

STUDIES IN THE EUPATORIEAE (ASTERACEAE). C.

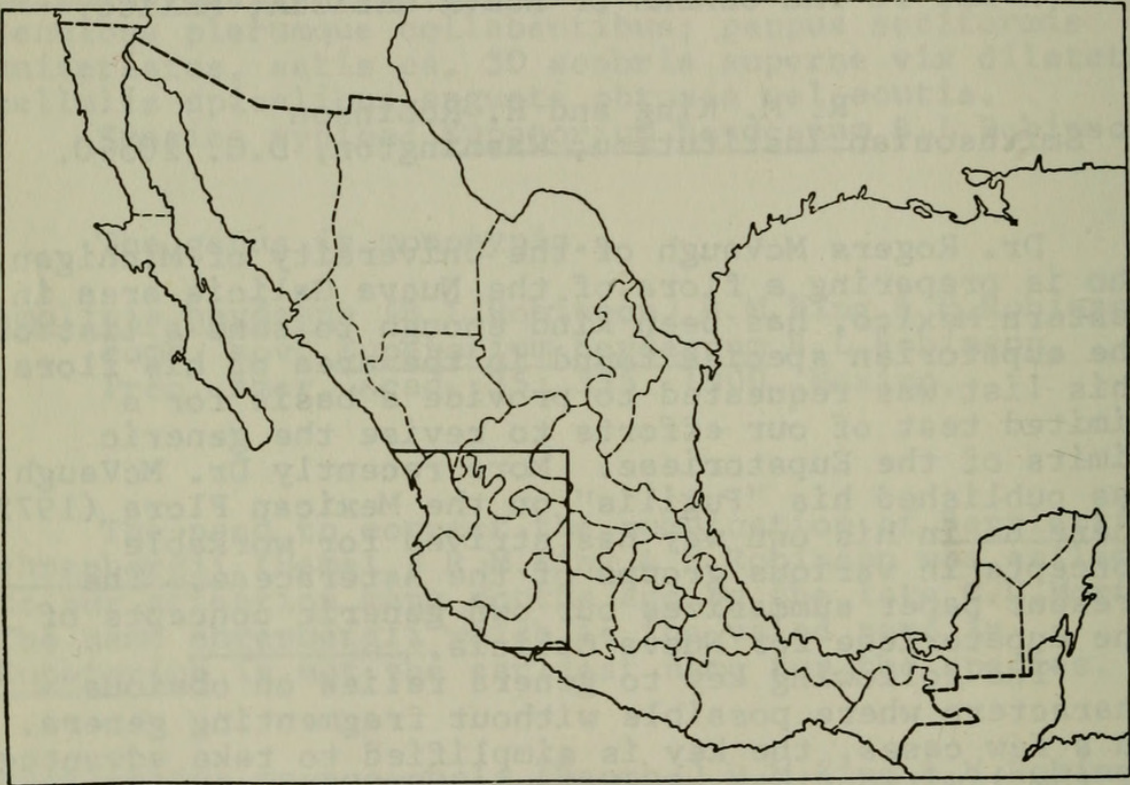
A KEY TO THE GENERA OF NUEVA GALICIA, MEXICO.

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Dr. Rogers McVaugh of the University of Michigan, who is preparing a flora of the Nueva Galicia area in Western Mexico, has been kind enough to send a list of the eupatorian species found in the area of his flora. This list was requested to provide a basis for a limited test of our efforts to revise the generic limits of the Eupatorieae. More recently Dr. McVaugh has published his "Pugilis" on the Mexican Flora (1972) where he in his own way has strived for workable concepts in various groups of the Asteraceae. The present paper summarizes our own generic concepts of the Eupatorieae for Nueva Galicia.

The following key to genera relies on obvious characters where possible without fragmenting genera. In a few cases, the key is simplified to take advantage of the limited flora of the area. The key includes only the typical subgenus of Neomirandea, only alternate leaved species of Decachaeta, and only the species of Koanophyllon with a long setose pappus. Due to the emphasis on obvious characters there is little significance to the order of genera in the key. The list of genera following the key is alphabetical. Actual relationships of the genera are discussed in other papers dealing with individual genera.

