

ADDITIONAL NOTES ON THE ERIOCAULACEAE. LXXVIII

Harold N. Moldenke

SYNGONANTHUS PHILODICOIDES (Körn.) Ruhl.

Additional bibliography: Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 2, 2: 402. 1946; Moldenke, Known Geogr. Distrib. Erioc. 19, 30, 52, & 59. 1946; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 93 & 213. 1949; Moldenke, Phytologia 4: 329. 1953; Moldenke, Résumé 108, 281, 327, & 493. 1959; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 3, 2: 402. 1960; Moldenke, Résumé Suppl. 6: 5 (1963) and 18: 9. 1969; Moldenke, Fifth Summ. 1: 131, 175, & 484 (1971) and 2: 588 & 965. 1971; Moldenke, Phytologia 35: 317 (1977) and 37: 87 & 499. 1977.

This species is based on Weddell 2080 and 2126 from "auf sandigen, feuchten Campos bei Salinas", Goiás, Brazil, apparently deposited in the herbarium of the Jardin Botanique de l'Etat at Brussels. Ruhland (1903), working in Berlin, comments "Descriptio Koernickeana supra citata. Species mihi ignota." To me, the species bears some habitual resemblance to S. huberi Ruhl. and S. macrocaulon Ruhl. Recent collectors refer to it as an annual and have found it growing in drying sand at the edges of pools.

Material of this species has been misidentified and distributed in some herbaria as S. anomalus (Körn.) Ruhl.

Additional citations: GUYANA: C. D. K. Cook 214 (N, Z).

SYNGONANTHUS PITTIERI Moldenke in Woodson & Schery, Ann. Mo. Bot. Gard. 27: 269. 1940.

Bibliography: Moldenke in Woodson & Schery, Ann. Mo. Bot. Gard. 27: 269. 1940; Moldenke, Ann. Mo. Bot. Gard. 31: 70—71. 1944; Moldenke, Known Geogr. Distrib. Erioc. 4 & 59. 1946; Hill & Salisb., Ind. Kew. Suppl. 10: 224. 1947; Moldenke, Alph. List Cit. 4: 1033. 1949; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 41 & 213. 1949; Moldenke, Phytologia 4: 329. 1953; Moldenke, Résumé 48 & 493. 1959; Moldenke, Fifth Summ. 1: 91 (1971) and 2: 965. 1971; Moldenke, Phytologia 29: 87. 1974.

Collectors have encountered this plant on savannas, at altitudes of 700—1125 meters, flowering in January and March, and in fruit in March.

Material has been misidentified and distributed in some herbaria as Eriocaulon sp.

Additional citations: PANAMA: Chiriquí: Partch 69-42 (E—1970563, Z). MOUNTED CLIPPINGS: Moldenke, Ann. Mo. Bot. Gard. 27: 269. 1940 (W).

SYNGONANTHUS PLANUS Ruhl. in Engl., Pflanzenreich 13 (4-30): 265. 1903.

Synonymy: Paepalanthus planus Ruhl. ex Moldenke, Résumé Suppl. 1: 22, in syn. 1959.

Bibliography: Ruhl. in Engl., Pflanzenreich 13 (4-30): 264, 265, & 293. 1903; Prain, Ind. Kew. Suppl. 3: 175. 1908; Moldenke, Known Geogr. Distrib. Erioc. 19 & 59. 1946; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 93 & 213. 1949; Moldenke, Phytologia 4: 329. 1953; Moldenke, Résumé 108 & 493. 1959; Moldenke, Résumé Suppl. 1: 22. 1959; Moldenke, Fifth Summ. 1: 175 (1971) and 2: 588 & 965. 1971; Moldenke, Phytologia 31: 386 (1975), 36: 74 (1977), and 37: 257 & 495. 1977.

This species is based on Glaziou 11634 from "Barbacena, in Morast", Minas Gerais, Brazil, deposited in the Berlin herbarium where it was photographed by Macbride as his type photograph number 10696 [not "11634" as erroneously stated by me in my 1953 work]. The original printed label accompanying the type is inscribed "Rio de Janeiro", but this is an error — Barbacena is located in Minas Gerais.

Recent collectors refer to this plant as an herb with rosettes of leaves and white flower-heads, and have found it at 1000 m. altitudes, in flower in January and June and in fruit in January. Harley and his associates encountered it in "woodland along small stream, normally damp grassland, now dry, and dry cerrado/carrasco on slopes of surrounding quartzite hills". Ruhland (1903) cites only the original collection. The species has habitual similarities with S. gracilis (Bong.) Ruhl., S. llanorum Ruhl., and S. pauciflorus Alv. Silv. The type specimen at Berlin was first annotated there as "Paepalanthus planus" by Ruhl.

Additional citations: BRAZIL: Bahia: Harley, Renvoize, Erskine, Brighton, & Pinheiro in Harley 15272 (Z). Minas Gerais: Glaziou 11634 [Macbride photos 10696] (B—type, N—photo of type, W—photo of type).

SYNGONANTHUS PLUMOSUS Alv. Silv., Fl. Mont. 1: 339—340, pl. 214. 1928.

Synonymy: Syngonanthus plumosus Alv. Silv. ex Wangerin in Just, Bot. Jahresber. 57 (1): 478, sphalm. 1937. Syngonanthus plumosus Fedde in Just, Bot. Jahresber. 57 (2): 896, sphalm. 1938; Moldenke, Phytologia 25: 244, in syn. 1973. Syngonanthus plumosus (Gardn.) Ruhl. ex Mendes Magalhaes, Anais V Reun. Anual Soc. Bot. Bras. 236 & 293. 1956.

Bibliography: Alv. Silv., Fl. Mont. 1: 339—340, pl. 214. 1928; Wangerin in Just, Bot. Jahresber. 57 (1): 478. 1937; Fedde in Just, Bot. Jahresber. 57 (2): 896. 1938; A. W. Hill, Ind. Kew. Suppl. 9: 272. 1938; Worsdell, Ind. Lond. Suppl. 2: 426. 1941; Moldenke, Known Geogr. Distrib. Erioc. 19 & 59. 1946; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 93 & 213. 1949; Moldenke, Phytologia 4: 329. 1953; Mendes Magalhaes, Anais V Reun. Anual Soc. Bot. Bras. 236—237 & 293. 1956; Moldenke, Résumé 109 & 493. 1959; Rennó, Levant. Herb. Inst. Agron. Minas 72. 1960; Moldenke, Résumé Suppl. 3: 35. 1962; Moldenke, Fifth Summ. 1: 175 (1971) and 2: 638 & 965. 1971; Moldenke, Phytologia 25: 244 (1973)

and 37: 255. 1977.

Illustrations: Alv. Silv., Fl. Mont. 1: pl. 214. 1928.

This species is based on A. Silveira 838 from "In campis inter Itacambira et Juramento", Minas Gerais, Brazil, collected in July, 1926, and deposited in the Silveira herbarium. On page 419 of his work (1928) Silveira cites his no. 838 from "Serrinha", collected in 1926, but if this is intended as a correction or is a second collection is not clear. He comments that the "Species ob pilositatem foliorum certe distincta". It has been collected in flower in February and July.

Material of S. plumosus has been misidentified and distributed in some herbaria as S. laricifolius (Gardn.) Ruhl.

SYNGONANTHUS POGGEANUS Ruhl. in Engl., Pflanzenreich 13 (4-30): 247. 1903.

Synonymy: Paepalanthus poggeanus Ruhl. ex H. Hess, Bericht. Schweiz. Bot. Gesell. 65: 190, in syn. 1955.

Bibliography: Ruhl. in Engl., Pflanzenreich 13 (4-30): 244, 247, & 293. 1903; Pilger in Engl. & Prantl, Nat. Pflanzenfam. Ergänz. 2, Nachtr. 3 zu 2: 41. 1908; Prain, Ind. Kew. Suppl. 3: 175. 1908; H. Lecomte, Bull. Soc. Bot. France 55: 595--597. 1909; T. C. E. & R. E. Fries in R. E. Fries, Wiss. Ergebn. Schwed. Rhod.-Kong.-Exped. 1911-12 Bot. 1: 219. 1916; Moldenke, Known Geogr. Distrib. Erioc. 21 & 59. 1946; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 115 & 213. 1949; Duvigneaud, Lejeunia 16: 103. 1953; H. Hess, Bericht. Schweiz. Bot. Gesell. 65: 190--192 & 198, fig. 1, & pl. 9, fig. 15. 1955; Moldenke, Résumé 142, 147, & 493. 1959; Moldenke, Résumé Suppl. 1: 22. 1959; Richards & Morony, Check List Fl. Mbala 262. 1969; Moldenke, Fifth Summ. 1: 231 & 244 (1971) and 2: 588 & 965. 1971; Lewalle, Bull. Jard. Nat. Belg. 42 [Trav. Univ. Off. Bujumb. Fac. Sci. C.20]: [237]. 1972; Moldenke, Phytologia 25: 231 (1973), 29: 233 (1974), 34: 278 (1976), 35: 308 & 314 (1977), and 37: 82, 83, & 266. 1977.

Illustrations: H. Hess, Bericht. Schweiz. Bot. Gesell. 65: 198, fig. 1, & pl. 9, fig. 15. 1955.

The type of this species was collected by Karl Pogge (no. 457) at Kimbundo [=Mona Quimbundo], Lunda, Angola, at an altitude of 1150--1220 m., in 1876, and is deposited in the Berlin herbarium where Ruhland at first annotated it as "Paepalanthus poggeanus Ruhl." In his 1903 work he cites only the type collection, which, he says, was collected in flower in August. He comments that the "Species cum formis brasiliensibus valde affinis a ceteris africanis valde abhorret. Flores ♂ perpauci."

Recent collectors have encountered this species in damp peat and in water of bogs, marshes, and wet marshland, at altitudes of 600--1950 meters, flowering in May, June, August, and October, and fruiting in June, August, and October. It is referred to as a "plante dressée", with white flowers. Fries (1916) cites R. E. Fries 518 & 1056 from Zambia, Richards and Morony

(1969) cite their nos. 1329, 5101, & 5966, and Lewalle (1972) cites his no. 5171.

The Lecomte work (1909), cited in the bibliography above, was presented at the November 13, 1908, session of the Society, but the "Index Kewensis" dates its actual publication as 1909. The Pilger (1908) work is dated "1906" by Stapf (1931).

Hess (1955) cites his nos. 50/298 & 50/322 from "Unterer Belgisch-Kongo", growing on "Quarzsandreicher Moorboden", and comments that "Von den beiden Proben aus dem ubtern Kongo haben nur einige Exemplare der Nr. 50/322 Drüsenhaare an den Blättern; die Typus-Pflanze aus Angola ist in den Blättern drüsig behaart..

"Syngonanthus Poggeanus war bisher nur vom locus classicus in Angola, Provinz Lunda, bekannt. Nun kommt eine neue Fundstelle im untern belgisches Kongo hinzu.....Syngonanthus Poggeanus ist Verwandt mit S. ngoweensis H. Lec. Durch den Vergleich des Typus-Materials beider Arten (der Typ von S. ngoweensis liegt im Muséum National, Paris) haben sich folgende Unterschiede ergeben: Die Halme von S. ngoweensis sind durchwegs 4-rillig, ein Merkmal, auf das der Autor speciell hinweist und das ich sonst auch an keinem afrikanischen Syngonanthus gesehen habe. Die Blütenköpfe sind ebenfalls weiss; die weissen Sepalen der ♂ und ♀ Blüten sind am Rande und im mittleren Drittel auch auf dem Rücken behaart. Sie sind um 1.8 mm lang. Die Art dürfte an diesen Merkmalen sicher von S. Poggeanus zu unterscheiden sein. S. ngoweensis ist nur von der Ebene N'gowé bei Fernand-Vaz (Congo français) bekannt geworden. Typus ist das von H. Lecomte dort am 11.12.1895 gesammelte Material. Von der gleichen Fundstelle stammt eine Einlage von M. Dybowski (Nr. 117), gesammelt am 11.4.1894. Die Pflanzen gehören zur gleichen Art, haben aber etwas breitere und flächerer Blätter.

"Im Bau der Blüten dürften zwischen Syngonanthus Poggeanus und den hellblütigen Varianten des S. Wahlbergii kaum Unterschiede gefunden werden. S. Poggeanus hat aber stets einen viel höheren Wuchs und breite, flache Blätter." Comparisons between S. poggeanus and S. angolensis H. Hess are detailed under the latter species in this series of notes, which see.

