



**A Nomenclator of Diplostephium (Asteraceae: Astereae):
A List of Species with Their Synonyms and Distribution
by Country**

Author: Vargas, Oscar M.

Source: Lundellia, 2011(14) : 32-51

Published By: The Plant Resources Center, The University of Texas at Austin

URL: <https://doi.org/10.25224/1097-993X-14.1.32>

BioOne Complete (complete.BioOne.org) is a full-text database of 200 subscribed and open-access titles in the biological, ecological, and environmental sciences published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Complete website, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at www.bioone.org/terms-of-use.

Usage of BioOne Complete content is strictly limited to personal, educational, and non - commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

BioOne sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

A NOMENCLATOR OF *DIPLOSTEPHIUM* (ASTERACEAE: ASTEREAEE): A LIST OF SPECIES WITH THEIR SYNONYMS AND DISTRIBUTION BY COUNTRY

Oscar M. Vargas

Integrative Biology and Plant Resources Center, 1 University Station CO930, The University of Texas,
Austin, Texas 78712 U.S.A

Author for correspondence (oscarvargash@mail.utexas.edu)

Abstract: Since the description of *Diplostephium* by Kunth in 1820, more than 200 *Diplostephium* taxa have been described. In the absence of a recent revision of the genus, a nomenclator of *Diplostephium* is provided based on an extensive review of the taxonomic literature, herbarium material, and databases. Here, 111 species recognized in the literature are listed along with their reference citations, types, synonyms, subspecific divisions, and distributions by country. In addition, a list of doubtful names and *Diplostephium* names now considered to be associated with other taxa is provided.

Resumen: Desde la descripción del género *Diplostephium* por Kunth en 1820, más de 200 nombres han sido publicados bajo *Diplostephium*. En ausencia de un estudio taxonómico actualizado, se presenta una lista de nombres de *Diplostephium* basada en una revisión extensiva de la literatura taxonómica, material de herbario y bases de datos. En este estudio se listan las 111 especies reconocidas hasta ahora, incluyendo información acerca de la publicación de la especie, tipos, sinónimos, división subgenérica y distribuciones por país. Adicionalmente se provee una lista de nombres dudosos y nombres de *Diplostephium* que se consideran estar asociados con otros taxones.

Keywords: Asteraceae, Astereae, *Diplostephium*, nomenclator.

Diplostephium is a genus of small trees, shrubs, and sub-shrubs that range from Costa Rica to northern Chile. Carl Sigismund Kunth published the genus in *Nova Genera et Species Plantarum* (1820) with the description of a single species, *Diplostephium lavandulifolium* Kunth (now *Diplostephium ericoides* (Lam.) Cabrera). The generic name came from the Greek *diplos*, double, and the Greek *stefanos*, crown, referring to the two-rowed pappus present on the achenes. After the original description, the first authors to describe new taxa were Hugh Algernon Weddell, who described 17 new species in *Chloris Andina* (1857) and Georg Hans Emmo Wolfgang Hieronymus, who published 10 species between 1895 and 1905.

In the twentieth century, Sidney Blake published 28 new taxa and two revisions of the genus (1922, 1928). In his first treatment (1922), Blake subdivided the 40 species recognized at that time into five series

(ROSMARINIFOLIA, FLORIBUNDA, DENTICULATA, RUPESTRIA, and LAVANDULIFOLIA = DIPLOSTEPHIUM) based on leaf and sinflor-escence variation. In his second revision (1928), Blake recognized 43 species and combined the series RUPESTRIA, FLORIBUNDA, and DENTICULATA under RUPESTRIA (leaving LAVANDULIFOLIA, ROSMARINIFOLIA, and RUPESTRIA). Following Blake, the Spanish botanist José Cuatrecasas, who largely explored the Colombian territory, published more than 90 new taxa in the genus along with two revisions (1943, 1969). In his first treatment (1943), Cuatrecasas accounted for 64 species and subdivided the genus in two sections based on the stigma form (sect. EMARGINATUM and BIFIDUM) ignoring the subdivision previously proposed by Blake. In his second revision (1969), Cuatrecasas studied the 53 Colombian species recognized at that time and calculated the total number of species to be 90. Additionally, Cuatrecasas

adopted Blake's 1922 subdivision of the genus into series, omitting the sections he himself previously described (Cuatrecasas 1943) and proposed seven new additional series (CRASSIFOLIA, CORIACEA, HUERTASINA, SCHULTZIANA, PHYLIICOIDEA, SAXATILIA y ANACTINOTA) for a total of twelve. This treatment of the genus was the last effort in publishing a complete study of *Diplostephium*. Cuatrecasas never explained why he eventually preferred using series rather than sections. Blake, who first described the stigma types in *Diplostephium*, concluded that dividing the genus using stigma characters (as in Cuatrecasas' sections) is not compatible with a division of the genus using foliage and inflorescence traits, and that the division by series seemed to be the more natural one. It appears that Cuatrecasas came to the same conclusion before his second revision.

Following the extensive work done by Cuatrecasas, four new Colombian species have been recently published by Santiago Díaz and collaborators (Díaz-Piedrahita and Restrepo 1994, Díaz-Piedrahita and Mendez-Ramirez 1997, Díaz-Piedrahita and Morales 2002). Colombia now has 63 species described (for a key, see Vargas & Madriñán 2006), Perú 39, Ecuador 26, Venezuela 10, Chile 3, Costa Rica 2, and Bolivia 1. Due to the size of the genus, this study is limited to listing the 111 species recognized in the literature without evaluating their taxonomic status. This nomenclator is the result of the intensive review of the published manuscripts, work in herbaria (COL, F, FMB, TEX, US, and USM), and information available in different databases (cf., IPNI and JSTOR Plant Science). All types deposited in the herbaria previously mentioned were seen. The list includes information about the bibliographical reference of the publication of the taxa, types with locations and notes, synonyms, distribution by country, and placement in the subgeneric subdivision according to Cuatrecasas' taxonomic definition of the series (species not previously

assigned to any series are assigned here). Preliminary data on the phylogeny of the genus (Vargas & Madriñán, data unpublished) suggest the series are not monophyletic, leading to the interpretation of the series as artificial subdivisions, which nevertheless are helpful for identifying species and morphological groups (see Cuatrecasas 1969, Vargas & Madriñán 2006). Authors, books, and journal abbreviations are listed accorded to IPNI, TL-2 (Taxonomic Literature, 2nd edition), and BPH-2 (Botanico Periodico Huntianum, 2nd edition) respectively. Additionally, a list of doubtful names and *Diplostephium* names now considered to be associated with other taxa is provided in Appendix 1. Items capitalized and in bold represent accepted names, while those in italics represent a synonyms, a nomina nuda, or a nomina illegitima.

LIST OF ABBREVIATIONS

* : type or series newly assigned in this study.

Note: designations are made to unassigned types or series; these do not represent changes or differences with previous treatments.

A: Herbarium of the Arnold Arboretum, Harvard University, Cambridge, Massachusetts USA. **B:** Botanischer Garten und Botanisches Museum Berlin-Dahlem, Zentraleinrichtung der Freien Universität Berlin, Berlin, Germany. **BC:** Institut Botànic de Barcelona, Barcelona, Spain. **BM:** The Natural History Museum, London, England. **COL:** Herbario Nacional Colombiano, Universidad Nacional de Colombia, Bogotá, Colombia. **F:** Field Museum of Natural History, Chicago, Illinois, USA. **FI:** Museo di Storia Naturale, Firenze, Italy. **G:** Conservatoire et Jardin botaniques de la Ville de Genève, Genève, Switzerland. **GH:** Gray Herbarium, Harvard University, Cambridge, Massachusetts USA. **GOET:** Universität Göttingen, Göttingen, Germany. **K:** Kew Herbari-