Two genera are presented in the key that were not included in the McVaugh list. The relationship of Isocarpha to the Ayapana series of the Eupatorieae is covered in our paper on the latter genus (King & Robinson, 1970). We also agree with Rzedowski (1970) regarding the eupatorian nature of Microspermum, though we do not consider the genus in any way close to the Heliantheae.



Map showing the region of Nueva Galicia in Mexico.

1. Individual heads with 1 or rarely 2 flowers
2. Pappus of broad scales, achenes constricted above
Mexianthus
2. Pappus setose, achene not strongly constricted above
Neohintonia
1. Individual heads with 3 or more flowers.
3. Inflorescence of large single heads on long scapes, scapes arising from subverticillate clusters of leaves.
Hofmeisteria
3. Inflorescence usually branched, not arising from subverticillate clusters of leaves.
4. Minute annual herbs up to 4 cm tall; corollas with 4 lobes and 4 stamens.
Piqueriopsis
4. Plants over 1 dm tall; corollas with 5 lobes and 5 stamens.
5. Style branches with stigmatic lines closely paired or fused along inner surface.
Carpochaete
5. Style branches with stigmatic lines widely separated on lateral margins.
6. Heads with 3-5 phyllaries and usually equal number of flowers.
7. Anther appendages minute to lacking; filaments of anthers with hairs or papillae; walls of achenes with sparse punctations internally.
Piqueria
7. Anther appendages distinct, as long as wide or longer; filaments of anthers without hairs or papillae; walls of achenes densely minutely punctate.
8. Plants scandent; heads with 4 flowers and 4 principle phyllaries; corollas glabrous inside, lobes smooth.
Mikania
8. Plants erect herbs or subshrubs; heads with 5 flowers and 5 equal phyllaries; corollas with hairs inside, lobes papillose inside.
Stevia

6. Heads with more than 5 phyllaries.
9. Pappus of chaffy scales or short setae or lacking.
10. Heads with outer-most flowers bearing expanded outer lobes, forming rays. Microspermum
10. Heads without ray flowers.
11. Leaves sessile and auriculate at base; carpodium with basal row of cells distinctly larger than upper cells. Trichocoronis
11. Leaves narrow or petiolate at base; carpodium without row of larger thick-walled cells at base.
12. Anther appendages short, much wider than long.
13. Leaves alternate; style branches linear; with ca. 7-8 flowers and phyllaries. Erythradenia
13. Leaves opposite; style branches very broadly clavate; with 50 or more flowers, 30 or more phyllaries. Gymnocoronis
12. Anther appendages as long as wide or longer.
14. Receptacle conical; leaves with glandular punctations on or sunken into surface.
15. Style base distinctly enlarged; style branches laxly papillose with large papillae. Isocarpha
15. Style base not enlarged; style branches densely and evenly papillose. Ageratum
14. Receptacle convex; leaves without glandular punctations on surface.
16. Heads with 11-25 flowers; receptacles with paleae; style usually slightly enlarged at base. Jaliscoa
16. Heads with 40-50 flowers; receptacles without paleae; style not enlarged at base. Alomia

9. Pappus of 5 or more long slender setae over half as long as the corolla, sometimes plumose.
17. Style bases covered with numerous hairs.
18. Achenes with 10 ribs. Brickellia
18. Achenes with 5 ribs.
19. Leaves with prickles on tips of lobes; corolla lobes and style branches smooth. Barrotea
19. Leaves without prickles on tips of lobes; corolla lobes and style branches covered with small papillae. Phanerostyles
17. Style bases glabrous.
20. Pappus setae plumose. Carminatia
20. Pappus setae not plumose.
21. Anther appendage short, wider than long.
22. Leaves alternate, receptacle hairy. Decachaeta
22. Leaves opposite, receptacle without hairs.
23. Heads with 150 or more flowers, with paleae. Eupatoriastrium
23. Heads with 50 flowers or less, without paleae. Koanophyllon
21. Anther appendage about as long as wide or longer.
24. Phyllaries not spreading when mature, all phyllaries deciduous with age. Chromolaena
24. Phyllaries spreading at maturity, at least outer phyllaries persistent.
25. Corolla lobes papillose on inner surface.
26. Stems with leaves absent at anthesis. Pachythamnus
26. Stems with leaves present at anthesis.