The E. A. Robinson 2266, distributed as S. poggeanus, actually is Eriocaulon teuschii Engl. & Ruhl.

Citations: ZAIRE: Vanderyst 31842 (S), 33753 (S), 33800 (Mu), 34598 (Ba). BURUNDI: Lewalle 5856 (Z). ANGOLA: Lunda: Gossweiler 14093 (W-2074445); Pogge 457 (B--type, Z--isotype). ZAMBIA: E. A. Robinson 3734 (Mu), 3745 (Mu, Z); Symoens 9529 (Mu).

SYNGONANTHUS PROLIFER Alv. Silv., Fl. Mont. 1: 374--375, pl. 238. 1928.

Bibliography: Alv. Silv., Fl. Mont. 1: 374--375 & 419, pl. 238. 1928; Wangerin in Just, Bot. Jahresber. 57 (1): 478. 1937; Fedde in Just, Bot. Jahresber. 57 (2): 896. 1938; A. W. Hill, Ind.

Kew. Suppl. 9: 272. 1938; Worsdell, Ind. Lond. Suppl. 2: 426. 1941; Moldenke, Known Geogr. Distrib. Erioc. 19 & 59. 1946; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 93 & 213. 1949; Moldenke, Résumé 109 & 493. 1959; Moldenke, Fifth Summ. 1: 175 (1971) and 2: 965. 1971; Anon., Biol. Abstr. 56 (1): B.A.S.I.C. S.254. 1973; Moldenke, Biol. Abstr. 56: 69. 1973; Moldenke, Phytologia 25: 223 & 230. 1973; Hocking, Excerpt. Bot. A.23: 292. 1974; Moldenke, Phytologia 34: 259 (1976) and 35: 349. 1977.

Illustrations: Alv. Silv., Fl. Mont. 1: pl. 238. 1928.

This species is based on Dr. P. Rolfs s.n. from "In campis arenosis prope Itacolumi", Minas Gerais, Brazil, collected in October, 1921, and deposited as no. 724 in the A. Silveira herbarium. Curiously, in his original description of the species, Silveira (1928) refers to "Tabula CCXXXIX" as representing the species, but the plate that does so is actually pl. 238. Silveira comments that "A S. candido Alv. Silv. flore femineo longissime pedunculato, foliorum indumentum et capitulis rursum folia proliferantibus praecipue differt".

Recent collectors refer to S. prolifer as a tufted herb, the inflorescences 20--25 cm. tall, the leaves in a loose rosette, and the flower-heads white, and have encountered it "in wet sand in an area of rocky summits with soil-filled crevices and small areas of white sand", "in damp sand along a small stream with marsh on white sand and surrounding cerrado on sandstone rock exposures", and "in marshy black humus by stream in area of hillside with blocky quartzite outcrops sloping down to streams, cerrado on hillsides, gallery forest along the streams, and brejos (sedge meadows) just above the forests", flowering in March and April, and fruiting in April.

Material of this species has been misidentified and distributed in some herbaria as S. elegans var. elanatus Ruhl. and the Duarte collection, cited below, was actually mistakenly so cited by me in a previous installment of this series of notes.

Citations: BRAZIL: Bahia: Harley, Renvoize, Erskine, Brighton, & Pinheiro in Harley 16967 (K). Minas Gerais: W. R. Anderson 8940 (Ld, N); Duarte 7569 [Herb. Brad. 27317] (N); Irwin, Fonsêca, Souza, Reis dos Santos, & Ramos 27913 (Ac, N, N, W--2759024, Z).

SYNGONANTHUS PROLIFER var. PARVUS Moldenke, Phytologia 25: 223. 1973.

Bibliography: Anon., Biol. Abstr. 56 (1): B.A.S.I.C. S.254. 1973; Moldenke, Biol. Abstr. 56: 69. 1973; Moldenke, Phytologia 25: 223 & 230. 1973; Hocking, Excerpt. Bot. A.23: 292. 1974.

This variety differs from the typical form of the species in its much smaller habit, the leaves being only about 2 cm. long and the peduncles only 7--11 cm. long.

Citations: BRAZIL: Minas Gerais: J. B. Silva 595 [Herb. Set. Lag. 732] (Ba--isotype, Z--type).

SYNGONANTHUS PTEROPHYLLUS Alv. Silv., Fl. Mont. 1: 379--380, pl. 241. 1928.

Bibliography: Alv. Silv., Fl. Mont. 1: 379--380 & 419, pl. 241. 1928; Wangerin in Just, Bot. Jahresber. 57 (1): 478. 1937; Fedde in Just, Bot. Jahresber. 57 (2): 896. 1938; A. W. Hill, Ind. Kew. Suppl. 9: 272. 1938; Worsdell, Ind. Lond. Suppl. 2: 426. 1941; Moldenke, Known Geogr. Distrib. Eric. 19 & 59. 1946; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 93 & 213. 1949; Moldenke, Résumé 109 & 493. 1959; Moldenke, Fifth Summ. 1: 176 (1971) and 2: 965. 1971; Moldenke, Phytologia 37: 262 & 265. 1977.

Illustrations: Alv. Silv., Fl. Mont. 1: pl. 241. 1928.

This species is based on A. Silveira 648 from "In campis arenosis in serra do Cabral", Minas Gerais, Brazil, collected in November, 1918, and deposited in the Silveira herbarium. Curiously, on page 380 of his work, Silveira (1928) refers to "Tabula CCXLII" as illustrating this species, but the plate that actually does so is "TABULA CCXLI". Also, on page 419, he gives "1917" as the date of collection of the type; whether this is a typographic error, a correction of the date previously given, or a second collection from the same locality is not clear. The species is known thus far only from his collection(s). In habit it appears similar to S. multicaulis Alv. Silv.

SYNGONANTHUS PULCHELLUS Moldenke, Phytologia 25: 230, nom. nud.

February 7, 1973; 27: 71--73, fig. 4. October 12, 1973.

Bibliography: Moldenke, Phytologia 25: 230 (1973) and 27: 71--73, fig. 4. 1973; Moldenke, Biol. Abstr. 57: 3780. 1974.

Illustrations: Moldenke, Phytologia 27: 72, fig. 4. 1973.

Citations: BRAZIL: Minas Gerais: Anderson, Stieber, & Kirkbride 35843 (N--isotype, Z--type).

SYNGONANTHUS PULCHER (Körn.) Ruhl. in Engl., Pflanzenreich 13 (4-30): 255. 1903.

Synonymy: Paepalanthus pulcher Körn. in Mart., Fl. Bras. 3 (1): 452--453. 1863. Dupatya pulchra (Körn.) Kuntze, Rev. Gen. Pl. 2: 746. 1891. Dupatya pulchra Kuntze apud Durand & Jacks., Ind. Kew. Suppl. 1, imp. 1, 145. 1902.

Bibliography: Körn. in Mart., Fl. Bras. 3 (1): 278, 452--453, & 507. 1863; Kuntze, Rev. Gen. Pl. 2: 746. 1891; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 1, 2: 402. 1894; Durand & Jacks., Ind. Kew. Suppl. 1, imp. 1, 145. 1902; Ruhl. in Engl., Pflanzenreich 13 (4-30): 245, 255, & 293. 1903; Prain, Ind. Kew. Suppl. 3: 175. 1908; Durand & Jacks., Ind. Kew. Suppl. 1, imp. 2, 145. 1941; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 2, 2: 402. 1946; Moldenke, Known Geogr. Distrib. Eric. 19, 31, 53, & 59. 1946; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 93 & 213. 1949; Moldenke, Phytologia 4: 329. 1953; Durand & Jacks., Ind. Kew. Suppl. 1, imp. 3, 145. 1959; Moldenke, Résumé 109, 281, 327, & 493. 1959; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 3, 2: 402. 1960; Rennó, Levant. Herb. Inst. Agron. Minas 72. 1960; Moldenke, Résumé Suppl. 3: 14 (1962), 12: 12 (1965), and 14: 2.

1966; Moldenke, Fifth Summ. 1: 176 & 484 (1971) and 2: 589, 638, & 965. 1971.

The type of this species was collected by George Gardner (no. 5265) somewhere in Minas Gerais, Brazil, probably deposited in the Berlin herbarium where two specimens of this collection were photographed by Macbride as his type photographs numbers 10697 and 25175. Material has been collected in flower and fruit in August.

Additional citations: BRAZIL: Distrito Federal: Sucre 709 (Ac), 796 (Z). Goiás: Ule 236 (P). Minas Gerais: G. Gardner 5265 [Macbride photos 10697] (B--isotype, Mi--isotype, N--isotype, N--photo of isotype, W--photo of isotype).

SYNGONANTHUS PULVINELLUS Moldenke, Phytologia 8: 394--395. 1962.

Bibliography: Moldenke, Phytologia 8: 394--395. 1962; Hocking, Excerpt. Bot. A.6: 455. 1963; Moldenke, Biol. Abstr. 42: 1517. 1963; G. Taylor, Ind. Kew. Suppl. 14: 131. 1970; Moldenke, Fifth Summ. 1: 176 (1971) and 2: 965. 1971.

Citations: BRAZIL: Minas Gerais: Maguire, Mendes Magalhães, & Maguire 49183 (N--type, Z--isotype).

SYNGONANTHUS QUADRANGULARIS Alv. Silv., Fl. Mont. 1: 333--334, pl. 210. 1928.

Bibliography: Alv. Silv., Fl. Mont. 1: 333--334 & 420, pl. 210. 1928; Wangerin in Just, Bot. Jahresber. 57 (1): 478. 1937; Fedde in Just, Bot. Jahresber. 57 (2): 896. 1938; A. W. Hill, Ind. Kew. Suppl. 9: 272. 1938; Worsdell, Ind. Lond. Suppl. 2: 426. 1941; Moldenke, Known Geogr. Distrib. Erioc. 19 & 59. 1946; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 93 & 213. 1949; Moldenke, Résumé 109 & 493. 1959; Moldenke, Fifth Summ. 1: 176 (1971) and 2: 965. 1971.

Illustrations: Alv. Silv., Fl. Mont. 1: pl. 210. 1928.

This species is based on A. Silveira 659 from "In campis arenosis prope Barauna", Minas Gerais, Brazil, collected in April, 1918, and deposited in the Silveira herbarium. On page 420 of his work Silveira (1928) gives the type locality as "Baraunas". The species is known thus far only from the original collection.

SYNGONANTHUS RECLINATUS (Körn.) Ruhl. in Engl., Pflanzenreich 13 (4-30): 260--261. 1903.

Synonymy: Paepalanthus reclinatus Körn. in Mart., Fl. Bras. 3 (1): 447. 1863. Dupatyia reclinata (Körn.) Kuntze, Rev. Gen. Pl. 2: 746. 1891. Dupatyia reclinata Kuntze apud Durand & Jacks., Ind. Kew. Suppl. 1, imp. 1, 145. 1902.

Bibliography: Körn. in Mart., Fl. Bras. 3 (1): 447 & 507. 1863; Kuntze, Rev. Gen. Pl. 2: 746. 1891; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 1, 2: 402. 1894; Durand & Jacks., Ind. Kew. Suppl. 1, imp. 1, 145. 1902; Ruhl. in Engl., Pflanzenreich 13 (4-30): 246, 260--261, & 293. 1903; Prain, Ind. Kew. Suppl. 3: 175. 1908; Lützelb., Estud. Bot. Nordést. 3: 149 & 151. 1923;

Durand & Jacks., Ind. Kew. Suppl. 1, imp. 2, 145. 1941; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 2, 2: 402. 1946; Moldenke, Alph. List Cit. 1: 223. 1946; Moldenke, Known Geogr. Distrib. *Erioc.* 19, 31, 53, & 59. 1946; Moldenke, Known Geogr. Distrib. *Verbenac.*, [ed. 2], 93 & 213. 1949; Moldenke, *Phytologia* 4: 329--330. 1953; Durand & Jacks., Ind. Kew. Suppl. 1, imp. 3, 145. 1959; Moldenke, *Résumé* 109, 281, 327, & 493. 1959; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 3, 2: 402. 1960; Moldenke, *Résumé Suppl.* 3: 14. 1962; Moldenke, *Fifth Summ.* 1: 176 & 485 (1971) and 2: 589 & 965. 1971; Angely, *Fl. Anal. & Fitogeogr. Est. S. Paulo*, ed. 1, 6: 1163 & Ind. 21 & 28. 1972; Moldenke, *Phytologia* 36: 36. 1977.