- um, Royal Botanic Gardens, Kew, England. **LD:** Botanical Museum, Lund, Sweden. **LIL:** Fundación Miguel Lillo, San Miguel de Tucumán, Argentina. **LP:** Museo de la Plata, Buenos Aires, Argentina. **M:** Botanische Staatssammlung München, München, Germany. **MA:** Real Jardín Botánico, Madrid, España. **MEDEL:** Universidad Nacional de Colombia - Sede de Medellín, Medellín, Colombia. **MO:** Missouri Botanical Garden, St. Louis, Missouri, USA. **NY:** New York Botanical Garden, Bronx, New York, USA. **P:** Muséum National d'Histoire Naturelle, Paris, France. **S:** Swedish Museum of Natural History, Stockholm, Sweden. **TEX:** The University of Texas Herbarium, Austin, Texas, USA. **U:** National Herbarium of the Netherlands, Herbarium Utrecht, Leiden, Netherlands. **UC:** University of California, Berkeley, California, USA. **UPTC:** Herbario de la Universidad Pedagógica y Tecnológica de Colombia, Tunja, Colombia. **US:** United States National Herbarium, Smithsonian Institution, Washington DC, USA. **USM:** Museo de Historia Natural de la Universidad Mayor de San Marcos, Lima, Peru. **VALLE:** Universidad Nacional de Colombia - Sede Palmira, Palmira, Colombia. **VEN:** Fundación Instituto Botánico de Venezuela Dr. Tobías Lasser, Caracas, Venezuela. **W:** Naturhistorisches Museum Wien, Wien, Austria.
- BOL:** Bolivia. **COL:** Colombia. **CHI:** Chile. **CR:** Costa Rica. **ECU:** Ecuador. **PER:** Peru. **VEN:** Venezuela.
- DIPLOSTEPHIUM** Kunth, Nov. Gen. Sp. 4: 96. 1820. TYPE: *Diplostephium ericoides* (Lam.) Cabrera.
- Diplostephium* sect. *Amphistephium* DC. Prodr. 5: 273. pro parte 1836.
- Simblocline* DC. Prodr. 5: 297. 1836.
- Linochilus* Benth. Pl. Hartw. 197. 1845.
- Diplostephium* sect. *Emarginatum* Cuatrec. Caldasia 2: 211. 1943.
- Diplostephium* sect. *Bifidum* Cuatrec. Caldasia 2: 211. 1943.
- I. **DIPLOSTEPHIUM** ser. **ANACTINOTA** Cuatrec., Webbia 24: 190. TYPE: *Diplostephium anactinotum* Wedd.
 - II. **DIPLOSTEPHIUM** ser. **CORIACEA** Cuatrec., Webbia 24: 123. 1969. TYPE: *Diplostephium coriaceum* Cuatrec.
 - III. **DIPLOSTEPHIUM** ser. **CRASSIFOLIA** Cuatrec., Webbia 24: 122. 1969. TYPE: *Diplostephium crassifolium* Cuatrec.
 - IV. **DIPLOSTEPHIUM** ser. **DENTICULATA** S.F.Blake, Contr. U. S. Natl. Herb. 24: 69. 1922. TYPE: *Diplostephium ochraceum* (Kunth) Nees.
 - V. **DIPLOSTEPHIUM** ser. **DIPLOSTEPHIUM**. *Diplostephium* ser. *Lavandulifolia* S.F.Blake, Contr. U. S. Natl. Herb. 24: 69. 1922. TYPE: *Diplostephium ericoides* (Lam.) Cabrera.
 - VI. **DIPLOSTEPHIUM** ser. **FLORIBUNDA** S.F.Blake, Contr. U. S. Natl. Herb. 24: 69. 1922. TYPE: *Diplostephium floribundum* (Benth.) Wedd.
 - VII. **DIPLOSTEPHIUM** ser. **HUERTASINA** Cuatrec., Webbia 24: 126. TYPE: *Diplostephium huertasii* Cuatrec.
 - VIII. **DIPLOSTEPHIUM** ser. **PHYLIICOIDEA** Cuatrec., Webbia 24: 164. TYPE: *Diplostephium phyllicoides* (Kunth) Wedd.
 - IX. **DIPLOSTEPHIUM** ser. **ROSMARINIFOLIA** S.F.Blake, Contr. U. S. Natl. Herb. 24: 69. 1922. TYPE: *Diplostephium rosmarinifolium* (Benth.) Wedd.
 - X. **DIPLOSTEPHIUM** ser. **RUPESTRIA** S.F.Blake, Contr. U. S. Natl. Herb. 24: 69. 1922. TYPE: *Diplostephium rupestre* (Kunth) Wedd.
 - XI. **DIPLOSTEPHIUM** ser. **SAXATILIA** Cuatrec., Webbia 24: 173. TYPE: *Diplostephium saxatile* Cuatrec.
 - XII. **DIPLOSTEPHIUM** ser. **SCHULTZIANA** Cuatrec., Webbia 24: 140. TYPE: *Diplostephium schultzii* Wedd.
1. **DIPLOSTEPHIUM** **ABIETINUM** S.F. Blake, J. Wash. Acad. Sci. 40: 48. 1950. TYPE: PERU. Amazonas: Piscohuanuno Pass, near Rioja, Aug 1938, *Sandemam* 13 (K, type; US, photograph and fragment). DISTRIBUTION: PER. SERIES: *Diplostephium*.

2. **DIPLOSTEPHIUM ALVEOLATUM** Cuatrec., *Caldasia* 2: 224. 1943. TYPE: COLOMBIA. Boyacá: páramo del Alto del Escobal, entre Soatá y Cocuy, 3800–3900 m, arbolito 2–4 m, Sep 15 1938, *Cuatrecasas & García-Barriga 1758* (COL, holotype; BC, F, P, US, isotypes). DISTRIBUTION: COL. SERIES: *Schultziانا*.
3. **DIPLOSTEPHIUM ANACTINOTUM** Wedd., *Chlor. And.* 1: 201. 1856. TYPE: COLOMBIA. Magdalena: Sierra Nevada de Santa Marta, 8000 pds. frútex, flores albi, [without date], *Funck 390* (P, lectotype; G, P, isotypes; F, photo). DISTRIBUTION: COL. SERIES: *Anactinota*.
4. **DIPLOSTEPHIUM ANTIOQUENSE** Cuatrec., *Proc. Biol. Soc. Wash.* 74: 12. 1961. TYPE: COLOMBIA. Antioquia: Medellín, monte El Boquerón, Alto de los Baldíos, páramo 3150 m, bosque andino fragmentario marginal, árbol 4–5 m, hoja crasiúscula, verde amarillenta oscura haz, blanquecina envés, inflorescencia blanquecina, borde de las brácteas involucrales algo pardusco, lígulas blancas, Apr 9 1958, *Cuatrecasas, Llano & Gutierrez 24226* (US, holotype; B, F, G, MEDEL, NY, P, US, isotypes). DISTRIBUTION: COL. SERIES: *Denticulata*.
5. **DIPLOSTEPHIUM APICULATUM** S.F.Blake, *Proc. Biol. Soc. Wash.* 49: 79. 1936. TYPE: COLOMBIA. Norte de Santander: Páramo de Santurbán, entre Tona y Mutiscuá, 3900 m, matita leñosa, lígulas blancas, flósculas verdes, Jan 19 1927, *Killip & Smith 19571* (US, holotype; A, COL, GH, NY, isotypes). DISTRIBUTION: COL. SERIES: *Diplostephium*.
6. **DIPLOSTEPHIUM ASPLUNDII** Cuatrec., *Phytologia* 23: 352. 1972. TYPE: ECUADOR. Tungurahua: Cordillera de los Llanganates near Las Torres, 3500 m, rays violet, disc corollas olivaceous-yellow, Nov 21 1939, *Asplund 9831* (S, holotype). DISTRIBUTION: ECU. SERIES: *Diplostephium*.
7. **DIPLOSTEPHIUM AZUREUM** Cuatrec., *Brittonia* 8: 179. 1956. TYPE: PERU. Ancash: Bolognesi entre Tallenga y Pachapaque, 3400–3600 m, arbusto 2–3 m alto, flores marginales celestes, del disco amarillas, hábitat monte rígido pedregoso, May 17 1950, *Ferreyra 7505*, (USM, holotype; US, isotype). DISTRIBUTION: PER. SERIES: *Rupestria**.
8. **DIPLOSTEPHIUM BARCLAYANUM** Cuatrec., *Proc. Biol. Soc. Wash.* 77: 127. 1964. TYPE: ECUADOR. Napo-Pastaza: near Cordillera de los Llanganates, Chihuila Sacha o Ainchilibí, shrub, to 1 m tall, leaves small, to 5 × 2 mm, white woolly stems, invol. bracts long ciliate; ligul. fls. white, disc. fls. yellow. Occasional, lower part west facing, grassy slope, south of high campsite under overhang on Ainchilibí, 3700 m, Aug 25–29 1959, *Barclay & Juajibioy 9046* (US, holotype; COL, MO, isotypes). DISTRIBUTION: ECU. SERIES: *Diplostephium*.
9. **DIPLOSTEPHIUM BICOLOR** S.F.Blake, *Contr. U. S. Natl. Herb.* 24: 85. 1922. TYPE: COLOMBIA. Cauca: Central Cordillera head waters of Rio Palo, Tierra Adentro, 2500–3000 m, small tree 2–4 m, Jan 1906, *Pittier 1084* (US, holotype; GH, F, isotypes). DISTRIBUTION: COL, ECU. SERIES: *Diplostephium*.
Diplostephium tabanense Cuatrec. *Caldasia* 2: 216. 1943. COLOMBIA. Nariño: Páramo del Tábano, alto de la cordillera entre Pasto y El Encano, vert occid., 3200 m, arbolito, Jan 11 1941, *Cuatrecasas 11932* (COL, holotype; BC, F, US, isotypes).
10. **DIPLOSTEPHIUM CAJAMARQUILLENSE** Cuatrec., *Brittonia* 8: 180. 1956. TYPE: PERU. La Libertad: prov. Bolívar: Nevado de Cajamarquilla, arbusto de flores violáceas, Nov 9 1946, *Ferreyras 1253* (USM, holotype). DISTRIBUTION: PER. SERIES: *Diplostephium**.
11. **DIPLOSTEPHIUM CALLAENSE** Cuatrec., *Proc. Biol. Soc. Wash.* 77: 130. 1964. TYPE: PERU. Amazonas: Prov. Chachapoyas: middle eastern Calla-Calla slopes, near km 416–419 of Leimebaba-Balsas