27. Corolla lobes longer than wide, smooth on back; style base usually swollen; cells of anther collars without distinct annular thickenings in walls; pappus setae often easily deciduous.
28. Achenes without distinct carpopodium. Piptothrix
28. Achenes with distinct carpopodium of sclerotized cells. Ageratina
27. Corolla lobes not longer than wide, strongly papillose on back, style base not swollen, cells of anther collars with distinct annular thickenings in walls; pappus setae not normally deciduous.
29. Receptacle conical; apical cells of pappus setae blunt; carpopodium indistinct. Conoclinium
29. Receptacle flat or slightly convex; apical cells of pappus setae acute; carpopodium very distinct. Fleischmannia
25. Corolla lobes smooth on inner surface.
30. Style base much enlarged.
31. Terrestrial shrubs; corollas glabrous on inner surface. Piptothrix
31. Epiphytic or climbing rather succulent plants; corollas with hairs on inner surface. Neomirandea
30. Style base not enlarged.
32. Achenes densely covered with long-stalked glandular hairs. Dyscritogyne
32. Achenes with non glandular hairs or short glandular punctations, sometimes glabrous.
33. Corollas with glandular punctations or hairs on outer surface.
34. Leaf bases cordate; heads with 10-16 flowers; corollas tubular; corollas with only glands externally. Kyrsteniopsis

34. Leaf bases rounded to cuneate; heads with 20-150 flowers; corollas narrowly funnellform; corollas often with hairs on lobes. Bartlettina
33. Corollas without glandular punctations or hairs on the outer surface.
35. Achenes with 5 ribs; moist leaves with laticifers evident in areoles as pellucid spots; shrubs or small trees. Critonia
35. Achenes with 6-10 ribs; leaves without laticifers in areoles; sparsely branched herbs or subshrubs.
36. Leaves sessile, linear or squamulose; phyllaries in 4 or more series. Asanthus
36. Leaves petiolate, ovate to lanceolate; phyllaries in 2-3 series. Steviopsis

The following list of the genera of Eupatorieae of Nueva Galicia includes citation of significant recent literature. The species given under each genus include all those cited from Nueva Galicia by McVaugh in his letter.

Ageratella A.Gray ex S.Watson, Proc. Amer. Acad. 22: 419. 1837. The following 1 species occurs in Nueva Galicia: A. microphylla (Schultz-Bip.) A.Gray.

Ageratina Spach, Hist. Veg. Phan. 10: 286. 1841.

Grashoff, J.L. & J.H.Beaman. 1969. Studies in Eupatorium (Compositae), 1. Revision of Eupatorium bellidifolium and allied species. Rhodora 71: 566-576. King, R.M. & H.Robinson. 1970. Studies in the Eupatorieae (Compositae). IXX. New combinations in Ageratina. Phytologia 19: 208-229. King, R.M. & H.Robinson. 1972. Studies in the Eupatorieae (Asteraceae). LXXXV. Additions to the genus Ageratina with a key to the Costa Rican species. Phytologia 24(2): 79-104. McVaugh, R. 1972. Compositarum Mexicanarum Pugillus. Contr. Univ. Mich. Herb. 9(4): 359-484. The following 38 species occur in Nueva Galicia: A. adenophora (Spreng.) K. & R., A. arsenei (B.L.Robinson) K. & R., A. aschenborniana (Schauer) K. & R., A. bellidifolia (Benth.) K. & R., A. blepharilepis (Schultz-Bip.) K. & R., A. brevipes (DC.) K. & R., A. calaminthifolia