This species is based on G. Gardner 3488 from Goiás, Brazil, deposited in the herbarium of the Botanisches Museum in Berlin, where it was photographed by Macbride as his type photograph number 10698; he photographed an isotype in the Copenhagen herbarium as type photograph number 25176. Ruhland (1902) cites only the single original collection. The label accompanying Macbride's photograph number 25176 is incorrectly inscribed as representing G. Gardner "3422". The Angely work (1972), cited above, is inscribed "1970" on its title-page, but was not actually published until 1972.

Recent collectors have encountered this species in marshes, on marshy campos, and on sandstone rock, flowering in February, May, July, and August, and fruiting in August. Murça Pires & Black 2259 is a mixture with something rubiaceous.

Additional citations: BRAZIL: Bahia: Lützelburg 536 (Mu). Goiás: G. Gardner 3488 [Macbride photos 10698 & 25176] (B—type, M—istotype, N—istotype, N—photo of type, W—1066780—istotype, W—photo of isotype, W—photo of type); Lützelburg 631 (Mu, W—1716263, Z), 1340 (Mu), 1443 (Mu). Maranhão: Murça Pires & Black 1609a (N), 2259 in part (N). Rio de Janeiro: Jobert 1221 (P). São Paulo: Glaziou 10108 (P). MOUNTED ILLUSTRATIONS: drawings by Körnicke (B).

SYNGONANTHUS REFLEXUS Gleason, *Bull. Torrey Bot. Club* 58: 327--328. 1931.

Synonymy: *Leiothrix echinulata* Moldenke, *Bull. Torrey Bot. Club* 77: 390. 1950.

Bibliography: Gleason, *Bull. Torrey Bot. Club* 58: 327--328. 1931; A. W. Hill, *Ind. Kew. Suppl.* 9: 272. 1938; Fedde & Schust. in *Just, Bot. Jahresber.* 59 (2): 20. 1939; Moldenke, *Known Geogr. Distrib. Erioc.* 6 & 59. 1946; Moldenke, *Alph. List Cit.* 3: 775. 1949; Moldenke, *Known Geogr. Distrib. Verbenac.*, [ed. 2], 65, 93, & 213. 1949; Moldenke, *Bull. Torrey Bot. Club* 77: 390. 1950; Moldenke, *Phytologia* 4: 330. 1953; E. J. Salisb., *Ind. Kew. Suppl.* 11: 133. 1953; Moldenke, *Résumé* 69, 74, 109, 309, & 493. 1959; Tomlinson in C. R. Metcalfe, *Anat. Monocot.* 3: 149, 159, 161, 162, 175, 184, 186, 189, & 191. 1969; Moldenke, *Fifth Summ.* 1: 120, 128, & 176 (1971) and 2: 547 & 965. 1971; Cárdenas de Guevara, *Act. Bot. Venez.* 10: 39. 1975; Moldenke, *Phytologia* 36: 35.

1977.

This species is based on G. H. H. Tate 305 from swampy ground at the Grand Savanna, Esmeralda, Amazonas, Venezuela, deposited in the Britton Herbarium at the New York Botanical Garden. The type of Leiotoxix echinulata is P. H. Allen 3199 from Yapoboda, Vaupés, Colombia, collected on December 10, 1943, and deposited in the herbarium of the Missouri Botanical Garden at St. Louis.

Gleason (1931) says that "The species is a member of the section Thysanocephalus Koern., as shown by its campanulate heads and imbricate bracts. Among the species of this section, its nearest allies appear to be S. centauroides (Bong.) Ruhl. and S. squarrosus Ruhl., both of Minas Geraes and both lacking the prominently reflexed bracts of our species."

Recent collectors describe this plant as growing to 30 cm. tall, the leaves in several planes, coriaceous, rich-green, the involucre buff-brown, the heads white, the flowers white or dull-white, and (according to Tate) the "petals large" [surely an error in observation]. They have found it growing on savannas and wet savannas and those with a quartzite base, in swampy ground, and around the periphery of swamps, at altitudes of 100—2100 meters, flowering from April to August and October to December, fruiting in April and November. Maguire and his associates refer to it as "abundant", "locally frequent in savannas and sabanitas", "locally abundant in scrub savanna", and "common perennial herb forming hummocks in savannas". Williams says of it "una de las plantas más corrientes en los claros en la sabana".

Additional citations: COLOMBIA: Vaupés: P. H. Allen 3199 (E, F--photo, N, N--photo, Z--photo); Maguire, Wurdack, & Keith 41845 (N); Schultes, Baker, & Cabrera 18178 (Ss); Schultes & Cabrera 14229 (Ss), 14348 (Ss), 18355 (W--2113113, W--2172130), 19172 (Ss, W--2172371), 19948 (Ss), 19990 (Ss). VENEZUELA: Amazonas: Fariñas, Velasquez, & Medina 450 (N); Foldats 3694 (N), 3831 (Ve); Maguire & Wurdack 35655 (N); Maguire, Wurdack, & Bunting 36352 (N), 36675 (Mu, N); Maguire, Wurdack, & Keith 41759 (B, B, Mu, N, S), 41803 (N), 41920 (N); Maguire, Wurdack, & Maguire 41681 (N, S); G. H. H. Tate 305 (N--type); Vareschi & Maegdefrau 6784 (Ve--42562); L. Williams 15068 (F--1189031, W--1877401); Wurdack & Adderley 42868 (N, S). Bolívar: J. A. Steyermark 75854 (Z). BRAZIL: Amazonas: Murça Pires 25 [Herh. IPEAN 15002] (Ld). Pará: Black & Ledoux 50-10570 (W--2250646); Ducke 8469 (Bs), 11317 (Bs), 11683 (Bs), 11941 (Bs); W. A. Egler 218 [Black 19502] (Bs), 270 [Black 19602] (Bs); Murça Pires, Black, Wurdack, & Silva 6182 (N), 6462 (N), 6470 (N), 6533 (N).

SYNGONANTHUS RETRORSO-CILIATUS Alv. Silv., Fl. Mont. 1: 347--349, pl. 220. 1928.

Synonymy: Syngonanthus retrorsociliatus Alv. Silv. apud Worsdell, Ind. Lond. Suppl. 2: 426. 1941.

Bibliography: *Alv. Silv., Fl. Mont.* 1: 347--349 & 420, pl. 220. 1928; Wangerin in *Just, Bot. Jahresber.* 57 (1): 478. 1937; Fedde in *Just, Bot. Jahresber.* 57 (2): 896. 1938; A. W. Hill, *Ind. Kew. Suppl.* 9: 272. 1938; Worsdell, *Ind. Lond. Suppl.* 2: 426. 1941; Moldenke, *Known Geogr. Distrib. Erioc.* 19 & 59. 1946; Moldenke, *Known Geogr. Distrib. Verbenac.*, [ed. 2], 93 & 214. 1949; Moldenke, *Résumé* 109 & 493. 1959; Moldenke, *Fifth Summ.* 1: 176 (1971) and 2: 965. 1971.

Illustrations: *Alv. Silv., Fl. Mont.* 1: pl. 220. 1928.

This species apparently based on three collections by Álvaro da Silveira from "In campis arenosis in serra do Chapadão et serra da Babylonia" and "in campis arenosis prope Milho Verde, in serra do Espinhaço", Minas Gerais, Brazil, collected in April and June, 1925, and all apparently numbered "747" in the Silveira herbarium. On page 420 of his work (1928) Silveira cites only the 747 from "Serra da Babylonia....1925" so I suppose this should be selected as the lectotype. He comments that the "Species ob folia retrorsociliata certe notabilis". Thus far it is known only from the original collections.

SYNGONANTHUS RETRORSUS *Alv. Silv., Fl. Mont.* 1: 344--345, pl. 218, fig. 2. 1928.

Bibliography: *Alv. Silv., Fl. Mont.* 1: 344--345 & 420, pl. 218, fig. 2. 1928; Wangerin in *Just, Bot. Jahresber.* 57 (1): 478. 1937; Fedde in *Just, Bot. Jahresber.* 57 (2): 896. 1938; A. W. Hill, *Ind. Kew. Suppl.* 9: 272. 1938; Worsdell, *Ind. Lond. Suppl.* 2: 426. 1941; Moldenke, *Known Geogr. Distrib. Erioc.* 19 & 59. 1946; Moldenke, *Known Geogr. Distrib. Verbenac.*, [ed. 2], 93 & 214. 1949; Moldenke, *Résumé* 109 & 493. 1959; Moldenke, *Fifth Summ.* 1: 176 (1971) and 2: 965. 1971.

Illustrations: *Alv. Silv., Fl. Mont.* 1: pl. 218, fig. 2. 1928.

This species is based on *A. Silveira* 846 from "In campis inter Itacambira et Juramento", Minas Gerais, Brazil, collected in July, 1926, and deposited in the Silveira herbarium. On page 420 of his work (1928) Silveira gives only "Itacambira" as the type locality. He comments that the "Species a speciebus affinibus pilis pedunculorum retrorsis praecipue differt". Thus far it is known only from the original collection.

SYNGONANTHUS RHIZONEMA Ruhl. in *Engl., Pflanzenreich* 13 (4-30): 269. 1903.

Synonymy: *Paepalanthus rhizonema* Ruhl. ex Moldenke, *Résumé Suppl.* 2: 10, in syn. 1960.

Bibliography: Ruhl. in *Engl., Pflanzenreich* 13 (4-30): 264, 269, & 293. 1903; Prain, *Ind. Kew. Suppl.* 3: 175. 1908; Moldenke, *Known Geogr. Distrib. Erioc.* 19 & 59. 1946; Moldenke, *Known Geogr. Distrib. Verbenac.*, [ed. 2], 93 & 214. 1949; Moldenke, *Phytologia* 4: 330. 1953; Moldenke, *Résumé* 109 & 493. 1959; Moldenke, *Résumé Suppl.* 2: 10. 1960; Moldenke, *Fifth Summ.* 1: 176 (1971) and 2: 589 & 965, 1971; Angely, *Fl. Anal. & Fitogeogr. Est. S. Paulo*, ed. 1, 1163 & *Ind.* 28. 1972.

This species is based on Glaziou 13284 from "nahe São Paulo, im Moor", São Paulo, Brazil, flowering in April, deposited in the herbarium of the Botanisches Museum in Berlin, where it was photographed by Macbride as his type photograph number 10699. Ruhland (1903) says that the "Species habitu valde insignis, P. inundato Koern. proxima". The printed labels accompanying Glaziou's collection are inscribed "Rio de Janeiro", but the collection was obviously made in São Paulo.

The Angely work, cited above, is date "1970" on its title-page, but was not actually published until two years later.

Additional citations: BRAZIL: São Paulo: Glaziou 13284 [Macbride photos 10699] (B--type, N--photo of type, W--photo of type).

SYNGONANTHUS RIVULARIS Moldenke, Mem. N. Y. Bot. Gard. 9: 411--412. 1957.

Bibliography: Moldenke, Mem. N. Y. Bot. Gard. 9: 411--412. 1957; Moldenke, Résumé 74 & 493. 1959; Moldenke, Résumé Suppl. 3: 12. 1962; G. Taylor, Ind. Kew. Suppl. 13: 132. 1966; Moldenke, Fifth Summ. 1: 128 (1971) and 2: 965. 1971.

This species is based on Steyermark & Wurdack 792 from swampy depressions along the river in wet savannas along the east branch of the headwaters of the Río Tirica, at 2120 meters altitude, in the central section of the Chimantá Massif, Bolívar, Venezuela, on February 12, 1955, and is deposited in the Britton Herbarium at the New York Botanical Garden. The collectors note that the species was locally frequent, forming large masses. Foldats 3829 is a mixture with S. tenuis (H.B.K.) Ruhl.

Citations: VENEZUELA: Amazonas: Foldats 3700 (N), 3829 in part (N). Bolívar: Steyermark & Wurdack 792 (Ba--isotype, Mu--isotype, N--type).

SYNGONANTHUS ROBINSONII Moldenke, Phytologia 17: 437. 1968.