- road, 2900–3000 m, shrub 0.4–1m, locally frequent, rays whites, disc yellow, Jul 9 1962, *Wurdack 1266* (US, holotype; F, P, UC, USM, isotypes). DISTRIBUTION: PER. SERIES: *Diplostephium**.
12. **DIPOSTEPHIUM CALLILEPIS** S.F.Blake, *Amer. J. Bot.* 15: 51. 1928. TYPE: PERU. Cuzco: rocky banks on páramo, Paso de Tres Cruces, Cerro de Cusiluyoc, 3800–3900 m, May 3 1925, *Pennell 13858* (F, holotype; GH, NY isotypes; US, photograph and fragment). DISTRIBUTION: PER. SERIES: *Diplostephium*.
13. **DIPOSTEPHIUM CAMARGOANUM** Cuatrec., *Phytologia* 23: 351. 1972. TYPE: COLOMBIA. Boyacá: Arcabuco, alrededores de la población 2739–2850 m, Oct 20 1965, *Huertas & Camargo 6309* (US, holotype; COL, isotypes). DISTRIBUTION: COL. SERIES: *Denticulata*.
14. **DIPOSTEPHIUM CARABAYENSE** Wedd., *Chlor. And.* 1: 202. 1856. TYPE: PERU. Puno: Near San Juan del Oro, Prov. Carabaya, Jun–Jul 1847, *Weddell 4648* (P, holotype; US, F, photograph and fragment). DISTRIBUTION: PER. SERIES: *Rupestris**.
15. **DIPOSTEPHIUM CAYAMBENSE** Cuatrec., *Brittonia* 8: 183. 1956. TYPE: ECUADOR. Napo–Pastaza: páramo NE Volcán Cayambe, 12,500 ft, woody compositae on moist páramo and ravines leading to alpine lake, Feb 10 1953, *Prescott 329* (NY, holotype; F, isotype). DISTRIBUTION: COL, ECU. SERIES: *Floribunda*.
16. **DIPOSTEPHIUM CHRYSOTRICHUM** S.Díaz & B.L.Restrepo, *Revista Acad. Colomb. Ci. Exact.* 19: 243. 1994. TYPE: COLOMBIA. Tolima: Cajamarca, corregimiento de Anaimé, Páramo de los Valles, La Cascada, Hacia Santa Helena, 3710 m, Arbolito 2.5 m alt, 3 cm diam., lígulas blancas, flores vino tinto, en turbera, hojas con olor a mentol, pegajosas al tacto, Jun 1994, *Restrepo 371* (COL, holotype; US, isotype). DISTRIBUTION: COL. SERIES: *Rupestris*.
17. **DIPOSTEPHIUM CINERASCENS** Cuatrec., *Caldasia* 3: 422. 1945. TYPE: COLOMBIA. Valle del Cauca: Cordillera Occidental, Los Farallones de Cali, filo de la cordillera, matorrales de páramo en el cerro de La Torre, 4000 m, arbolito, hoja verde claro, mate haz, blanquecina envés, nervio medial verdoso blanquecino, involucro violáceo sucio, lígulas blancas, corolas centrales blanco verdosas, Oct 10 1944, *Cuatrecasas 17851* (VALLE, holotype; COL, F, P, US, isotypes). DISTRIBUTION: COL, ECU. SERIES: *Floribunda*.
- 17.1 **DIPOSTEPHIUM CINERASCENS** subsp. **PURACENSE** (Cuatrec.) Cuatrec., *Webbia* 24: 138. 1969. DISTRIBUTION: COL.
- Diplostephium violaceum* var. *puracense* Cuatrec. *Caldasia* 3: 424. 1945. TYPE: COLOMBIA. Cauca: Cordillera Central, al sur del Volcán Puracé, filo de la cordillera en San Francisco, 3400–3450 m, arbolito muy ramoso de hoja muy compacta y redondeada, hoja verde vivo en la haz, blanco tomentoso en el envés, involucro verdoso en la base, violáceo en el extremo superior, lígulas blancas, flosculos blanco-verdosos, anteras violáceas, Aug 23 1943, *Cuatrecasas 14602* (VALLE, holotype; F, P, US, isotypes).
- Diplostephium cinerascens* var. *centrale* Cuatrec. *Caldasia* 3: 423. 1945. TYPE: COLOMBIA. Cauca: Cordillera Central, cabeceras del Río Palo, quebrada del Río López, Alto del Duende, matorrales y bosquecillo de páramo, 3300–3350 m, arbolito, hoja verde grisácea clara haz, blanquecina envés, brácteas involucrales violáceas, lígulas blancas, “guasgüín”, Dic 1 1944, *Cuatrecasas 18796* (US, lectotype*; A, COL, F, isotypes).
18. **DIPOSTEPHIUM CINEREUM** Cuatrec., *Caldasia* 2: 228. 1943. TYPE: PERU. Apurímac: entre Coracora y Andahuaylas, en el lago de Tenococha, 3900–4000 m, 1909, *Weberbauer 5833* (F, holotype, US, isotype). DISTRIBUTION: PER, CHI. SERIES: *Diplostephium**.
19. **DIPOSTEPHIUM COLOMBIANUM** (Cuatrec.) Cuatrec., *Feddes Repert. Nov.*

- Regni Veg. 55: 153. 1953. DISTRIBUTION: COL. SERIES: *Diplostephium*.
- Piofontia colombiana* Cuatrec. *Caldasia* 2: 5. 1943. TYPE: COLOMBIA. Boyacá: Sierra Nevada del Cocuy, alto valle de Las Lagunillas, pendientes rocosas mas abajo de los arenales, 4300–4400 m, frútex achaparrado, lígulas blancas que al secarse se vuelven rosado-amarillosas, Sep 12 1938, *Cuatrecasas & Garcia-Barriga 1492* (COL, holotype; F, US, isotypes).
20. **DIPOSTEPHIUM CORIACEUM** Cuatrec., *Webbia* 24: 123. 1969. TYPE: COLOMBIA. Magdalena: Sierra Nevada de Santa Marta, flanco occidental, páramo 3100 m, arbusto 3 m, tomento amarillo-ferrugineo-pálido, lígulas crema, flósculos rojizos, Jan 30 1959, *Romero-Castañeda 7162* (COL, holotype; US, isotype) DISTRIBUTION: COL. SERIES: *Coriacea*.
21. **DIPOSTEPHIUM COSTARICENSE** S.F. Blake, *Contr. U. S. Natl. Herb.* 24: 82. 1922. TYPE: COSTA RICA. San José: Cerro de la Muerte, 3100 m, Jan 1987, *Pittier 10459* (US, holotype; G, isotype). DISTRIBUTION: CR. SERIES: *Schultziana*.
22. **DIPOSTEPHIUM CRASSIFOLIUM** Cuatrec., *Bull. Torrey Bot. Club* 80: 401. 1953. TYPE: COLOMBIA. Magdalena: Sierra del Perijá, 12 km al noreste de Manaure, 48 km al este de Valledupar, 1 km de la frontera con Venezuela, páramo 3000 m, capítulos blancos, Feb 5 1945, *Grant 10865* (US, holotype; NY, VEN, isotypes). DISTRIBUTION: VEN, COL. SERIES: *Crassifolia*.
23. **DIPOSTEPHIUM CRYPTERIOPHYLLUM** Cuatrec., *Brittonia* 8: 47. 1954. TYPE: ECUADOR. Azuay: oriente border, Eastern Cordillera between Oña and río Yacuambí, crest, 3050–3400 m, shrubs reaching a maximum of 0.4 m high, leaves dark green, rays fls. white, disk fls. yellow, pappus deep salmon red, Sep 10 1945, *Camp & Prieto P-284* (F, holotype; US, isotype). DISTRIBUTION: ECU. SERIES: *Diplostephium*.
24. **DIPOSTEPHIUM CYPARISSIAS** Wedd., *Chlor. And.* 1: 203. 1856. TYPE: COLOMBIA. Magdalena: Sierra Nevada de Santa Marta, vertiente N, flores albi, [without date], *Funck 387* (P, holotype; G, US, F, isotypes, fragments). DISTRIBUTION: COL. SERIES: *Rosmarinifolia*.
25. **DIPOSTEPHIUM DENTATUM** Cuatrec., *Caldasia* 2: 218. 1943. TYPE: COLOMBIA. Norte de Santander: hoya del río Chítaga en Vega Colombia, bosque andino, 2880 m, árbol, lígulas blancas, Nov 28 1941, *Cuatrecasas 13463* (COL, holotype; BC, COL, F, U, US, isotypes). DISTRIBUTION: COL. SERIES: *Denticulata*.
26. **DIPOSTEPHIUM ELLIPTICUM** Cuatrec., *Caldasia* 2: 212, fig. 1C. 1943. TYPE: COLOMBIA. Norte de Santander: Páramo de Fontibón, 2600–2750 m, entre Pamplona y Chitaga, arbolito, Oct 16 1941, *Cuatrecasas, Schultes, & Smith 12336* (COL, holotype; F, US, isotype). DISTRIBUTION: COL. SERIES: *Denticulata*.
27. **DIPOSTEPHIUM EMPETRIFOLIUM** S.F. Blake, *Contr. U. S. Natl. Herb.* 24: 73. 1922. TYPE: ECUADOR. Loja: Páramo de Laraguero, Sep 1864, *Jamenson s.n.* (US, holotype; NY, US, isotype). DISTRIBUTION: ECU, PER. SERIES: *Diplostephium*.
28. **DIPOSTEPHIUM ERICOIDES** (Lam.) Cabrera, *Bol. Soc. Argent. Bot.* 7: 239. 1959. DISTRIBUTION: ECU, PER. SERIES: *Diplostephium*.
- Conyza ericoides* Lam., *Encycl. Mety.* 2: 92. 1786. TYPE: PERU. [Without specific locality and date] (P “herb. de Jos. Jussieu,” holotype).
- Baccharis ericoides* (Lam.) Pers., *Syn. PL* 2: 425. 1807.
- Diplostephium lavandulifolium* Kunth, *Nov. Gen. Sp. Pl.* 4: 97 pl 335. 1820. TYPE: ECUADOR. Near Mulalo, near base of Mt. Illiniza and Cotopaxi, [without date], *Bonpland 3064* (P, “Herb. Bolpand,” holotype; P, isotype).