(H.B.K.) K. & R., A. calophylla (B.L.Robinson) K. & R.,
A. campyloclada (B.L.Robinson) K. & R., A. cardiophylla
 (B.L.Robinson) K. & R., A. cerifera (McVaugh) K. & R.,
A. chiapensis (B.L.Robinson) K. & R., A. choricephala
 (B.L.Robinson) K. & R., A. crenaea (B.L.Robinson) K. &
 R., A. cylindrica (McVaugh) K. & R., A. dolichobasis
 (McVaugh) K. & R., A. espinosarum (A.Gray) K. & R.,
A. geminata (McVaugh) K. & R., A. halbertiana (McVaugh)
 K. & R., A. lasioneura (Hook. & Arn.) K. & R.,
A. lemmonii (B.L.Robinson) K. & R., A. leptodictyon
 (A.Gray) K. & R., A. mairetiana (D.C.) K. & R.,
A. malacolepis (B.L.Robinson) K. & R., A. muelleri
 (Schultz-Bip. ex Klatt) K. & R., A. pazcuarensis (H.B.K.)
 K. & R., A. petiolaris (Moc. & Sesse ex D.C.) K. & R.,
A. prunellifolia (H.B.K.) K. & R., A. purpursii (T.Brand.)
 K. & R., A. rhomboidea (H.B.K.) K. & R., A. rubricaulis
 (H.B.K.) K. & R., A. schaffneri (Schultz-Bip. ex B.L.
 Robinson) K. & R., A. scorodonioides (A.Gray) K. & R.,
A. subintegra (E.L.Greene) K. & R., A. thyrsiflora
 (E.L.Greene) K. & R., A. triniona (McVaugh) K. & R.,
A. viscosissima (Rolfe) K. & R., A. wrightii (A.Gray)
 K. & R.

Ageratum L., Sp. Pl. 2: 838. 1753. Johnson, M.F.
 1971. A monograph of the genus Ageratum L.
 (Compositae-Eupatorieae). Ann. Missouri Bot. Gard.
 58(1): 6-88. King, R.M. & H.Robinson 1972. Studies
 in the Eupatorieae (Asteraceae). LXXXVIII. Additions
 to the genus, Ageratum. Phytologia 24(2): 112-117. The
 following 7 species occur in Nueva Galicia: A. conyzoides
 L., A. corymbosum Zuccag. ex Pers., A. echinoides
 (Less.) Hemsl., A. houstonianum Miller, A. lucidum
 B.L.Robinson, A. paleaceum (DC.) Hemsl., A. platypodium
 B.L.Robinson.

Alomia H.B.K., Nov. Gen. et Sp. 4: 151. 1820. King, R.M.
 & H.Robinson 1972. Studies in the Eupatorieae
 (Asteraceae). LXXXVII. The genus, Alomia. Phytologia
 24(2): 108-111. The following species occurs in Nueva
 Galicia: A. callosa (Watson) B.L.Robinson.

Asanthus R.M.King & H.Robinson, Phytologia 24: 66.
 1972. King, R.M. & H.Robinson 1972. Studies in
 the Eupatorieae (Asteraceae). LXXIX. A new genus,
Asanthus. Phytologia 24(2): 65-66. The following species
 occurs in Nueva Galicia: A. thyrsiflorus (A.Gray) K. & R.

Barroetia A.Gray, Proc. Amer. Acad. 15: 29. 1880.
 The following species occurs in Nueva Galicia:
B. subuligera A.Gray

Bartlettina R.M.King & H.Robinson. *Phytologia* 22(3): 160. 1971. King, R.M. & H.Robinson 1971. Studies in the Eupatorieae (Asteraceae). XXXVI. A new genus, Neobartlettia. *Phytologia* 21(5): 294-297. King, R.M. & H.Robinson 1971. Studies in the Eupatorieae (Asteraceae) LXI. Additions to the Hebecclinium complex with Bartlettina, a new generic name. *Phytologia* 22(3):160-162. The following species occurs in Nueva Galicia:
B. oresbia (B.L.Robinson) K. & R.

Brickellia S. Ellioitt, Sketch Bot. S. Car. and Ga. 2: 290. 1822 ? ("1824"). The following 23 species occur in Nueva Galicia: B. cardiophylla B.L.Robinson, B. corymbosa (DC.) A.Gray, B. coulteri A. Gray, B. cuspidata A.Gray, B. diffusa (Vahl) A.Gray, B. extranea McVaugh, B. filipes B.L.Robinson, B. glandulosa (Llave) McVaugh, B. glomerata Fernald, B. jaliscensis McVaugh, B. lanata (DC.) A.Gray, B. magnifica McVaugh, B. monocephala B.L.Robinson, B. oliganthes (Less.) A.Gray, B. paniculata (Miller) B.L.Robinson, B. schaffneri (A.Gray) Shinners, B. scoparia (DC.) A.Gray, B. secundiflora (Lag.) A.Gray, B. seemannii A.Gray, B. spinulosa A.Gray, B. squarrosa (Cav.) B.L.Robinson, B. verbenacea (Greene) B.L.Robinson, B. veronicaefolia (H.B.K.) A.Gray.