Bibliography: Moldenke, Phytologia 17: 437 & 438, pl. 2. 1968; Anon., Assoc. Étud. Tax. Fl. Afr. Trop. Index 1968: 25. 1969; Anon., Biol. Abstr. 50 (8): B.A.S.I.C. S.186. 1969; Moldenke, Biol. Abstr. 50: 4149. 1969; Rickett & Becker, Bull. Torrey Bot. Club 96: 387. 1969; Hocking, Excerpt. Bot. A.16: 39. 1970; Moldenke, Fifth Summ. 1: 246 (1971) and 2: 964. 1971; Heslop-Harrison, Ind. Kew. Suppl. 15: 133. 1974.

Illustrations: Moldenke, Phytologia 17: 438, pl. 2. 1968.

Collectors have found this plant growing in damp soil over rocky outcrops, flowering and fruiting in April.

A letter to me from Sir George Taylor, dated March 12, 1968, says, in part, that "we have a specimen of the Syngonanthus E. A. Robinson 5167 from Northern Rhodesia. It has not been identified with any known African species, and is at the moment provisionally named Syngonanthus sp. near S. schlechteri Ruhl. A note in the herbarium adds that the Robinson specimen matches B. D. Burt 3970 from Tanganyika and Richards 9307, 9340 and 10012, all from Northern Rhodesia. There is no authentic material of S. angolensis in

the Kew Herbarium, so it is just possible that the plant in question may be conspecific with this. It is certainly distinct from both S. chevalieri and S. wahlbergii."

Citations: ZAMBIA: E. A. Robinson 5167 [N. Y. Bot. Gard. Type Photos N.S. 8847] (Mu--isotype, N--type, N--photo of isotype, Z--isotype, Z--photo of isotype, Z--drawings of type), 6586 (Mu, N).

SYNGONANTHUS RUFIPES Alv. Silv., Fl. Serr. Min. 77. 1908.

Bibliography: Alv. Silv., Fl. Serr. Min. 77. 1908; Alv. Silv., Fl. Mont. 1: 388 & 420, pl. 247. 1928; Fedde & Schust. in Just, Bot. Jahresber. 46 (2): 5. 1924; A. W. Hill, Ind. Kew. Suppl. 8: 231. 1933; Wangerin in Just, Bot. Jahresber. 57 (1): 478. 1937; Fedde in Just, Bot. Jahresber. 57 (2): 896. 1938; Worsdell, Ind. Lond. Suppl. 2: 426. 1941; Moldenke, Known Geogr. Distrib. Erioc. 19 & 59. 1946; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 93 & 214. 1949; Moldenke, Résumé 109 & 493. 1959; Moldenke, Fifth Summ. 1: 176 (1971) and 2: 965. 1971; Moldenke, Phytologia 37: 253. 1977.

Illustrations: Alv. Silv., Fl. Mont. 1: pl. 247. 1928.

The type of this species is A. Silveira 454 from "In campis prope Capão dos Palmitos, ad Serra do Cipó", Minas Gerais, Brazil, collected in April, 1905, and deposited in the Silveira herbarium. Silveira (1908) comments that the "Species ob tapetam papillosum in summa foliorum parte insignis". In the text of his 1928 work he refers to "Tabula CCXLVIII" as illustrative of this species, but the plate referred to is labeled "TABULA CCXLVII" — plate 248 actually illustrates S. glaber Alv. Silv.

Citations: BRAZIL: Minas Gerais: Murça Pires & Black 2800 (Be—63256).

SYNGONANTHUS RUFO-ALBUS Alv. Silv., Fl. Mont. 1: 420, pl. 223, fig. 1, hyponym. 1928.

Synonymy: Syngonanthus rufoalbus Alv. Silv. apud Worsdell, Ind. Lond. Suppl. 2: 426. 1941.

Bibliography: Alv. Silv., Fl. Mont. 1: 420, pl. 223, fig. 1. 1928; Wangerin in Just, Bot. Jahresber. 57 (1): 478. 1937; Fedde in Just, Bot. Jahresber. 57 (2): 896. 1938; Worsdell, Ind. Lond. Suppl. 2: 426. 1941; Moldenke, Phytologia 2: 374 & 381. 1947; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 93 & 214. 1949; Moldenke, Phytologia 4: 330. 1953; Mendes Magalhães, Anais V Reun. Anual Soc. Bot. Bras. 236—237. 1956; Moldenke, Résumé 109 & 493. 1959; Rennó, Levant. Herb. Inst. Agron. Minas 72. 1960; Moldenke, Fifth Summ. 1: 176 (1971) and 2: 965. 1971; Moldenke, Phytologia 36: 47. 1977.

Illustrations: Alv. Silv., Fl. Mont. 1: pl. 223, fig. 1. 1928.

This species is apparently based on A. Silveira 791 from Milho Verde, Minas Gerais, Brazil, collected in 1926 and deposited in the Silveira herbarium. As far as I am aware, no formal description of the species has ever been published. Mendes Magal-

hães says that it flowers in July and August. Wangerin (1937) cites Silveira's original (1928) illustration as "tab. CCXIII", but the plate actually is labeled "CCXXIII" -- plate 213 depicts S. bicolor Alv. Silv.

SYNGONANTHUS RUPRECHTIANUS (Körn.) Ruhl. in Engl., Pflanzenreich 13 (4-30): 271 [as "Rupprechtianus"]. 1903; Prain, Ind. Kew. Suppl. 3: 175. 1908.

Synonymy: Paepalanthus ruprechtianus Körn. in Mart., Fl. Bras. 3 (1): 437. 1863. Dupatya ruprechtiana (Körn.) Kuntze, Rev. Gen. Pl. 2: 746. 1891. Dupatya ruprechtiana Kuntze apud Durand & Jacks., Ind. Kew. Suppl. 1, imp. 1, 145. 1902. Syngonanthus rupprechtianus (Körn.) Ruhl. in Engl., Pflanzenreich 13 (4-30): 271. 1903. Paepalanthus rupprechtianus Körn. apud Ruhl. in Engl., Pflanzenreich 13 (4-30): 271, in syn. 1903. Dupatya rupprechtiana Kuntze apud Ruhl. in Engl., Pflanzenreich 13 (4-30): 271, in syn. 1903. Dupatya rupprechtiana (Körn.) Kuntze apud Moldenke, Fifth Summ. 1: 485, in syn. 1971.

Bibliography: Körn. in Mart., Fl. Bras. 3 (1): 437 & 507. 1863; Kuntze, Rev. Gen. Pl. 2: 746. 1891; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 1, 2: 402. 1894; Durand & Jacks., Ind. Kew. Suppl. 1, imp. 1, 145. 1902; Ruhl. in Engl., Pflanzenreich 13 (4-30): 271, 272, & 293. 1903; Prain, Ind. Kew. Suppl. 3: 175. 1908; Alv. Silv., Fl. Mont. 1: 420. 1928; Durand & Jacks., Ind. Kew. Suppl. 1, imp. 2, 145. 1941; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 2, 2: 402. 1946; Moldenke, Known Geogr. Distrib. Erioc. 19, 31, 53, & 59. 1946; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 93 & 214. 1949; Durand & Jacks., Ind. Kew. Suppl. 1, imp. 3, 145. 1959; Moldenke, Résumé 109, 282, 328, & 493. 1959; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 3, 2: 402. 1960; Moldenke, Fifth Summ. 1: 176 & 485 (1971) and 2: 590 & 965. 1971; Moldenke, Phytologia 36: 35, 42, 45, & 47 (1977) and 37: 493. 1977.

This rare (or poorly understood) species is based on an unnumbered Riedel collection from somewhere in Minas Gerais, Brazil, probably deposited in the Leningrad herbarium. Silveira (1928) cites A. Silveira 664 from Itambé, Minas Gerais, collected in 1918, and deposited in the Silveira herbarium. As far as I know, these are the only two collection known of this species. Unfortunately, misled by Ruhland's (1903) spelling of the specific epithet, I hitherto misspelled it "rupprechtianus" in all of my works in which the taxon is mentioned. Originally it was proposed by Körnicke (1863) with a single "p". I see no valid reason for "correcting" the original spelling.

SYNGONANTHUS SAVANNARUM Moldenke, Phytologia 2: 352 & 381, nom. nud. 1947; in Maguire & al., Bull. Torrey Bot. Club 75: 202. 1948.

Bibliography: Moldenke, Phytologia 2: 352 & 381. 1947; Moldenke in Maguire & al., Bull. Torrey Bot. Club 75: 202. 1948; Moldenke, Alph. List Cit. 3: 701 & 894 (1949) and 4: 1166. 1949; Moldenke,

Known Geogr. Distrib. Verbenac., [ed. 2], 67 & 214. 1949; Moldenke, Phytologia 4: 330. 1953; E. J. Salisb., Ind. Kew. Suppl. 11: 244. 1953; Moldenke, Résumé 74, 76, & 493. 1959; Moldenke, Résumé Suppl. 1: 5. 1959; Hocking, Excerpt. Bot. A.4: 593. 1962; Moldenke, Fifth Summ. 1: 128 & 131 (1971) and 2: 965. 1971; Moldenke, Phytologia 33: 51 & 273. 1976.

This puzzling species is based on Maguire & Fanshawe 23280 from damp soil on the Kaieteur Savanna, Guyana, deposited in the Britton Herbarium at the New York Botanical Garden. As was stated in the original description, this plant looks much more like a Paepalanthus than it does a Syngonanthus in general aspect. In fact, it closely resembles P. glaziovii Ruhl. and P. steyermarkii Moldenke. The former is from Minas Gerais, Brazil, and from the latter it may be distinguished by the appressed pubescence on its leaves and peduncles (in P. steyermarkii the pubescence is spreading). It also resembles P. cristatus Moldenke.

Recent collectors have found S. savannarum growing as a forb in brejo (sedge meadows) and report it "frequent" on dry savannas and frequently forming dense dome-shaped or pulvinate cushions in the moist sand of savannas, at altitudes of 1000--1330 meters, flowering in February, April, May, and November. They refer to the flower-heads as "white". In Guyana it is called "pin-cushion".

The Steyermark & Wurdack 331 and Wurdack & Adderley 42874, distributed as S. savannarum, are now regarded by me as representing f. glabrescens Moldenke.

Additional citations: VENEZUELA: Bolívar: B. Maguire 33729 (Mu, N); J. A. Steyermark 93759 (N, Z). GUYANA: D. H. Davis 779 (N); Maguire, Bagshaw, & Maguire 40653 (Mu, N); Maguire & Fanshawe 32536 (N).

SYNGONANTHUS SAVANNARUM var. GLABRESCENS Moldenke in Maguire & Wurdack, Mem. N. Y. Bot. Gard. 9: 412. 1957.

Bibliography: Moldenke in Maguire & Wurdack, Mem. N. Y. Bot. Gard. 9: 412. 1957; Moldenke, Résumé 74 & 493. 1959; Moldenke, Résumé Suppl. 1: 4. 1964; Moldenke, Fifth Summ. 1: 128 (1971) and 2: 965. 1971; Moldenke, Phytologia 33: 51. 1976.

This glabrous or subglabrous variety is based on Steyermark & Wurdack 539 from along a rivulet at the base of the Upper Falls of the Río Tirica above Summit Camp, where it was growing in dense tufts, at an altitude of 1050--1940 meters, in the Central Section of the Chimantá Massif, Bolívar, Venezuela, collected on February 7, 1955, and deposited at the New York Botanical Garden. The variety has also been encountered at 125 meters altitude in Amazonas. Collectors refer to it as "locally abundant" in clumps in open sandy areas of scrub forest, the flowers white, and found it in anthesis in February and June, in flower and fruit in July. Ruiz-Terán & López-Palacios describe the plant as a "hierba psamófila y heliófila, 5--10 cm. de alto, repetidamente bifurcada; capítulos hemisféricos, 4--5 mm. de diámetro, con escapo corto pero exserto;

flores pequeñas, blancas".

The specimens cited below, exclusive of the type collection, were originally distributed as typical S. savannarum Moldenke in various herbaria or as Paepalanthus muscosus Körn.

Citations: VENEZUELA: Amazonas: Wurdack & Adderley 42874 (N, S). Bolívar: Ruiz-Terán & López-Palacios 11217 (Z); Steiermark & Wurdack 331 (N), 539 (N--type).