- Diplopappus lavandulifolius* (Kunth) Cass., Dict. Sci. Nat. 25: 96. 1822.
- Aster lavandulaceus* (Kunth) Willd. Ex DC., as a synonym in Prodr. (DC.) 5: 274 1836. Nom. nud.
- Linochilus lavandulifolius* (Kunth) Sch.Bip., as a synonym in Wedd. Chl. And. 1: 200. 1857. Nom. nud.
- Diplostephium antisanense* Hieron. Engl. Bot. Jahrb. 21: 338. 1895. TYPE: ECUADOR. near Las Cimarronas in Páramo of cerro Antisana, 4000 m, Oct 1871, *Stubel 235a* (B, holotype [possibly destroyed]; F, lectotype*, US, photograph and fragment).
- Diplostephium pycnophyllum* S.F.Blake, Contr. US. Nat. Her. 24: 75. 1922. TYPE: ECUADOR. Cañar: páramo in the vicinity of Cañar, Sep 16 1918, *Rose & Rose 22750* (US, holotype; NY, isotype).
- Diplostephium antisanense* f. *rhodopappus* Cuatrec., Anal. Univ. Madrid 4: 216. 1935. TYPE: ECUADOR. Imbabura: Antisana, I-1865, *Isern 52* (MA lectotype*; LP, isotype).
29. **DIPLOSTEPHIUM ERIOPHORUM** Wedd., Chlor. And. 1: 206. 1856. TYPE: COLOMBIA. Tolima: Monte Tolima, en el límite inferior de la nieve, 1844, *Goudot s.n.* (P, holotype; FI, G, GH, P, isotypes; F, fragment). DISTRIBUTION: COL. SERIES: *Rupestria*.
30. **DIPLOSTEPHIUM ESPINOSAE** Cuatrec., Bull. Torrey Bot. Club 80: 402. 1953. DISTRIBUTION: ECU, PER. SERIES: *Diplostephium*.
- Diplostephium espinosae* Cuatrec. ex Espinosa, Estud. Bot. Sur Ecuador 2: 85. 1949. TYPE: ECUADOR. Loja: Horta-Naque 3500–3800 m, arbusto erguido denso follaje, hojas 7 × 4 mm, coriáceas lanosas envés, flores color lila claro, Nov 9 1946, *Espinosa E-979* (F, holotype). NOTE: Published without latin diagnosis nom. illeg.
31. **DIPLOSTEPHIUM FARALLONENSE** (Cuatrec.) Cuatrec., Webbia 24: 135. 1969. TYPE: COLOMBIA. DISTRIBUTION: COL. SERIES: *Floribunda*.
- Diplostephium floribundum* subsp. *farallonense* Cuatrec., Caldasia 3: 423. 1945. COLOMBIA. Valle del Cauca: Cordillera Occidental, Los Farallones de Cali, filo de la cordillera, matorrales de páramo en el cerro de La Torre, 4000 m, arbolito, hoja coriácea, rígida, verde claro haz, blanquecina envés, involucro verdoso-amarillento, lígulas blancas, flósculos violáceos, Oct 10 1944, *Cuatrecasas 17855* (VALLE, holotype; COL, F, isotype).
32. **DIPLOSTEPHIUM FERNANDEZ-ALONSOI** S.Díaz, Revista Acad. Colomb. Ci. Exact. 21: 405. 1997. TYPE: COLOMBIA. Cauca, Silvia, Guambita, 2800 m, Oct 1948, *Agredo 3080* (COL, holotype). DISTRIBUTION: COL. SERIES: *Diplostephium*.
33. **DIPLOSTEPHIUM FLORIBUNDUM** (Benth.) Wedd., Chlor. And. 1: 205. 1856. DISTRIBUTION: CR, COL, ECU. SERIES: *Floribunda*.
- Linochilus floribundus* Benth., Pl. Hartw. 203. 1945. TYPE: COLOMBIA. Cauca: Popayán, Páramo de Guanacas, [without date], *Hartweg 1126* (NY, holotype*; F, K, LD, isotypes; US, photo).
- Linochilus ochraceus* Sch.Bip., as a synonym in Weddell Chl. And. 1: 205. 1857. Nom. nud.
- Diplostephium ochroleucum* Klatt, Engl. Bot. Jahrb. 8: 37. 1886. TYPE: Cauca: [illegible] von Paletará, 3000 m, Feb 5 1884, *Lehmann 3579* (K, holotype; US, isotypes).
- Aster ochroleucus* (Klatt) Kuntze, Rev. Gen. Pl. 3: 131. 1898.
- 33.1. **DIPLOSTEPHIUM FLORIBUNDUM** subsp. **AEQUATORIENSE** Cuatrec., Caldasia 2: 235. 1943. TYPE: ECUADOR. Pichincha: Valle Mojanda, [without date], *Sodiño 443* (NY, holotype). DISTRIBUTION: COL, ECU.
- 33.2. **DIPLOSTEPHIUM FLORIBUNDUM** subsp. **LLANGANATENSE** Cuatrec., in Ciencia, 27: 181. 1972. TYPE: ECUADOR. Tungurahua: cordillera de los Llanganates near Las Torres, 3500 m, about 1 m

- high, Nov 21 1939, *Asplund 9829* (S, holotype). DISTRIBUTION: ECU.
- 33.3. **DIPLOSTEPHIUM FLORIBUNDUM** subsp. **PUTUMAYENSE** Cuatrec., *Caldasia* 2: 234. 1943. TYPE: COLOMBIA. Nariño: lado sur de la Laguna de la Cocha, Quebrada de Santa Lucía, bosque 2850 m, arbolito, lígulas blanco-liláceas, Jan 8 1941, *Cuatrecasas 11822* (COL, holotype; BC, F, P, U, US, isotypes). DISTRIBUTION: COL.
- 33.4. **DIPLOSTEPHIUM FLORIBUNDUM** subsp. **CUNDINAMARCENSE** Cuatrec., *Caldasia* 2: 235. 1943. TYPE: COLOMBIA. Cundinamarca: páramo entre Zipaquira y Pacho, 3100–3200 m, árbol 7 m, corteza gris, lígulas blancas, Jun 16 1940, *Cuatrecasas 9543* (COL, holotype). DISTRIBUTION: COL.
34. **DIPLOSTEPHIUM FOLIOSISSIMUM** S.F. Blake, *Proc. Biol. Soc. Wash.* 49: 80. 1936. TYPE: PERU. Piura: Prov. Huancabamba, Cordillera west of Huancabamba, 3200–3300 m, Apr 1912, *Weberbauer 6044* (GH, holotype; F, US, isotypes). DISTRIBUTION: ECU, PER. SERIES: *Diplostephium*.
35. **DIPLOSTEPHIUM FOSBERGII** Cuatrec., *Bull. Torrey Bot. Club* 80: 403. 1953. TYPE: COLOMBIA. Meta: Cordillera Oriental, Río Arroz arriba de la confluencia con la Quebrada del Pedregal, márgenes con matorrales, 3445 m, arbusto 3 m, capítulos pardo verdosos, Aug 29 1943, *Fosberg 20912* (F, holotype; US, isotype). DISTRIBUTION: COL. SERIES: *Denticulata*.
36. **DIPLOSTEPHIUM FRIEDBERGII** Cuatrec., *Ciencia (Mexico)* 23: 144. 1964. TYPE: PERU. Piura: Huancabamba, Talaneo, près de la Laguna Negra appartenant au groupe de lacs de Las Huarinjas, 3500 m alt., Nov 29 1961, *Friedberg 818* (US, holotype; USM isotype). DISTRIBUTION: PER. SERIES: *Rupestria*.
37. **DIPLOSTEPHIUM FRONTINENSE** Cuatrec., *Revista Acad. Colomb. Ci. Exact.* 18: 123. 1991. TYPE: COLOMBIA. Antioquia: Mpio Urrao, Páramo de Frontino, Llano Grande and hill to north, small areas of dense mossy forest intermixed with open *Espeletia* páramo, 3320–3450 m, shrub 1.5 m, rays white disk dull gray, foliage sticky-glandular, Mar 2 1989, *McDougal, Roldán, & Betancur 4424* (US, holotype). DISTRIBUTION: COL. SERIES: *Diplostephium*.
38. **DIPLOSTEPHIUM GLANDULOSUM** Hieron., *Bot. Jahrb. Syst.* 21: 339. 1895. TYPE: COLOMBIA. Nariño: Volcán Cumbal, páramo de la Boca del Mundo Nuevo, Ene–Feb 1870, *Stuebel 445b* (US, lectotype, [fragment from the original specimen from B]; NY, isotype). DISTRIBUTION: COL, ECU. SERIES: *Diplostephium*.
- Diplostephium spinulosum* Hieron. *Engl. Bot. Jahrb.* 8: 22. 1900. non *D. spinulosum* Wedd. TYPE: ECUADOR. Crescit in collibus aridis prope Riobamba, mense Septembri florens, Sept 1893, *Sodiño 64/3* (US, holotype fragment [probably from B]). NOTE: this species was originally redescribed by Hieronymus in an effort to improve the description of *D. spinulosum* Wedd., but he based the redescription on a specimen that belongs to *Diplostephium glandulosum* Hieron. for more information see Blake 1928: 50.
- Diplostephium cicatricosum* S.F. Blake, *Contr. U.S. Nat. Herb.* 24: 76. pl. 23. 1922. TYPE: COLOMBIA. Cauca: Cordillera Central, Páramo de Buena Vista (“Huila Group”), 3000–3600 m, Jan 1906, *Pittier 1128* (US, holotype; F, G, isotypes).
39. **DIPLOSTEPHIUM GLUTINOSUM** S.F. Blake, *Proc. Biol. Soc. Wash.* 49: 78. 1936. TYPE: COLOMBIA. Santander: Páramo de los Colorados, arriba de La Baja, 3900–4100 m, frutex 30 cm, brácteas con manchas purpúreas, lígulas blancas, flósculos con tubo amarillo verdoso y lóbulos rosados, estilos rosados, Jan 27 1927, *Killip & Smith 18440* (US, holotype; A, COL, GH, K, NY, isotypes). DISTRIBUTION: VEN, COL. SERIES: *Diplostephium*.
- 39.1. **DIPLOSTEPHIUM GLUTINOSUM** subsp. **GLUTINOSUM** f. **MICROPHYLLUM** Cua-