Carminatia Mocino ex DC. Prodr. 7: 267. 1838.

The following 2 species occur in Nueva Galicia:
C. recondita McVaugh, C. tenuiflora DC.

Carphochaete A.Gray, Mem. Amer. Acad. n.s. 4: 65. 1849.

The following 2 species occur in Nueva Galicia:
C. grahamii A.Gray, C. gummifera McVaugh.

Chromolaena DC. Prodr. 5: 133. 1836. King, R.M. & H.

Robinson 1970. Studies in the Eupatorieae (Compositae). XXIX. The genus, Chromolaena. *Phytologia* 20(3): 196-209. The following 9 species occur in Nueva Galicia: C. collina (DC.) K. & R., C. glaberrima (DC.) K. & R., C. haenkeana (DC.) K. & R., Chromolaena misella (McVaugh) R.M.King & H.Robinson, comb. nov. Eupatorium misellum McVaugh, Contr. Univ. Mich. Herb. 9: 400. 1972., C. odorata (L.) K. & R., C. ortegae (B.L. Robinson) K. & R., C. ovaliflora (Hook. & Arn.) K. & R., C. pulchella (H.B.K.) K. & R., C. sagittata (A.Gray) K. & R.

Conoclinium DC. Prodr. 5: 135. 1836. King, R.M. & H.

Robinson. 1970. Studies in the Eupatorieae (Compositae). XII. The genus Conoclinium. Phytologia 19(5): 299-300. The following 1 species occurs in Nueva Galicia: C. betonicifolium (Miller) K. & R.

Critonia P. Browne, Civ. Nat. Hist. Jam. 490. 1756.

King, R.M. & H. Robinson. 1971. Studies in the Eupatorieae (Asteraceae) XLVII. The genus Critonia. Phytologia 22(1): 46-51. The following 3 species occur in Nueva Galicia: C. hebebotrya DC., C. morifolia (Miller) K. & R., C. quadrangularis (DC.) K. & R.

Decachaeta DC. Prodr. 5: 133. 1836. King, R.M. & H.

Robinson. 1969. Studies in the Compositae (Compositae). XVI. A monograph of the genus Decachaeta DC. Brittonia 21: 275-284. The following 4 species occur in Nueva Galicia: D. haenkeana DC., D. incompta (DC.) K. & R., D. ovatifolia (DC.) K. & R., D. scabrella (B.L. Robinson) K. & R.

Dyscritogyne R.M. King & H. Robinson, Phytologia 22(3):

158. 1971. Ibid. Studies in the Eupatorieae (Asteraceae). LX. A new genus, Dyscritogyne. The following species occur in Nueva Galicia: D. adenospermum (Schultz-Bip.) K. & R., D. dryophilum (B.L. Robinson) K. & R.

Erythradenia (B.L. Robinson) R.M. King & H. Robinson,

Brittonia 21: 285. 1969. Ibid. Studies in the Eupatorieae (Compositae). XVII. The genus Erythradenia (B.L. Robinson) R.M. King & H. Robinson. The following 1 species occurs in Nueva Galicia: E. pyramidalis (B.L. Robinson) K. & R.

Eupatoriastrum Greenman, Proc. Amer. Acad. 39: 93.

1893. King, R.M. & H. Robinson. 1971. Studies in the Eupatorieae (Asteraceae). XLI. The genus, Eupatoriastrum. Phytologia 21(5): 306-307. The following 1 species occurs in Nueva Galicia: E. triangulare (DC.) B.L. Robinson.

Fleischmannia Schultz-Bip., Flora 33: 417. 1850. King,,

R.M. & H. Robinson, 1970. Studies in the Eupatorieae (Asteraceae). XVIII. New combinations in

Fleischmannia. Phytologia 19(4): 201-207. The following 3 species occur in Nueva Galicia: F. arguta (H.B.K.) B.L.Robinson, F. pycnocephala (Lessing) K. & R., F. trinervia (Schultz-Bip.) K. & R.