SYNGONANTHUS SCHLECHTERI Ruhl. in Schlecht., Westafri. Kautschuk-Exped. 272, nom. nud. 1900; in Engl., Pflanzenreich 13 (4-30): 247--248. 1903.

Synonymy: Paepalanthus schlechteri (Ruhl.) Macbr., Candollea 5: 348. 1934.

Bibliography: Ruhl. in Schlecht., Westafri. Kautschuk-Exped. 272. 1900; Ruhl. in Engl., Pflanzenreich 13 (4-30): 244, 247--248, & 293. 1903; Thiselt.-Dyer, Ind. Kew. Suppl. 2: 180. 1904; Pilger in Engl. & Prantl, Nat. Pflanzenfam. Ergänzt. 2, Nachtr. 3 zu 2: 41. 1908; H. Lecomte, Bull. Soc. Bot. France 55: 595 & 597. 1909; J. F. Macbr., Candollea 5: 348. 1934; A. W. Hill, Ind. Kew. Suppl. 9: 200. 1938; Moldenke, Known Geogr. Distrib. Erioc. 21 & 59. 1946; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 115 & 214. 1949; Moldenke, Phytologia 4: 330. 1953; Moldenke, Résumé 142, 328, & 492. 1959; Moldenke, Fifth Summ. 1: 231 (1971) and 2: 590 & 965. 1971; Moldenke, Phytologia 35: 308. 1977.

The Pilger (1908) work cited in the bibliography of this species is dated "1906" by Stapf (1931); the Lecomte (1909) paper was published as part of the November 13, 1908, session report of the Society, but according to the "Index Kewensis" was not actually published until 1909.

This species is based on R. Schlechter 12453 from sandy moist ground at Stanley Pool, Dofo, Zaire, flowering in June, deposited in the Berlin herbarium.

Citations: ZAIRE: Bacicchi 403 (Ba, Mu); R. Schlechter 12453 (B--type, B--isotype, Z--isotype).

SYNGONANTHUS SCHWACKEI Ruhl. in Engl., Pflanzenreich 13 (4-30): 259. 1903.

Bibliography: Ruhl. in Engl., Pflanzenreich 13 (4-30): 245, 259, & 293. 1903; Prain, Ind. Kew. Suppl. 3: 175. 1908; Alv. Silv., Fl. Mont. 1: 420. 1928; Moldenke, Known Geogr. Distrib. Erioc. 19 & 59. 1946; Moldenke, Phytologia 2: 493. 1948; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 93 & 214. 1949; Moacyr do Amaral Lisboa, Rev. Esc. Minas 5. 1951; Moldenke, Phytologia 4: 330. 1953; Moldenke, Résumé 109 & 493. 1959; Moldenke, Fifth Summ. 1: 176 (1971) and 2: 965. 1971.

This species is based on Schwacke 547 [I.1221] from "Buritysal bei Burity doce...1878", Maranhão, Brazil, deposited in the Berlin herbarium. Ruhland (1903) comments that the "Species valde insignis. Habitu tenero, pedunculorum indumento et bracteis involucrentibus ab affinis recedit. Species 2 antecedentibus

proxima." The species to which he here refers are S. anthemiflorus (Bong.) Ruhl. and S. laricifolius (G. Gardn.) Ruhl. Silveira (1928) cites A. Silveira 619, collected in Bahia in 1912. As far as I know, the species is known only from these two collections.

Citations: BRAZIL: Maranhão: Schwacke 547 [I.1221] (B--type).

SYNGONANTHUS SCLEROPHYLLUS Ruhl. in Engl., Pflanzenreich 13 (4-30): 255. 1903.

Synonymy: Paepalanthus sclerophyllus Ruhl. ex Moldenke, Résumé Suppl. 1: 22, in syn. 1959. Syngonanthus sclerophylla Ruhl. ex Moldenke, Résumé Suppl. 12: 12, in syn. 1965.

Bibliography: Ruhl. in Engl., Pflanzenreich 13 (4-30): 245, 255, & 293. 1903; Prain, Ind. Kew. Suppl. 3: 175. 1908; Moldenke, Known Geogr. Distrib. Erioc. 19 & 59. 1949; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 93 & 214. 1949; Moldenke, Phytologia 4: 330. 1953; Moldenke, Résumé 109 & 493. 1959; Moldenke, Résumé Suppl. 1: 22 (1959) and 12: 12. 1965; Moldenke, Fifth Summ. 1: 176 (1971) and 2: 590, 638, & 965. 1971; Moldenke, Phytologia 36: 67. 1977.

This species is based on Glaziou 22305 from "Burity Vermelho, in Morästen", Goiás, Brazil, flowering in June, and deposited in the herbarium of the Botanisches Museum in Berlin where it was photographed by Macbride as his type photograph number 10700. Ruhland (1903) comments about this species: "Haud scio, an non melius varietas modo S. goyazensis planta nostra sit". Thus far it is known only from the original collection.

Citations: BRAZIL: Goiás: Glaziou 22305 [Macbride photos 10700] (B--type, N--photo of type, W--photo of type).

SYNGONANTHUS SICKII Moldenke, Phytologia 7: 90--91. 1959.

Bibliography: Moldenke, Phytologia 7: 90--91. 1959; Moldenke, Résumé Suppl. 1: 7 & 26 (1959) and 2: 5. 1960; Moldenke, Biol. Abstr. 35: 1688. 1960; Hocking, Excerpt. Bot. A.5: 592. 1962; G. Taylor, Ind. Kew. Suppl. 13: 132. 1966; Moldenke, Fifth Summ. 1: 176 (1971) and 2: 965. 1971.

Citations: BRAZIL: Pará: Sick B.667a [Herb. Pabst 4616] (Bd, Z), s.n. [Serra do Cachimbo, 5.57; Herb. Pabst 4703] (Bd--type).

SYNGONANTHUS SIMILIS Ruhl. in Engl., Pflanzenreich 13 (4-30): 259. 1903.

Bibliography: Ruhl. in Engl., Pflanzenreich 13 (4-30): 245, 259, & 293. 1903; Prain, Ind. Kew. Suppl. 3: 175. 1908; Moldenke, Known Geogr. Distrib. Erioc. 19 & 59. 1946; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 93 & 214. 1949; Moldenke, Phytologia 4: 330. 1953; Moldenke, Résumé 109 & 493. 1959; Moldenke, Fifth Summ. 1: 176 (1971) and 2: 965. 1971.

This species is based on an unnumbered Sena collection from the Serra do Cipó, Minas Gerais, Brazil, flowering in August, and designated as no. 14570 in the Schwacke herbarium deposited

at Berlin, photographed there by Macbride as his type photograph number 10701. Apparently Ruhland's first choice of a name for this species was S. schwackei -- a name which he later gave to another species (q.v.). Thus far S. similis is known only from the original collection.

Additional citations: BRAZIL: Minas Gerais: Sena s.n. [Herb. Schwacke 14570; Macbride photos 10701] (B--type, N--photo of type, W--photo of type, Z--isotype).

SYNGONANTHUS SIMPLEX (Miq.) Ruhl. in Engl., Pflanzenreich 13 (4-30): 248--249. 1903.

Synonymy: Paepalanthus hispidus Klotzsch in M. R. Schomb., Verz. Faun. & Fl. Brit.-Guian. [Reisen Brit.-Guian. 3:] 1116, hyponym. 1848. Paepalanthus simplex Miq., Stirp. Surin. Sel. [Natuurk. Verh. Holl. Maatsch. Wetensch. Haarlem Verz. 2 (7):] 222. 1850. Eriocaulon simplex Miq. ex Steud., Syn. Pl. Glum. 2: [Cyp.] 280. 1855. Eriocaulon hostmanni Steud., Syn. Pl. Glum. 2: [Cyp.] 281. 1855. Eriocaulon simplex Benth. ex Steud., Syn. Pl. Glum. 2: [Cyp.] 334. 1855. Dupatya simplex (Miq.) Kuntze, Rev. Gen. Pl. 2: 746. 1891. Eriocaulon simplex Steud. apud Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 1, 1: 879, in syn. 1893. Dupatya simplex Kuntze apud Durand & Jacks., Ind. Kew. Suppl. 1, imp. 1, 145. 1902. Eriocaulon simplex (Miq.) Steud. ex Uittien & Heyn in Pulle, Fl. Surin. 1: 221, in syn. 1938. Eriocaulon hostmannii Steud. ex Moldenke, Known Geogr. Distrib. Erioc. 35, in syn. 1946.

Bibliography: Klotzsch in M. R. Schomb., Verz. Faun. & Fl. Brit.-Guian. [Reisen Brit.-Guian. 3:] 1116. 1848; Walp., Ann. Bot. Syst. 3: 662 (1852) and 3: 1093. 1853; Steud., Syn. Pl. Glum. 2: [Cyp.] 280, 281, & 334. 1855; Körn. in Mart., Fl. Bras. 3 (1): 297, 462, 463, & 507. 1863; Kuntze, Rev. Gen. Pl. 2: 746. 1891; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 1, 1: 878 & 879 (1893) and imp. 1, 2: 402. 1894; N. E. Br., Trans. Linn. Soc. Lond. Bot., ser. 2, 6: 72. 1901; Durand & Jacks., Ind. Kew. Suppl. 1, imp. 1, 145. 1902; Ruhl. in Engl., Pflanzenreich 13 (4-30): 244, 248--249, 284, 286, 287, 290, 292, & 293. 1903; Gleason, Bull. Torrey Bot. Club 58: 328. 1931; Uittien & Heyn in Pulle, Fl. Surin. 1 [Meded. Konink. Ver. Ind. Inst. 30, Afd. Handelms. 11:] 220 & 221. 1938; Durand & Jacks., Ind. Kew. Suppl. 1, imp. 2, 145. 1941; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 2, 1: 878 & 879 (1946) and imp. 2, 2: 402. 1946; Moldenke, Known Geogr. Distrib. Erioc. 6, 7, 31, 35, 40, 49, 54, & 59. 1946; Moldenke, Phytologia 2: 352. 1947; Moldenke in Maguire & al., Bull. Torrey Bot. Club 75: 202. 1948; Moldenke, Alph. List Cit. 3: 701 (1949) and 4: 985. 1949; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 65, 67, 68, 93, & 214. 1949; Moldenke in Maguire, Mem. N. Y. Bot. Gard. 8: 102. 1953; Moldenke, Phytologia 4: 331. 1953; Durand & Jacks., Ind. Kew. Suppl. 1, imp. 3, 145. 1959; Moldenke, Résumé 69, 74, 76, 77, 109, 282, 289,

292, 325, 328, & 493. 1959; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 3, 1: 878 & 879 (1960) and imp. 3, 2: 402. 1960; Moldenke, Résumé Suppl. 12: 12. 1965; Van Donselaar, Wentia 14: 70. 1965; Lindeman & Görts-van Rijn in Pulle & Lanjouw, Fl. Surin. 1 [Meded. Konink. Inst. Trop. 30, Afd. Trop. Prod. 11]: 335--337. 1968; Moldenke, Fifth Summ. 1: 120, 128, 131, 133, 176, & 486 (1971) and 2: 503, 513, 584, 590, & 965. 1971; Moldenke, Phytologia 29: 294 (1974), 31: 383 & 386 (1975), 35: 112, 306, 307, 339, 340, & 442 (1977), 36: 63--65, 72, & 74 (1977), and 37: 54, 71, & 85. 1977.