- trec., Bull. Torrey Bot. Club 80: 408, 533. 1953. TYPE: COLOMBIA. Santander: Páramo de Santurbán, cerca de Vetas, 3950–4160 m, frutos bajo, lígulas blancas, flósculos rojizos, Jan 17 1927, *Killip & Smith 17487* (US, holotype). DISTRIBUTION: COL.
- 39.2. **DIPLOSTEPHIUM GLUTINOSUM** subsp. **GLUTINOSUM** f. **SUBSPATHULATUM** (Cuatrec.) Cuatrec., *Webbia* 24: 178. 1969. DISTRIBUTION: COL.
- Diplostephium subspathulatum* Cuatrec., *Caldasia* 2: 226. 1943. TYPE: VENEZUELA. Táchira: Páramo de Tamá, 4000 m, Aug 1937, *Cardona 145* (US, holotype, VEN, isotype).
- 39.3. **DIPLOSTEPHIUM GLUTINOSUM** subsp. **COCUYANUM** Cuatrec., *Phytologia* 31: 320. 1975. TYPE: COLOMBIA. Boyacá: Páramo de Pisba, carretera Socha - La Punta, loma el Bizcocho, 2 km al SO de Laguna Batanera, 3750 m, rocas de arenisca muy expuestas al viento, arbuscillo, lígulas amarillentas, 13 Jul 1972, *Cleef 4487* (US, holotype; COL, U, isotypes). DISTRIBUTION: COL.
40. **DIPLOSTEPHIUM GNIDIROIDES** S.F.Blake, *Amer. J. Bot.* 15: 54. 1928. TYPE: PERU. Huánuco: 9.6 km south of Mito, grassy uplands, 3050 m, Aug 1–5 1922, *Macbride & Featherstone 1858* (F, holotype; US, G, isotype). DISTRIBUTION: PER. SERIES: *Diplostephium*.
41. **DIPLOSTEPHIUM GOODSPEEDII** Cuatrec., Bull. Torrey Bot. Club 80: 404. 1953. TYPE: Peru. Cuzco: prov. Urabamba: near Wenner Gren ruins; 3400–3600 m, shrub 2 m high, involucre greenish brown, ray flowers light purple, wet sphagnum hillside in open, much fog and rain, Aug 5–6 1942, *Meltcalf 30747* (GH, holotype; MO, US, isotype). DISTRIBUTION: PER. SERIES: *Rupestris**.
42. **DIPLOSTEPHIUM GRANTII** Cuatrec., Bull. Torrey Bot. Club 80: 403. 1953. TYPE: COLOMBIA. Magdalena: Sierra del Perijá, 10 km, este-noreste de Manaure, 46 km al este de Valledupar, 3 km de la frontera con Venezuela, 2550 m, arbusto 2.6 m, hojas pardo amarillentas envés, lígulas blancas, Feb 4 1947, *Grant 10791* (F, holotype; NY, US, isotype). DISTRIBUTION: VEN, COL. SERIES: *Denticulata*.
43. **DIPLOSTEPHIUM GYNOXYOIDES** Cuatrec., Bull. Torrey Bot. Club 80: 405. 1953. TYPE: PERU. Huánuco: Pillao 2700 m, in low shrubby reaches the altitude of nearly 4000 m, flower blue with dull yellow center. Leaves very dark green, underneath beige, stem beige, Nov 14 1946, *Woytkowski 34049* (F, holotype). DISTRIBUTION: PER. SERIES: *Rupestris**.
44. **DIPLOSTEPHIUM HAENKEI** (DC.) Wedd., *Chlor. And.* 1: 203. 1856. DISTRIBUTION: PER, BOL. SERIES: *Rupestris*.
- Simblocline haenkei* DC., *Prod.* 5: 297. 1836. TYPE: PERU. [Without specific locality and date], *Haenke s.n.* (G, holotype*; M, isotype).
- Diplostephium affine* Wedd., *Chlor. And.* 1: 203. 1856. TYPE: PERU. Cordillera of Carabaya, 3000–3200 m, [without date], *Weddell 4740* (P, holotype; F, US, photograph and fragment).
- Diplostephium mandonii* Sch.Bip., *Linnaea* 34: 534. 1866. Nom. nud.
- Aster sejaensis* Kuntze, *Rev. Gen. Pl.* 3:131 1898. TYPE: BOLIVIA. La Paz: Near la ceja between Cochabamba and Santa Rosa, 3000, Apr 1982, *Kuntze s.n.* (US, holotype*; NY, S, isotype).
- Diplostephium atropurpureum* Rusby, Bull. New York Bot. Gard. 4: 384. 1907. TYPE: BOLIVIA. [Without specific locality and date], *Bang 2030* (NY, holotype, isotype).
- Diplostephium liabioides* Rusby, Bull. New York Bot. Gard. 4: 384. 1907. TYPE: BOLIVIA. La Paz: Unduavi, a low shrub with blue flowers, soil mould forest, Sep 1984, *Bang 2496* (NY, holotype).
- Diplostephium mandonii* Rusby, Bull. New York Bot. Gard. 4: 383. 1907. TYPE: BOLIVIA. [Without specific locality], Mar 1858, *Mandon 215* (F, holotype*; F, GOET, isotypes).
- Diplostephium sejaense* (Kuntze) S.F.Blake, *Contr. U. S. Natl. Herb.* 24: 80. 1922.

45. **DIPLOSTEPHIUM HARTWEGII** Hieron., Bot. Jahrb. Syst. 21: 337. 1895. TYPE: ECUADOR. Loja: Saraguro, [without date], *Hartweg* 763 (K, lectotype; F, K, P, isotype). DISTRIBUTION: COL, ECU. SERIES: *Diplostephium*.
- Diplostephium adenachaenium* S.F.Blake, Contr. U.S. Nat. Herb. 24: 72. 1922. COLOMBIA. Cauca: Cordillera Central, Tierra Adentro, Páramo de las Moras, entre Mozoco y Pitayó, 3000–3500 m, Feb 1906, *Pittier 1408* (US, holotype).
46. **DIPLOSTEPHIUM HETEROPHYLLUM** Cuatrec., *Caldasia* 2: 230. 1943. TYPE: COLOMBIA. Cundinamarca: Macizo de Bogotá, Páramo de Cruz Verde, 3400–3500 m, árbolito achaparrado, 1–1.5 m, lígulas blancas, Sep 15 1940, *Cuatrecasas 10457* (COL, holotype; BC, F, G, P, US, isotypes). DISTRIBUTION: COL. SERIES: *Rosmarinifolia*.
47. **DIPLOSTEPHIUM HIPPOPHAE** S.F.Blake, Amer. J. Bot. 15: 52. 1928. TYPE: PERU. Huánuco: Vilcabamba, grassy slope in hacienda on Río Chinchao, 1830 m, Jul 17–26 1923, *Macbride 5136* (F, holotype; US, photograph and fragment). DISTRIBUTION: PER. SERIES: *Diplostephium*.
48. **DIPLOSTEPHIUM HUERTASII** Cuatrec., *Webbia* 24: 126. 1969. TYPE: COLOMBIA. Cundinamarca: municipio de Fómeque, páramo de Chingaza, finca la Laja, 3000 m, orillas del camino, arbusto 2 m, hojas verdes opacas haz, estilos de los flósculos del disco morados, Jan 10–18–20 1965, *Huertas & Camargo 5951* (US, holotype; COL, isotype). DISTRIBUTION: COL. SERIES: *Huertasina*.
49. **DIPLOSTEPHIUM INESIANUM** Cuatrec., *Webbia* 24: 192. 1969. TYPE: COLOMBIA. Magdalena: Sierra Nevada de Santa Marta, flanco occidental, 3140 m, arbusto 4 m, Jan 29 1959, *Romero Castañeda 7121* (COL, holotype; US, isotype). DISTRIBUTION: COL. SERIES: *Anactinota*.
50. **DIPLOSTEPHIUM JARAMILLOI** Cuatrec., *Phytologia* 31: 317. 1975. TYPE: COLOMBIA. Boyacá: Cerro Berlín, between Arcabuco and la Palma (borderline between Boyacá and Santander), in degraded Andean Forest, 2900 m, frutex 1.5–3 m alt, leaves coriaceous, thick, yellowish green dull above, ochraceous below, inflorescences and involucre ochraceous, ligules white, disc corollas brownish, Mar 28 1973, *Cuatrecasas, Garcia-Barriga & Jaramillo 28667* (US, holotype; COL isotype). DISTRIBUTION: COL. SERIES: *Huertasina*.
51. **DIPLOSTEPHIUM JELSKII** Hieron., Bot. Jahrb. Syst. 36: 476. 1905. TYPE: PERU. Cajamarca: Crescit prope Cutervo, May 1879, *Jelski 622* (US, lectotype [B holotype possibly destroyed]; US, isotype, F, photograph). DISTRIBUTION: PER. SERIES: *Diplostephium*.
52. **DIPLOSTEPHIUM JENESANUM** S.Díaz & M.E.Morales, *Revista Acad. Colomb. Ci. Exact.* 26: 7. 2002. TYPE: COLOMBIA. Boyacá: municipio de Jenesano, 2500 m, arbusto, hojas verde intenso, flores blancas, [without date], *Rojas 14* (UPTC, holotype; COL, isotype). DISTRIBUTION: COL. SERIES: *Denticulata*.
53. **DIPLOSTEPHIUM JUAJIBIOYI** Cuatrec., *Webbia* 24: 140. 1949. TYPE: COLOMBIA. Norte de Santander: entre Chitagá y El Cerrito, Páramo del Almorzadero, un poco abajo (al sur) del punto más alto del páramo, 3900 m, frútex 1 m, hojas verde haz, casi blancas envés, involucro verde veloso, lígulas blancas, estrechas, vilano violeta-rojizo, flores de disco verdes con ápices purpúreos, Dic 31 1959–Jan 1 1960, *Barclay & Juajibioy 10388* (US, holotype; F, MO, U, isotypes). DISTRIBUTION: COL. SERIES: *Schultziana*.
- 53.1. **DIPLOSTEPHIUM JUAJIBIOYI** subsp. **LEUCOPAPPUM** Cuatrec., *Phytologia* 31: 321. 1975. TYPE: COLOMBIA. Cundinamarca: Páramo de Sumapaz, hoya de la Quebrada Sitiales, 3530 m, orilla de la quebrada, 500 m al W de la Laguna La Primavera, arbusto 4 m, lígulas liláceas, disco marrón, Jan 9 1973, *Cleef 7584* (US, holotype; COL, U, isotypes). DIS-

