴ Endemic.
- V. heliconioides (Humb., Bonpl. & Kunth) Hook.f. ex Walpers, *Ann. Bot. Syst.* 3:623. 1852.
- V. hygrometrica (André) L.B.Sm. & Pittendr., *J. Wash. Acad. Sci.* 43:402. 1953.⁴
- V. incurva (Griseb.) R.W.Read, *Phytologia* 16:458. 1968.
- V. kathyae Utley, *Tulane Studies Zool. & Bot.* 24(1):71-73, fig. 24. 1983.⁴ Endemic.
- V. kupperiana Suess., *Bot. Arch.* 39:384, fig. 1. 1939.⁴
- V. latissima (Mez & Wercklé) L.B.Sm. & Pittendr., *J. Wash. Acad. Sci.* 43:402. 1953.⁴
- V. leptopoda L.B.Sm. & Pittendr., *J. Wash. Acad. Sci.* 43:403. 1953.
- V. leucophylla L.B.Sm., *Phytologia* 8:498, pl. 2, fig. 1,2. 1963.⁴
- V. luis-gomezii Utley, *Tulane Studies Zool. & Bot.* 24(1):48-50, fig 21. 1983.⁴ Endemic.
- V. lutheriana J.R.Grant, *J. Bromeliad Soc.* 42:114-7,125. 1992.³ Endemic.
- V. lyman-smithii Utley, *Tulane Studies Zool. & Bot.* 24(1):35-36 fig. 19. 1983.⁴ Endemic.
- V. macrantha Mez & Wercklé in Mez, *Bull. Herb. Boissier II.* 4:867. 1904.⁴ Endemic.
- V. macrochlamys Mez & Wercklé in Mez, *Bull. Herb. Boissier II.* 4:865. 1904. Endemic.
- V. marnier-lapostollei L.B.Sm., *Bull. Bromeliad Soc.* 14:108, figs. 1964.⁴
- V. monstrum (Mez) L.B.Sm., *Phytologia* 16:81. 1968.
- V. nephrolepis L.B.Sm. & Pittendr., *J. Wash. Acad. Sci.* 43:403. 1953.⁴
- V. notata L.B.Sm. & Pittendr., *J. Wash. Acad. Sci.* 43:403. 1953.⁴ Endemic.
- V. nutans L.B.Sm., *Phytologia* 7:175. 1960.⁴ Endemic.
- V. ororiensis (Mez) L.B.Sm. & Pittendr., *J. Wash. Acad. Sci.* 43:403. 1953.⁴
- V. pedicellata (Mez & Wercklé) L.B.Sm. & Pittendr., *J. Wash. Acad. Sci.* 43:403. 1953.⁴
- V. picta (Mez & Wercklé) L.B.Sm. & Pittendr., *J. Wash. Acad. Sci.* 43:403. 1953.⁴
- V. pittieri Mez, *Bull. Herb. Boissier II.* 3:135. 1903.⁴
- V. ringens (Griseb.) Harms, *Notizbl. Bot. Gart. Berlin-Dahlem* 10:801. 1929.⁴
- V. rugosa Mez & Wercklé in Mez, *Bull. Herb. Boissier II.* 4:866. 1904.⁴ Endemic.
- V. sanguinolenta Cogn. & Marchal, *Pl. Ornem.* pl. 52. 1874.⁴
- V. singuliflora (Mez & Wercklé) L.B.Sm. & Pittendr., *J. Wash. Acad. Sci.* 43:403. 1953.⁴ Endemic.

⁴ Transferred to genus *Werauhia* by Grant (1995).

- V. stenophylla (Mez & Wercklé) L.B.Sm. & Pittendr., J. Wash. Acad. Sci. 43:403. 1953.⁴
- V. subsecunda Wittm., Bot. Jahrb. Syst. 11: 69. 1889.⁴
- V. tonduziana L.B.Sm., N. Am. Fl. 19:166. 1938.⁴ Endemic.
- V. triflora L.B.Sm. & Pittendr., J. Wash. Acad. Sci. 43:403. 1953.⁴ Endemic.
- V. umbrosa L.B.Sm., Phytologia 28:328, pl. 4. 1974.⁴
- V. uxoris Utley, Brittonia 33:583–584. 1982.⁴ Endemic.
- V. viectoris Utley, Brittonia 33:584–586. 1981.⁴ Endemic.
- V. viridiflora (Regel) Wittm. ex Mez in Engler, Pflanzenr. IV. Fam. 32:387. 1935.⁴
- V. viridis (Mez & Wercklé) L.B.Sm. & Pittendr., J. Wash. Acad. Sci. 43:403. 1953.⁴ Endemic.
- V. vittata (Mez & Wercklé) L.B.Sm. & Pittendr., J. Wash. Acad. Sci. 43:403. 1953.⁴

- V. werckleana Mez, Bull. Herb. Boissier II. 3:136. 1903.⁴
- V. williamsii L.B.Sm., Phytologia 6:193, pl. 1, figs. 1,2. 1958.⁴

NATURAL HYBRIDS

- T. acostae × T. tricolor var. melanocrater
- T. brachycaulos × T. caput-medusae (syn.: T. brachycaulos var. multiflora)
- T. schiediana × T. ionantha = T. × rectifolia
- T. schiediana × T. juncea
- T. tricolor var. melanocrater × T. fasciculata
- T. tricolor var. melanocrater × T. juncea

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