Ruhland (1903) reduced this species to the synonymy of S. biformis N. E. Br., while Uittien & Heyn (1938) reduced it [along with S. biformis] to S. gracilis (Bong.) Ruhl. These three taxa are admittedly very similar in general appearance, but Lindeman & Görts-van Rijn (1968) distinguish them as follows:

1. Male and female flowers not very unequal in size or shape; involucre bracts about the same length as the flowers.
 2. Leaves about 5 mm. long, densely rosulate, white-villous and pilose, later glabrous; peduncles 5--7 cm. long; involucre bracts glabrous, the inner ones ciliate; style without appendages.....S. simplex.
 - 2a. Leaves 1--3 cm. long, cespitose, glabrous or slightly puberulous; peduncles 6--30 cm. long; involucre bracts equaling or longer than the flowers; sepals at first puberulous in the middle, later glabrous.....S. gracilis.
 - 1a. Male flowers about half as long as the female ones, irregular, longer-pedicellate; heads somewhat echinate in appearance; leaves 6--8 mm. long, arachnoid, tomentose to glabrous above; involucre bracts much shorter than the flowers.S. biformis.
- Gleason, in his unpublished Flora of British Guiana, differentiates them and what he regarded as related taxa as follows:
1. Lateral sepals of the staminate flowers strongly falcate and inequilateral.
 2. Pistillate and staminate flowers, including the pedicels, about equal in length.....S. simplex.
 - 2a. Pistillate flowers about twice as long as the staminate ones.....S. biformis.
 - 1a. Lateral sepals of staminate flowers not falcate, equilateral.
 3. Bracts obovate, broadly rounded at the summit..S. gracilis.
 - 3a. Bracts oblong, acute to obtuse at the apex.
 4. Leaves rosulate; peduncles not glandular; sinus of the sheaths, opposite the lamina, acute..S. eriophyllus [now regarded as not distinct from S. gracilis].
 - 4a. Leaves crowded on a very short stem; peduncles glandular; sinus of the sheaths broadly rounded.....S. glandulosus.

The type of S. simplex was collected by Fr. W. R. Hostmann (no. 633) in Surinam; Eriocaulon hostmanni is also based on a Hostmann collection (no. 1066) from Surinam, both deposited in the Utrecht herbarium. Lindeman & Görts-van Rijn (1968) describe

S. simplex as follows: "Leaves in a rosette, rigid, subobtusely, above white-villous and pilose at first, soon glabrous, 4--7 mm. long. Peduncles few, hairs spreading, glandular-puberulous, later glabrous, 5--7 cm long. Sheaths narrow, striate, with short, 1--1.2 cm wide lamina [sic!]. Heads subglobose, glabrous, white, 4--5 mm wide. Involucral bracts oblong-lanceolate, obtusish, glabrous, white, the inner ones ciliate except at the apex. Style without appendages." They cite Hostmann 633 and Donselaar 359 from Surinam. Gleason describes it as having "Leaves narrowly linear, closely cespitose, more or less recurved, often few in number, 5--15 mm. long, thinly hirsute; peduncles few, 8--15 cm. tall, slightly twisted, thinly pubescent; sheaths exceeding the leaves, twisted, hirtellous; heads whitish, hemispheric, 4--5 mm. wide; bracts oblong, obtuse, glabrous, white." He cites Jenman 3767 and Schomburgk 190.5 from Guyana.

Recent collectors refer to leaves of S. simplex as flaccid and the flower-heads as white or "pale-white" and have found the plant growing on sandy or on white sand savannas, in moist sandy places on savannas, on lake shores, in standing water of sandy swales, on sand in periodically flooded savannas, on shaded stream banks, and in thin woodland adjacent to rock sandstone exposures, flowering in January, June, October, and November, and fruiting in January and November, at altitudes of 120--750 meters. Maguire and his associates refer to it as "locally abundant" in sandy moist soil along trails and "frequent" on white sand on the borders of small savannas. The vernacular name, "aribái-panárukusí", is recorded for it in Venezuela.

Ruhland (1903) cites Passarge & Selwyn 580 from Venezuela and Hostmann 633 and Kegel s.n. from Surinam.

Material of S. simplex has been misidentified and distributed in some herbaria as Paepalanthus sp., P. subtilis Miq., and Syngonanthus biformis (N. E. Br.) Gleason. Hostmann 633 is a mixture with Syngonanthus gracilis var. koernickeanus Ruhl., while Ruiz-Terán & López-Palacios 11222a is a mixture with Paepalanthus subtilis Miq. The Steyermark, Dunsterville, & Dunsterville 113154, distributed as Syngonanthus simplex, actually is S. gracilis (Bong.) Ruhl.

Additional citations: COLOMBIA: Amazonas: Schultes & Cabrera 12381 (Ss, W--2170835), 13505 (Ss), 14963 (Z). Vaupés: Schultes & Cabrera 19936 (Ss). VENEZUELA: Amazonas: Foldats 3690 (N); Maguire, Wurdack, & Keith 41793 (N, S). Bolívar: Ruiz-Terán & López-Palacios 11222a in part (Ac); Steyermark, Dunsterville, & Dunsterville 113135b (Ld), 113170 (Lc). GUYANA: Carrick 985 (Kl--3985). SURINAM: Donselaar & Donselaar 359 (Ut--93610B); Hostmann 633 (B--isotype, Ut--411--type). BRAZIL: Amazonas: Murça Pires 737 (W--2655152); Prance, Maas, Woolcott, Monteiro, & Ramos 16213 (Ld, N). LOCALITY OF COLLECTION UNDETERMINED: Herb. Inst. Agron. Norte 8 (Z). MOUNTED ILLUSTRATIONS: drawings

& notes by Körnicke (B).

SYNGONANTHUS SIMPLEX var. *APPENDICULIFER* Ruhl. in Engl., Pflanzenreich 13 (4-30): 248--249 [as "*appendiculifera*"]. 1903.

Synonymy: *Syngonanthus simplex* var. *appendiculifera* Ruhl. in Engl., Pflanzenreich 13 (4-30): 248. 1903. *Syngonanthus simplex* var. *appendiculiferus* Ruhl. ex Moldenke, Known Geogr. Distrib. Erioc. 6, 59, & 60. 1946.

Bibliography: Ruhl. in Engl., Pflanzenreich 13 (4-30): 248--249 & 293. 1903; Moldenke, Known Geogr. Distrib. Erioc. 6, 59, & 60. 1946; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 67 & 214. 1949; Moldenke, Résumé 76, 352, & 493. 1959; Moldenke, Résumé Suppl. 12: 12. 1965; Moldenke, Fifth Summ. 1: 131 (1971) and 2: 638 & 965. 1971; Moldenke, Phytologia 31: 383 & 386 (1975) and 37: 85. 1977.

Ruhland (1903) describes this variety as "Differt a forma typica foliis paullo latioribus et stylo appendiculifero" and bases it on (1) *Lloyd s.n.* from Georgetown, Guyana, and (2) *MacConnell & Quelch 126* from "Kotinga-Thal, nahe dem Roraima" -- the former deposited in the Munich herbarium and the latter presumably at Berlin. Material has been distributed in some herbaria as typical *S. simplex* (Miq.) Ruhl. and as *S. heteropeplus* (Körn.) Ruhl. On the other hand, the *Pittier 5841*, distributed as *S. simplex* var. *appendiculifer*, actually is *S. glandulosus* Gleason.

Syngonanthus simplex var. *appendiculifer* has been found growing in moist or marshy campos, flowering and fruiting in August and September.

Citations: GUYANA: *Lloyd s.n.* [Georgetown; N. Y. Bot. Gard. Neg. N. S. 3877] (Mu--cotype, N--photo of cotype, Z--photo of cotype). BRAZIL: Amazônas: *Lützelburg 20800* (Mu), *20875* (Mu, Z), *21053a* (Mu).

SYNGONANTHUS SINUOSUS Alv. Silv., Fl. Serr. Min. 75, pl. 28. 1908.

Bibliography: Alv. Silv., Fl. Serr. Min. 75, pl. 28. 1908; Fedde & Schust. in Just, Bot. Jahresber. 46 (2): 5. 1924; Alv. Silv., Fl. Mont. 1: 353--355 & 420, pl. 224. 1928; Stapf, Ind. Lond. 6: 248. 1931; A. W. Hill, Ind. Kew. Suppl. 8: 231. 1933; Wangerin in Just, Bot. Jahresber. 57 (1): 478. 1937; Fedde in Just, Bot. Jahresber. 57 (2): 896. 1938; Worsdell, Ind. Lond. Suppl. 2: 426. 1941; Moldenke, Known Geogr. Distrib. Erioc. 19 & 60. 1946; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 93 & 214. 1949; Moldenke, Résumé 109 & 493. 1959; Moldenke, Fifth Summ. 1: 176 (1971) and 2: 965. 1971.

Illustrations: Alv. Silv., Fl. Serr. Min. pl. 28. 1908; Alv. Silv., Fl. Mont. 1: pl. 224, fig. 2. 1928.

This species is based on *A. Silveira 448* from "In stagnis jacentibus in pratis altis montis Serra do Batatal, prope Capanema", Minas Gerais, Brazil, collected in April, 1906, and de-

posited in the Berlin herbarium. Silveira (1908) comments that the "Species cum S. rhizonemate Ruhl. valde affinis esse videtur, differt autem ab eo foliis glabris longioribus, pedunculis glabris atque robustis, vaginis glabris haud oblique fissis sed oblique truncatis et aliis characteribus". Thus far the species is known only from the original collection.

Citations: BRAZIL: Minas Gerais: A. Silveira 448 (B--type, Z--isotype).

SYNGONANTHUS SPADICEUS (Körn.) Ruhl. in Engl., Pflanzenreich 13 (4-30): 255--256. 1903.

Synonymy: Paepalanthus spadiceus Körn. in Mart., Fl. Bras. 3 (1): 452. 1863. Dupatya spadicea (Körn.) Kuntze, Rev. Gen. Pl. 2: 746. 1891. Dupatya spadicea Kuntze apud Durand & Jacks., Ind. Kew. Suppl. 1, imp. 1, 145. 1902.

Bibliography: Körn. in Mart., Fl. Bras. 3 (1): 278, 452, & 507. 1863; Körn. in Warm., Vidensk. Meddel. Nat. Foren. Kjöbenh. 23: 313. 1871; Kuntze, Rev. Gen. Pl. 2: 746. 1891; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 1, 2: 402. 1894; Durand & Jacks., Ind. Kew. Suppl. 1, imp. 1, 145. 1902; Ruhl. in Engl., Pflanzenreich 13 (4-30): 245, 255, 284, 292, & 293. 1903; Prain, Ind. Kew. Suppl. 3: 175. 1908; Durand & Jacks., Ind. Kew. Suppl. 1, imp. 2, 145. 1911; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 2, 2: 402. 1946; Moldenke, Known Geogr. Distrib. Erioc. 19, 31, 54, & 60. 1946; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 93 & 214. 1949; Moldenke, Phytologia 4: 331. 1953; Durand & Jacks., Ind. Kew. Suppl. 1, imp. 3, 145. 1959; Moldenke, Résumé 109, 282, 328, & 493. 1959; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 3, 2: 402. 1960; Moldenke, Fifth Summ. 1: 176 & 486 (1971) and 2: 590 & 965. 1971.

This species is based on Stephan s.n. from "bei Congonhas do Campo", Piauí [not Minas Gerais as erroneously stated by me in 1953], Brazil, probably deposited in the Munich herbarium. Ruhland (1903) erroneously cites page "453" as the page of the original description by Körnicke. In his original work (1863) Körnicke cites only the Stephan collection, but in his 1871 work he adds a Warming collection from Minas Gerais, deposited in the Copenhagen herbarium, where it was photographed by Macbride as his type photograph number 22295, even though it is not a type. Ruhland (1903) comments that the species is "Cum specie praecedente [S. pulcher] valde affinis".

Additional citations: BRAZIL: Minas Gerais: Warming 535 [Macbride photos 22295] (W--photo).

SYNGONANTHUS SQUARROSUS Ruhl. in Engl., Pflanzenreich 13 (4-30): 278. 1903.

Synonymy: Syngonanthus rigidulus Ruhl. ex Moldenke, Résumé Suppl. 1: 23, in syn. 1959. Syngonanthus silveirae Ruhl. ex Moldenke, Résumé Suppl. 1: 23, in syn. 1959.

Bibliography: Ruhl. in Engl., Pflanzenreich 13 (4-30): 276,

278, & 293. 1903; Prain, Ind. Kew. Suppl. 3: 175. 1908; Moldenke, Known Geogr. Distrib. Erioc. 19 & 60. 1946; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 93 & 214. 1949; Mendes Magalhães, Anais V Reun. Anual Soc. Bot. Bras. 242-243 & 276-277. 1956; Moldenke, Résumé 109 & 493. 1959; Moldenke, Résumé Suppl. 1: 23. 1959; Rennó, Levant. Herb. Inst. Agron. Minas 72. 1960; Eiten in Ferré, Simpos. Sôbre Cerrado 195. 1962; Moldenke, Fifth Summ. 1: 176 (1971) and 2: 638 & 965. 1971; Moldenke, Phytologia 36: 61 & 62. 1977.