- TRIBUTION: COL. NOTE: the original description of this subspecies has a typographical error in the epithet (corrected here according with article 60.1 of the International Code of Botanical Nomenclature, 2006) that was written as *Diplostephium juajibioi* subsp. *leucopappum* missing the letter “y” before the final vowel “i”.
54. **DIPLOSTEPHIUM JULIANII** Cuatrec., Webbia 24: 127. 1969. TYPE: VENEZUELA. Táchira, debajo del Páramo de Tamá, cerca de la frontera con Colombia, faldas con bosque enano y subpáramo, 2750–2950 m, shrubby vining, leaves coriaceous, dark green above, buff brown below with reticulate nerves, bracts brownish green, Jun 20–23 1967, *Steyermark & Dunsterville 98616* (US, holotype; NY, isotype). DISTRIBUTION: VEN, COL. SERIES: *Huertasina*.
55. **DIPLOSTEPHIUM JUNIPERINUM** Cuatrec., Brittonia 8: 47. 1954. TYPE: ECUADOR. Azuay: oriente border: Eastern cordillera between Oña and río Yacuambí, crest, 3050–3400 m, round-topped shrub, 0.8 m, the branches densely compacted, bracts green with reddish purple tinge, ray florets white, tipped with pale lavender below, disk flowers dull yellow, Sept 10 1945, *Prieto P-288* (F, holotype; F, MO, P, US, isotypes). DISTRIBUTION: ECU. SERIES: *Diplostephium*.
56. **DIPLOSTEPHIUM KONOTRICHUM** Cuatrec., Proc. Biol. Soc. Wash. 77: 131. 1964. TYPE: PERU. Amazonas: Prov Chachapoyas: moist scrub forest on south side of Molinopampa-Diosan pass, 2700–3100 m, shrub 4 m, rays lilac, disc yellow, Aug 8 1962, *Wurdack 1634* (US, holotype; P, USM, TEX, isotype). DISTRIBUTION: PER. SERIES: *Floribunda**.
57. **DIPLOSTEPHIUM LACUNOSUM** Cuatrec., Bull. Torrey Bot. Club 80: 406. 1953. TYPE: COLOMBIA. Boyaca: Sierra Nevada del Cocuy, alto valle de Las Lagunillas, 4000–4300 m, arbusto 2–3 m, Sep 12 1938, *Cuatrecasas 1443* (F, holotype; COL, US, isotypes). DISTRIBUTION: COL. SERIES: *Rosmarinifolia*.
58. **DIPLOSTEPHIUM LANATUM** Cuatrec., Brittonia 8: 180. 1956. TYPE: PERU. Ancash: prov. Huari: encima de Pontó, 4200–4300 m, [without date], *Weberbauer 3323* (USM, holotype). DISTRIBUTION: PER. SERIES: *Rupestria**.
59. **DIPLOSTEPHIUM LECHLERI** (Sch.Bip.) Wedd., Chlor. And. 1: 204. 1856. DISTRIBUTION: PER. SERIES: *Rupestria*.
- Liabum lechleri* Sch.Bip., Bonplandia 3: 236. 1855. TYPE: PERU. Puno: Sachapata, Prov. Carabaya, Aug 1854, *Lechler 2517* (NY, holotype*; GOET, isotype; US, F, photograph and fragment).
60. **DIPLOSTEPHIUM LEIOCLADUM** S.F.Blake, Amer. J. Bot. 15: 62. 1928. TYPE: COLOMBIA. Caldas: Cordillera Occidental, Cerro Tatamá zona de matorral al borde del páramo, 3300–3500 m, arbusto, lígulas blancas, Oct 8–10 1922, *Pennell 10531* (US, holotype; GH, isotype) DISTRIBUTION: COL. SERIES: *Denticulata*.
61. **DIPLOSTEPHIUM LEUACTINUM** Cuatrec., Brittonia 8: 181. 1956. TYPE: PERU. La Libertad: Bolívar, Sancopampa, Mollepata, Sep 6 1946, *Ferreyra 1249* (USM, holotype). DISTRIBUTION: PER. SERIES: *Diplostephium*.
62. **DIPLOSTEPHIUM MACROCEPHALUM** S.F. Blake, Contr. U. S. Natl. Herb. 24: 75, pl. 22. 1922. TYPE: ECUADOR. Azuay: vicinity of Nabón, between Cuenca and Loja, Sep 25 1918, *Pachano & Rose 22998* (US, holotype). DISTRIBUTION: ECU. SERIES: *Diplostephium*.
63. **DIPLOSTEPHIUM MEYENII** Wedd., Chlor. And. 1: 201. 1856. TYPE: CHILE: Tacna: Cordillera of Tacora, [before Peru], 4000–4500 m, *Meyen s.n.* (P, holotype). DISTRIBUTION: PER, CHI. SERIES: *Diplostephium*.
- Linochilus meyenii* Sch.Bip. Chl. And. 1: 201 1856. Nom. nud.
- Aster trachyticus* Phil. Anal. Mus. Nac. Chile Bit. 37. 1891. TYPE: CHILE: Región de

- Arica y Parinacota: Valdivia, [without date and collector] (K, holotype).
64. **DIPLOSTEPHIUM MICRADENIUM** S.F. Blake, Amer. J. Bot. 15: 49. 1928. TYPE: COLOMBIA. Caldas: Cordillera Occidental, Cerro Tatamá, 3300–3500 m, matorrales en subpáramo, lígulas blancas, flores de disco pardo-amarillas, Oct 8 1922, *Pennell 10533* (US, holotype; GH, isotype). DISTRIBUTION: COL. SERIES: *Diplostephium*.
65. **DIPLOSTEPHIUM MUTISCUANUM** Cuatrec., *Webbia* 24: 117. 1967. TYPE: COLOMBIA. Norte de Santander: entre Mutiscua y Pamplona, 3400 m, shrub 10–12 ft, rays white, anthers deep purple, pappus light brown, Feb 23 1927, *Killip & Smith 19708* (US, holotype; A, GH, isotypes) DISTRIBUTION: COL. SERIES: *Denticulata*.
66. **DIPLOSTEPHIUM NEVADENSE** Cuatrec., *Brittonia* 8: 182. 1956. TYPE: COLOMBIA. Magdalena: Sierra Nevada de Santa Marta, hasta 15500 pies de altitud (4724 m), entre peñas, hasta el nivel de las nieves perpetuas, flor amarilla, Jan 13 1924, *Wollaston 6* (K, holotype). DISTRIBUTION: COL. SERIES: *Diplostephium*.
67. **DIPLOSTEPHIUM OBLANCEOLATUM** S.F. Blake, Contr. U. S. Natl. Herb. 24: 76, pl. 24. 1922. TYPE: ECUADOR. Loja: Chuquiribamba, 3000 m, Nov 1876, *André 1* (GH, holotype; US, photograph and fragment). DISTRIBUTION: ECU. SERIES: *Diplostephium*.
68. **DIPLOSTEPHIUM OBLONGIFOLIUM** Cuatrec., *Caldasia* 2: 220. 1943. TYPE: COLOMBIA. Norte de Santander: cerro al noreste de Pamplona, vertiente oriental, páramo entre matorrales de bosque andino, 2770 m, arbolito, lígulas blancas, Sep 26 1940, *Cuatrecasas & Gracia-Barriga 10238* (COL, holotype; BC, F, US, isotypes). DISTRIBUTION: COL. SERIES: *Denticulata*.
69. **DIPLOSTEPHIUM OBTUSUM** S.F. Blake, Contr. U. S. Natl. Herb. 24: 84. 1922. TYPE: VENEZUELA. Trujillo: Páramo del Jabón, 3000–3200 m, Oct 2 1910, *Jahn 24a* (US, holotype). DISTRIBUTION: VEN. SERIES: *Floribunda*. NOTE: IPNI has as a record *D. obtusum* V.M. Badillo, Bol. Soc. Venez. Ci. Nat. 10: 305. 1946. IPNI record is erroneous, that publication cited *Diplostephium obtusum* S.F. Blake and does not describe it as new taxa.
70. **DIPLOSTEPHIUM OCANENSE** Cuatrec., *Brittonia* 8: 182. 1956. TYPE: COLOMBIA. Norte de Santander: entre Ocaña y Pamplona, 1878–1879, *Kalbreder 1199* (K, holotype). DISTRIBUTION: COL. SERIES: *Denticulata*.
71. **DIPLOSTEPHIUM OCHRACEUM** (Kunth) Nees, Gen. et Sp. Aster. 201. DISTRIBUTION: COL. SERIES: *Denticulata*. *Aster ochraceus* Kunth Nov., Gen. Sp. Pl. 4: 94. 1820. TYPE: COLOMBIA. [erroneously cited as Ecuador. Quito: monts de Quito; see note below], [without date], *Humboldt & Bonpland s.n.* (P, holotype; F, isotype). NOTE: the location of this specimen is doubtful; taking into account the distribution of the species, it is likely that this specimen was collected near Bogotá, Colombia.
- Tetramolopium ochraceum* (Kunth.) DC., Prodr. 5: 262. 1836.
- Diplostephium denticulatum* S.F. Blake, Contr. Gray Herb. 53: 25. 1918. TYPE: COLOMBIA. Cundinamarca: Macizo de Bogotá: Cerro de Guadalupe, 3000 m, Jul 1911, *Apollinaire & Arthur 11* (GH, holotype; US, isotype).
72. **DIPLOSTEPHIUM OXAPAMPANUM** Cuatrec., *Revista Acad. Colomb. Ci. Exact.* 8: 475. 1993. TYPE: PERU. Pasco: Oxapampa, Cordillera Yanachaga: Cerro Pajonal “Chacos” 12 km SE of Oxapampa. Shrubland on white sandstone, spongy sphagnum humus up to 2 m deep except where burned, 2700–2800 m, shrub 0.5 m, leaves coriaceous, flowers blue purple, Oct 7 1982, *Foster 9050* (US, holotype; F, isotype). DISTRIBUTION: PER. SERIES: *Crassifolia*.
73. **DIPLOSTEPHIUM PACHYPHYLLUM** Cuatrec., *Caldasia* 2: 228. 1943. TYPE: PERU.