Gymnocoronis DC., Prod. 5: 106. 1836. The following 1 species occurs in Nueva Galicia: G. latifolia Hook. & Arn.

Hofmeisteria Walpers, Walp. Rep. 6: 106. 1847. King, R.M. 1967. Studies in the Compositae-Eupatorieae IV. Rhodora 67: 352-371. King, R.M. & H.Robinson 1966. Generic limitations in the Hofmeisteria complex (Compositae-Eupatorieae). Phytologia 12: 465-476. The following 3 species occur in Nueva Galicia: H. dissecta (Hook. & Arn.) K. & R., H. schaffneri (A.Gray) K. & R., H. urenifolia (Hook. & Arn.) Walpers.

Isocarpha R. Brown, Trans. Linn. Soc. 12: 110. 1817. The following 1 species occurs in Nueva Galicia: I. oppositifolia (L.) R.Brown.

Jaliscoa S.Watson, Proc. Amer. Acad. 25: 153. 1890. King, R.M. & H.Robinson 1970. Studies in the Eupatorieae (Compositae). XXIII. New combinations in Jaliscoa. Phytologia 19(7): 427-428. The following 3 species occur in Nueva Galicia: J. goldmanii (B.L. Robinson) K. & R., J. paleacea (Cronquist) K. & R., J. pringlei S.Watson.

Koanophyllon Arruda de Camara, Discurso sobre utilidade da instituicao de jardins nas principaes provincias do Brasil,.... p. 38 ? 1810. King, R.M. & H.Robinson. 1971. Studies in the Eupatorieae (Asteraceae). LXIV. The genus, Koanophyllon. Phytologia 22(3): 147-152. The following 2 species occur in Nueva Galicia: K. albicaulis (Schultz-Bip. ex Klatt) K. & R., K. solidaginifolia (A.Gray) K. & R.

Kyrsteniopsis R.M.King & H.Robinson, Phytologia 22(3): 146. 1971. King, R.M. & H.Robinson. 1971. Studies in the Eupatorieae (Asteraceae). LXIII. A new genus, Kyrsteniopsis. Phytologia 22(3): 145-146. King, R.M. & H.Robinson. 1972. Studies in the Eupatorieae (Asteraceae). LXXVI. Additions to the genus, Kyrsteniopsis.

Phytologia 24(2): 57-59. The following 1 species occurs in Nueva Galicia: K. nelsonii (B.L.Robinson) K. & R.

Mexianthus B.L.Robinson, Contr. Gray Herb. n.s. 29: 5. 1925. The following 1 species occurs in Nueva Galicia: M. mexicanus B.L.Robinson.

Microspermum Lag., Gen. & Sp. Nov. p. 25, 1816.
Rzedowski, J. 1970. Estudio sistematico del genero Microspermum (Compositae). Bol. Soc. Bot. Mexico 31: 49-107. The following 2 species occur in Nueva Galicia: M. debile Benth., M. nummulariifolium Lag.

Mikania Willdenow in Linnaeus, Sp. Pl. (ed. 4) 3(3): 1742. 1803. The following 2 species occur in Nueva Galicia: M. cordifolia (L.f.) Willd., M. micrantha H.B.K.

Neohintonia R.M.King & H.Robinson. Phytologia 22(3): 143. 1971. King, R.M. & H.Robinson, 1971. Studies in the Eupatorieae (Asteraceae) LXII. A new genus, Neohintonia. Phytologia 22:143-144. The following 1 species occurs in Nueva Galicia: M. monantha (Schultz-Bip.) K. & R.

Neomirandea R.M.King & H.Robinson, Phytologia 19(5): 306. 1970. King, R.M. & H.Robinson, 1970. Studies in the Eupatorieae (Compositae). XXI. A new genus, Neomirandea. The following 1 species occurs in Nueva Galicia: N. araliifolia (Less.) K. & R. (including Eupatorium altiscandens McVaugh).

Pachythamnus (R.M.King & H.Robinson) R.M.King & H.Robinson, Phytologia 23(1):153. 1972. King, R.M. & H.Robinson, 1970. Studies in the Eupatorieae (Compositae) XIX. New combinations in Ageratina. Phytologia 19(4): 208-229. King, R.M. & H.Robinson. 1972. Studies in the Eupatorieae (Asteraceae). LXVI. The genus, Pachythamnus. Phytologia 23(1): 153-154. The following 1 species occurs in Nueva Galicia: P. crassirameus (B.L. Robinson) K. & R.