This species is based on Glaziou 15541 from "Caraça, auf trockenen Campo", Minas Gerais, Brazil, flowering in June, and deposited in the Berlin herbarium where it was photographed by Macbride as his type photograph number 10602, the labels of which erroneously state that the photograph depicts Glaziou 15540. Ruhland (1903) comments that the "Species *S. centauroidei*, praesertim foliis obtusis et bracteis involucrantibus valde squarrosis proxima. Sed perbene 1) foliis semper planis neque tereti-crassis, 2) pedunculis semper 3costatis (nec 6 sulcatis). teretibus (nec herbaceo-planis), 3) habitu omnino graciliore differt". It also resembles *S. flexuosus* Alv. Silv. and *S. glaber* Alv. Silv.

Syngonanthus squarrosus has been found in anthesis from October to February as well as in April and June, in fruit in June. Eiten (1962) encountered it in "Sedge meadow on level ground at inner edge of river plain" and cites "M & M 8563". *Syngonanthus rigidulus* is based on A. Silveira 470 and S. silveirae on A. Silveira 430, both from Minas Gerais and both deposited in the Berlin herbarium. The printed labels accompanying Glaziou's original collection are inscribed "Rio de Janeiro", but the collection was made at Caraça in Minas Gerais.

Material of *S. squarrosus* has been misidentified and distributed in some herbaria as *S. vernonioides* (Kunth) Ruhl. and *S. xeranthemoides* (Bong.) Ruhl. On the other hand, the Mattos 8563 and Mello Barreto 4747, distributed as *S. squarrosus* and cited by Eiten (1962), are actually *S. xeranthemoides* (Bong.) Ruhl.

Additional citations: BRAZIL: Minas Gerais: Archer & Mello Barreto 4979 [Herb. U. S. Nat. Arb. 177462] (W--2121776); Glaziou 15541 [Macbride photos 10702] (B--type, N--isotype, N--photo of type, W--1124141--isotype, W--photo of type); Mello Barreto 4931 [Herb. U. S. Nat. Arb. 177524] (W--2121742); A. Silveira 430 (B), 470 (B); Werdermann 3947 (B).

SYNGONANTHUS SQUARROSUS var. ELATIOR Alv. Silv., Fl. Mont. 1: 396. 1928.

Bibliography: Alv. Silv., Fl. Mont. 1: 396. 1928; Moldenke, Known Geogr. Distrib. Erioc. 19 & 60. 1946; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 93 & 214. 1949; Moldenke, Résumé 109 & 492. 1959; Moldenke, Fifth Summ. 1: 176 (1971) and 2: 965. 1971.

Silveira (1928) describes this variety as "Foliis 20--25 cm longis et pedunculis 50--60 cm altis a specie typica differt" and bases it on A. Silveira 846 from "In campis arenosis inter Itacambira et Juramento", Minas Gerais, Brazil, collected in July, 1926, and deposited in the Silveira herbarium. Thus far it is known only from the original collection.

SYNGONANTHUS STEYERMARKII Moldenke, *Phytologia* 2: 418--419. 1948.

Bibliography: Moldenke, *Phytologia* 2: 418--419, 491, & 499. 1948; Moldenke, *Known Geogr. Distrib. Verbenac.*, [ed. 2], 65 & 214. 1949; Moldenke, *Phytologia* 4: 331. 1953; E. J. Salisb., *Ind. Kew. Suppl.* 11: 244. 1953; J. A. Steyerm., *Fieldiana Bot.* 28: 1158. 1957; Moldenke, *Résumé* 74 & 493. 1959; J. A. Steyerm., *Act. Bot. Venez.* 1: 247. 1966; Moldenke, *Fifth Summ.* 1: 128 (1971) and 2: 965. 1971; Moldenke, *Phytologia* 33: 273. 1976.

The Steyermark, Steyermark, Wurdack, Wurdack, & Wiehler 106650, distributed as *Syngonanthus steyermarkii*, actually is *Paepalanthus steyermarkii* Moldenke.

SYNGONANTHUS SURINAMENSIS Moldenke, *Phytologia* 3: 373 & 381, nom. nud. 1947; in Maguire & al., *Bull. Torrey Bot. Club* 75: 202--203. 1948.

Bibliography: Moldenke, *Phytologia* 3: 373 & 381. 1947; Moldenke in Maguire & al., *Bull. Torrey Bot. Club* 75: 202--203. 1948; Moldenke, *Alph. List Cit.* 3: 701. 1949; Moldenke, *Known Geogr. Distrib. Verbenac.*, [ed. 2], 68 & 214. 1949; E. J. Salisb., *Ind. Kew. Suppl.* 11: 244. 1953; Moldenke, *Résumé* 77 & 493. 1959; Lindeman & Gorts-van Rijn in *Pulle & Lanjouw, Fl. Surin.* 1 [Meded. Konink. Inst. Trop. 30, Afd. Trop. Prod. 11]: 334 & 338--339. 1968; Moldenke, *Fifth Summ.* 1: 133 (1971) and 2: 965. 1971; Moldenke, *Phytologia* 35: 307. 1977.

This species is based on Maguire 24502 from wet dripping cliffs 200 meters west of Grace Falls, Tafelberg, Surinam, where the plant is said to be "locally frequent" and was collected on August 25, 1944, deposited in the Britton Herbarium at the New York Botanical Garden. Lindeman & Gorts-van Rijn (1968) cite only the original collection.

SYNGONANTHUS TENUIPES Alv. Silv., *Fl. Mont.* 1: 326--327, pl. 207. 1928.

Bibliography: Alv. Silv., *Fl. Mont.* 1: 326--327 & 420, pl. 207. 1928; Wangerin in *Just, Bot. Jahresber.* 57 (1): 478. 1937; Fedde in *Just, Bot. Jahresber.* 57 (2): 896. 1938; A. W. Hill, *Ind. Kew. Suppl.* 9: 272. 1938; Worsdell, *Ind. Lond. Suppl.* 2: 426. 1941; Moldenke, *Known Geogr. Distrib. Erioc.* 19 & 60. 1946; Moldenke, *Known Geogr. Distrib. Verbenac.*, [ed. 2], 93 & 214. 1949; Moldenke, *Résumé* 109 & 493. 1959; Moldenke, *Fifth Summ.* 1: 176 (1971) and 2: 965. 1971.

Illustrations: Alv. Silv., *Fl. Mont.* 1: pl. 207. 1928.

This species is based on A. Silveira 659 from "In campis are-

nosis prope Barauna", Minas Gerais, Brazil, collected in April, 1918, and deposited in the Silveira herbarium. On page 420 of his work (1928) Silveira cites his no. 658 from "Baraunas", but whether this is intended as a second collection, a correction of the original citation, or is a mere typographic error, is not clear. He comments that the "Species ob pedunculorum pilositatem praecipue ad affinibus distinguenda." Thus far the species is known only from the original collection(s).

SYNGONANTHUS TENUIS (H.B.K.) Ruhl. in Engl., Pflanzenreich 13 (4-30): 253. 1903.

Synonymy: Eriocaulon tenue H.B.K., Nov. Gen. & Sp. Pl., ed. quarto, 1: 253--254. 1816 [not E. tenue Buch.-Ham., 1832, nor Hamilt., 1959, nor Poepp., 1841]. Eriocaulon tenue Humb. & Bonpl. apud Roem. & Schult. in L., Syst. Veg., ed. 15 nova, 2: 865--866. 1817. Eriocaulon tenue Kunth apud Poir. in Cuvier, Dict. Sci. Nat. 24: 241. 1822. Paepalanthus tenuis (H.B.K.) Kunth, Enum. Pl. 3: 534. 1841. Eriocaulon brachyphyllum Willd. ex Kunth, Enum. Pl. 3: 534, in syn. 1841. Eriocaulon tenue Humb. & Kunth apud Kunth, Enum. Pl. 3: 534, in syn. 1841. Paepalanthus tenuis Kunth apud Körn. in Mart., Fl. Bras. 3 (1): 460 & 507. 1863. Dupatyia tenuis (H.B.K.) Kuntze, Rev. Gen. Pl. 2: 746. 1891. Paepalanthus bulbifer Huber, Bol. Mus. Para. 2: 499. 1898. Dupatyia tenuis Kuntze apud Durand & Jacks., Ind. Kew. Suppl. 1, imp. 1, 145. 1902. Syngonanthus bulbifer (Huber) Ruhl. in Engl., Pflanzenreich 13 (4-30): 272. 1903. Syngonanthus vaupesanus Moldenke, Phytologia 2: 6--7. 1941.

Bibliography: H.B.K., Nov. Gen. & Sp. Pl., ed. quarto, 1: 253--254 (1816) and ed. folio, 1: 202. 1816; Roem. & Schult. in L., Syst. Veg., ed. 15 nova, 2: 865--866. 1817; Steud., Nom. Bot., ed. 1, 313. 1821; Wikstr., Trenne Nya Art. Örtel. Erioc. 12. 1821; Poir. in Cuvier, Dict. Sci. Nat. 24: 241. 1822; Spreng. in L., Syst. Veg., ed. 16, 3: 776. 1826; Steud., Nom. Bot. Phan., ed. 2, 1: 586. 1840; Kunth, Enum. Pl. 3: 534, 614, 614, & 625. 1841; D. Dietr., Syn. Pl. 5: 262--263. 1852; Steud., Syn. Pl. Glum. 2: [Cyp.] 282 & 334. 1855; Körn. in Mart., Fl. Bras. 3 (1): 460 & 507. 1863; Kuntze, Rev. Gen. Pl. 2: 746. 1891; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 1, 1: 877 & 879 (1893) and imp. 1, 2: 402. 1894; Huber, Bol. Mus. Para. 2: 499 & 500. 1898; Barnhart, Bull. Torrey Bot. Club 29: 585--598. 1902; Durand & Jacks., Ind. Kew. Suppl. 1, imp. 1, 145. 1902; Ruhl. in Engl., Pflanzenreich 13 (4-30): 28, 244, 253, 271, 272, 284, 287, 289, 292, & 293. 1903; Thiselt.-Dyer, Ind. Kew. Suppl. 2: 131. 1904; Prain, Ind. Kew. Suppl. 3: 175. 1908; Alv. Silv., Fl. Mont. 1: 416. 1928; Durand & Jacks., Ind. Kew. Suppl. 1, imp. 2, 145. 1941; Moldenke, Phytologia 2: 6--7. 1941; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 2, 1: 877 & 879 (1946) and imp. 2, 2: 402. 1946; Moldenke, Known Geogr. Distrib. Erioc. 5, 6, 17, 31, 41, 45, 55, 56, & 60. 1946; moldenke, Phytologia 2: 493. 1948; Moldenke, Known Geogr.

Distrib. Verbenac., [ed. 2], 61, 65, 91, 95, 212, & 214. 1949; Moldenke, Phytologia 4: 299 & 331. 1953; Moldenke in Maguire, Mem. N. Y. Bot. Gard. 8: 102. 1953; E. J. Salisb., Ind. Kew. Suppl. 11: 244. 1953; Durand & Jacks., Ind. Kew. Suppl. 1, imp. 3, 145. 1959; Moldenke, Résumé 69, 74, 106, 109, 112, 282, 293, 323, 328, 352, 491, & 493. 1959; Moldenke, Résumé Suppl. 1: 16, 18, 20, & 23. 1959; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 3, 1: 877 & 879 (1960) and imp. 3, 2: 402. 1960; Moldenke, Résumé Suppl. 2: 5 (1960), 3: 34 (1962), 12: 12 (1965), and 18: 12. 1969; Moldenke, Phytologia 20: 8. 1970; Moldenke, Fifth Summ. 1: 120, 128, 176, & 486 (1971) and 2: 494, 514, 578, 591, 635, 638, & 965. 1971; Moldenke, Phytologia 29: 99 (1974), 30: 280 (1975), 34: 259 & 260 (1976), 35: 347, 442, & 448 (1977), 36: 32, 36, 73, & 75 (1977), and 37: 275. 1977.