- [Without specific locality], 1909–1914, *Weberbauer 6078* (F, holotype). DISTRIBUTION: ECU, PER. SERIES: *Diplostephium**.
74. **DIPLOSTEPHIUM PARVIFOLIUM** S.F.Blake, *Contr. U. S. Natl. Herb.* 24: 74. 1922. DISTRIBUTION: COL. NOTES: this species was re-described by Blake from the one initially described by Weddell; presumably because of the homonymy presented between *Diplostephium microphyllum* Wedd. (1852) and *Diplostephium microphyllum* (Vent.) Nees (1832). Country of location of this type is wrong; the Sierra-Nevada of the Santa Marta belongs to Colombia and not to Venezuela. SERIES: *Diplostephium*.
- Diplostephium microphyllum* Wedd., *Chl. And.* 1: 201. 1857. TYPE: COLOMBIA [erroneously cited as Venezuela]. Magdalena: Sierra Nevada de Santa Marta, 3000 m, arbustito, flores violáceas, [without date], *Funck 388* (P, holotype; GH, F, P, isotypes). Not *D. microphyllum* (Vent.) Nees. Nom. illeg.
- Linochilus microphyllus* Sch.Bip., as a synonym in Wedd. *Chl. And.* 1: 201. 1857. Nom. nud.
75. **DIPLOSTEPHIUM PEARCEI** Sprague & S.F.Blake, *Amer. J. Bot.* 15: 51. 1928. TYPE: PERU. Ayacucho: Puitac (near Huanta), 3660–3965 m, Feb 1987, *Pearce* s.n. (K, lectotype*, BM, isotypes; US photograph and fragment). DISTRIBUTION: PER. SERIES: *Diplostephium*.
76. **DIPLOSTEPHIUM PERIJAENSE** S.Díaz & G.P.Méndez, *Revista Acad. Colomb. Ci. Exact.* 21: 406. 1997. TYPE: COLOMBIA. Cesar, Manaure, Serranía del Perijá, camino entre casa de vidrio y Cerro del Avión, 2900 m, 72°53' W 10° N, arbolito de 5 m, hojas seríceo-ferrugíneas por el envés, verde nítido por la haz, brácteas verdes variegadas con morado, lígulas blancas, flósculos pajizos, Nov 6 1993, *Rangel, Franco, Rudas, Olmos, Pardo y Clavijo 11212* (COL, Holotype). DISTRIBUTION: COL. SERIES: *Floribunda*.
77. **DIPLOSTEPHIUM PERUVIANUM** Cuatrec., *Bull. Torrey Bot. Club* 80: 406. 1953. TYPE: PERU. Huánuco: Sariapampa, 3600 m, open spaces dwarf wood, reaches puna (4000 m), flower purple center brown, leaves gray underneath, stem brown, 5 May 1946, *Woytkowski 34285* (F, holotype; UC, isotype). DISTRIBUTION: PER. SERIES: *Diplostephium**.
78. **DIPLOSTEPHIUM PHYLICOIDES** (Kunth) Wedd., *Chlor. And.* 1: 205. 1856. DISTRIBUTION: COL. SERIES: *Phylicoidea*. *Aster phylcooides* Kunth, *Nov. Gen. Sp. Pl.* 4: 93. 1820. TYPE: COLOMBIA [erroneously cited as Mexico, see note above], [without date], *Humboldt & Bonpland s.n.* (P “Herb. Bonpland”, holotype; P “Herb. Bonpland”, isotype; F, fragment). The type specimen was supposed to be collected in Mexico, it is known that some of the Humboldt & Bonpland collections were wrongly labeled as collected in Santa Fe, Mexico (now USA), while they were collected close to Bogotá (before Santa Fe de Bogotá), Colombia.
- Tetramolopium phylcooides* (Kunth) DC. *Prodr.* 5: 262. 1836.
- Linochilus phylcooides* Sch.Bip., as a synonym in Wedd. *Chl. And.* 1: 205. 1857. Nom. nud.
- Aster crassifolius* Klatt, *Abhandl. Natur. Gesell. Halle* 15: 326. 1882. TYPE: COLOMBIA. [without specific locality and date], *Linden 1* (MA, lectotype*; BM, LIL, isotypes F, fragment).
- Diplostephium umbelliferum* S.F.Blake, *Contr. U.S. Nat. Herb.* 24: 80. pl. 26. 1922. TYPE: COLOMBIA. Cundinamarca: Cerro de Guadalupe, 1917, *Ariste-Joseph s.n.* (US, holotype).
79. **DIPLOSTEPHIUM PITTIERI** Cuatrec., *Caldasia* 2: 221, fig. 3 I, 6 S. 1943. TYPE: COLOMBIA. Valle del Cauca: Cordillera Central en el macizo del Huila, Páramo de Buena Vista, 3000–3600 m, Jan 1906, *Pittier 1174* (US, holotype; F, isotype). DISTRIBUTION: COL. SERIES: *Floribunda*.

80. **DIPLOSTEPHIUM PULCHRUM** S.F.Blake, Amer. J. Bot. 15: 58. 1928. TYPE: PERU. Huánuco: Tambo de Vaca, 3965 m, Jun 10–24 1923, *Mackbride 4346* (F, holotype; G, US, isotypes). DISTRIBUTION: PER. SERIES: *Rupestria*.
81. **DIPLOSTEPHIUM RAMIGLABRUM** Cuatrec., Bull. Torrey Bot. Club 80: 407. 1953. TYPE: ECUADOR. Loja: Horta-Naque 3700–3800 m, arbusto duro, hojas brillantes en el haz, lanosas en el envés, bordes revolutos 11 × 5 cm, cabezuelas solitarias al extremo de las ramas, flores inferiores amarillas, Nov 9 1946, *Espinosa E-1002* (F, holotype). DISTRIBUTION: ECU. SERIES: *Diplostephium*.
82. **DIPLOSTEPHIUM RANGELII** Cuatrec., Phytologia 49: 74. 1981. TYPE: COLOMBIA. Magdalena: Sierra Nevada de Santa Marta, transecto de Buritaca, Filo la Cumbre, 3850 m, arbustillo 1 m, lígulas blancas con tintes violáceos. Hojas blancas por el envés, Aug 19 1977, *Rangel & Cleef 994* (COL, holotype; COL, U, US, isotype). DISTRIBUTION: COL. SERIES: *Diplostephium*.
83. **DIPLOSTEPHIUM REVOLUTUM** S.F.Blake, Contr. U. S. Natl. Herb. 24: 78. 1922. TYPE: COLOMBIA. Cundinamarca: Bogotá, 1917, *Ariste-Joseph A233* (US, holotype). DISTRIBUTION: COL. SERIES: *Rosmarinifolia*.
Diplostephium revolutum var. *longifolium* Cuatrec., Trab. Mus. Nac. Cienc. Nat. Jard. Bot. Madrid 33: 134. 1936. TYPE: COLOMBIA. Tolima: Vertiente sur del Nevado del Tolima, Las Mesetas, 3800 m, “romero”, Jun 13 1932, *Cuatrecasas 2892* (MA, holotype).
Diplostephium revolutum var. *rubrum* Cuatrec., Caldasia 2: 236. 1943. TYPE: COLOMBIA. Boyaca: Páramo de la Rusia, vertiente SE, Boca de Monte, 3300–3400 m, arbusto, hojas pegajosas, copa densa verde clara, Aug 4 1940, *Cuatrecasas 10416* (COL, holotype; BC, F, U, US, types).
Diplostephium revolutum f. *macrocephalum* Cuatrec., Caldasia 2: 236. 1943. TYPE: COLOMBIA. Santander: Páramo del Almorzadero vertiente norte, 3600–3800 m, arbolito, lígulas blancas, Nov 28 1941, *Cuatrecasas 13513* (COL, holotype*; BC, F, US, isotypes).
84. **DIPLOSTEPHIUM RHODODENDROIDES** Hieron., Bot. Jahrb. Syst. 21: 340. 1895. TYPE: COLOMBIA. Nariño: Azufral de Túquerres, Laguna Verde, Jan 1840, *Stuebel 429* (US, holotype fragments from the original destroyed specimen from B; F, photo). Ibid: Volcán Azufral, 3400–3500 m, escamas rojo carmín brillante, Feb 10 1972, *Mora 1878A* (US, topotype, designated by Cuatrecasas in 1969). DISTRIBUTION: COL, ECU. SERIES: *Schultziana*.
Diplostephium cochense Hieron., Engl. Bot. Jahrb. 21: 341. 1985. TYPE: COLOMBIA. Nariño: llanura del Río Cocha con el frailejón, Aug 1869, *Stuebel 353* (US, holotype, fragment from the original specimen from B).
85. **DIPLOSTEPHIUM RHOMBOIDALE** Cuatrec., Webbia 24: 151. 1969. TYPE: COLOMBIA. Boyacá, Sierra Nevada del Cocuy, alto valle de Las Lagunillas, 4000–4300 m, arbusto 2–3 m, lígulas azafrandas, vilanos rojizos, Sep 12 1938, *Cuatrecasas & Gracia-Barriga 1450* (US, holotype; COL, F, P, isotypes). DISTRIBUTION: COL, ECU. SERIES: *Schultziana*.
- 85.1. **DIPLOSTEPHIUM RHOMBOIDALE** var. **PAUCIFLORUM** Cuatrec., Webbia 24: 152. 1969. TYPE: COLOMBIA. Cundinamarca: Macizo de Bogotá, Páramo de Chísaca, Laguna Negra, 3660–3720 m, hoja coriácea, verde amarillenta brillante haz, blanca envés, brácteas involucrales base verdes claras, arriba blanco-tomentosas, lígulas blancas, flósculos con limbo purpúreo, Sep 11 1961, *Cuatrecasas & Jaramillo 25904* (US, holotype; COL, P, isotypes). DISTRIBUTION: COL, ECU.
86. **DIPLOSTEPHIUM RITTERBUSHII** Cuatrec., Phytologia 23: 350. 1972. TYPE: COLOMBIA. Huila: west slope below Pico Norte of Nevado del Huila, 4200 m