Phanerostylis (A.Gray) R.M.King & H.Robinson, *Phytologia* 24(2): 70. 1972. King, R.M. & H.Robinson, 1972. Studies in the Eupatorieae (Asteraceae) LXXXI. The genus, Phanerostylis. *Phytologia* 24(2): 70-71. The following species occurs in Nueva Galicia: P. pedunculosa (DC.) K. & R. (Eupatorium longipes)

Piptothrix A.Gray, *Proc. Amer. Acad.* 21: 383. 1886. King, R.M. & H.Robinson, 1970. Studies in the Eupatorieae (Compositae) XXII. The genus, Piptothrix. *Phytologia* 19(7): 425-426. The following species occur in Nueva Galicia: P. areolare (DC.) K. & R., P. jaliscensis B.L.Robinson, P. pubens A.Gray.

Piqueria Cavanilles, *Ic. Desc. Pl.* 3: 18. 1794. The following 4 species occur in Nueva Galicia: P. laxiflora, P. pilosa H.B.K., P. triflora Hemsl., P. trinervia Cav.

Piqueriopsis R.M.King, *Brittonia* 17: 352. 1965. King, R.M. 1965. Piqueriopsis, a new genus of Compositae from southwestern Mexico. *Brittonia* 17: 352-353. The following species occurs in Nueva Galicia: P. michoacana R.M.King.

Stevia Cavanilles, *Ic. Desc. Pl.* 4: 32. 1797. The following 32 species occur in Nueva Galicia: S. aschenborniana Schultz-Bip., S. caracasana DC., S. dictyophylla B.L.Robinson, S. elatior H.B.K., S. eupatoria (Spreng.) Willd., S. glandulosa Hook. & Arn., S. hirsuta DC., S. jaliscensis B.L.Robinson, S. jorullensis H.B.K., S. latifolia Benth., S. lucida Lag., S. micradenia B.L.Robinson, S. micrantha Lag., S. monardifolia H.B.K., S. myricoides McVaugh, S. nelsonii B.L.Robinson, S. organoides H.B.K., S. ovata Willd., S. phlebophylla A.Gray, S. pilosa Lag., S. porphyrea McVaugh (purpurea) sensu B.L.Robinson not purpurea Pers., S. rosei B.L.Robinson, S. rzedowskii McVaugh, S. salicifolia Cav., S. scabrella Benth., S. seemannii Schultz-Bip., S. serrata Cav., S. subpubescens Lag., S. tomentosa H.B.K., S. trifida Lag., S. villaregalis McVaugh, S. viscida H.B.K.

Steviopsis R.M.King & H.Robinson, Phytologia 22(3):

156. 1971. King, R.M. & H.Robinson, 1971. Studies in the Eupatorieae (Asteraceae). LIX. A new genus, Steviopsis. Phytologia 22(3): 156-157. King, R.M. & H.Robinson, 1972. Studies in the Eupatorieae (Asteraceae) LXXVII. Additions to the genus Steviopsis. Phytologia 24(2): 60-62. The following 2 species occur in Nueva Galicia: S. adenolepis (B.L.Robinson) K.& R., S. rapunculoides (DC.) K. & R.

Trichocoronis A. Gray, Mem. Am. Acad. n.s. 4: 65. 1849.

King, R.M. & H.Robinson, 1970. Studies in the Eupatorieae (Compositae). XXVII. A monograph of the genus, Trichocoronis. Phytologia 19(7): 497-500. The following 1 species occurs in Nueva Galicia: T. sessilifolia (Schauer) B.L.Robinson.

References

King, R.M. & H.Robinson 1970. Studies in the Eupatorieae (Compositae). XXX. The genus, Ayapana. Phytologia 20: 210-212.

McVaugh, R. 1972. Compositarum Mexicanarum Pugillus. Contr. Univ. Mich. Herb. 9: 359-484.

Rzedowski, J. 1970. Estudio sistematico del genero Microspermum (Compositae). Bol. Soc. Bot. Mexico 31: 49-107.

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