This species is based on Humboldt s.n. from Javita, on the banks of the Río Tuamini, in Amazonas, Venezuela, deposited in the Berlin herbarium, where it was photographed by Macbride as his type photograph number 10703; this specimen is also the type of Eriocaulon brachyphyllum Willd. Paepalanthus bulbifer is based on Guedes 601 from "in campis ad fluvium Maracá", Guyana, also deposited in the Berlin herbarium where it was photographed by Macbride as his type photograph number 10676. The type of Syngonanthus vaupesanus was collected by José Cuatrecasas (no. 6973) at Yurupari, 350 km. above Mitú, in Vaupés, Colombia, on September 24, 1939, and deposited in the United States National Herbarium at Washington. The Eriocaulon tenue credited to "Buch.-Ham." and to "Hamilton" is a synonym of E. cinereum R. Br. [not of E. sexangulare L. as claimed by Jackson (1893)], while E. tenue Poepp. belongs in the synonymy of Paepalanthus polytrichoides Kunth.

Syngonanthus tenuis is described by collectors as caespitose, growing in clumps, with the "stems" [peduncles] filiform, dull-green, "leaves mostly absent, those present slender and pale-green", the involucral bracts white, elongate, the inflorescence heads and flowers white or the "heads white centrally". They have encountered it in shady places, in sand, in swampy meadows or swampy ground on rocks, on quartzitic savannas or "artificial campos", on moist campos between rocks or sandy moist campos, in thin woodland adjacent to rocky open sandstone exposures, and on white sand of sabanitas, at altitudes of 120—750 meters, flowering from June to January and in May, fruiting in August, October, and November. Maguire and his associates report it "locally abundant", "infrequent in wet places", or "common (or abundant) on savannas".

Kunth (1841) avers that the species is related to his Paepalanthus brizoides [now known as Syngonanthus gracilis (Bong.) Ruhl.]. Ruhl. (1903) erroneously cites the original publication of Paepalanthus tenuis as "Kunth, Enum. pl. III (1855) 282", apparently confusing the Kunth work with Steud., Syn. Pl. Glum.

2: [Cyp.] 282, published in 1855. Barnhart (1902) confirms 1816 as the actual date of publication of both the quarto and folio editions of the original H.B.K. description, even though Ruhland dates the former as "1815".

A letter received by me from Mlle. Keraudren, assistant at the Paris herbarium, dated August 6, 1958, states that "Le type de Syngonanthus tenuis de l'Herbier Humboldt & Bonpland n'a pas été retrouvé, par contre nous possédons deux isotypes (Javita in ripa, Tuamini). J'ai pu constater que les scapes de ces isotypes ont des poils souples, longs et fins, blanchâtres."

Ruhland (1903) cites Passarge & Selwyn 259 from Sipao, Venezuela, for S. tenuis and Guedes 601 from Río Maracá, Guyana, for S. bulbifer, commenting that the "Bulbilis in foliorum axillis enascentibus ante omnes familiae species insignis". Huber (1898) says that "Esta especie tem alguma afinidade com o Paepalanthus tenuis Kth., de Venezuela, porem ella se distingue bem pelas bracteas abertas e a presença de bulbillos. Estes ultimos não me mostraram nenhum vestigio de formação pathologica de maneira que devo consideral-os como producções normaes, servindo sem duvida a uma disseminação vegetativa da planta. Segundo ma consta serie isto o primeiro exemplo de formação de bulbillos no genero Paepalanthus e no grupo inteiro das Eriocaulaceas."

Silveira (1928) cites Huber 438 from Maracá, collected in 1896, probably not Maracá island in Pará, Brazil, as has been assumed previously, but the same Río Maracá in Guyana where the type collection of S. bulbifer originated.

Syngonanthus tenuis bears strong resemblance to S. drouetii L. B. Sm. Material has been misidentified and distributed in some herbaria as S. gracilis (Bong.) Ruhl. On the other hand, the Drouet 2112, distributed as S. tenuis in some herbaria, is the type collection of S. drouetii L. B. Sm., while Schultes & López 10308 is S. elongatulus Ruhl. and Steyermark, Dunsterville, & Dunsterville 113217 is the type collection of S. tenuis var. minor Moldenke.

Schultes & Cabrera 19704 is a mixture with S. umbellatus (Lam.) Ruhl., Foldats 3829 is a mixture with S. rivularis Moldenke, Foldats 3695 is a mixture with Xyris sp. and a grass, and Prance, Pennington, & Murça Pires 1295 is a mixture with something non-ericaulaceus

Additional & emended citations: COLOMBIA: Amazonas: García-Barriga & Schultes 14148 (N). Vaupés: Cuatrecasas 6973 (N, N--photo); Maguire, Maguire, & Fernandez 44114 (N); Maguire, Wurdack, & Keith 41458 (N, S); Schultes, Baker, & Cabrera 18451 (Ss, W--2172192, W--2198904), 18533 (Ss); Schultes & Cabrera 14231 (Ss), 14264 (Ld), 19704 in part (N, Ss), 19918 (Ss). VENEZUELA: Amazonas: Foldats 3695 in part (N), 3829 in part (N); Humboldt s.n. [Javita; Macbride photos 10703] (B, N--photo of type,

W--photo of type); Maguire, Wurdack, & Bunting 36336 (N), 36590 (N); Vareschi & Maegdefrau 6781 (Ve--42898). Bolívar: Steyermark, Dunsterville, & Dunsterville 113129a (Lc), 113342 (Ld). GUYANA: Guedes 601 [Macbride photos 10676] (B, N--photo, W--hoto, Z, Z--photo). BRAZIL: Amazônas: Frôes & Addison 29270 (Z); Murça Pires 80a [Herb. IPEAN 15060] (Ld); Prance, Nelson, Monteiro, & Lima 21039 (Ld). Goiás: Murça Pires & Black 2417 (Ca--28209, N, N). Minas Gerais: Hatschbach, Anderson, Barneby, & Gates 36531 (Ld, N). Pará: G. A. Black 50-8645 (N), 54-16734 (Ca--28249, N, Ut--72013b), 54-16860 (Bm); Ducke 11935 (Bs), 11686 (Bs), 12574 (Bs), s.n. [Herb. Mus. Goeldi 8468] (Bs); W. A. Egler 213 [Black 19497] (Z), 269 (Bs), 335 [Black 19678] (Bs), 1104 [Herb. Brad. 47003] (Ld); Egler & Raimundo s.n. [Egler 803; Herb. Mus. Goeldi 23633] (Bd--12292, Mm), s.n. [Egler 1221; Herb. Mus. Goeldi 24268] (Bm), s.n. [Egler 1269; Herb. Mus. Goeldi 24316] (Bm), s.n. [Egler 1282; Herb. Mus. Goeldi 24329] (Bm); Frôes 27835 (Z), 29901 (Be--80016, Le), 30096 (Z); Goeldi s.n. [Herb. Mus. Goeldi 15058] (Bs); Herb. Mus. Goeldi 9798 (Bs); Murça Pires 4079 (N, Z), 6050 (Bm), s.n. [Herb. Inst. Agron. Norte 71676] (Z); E. Pereira 5008 (Bd--12469); Prance, Pennington, & Murça Pires 1295 in part (N, S); N. T. Silva 144 (N); Sioli 53 (Hk). State undetermined: Herb. Inst. Agron. Norte 9 (Z); R. E. Schultes 10308 (Z). MOUNTED ILLUSTRATIONS: drawings and notes by Körnicke (B).

SYNGONANTHUS TENUIS var. MINOR Moldenke, Phytologia 37: 275. 1977.

Bibliography: Moldenke, Phytologia 37: 275. 1977.

Citations: VENEZUELA: Bolívar: Steyermark, Dunsterville, & Dunsterville 113217 (Z--type).

SYNGONANTHUS TIRICENSIS Moldenke, Mem. N. Y. Bot. Gard. 9: 412. 1957.

Bibliography: Moldenke, Mem. N. Y. Bot. Gard. 9: 412. 1957; Moldenke, Résumé 74 & 493. 1959; G. Taylor, Ind. Kew. Suppl. 13: 132. 1966; Moldenke, Fifth Summ. 1: 128 (1971) and 2: 965. 1971.

The type of this species was collected by Julian A. Steyermark and John J. Wurdack (no. 739) among rocks on a rocky and swampy savanna between the west and east branches of the headwaters of the Río Tirica, at an altitude of 2120--2210 m., in the central section of the Chimantá Massif, Bolívar, Venezuela, on February 11, 1955, and is deposited in the Britton Herbarium at the New York Botanical Garden. Thus far the species is known only from the original collection.

Citations: VENEZUELA: Bolívar: Steyermark & Wurdack 739 (N--type).

SYNGONANTHUS TRICHOPHYLLUS Moldenke, Phytologia 6: 329--330. 1958.

Bibliography: Moldenke, Phytologia 6: 329--330. 1958; Molden-

ke, Résumé 69 & 493. 1959; Moldenke, Biol. Abstr. 33: 1215. 1959; Hocking, Excerpt. Bot. A.5: 44. 1962; G. Taylor, Ind. Kew. Suppl. 13: 132. 1966; Moldenke, Fifth Summ. 1: 120 (1971) and 2: 965. 1971; Cárdenas de Guevara, Act. Bot. Venez. 10: 38. 1975.

Citations: COLOMBIA: Amazonas: García Barriga & Schultes 14138 (Z--type).

SYNGONANTHUS ULEI Ruhl., Verh. Bot. Ver. Brand. 48: 130. 1907.

Synonymy: Paepalanthus ulei Ruhl. ex Moldenke, Résumé Suppl. 14: 9, in syn. 1966.

Bibliography: Ruhl., Verh. Bot. Ver. Brand. 48: 130. 1907; Prain, Ind. Kew. Suppl. 4, imp. 1, 230. 1913; Alv. Silv., Fl. Mont. 1: 420. 1928; Moldenke, Known Geogr. Distrib. Erioc. 19 & 60. 1946; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 93 & 214. 1949; Moldenke, Phytologia 4: 332. 1953; Anon., U. S. Dept. Agr. Subj. Index 5: 4227. 1958; Prain, Ind. Kew. Suppl. 4, imp. 2, 230. 1958; Moldenke, Résumé 109, 417, & 493. 1959; Moldenke, Résumé Suppl. 14: 9. 1966; Moldenke, Fifth Summ. 1: 176 (1971) and 2: 592, 773, & 965. 1971; Anon., Biol. Abstr. 56 (1): B.A.S.I.C. S.254. 1973; Moldenke, Biol. Abstr. 56: 69. 1973; Moldenke, Phytologia 25: 223 & 230. 1973; Hocking, Excerpt. Bot. A.23: 292. 1974; Moldenke, Phytologia 35: 289. 1977.

This species is based on Ule 6176 from "auf Sandboden in der Campina on der Ponta Negra, Rio Negro," Amazônas, Brazil, flowering in May, and deposited in the herbarium of the Botanisches Museum in Berlin where it was photographed by Macbride as his type photograph number 10704. The type is inscribed "Paepalanthus ulei" in Ruhland's handwriting -- apparently he at first regarded the plant as a Paepalanthus. He comments that "die Art gehört zur Sektion Eulepis Bong. Sie steht S. habrophyus nahe, unterscheidet sich aber sehr gut durch die Behaarung von Blättern und Scheiden, durch die kürzeren Involucralbrakteen etc." Ducke found the species growing on campos, flowering in December, January, and July. Silveira (1928) cites a no. 441, no collector designated, collected at Manaos, Brazil, in 1902.

Additional citations: BRAZIL: Amazônas: Ule 6176 [Macbride photos 10704] (B--type, Mi--isotype, N--photo of type, W--photo of type, Z--isotype). Pará: Ducke 8403 (Ut--1694), s.n. [Herb. Mus. Goeldi 8464] (Bs), s.n. [Herb. Mus. Goeldi 9110] (Gl), s.n. [Herb. Mus. Goeldi 10475] (Z), s.n. [Herb. Mus. Goeldi 10936] (Bs).

SYNGONANTHUS ULEI var. GOYAZENSIS Moldenke, Phytologia 25: 223--224. 1973.

Bibliography: Anon., Biol. Abstr. 56 (1): B.A.S.I.C. S.254. 1973; Moldenke, Biol. Abstr. 56: 69. 1973; Moldenke, Phytologia 25: 223--224 & 230. 1973; Hocking, Excerpt. Bot. A.23: 292. 1974; Moldenke, Phytologia 35: 289. 1977.

The type collection is a mixture with Philodice cuyabensis (Bong.) Körn. [to be continued]