- (range is 4150–4250 m), very abundant, Jan 11 1970, *Ritterbush s.n.* (US, holotype). DISTRIBUTION: COL. SERIES: *Rupestria*.
87. **DIPLOSTEPHIUM ROMEROI** Cuatrec., *Webbia* 24: 173. 1969. TYPE: COLOMBIA. Magdalena: Sierra Nevada de Santa Marta, flanco occidental, 3180 m, arbolito 5 m, flores rojas; Jan 29 1959, *Romero-Castañeda 7115* (COL, holotype; MO, US, VEN, isotypes). DISTRIBUTION: COL. SERIES: *Saxatilia*.
88. **DIPLOSTEPHIUM ROSMARINIFOLIUM** (Benth.) Wedd., *Chlor. And.* 1: 202. 1856. DISTRIBUTION: VEN, COL. SERIES: *Rosmarinifolia*.
- Linochilus rosmarinifolius* Benth., *Pl. Hartw.* 197. 1845. TYPE: COLOMBIA. Cundinamarca: Bogotá, alrededores, [without date], *Hartweg 1092* (K, holotype; F, G, LD, NY, P, US, W, isotypes).
- Diplostephium baccharideum* Blake, *Contr. U. S. Natl. Herb.* 24: 77, pl. 25. 1922. TYPE: COLOMBIA. Cundinamarca: Bogotá, Monserrate, 1917, *Aristhe-Joseph B34* (US, holotype; K, isotype).
- Diplostephium rosmarinifolium* var. *baccharideum* (Blake) Cuatrec., *Trab. Mus. Cienc. Nat. Jard. Bot. Madrid* 33: 135. 1936.
89. **DIPLOSTEPHIUM RUPESTRE** (Kunth) Wedd., *Chlor. And.* 1: 206. 1856. DISTRIBUTION: COL, ECU, PER. SERIES: *Rupestria*.
- Aster rupestris* Kunth *Nov. Gen. Sp. Pl.* 4: 94. tab. 334. 1820. TYPE: ECUADOR. Rucu Pichincha, [without date], *Humboldt & Bonpland 3047* (P, holotype; P. “Herb. Bonpl.” isotype; F, photo).
- Tetramolopium rupestre* (Kunth) Ness, *Gen. & Sp. Ast.* 203. 1832.
- Aster pichinchensis* Willd. ex Nees, *Gen. & Sp. Ast.* 203p. 1832. Nom. nud.
- Diplostephium mutisii* Cuatrec., *Trab. Mus. Nac. Cienc.* TYPE: COLOMBIA. Tolima: páramo del Nevado del Tolima, vert S y SE, 4000–4300 m, Jun 15 1932, *Cuatrecasas 2882* (MA, holotype).
90. **DIPLOSTEPHIUM SAGASTEGUII** Cuatrec., *Phytologia* 23: 353. 1972. TYPE: PERU. La Libertad: Santiago de Chuco, Laguna La Victoria, camino hacia Consuso, 4000 m, ladera rocosa, arbusto con flores blanco-violáceas, Jul 19 1966, *Sagástegui, Aldave, Fernández & Feekushima 6185* (US, holotype; F, K, MO, US, isotypes). DISTRIBUTION: PER. SERIES: *Diplostephium**.
91. **DIPLOSTEPHIUM SANDIENSE** Cuatrec., *Brittonia* 8: 183. 1956. TYPE: PERU. Puno: prov. Sandía, cerros encima de Sandía, 3100–3300 m, monte bajo siempre verde compuesto de arbustos, [without date], *A. Weberbauer 750* (USM, holotype). DISTRIBUTION: PER. SERIES: *Diplostephium**.
92. **DIPLOSTEPHIUM SANTAMARTAE** Cuatrec., *Phytologia* 52: 174. 1982. TYPE: COLOMBIA. Magdalena: Sierra Nevada de Santa Marta, “Transecto del Río Buriticá”, 3000 m alt, arbolito 3 m, brácteas e involucro de color vino tinto, hojas haz verdosas envés amarillo pálido, Aug 1977, *Rangel & Cleef 928* (COL, holotype; COL, US, holotypes). DISTRIBUTION: COL. SERIES: *Denticulata*.
93. **DIPLOSTEPHIUM SAXATILE** Cuatrec., *Proc. Biol. Soc. Wash.* 74: 14, fig. 2. 1961. TYPE: COLOMBIA. Magdalena: Sierra Nevada de Santa Marta, flanco suroriental, hoyo del Río Donachí entre la Laguna Esacuriba y unos enormes cantos y peñascos, 7870 m, árbolito 2–6m, hoja blanda haz verde clara, envés ceniciento, involucro violáceo, corolas tubulosas amarillentas, Oct 6 1959, *Cuatrecasas & Romero-Castañeda 24620* (US, holotype; COL, F, G, NY, P, isotypes). DISTRIBUTION: COL. SERIES: *Saxatilia*.
94. **DIPLOSTEPHIUM SCHULTZII** Wedd., *Chlor. And.* 1: 204. 1856. TYPE: COLOMBIA. Tolima: Volcán Tolima, 9200 toeses, 21 fl. Pourpres, Jan 1843, *Linden 901* (P, holotype; BM, F, G, K, P, US, W, isotypes). DISTRIBUTION: VEN, COL, ECU. SERIES: *Schultziana*.

- Linochilus jodopappus* Sch.Bip. ex Wedd. Chl. And. 1: 204. 1857. Nom. nud.
- 94.1. **DIPLOSTEPHIUM SCHULTZII** var. **LEHMANNIANUM** Hieron., Engl. Bot. Jahrb. 19: 48 (1894). DISTRIBUTION: COL.
- Diplostephium schultzii* var. *lehmanniana* Hieron. Engl. Bot. Jahrb. 19: 48. 1894. TYPE: COLOMBIA. Cauca: [Central Cordillera] Crescit in regione suprema fruticetorum in Páramo de Guanácas, prov. Popayán, 3000–3500 m, floret mense Jan, [without date], *Lehman* 4893 (K, lectotype*; US, isotype fragment from the B).
- Diplostephium lehmanniano* (Hieron.) Hieron., Engl. Bot. Jahrb. 21: 340. 1895.
- Diplostephium pleistogynum* S.F.Blake, Contr. U.S. Nat. Herb. 24: 82. 1922. TYPE: COLOMBIA. Cauca: Cordillera Central, Páramo de Buena Vista (“Huila Group”), 3000–3600 m, Jan 1906, *Pittier s.n.* (US, holotype; F, fragment).
- 94.1.1. **DIPLOSTEPHIUM SCHULTZII** var. **LEHMANNIANUM** f. **SUBINCISUM** (Cuatrec.) Cuatrec., *Webbia* 24: 148. 1969. DISTRIBUTION: COL.
- Diplostephium subincisum* Cuatrec., *Caldasia* 3: 421. 1945. TYPE: COLOMBIA. Cauca: Cordillera Central, cabeceras del Río Páez, páramos alrededor de la Laguna del Páez, 3450 m, Dic 4 1944, *Cuatrecasas* 19041 (VALLE, holotype; A, COL, F, isotypes).
- 94.2. **DIPLOSTEPHIUM SCHULTZII** var. **ORIENTALE** (Cuatrec.) Cuatrec., *Webbia* 24: 148. 1969. DISTRIBUTION: COL, VEN.
- Diplostephium pleistogynum* var. *orientale* Cuatrec., *Bull. Torr. Bot. Club* 80: 408. 1953. TYPE: VENEZUELA. Táchira: Páramo de Tamá, 3100–3300 m, Jul 31 1939, *Cardona* 316 (US, holotype; VEN, isotype).
95. **DIPLOSTEPHIUM SERRATIFOLIUM** Cuatrec., *Phytologia* 52: 176. 1982. TYPE: PERU. Cajamarca: Contumazá, circa Contumazá, 2700 m, Jun 1960, *Alza s.n.* (LP, holotype; USM, isotype; US, fragment and photo). DISTRIBUTION: PER. SERIES: *Rupestria*.
96. **DIPLOSTEPHIUM SPINULOSUM** Wedd., Chl. And. 1: 200. 1856. TYPE: ECUADOR. Andes de Quito, 4200 m, 1856, *Jamenson* 406 (P, holotype; K, US, isotypes). DISTRIBUTION: COL, ECU. SERIES: *Diplostephium*.
97. **DIPLOSTEPHIUM STUEBELII** (Hieron.) Cuatrec., *Ciencia* (Mexico) 23: 144. 1964. DISTRIBUTION: PER. SERIES: *Diplostephium**.
- Aster stuebelii* Hieron., Bot. Jahrb. Syst. 21:334 1895. TYPE: PERU. Amazonas: Crescit prope Fraileyacu inter Pacasmayo et Moyobamba, 3300 m, ubi floret mense Aprili-Junio 1875, (col. peruv. 24a) (Original specimen destroyed in B; F, photo). *ibid*: Chachapoyas, altos del Cerro Yama-Uma, arriba de Taulia, 12–15 km al SSW de Molinopampa, 3200–3450 m, rare, rays white, disc yellow, Aug 11 1962, *Wurdack* 1675 (US, neotype; USM isotype, designated by Cuatrecasas, 1964).
98. **DIPLOSTEPHIUM TACHIRENSE** V.M.Badillo, Bol. Soc. Venez. Ci. Nat. 10: 305. 1946. TYPE: VENEZUELA. Táchira, Páramo de Tamá, Jul 15 1944, *Steyermark* 57360 (VEN, holotype; F, NY, US, isotypes) DISTRIBUTION: VEN, COL. SERIES: *Denticulata*.
99. **DIPLOSTEPHIUM TACORENSE** Hieron., Bot. Jahrb. Syst. 21: 337. 1895. TYPE: CHILE: Plain near Tacora [before Peru], 4000–5000 m, Apr 1831, *Meyen s.n.* (K, holotype; US, fragment) DISTRIBUTION: PER, CHI. SERIES: *Diplostephium*.
100. **DIPLOSTEPHIUM TAMANUM** Cuatrec., *Caldasia* 2: 214. 1943. TYPE: COLOMBIA. Norte de Santander: Páramo de Tamá, alrededores de La Cueva, residuos del bosque andino límite, 3000–3200 m, lígulas blancas, flósculos verdosos, Oct 28 1941, *Cuatrecasas, Shultes, & Smith* 12710 (COL, holotype; F, P, S, U, isotypes). DISTRIBUTION: COL. SERIES: *Denticulata*.
101. **DIPLOSTEPHIUM TENUIFOLIUM** Cuatrec., *Caldasia* 2: 211, fig. 1A. 1943. TYPE: COLOMBIA. Boyacá, Valle de la Uvita,

- El Hatico (entre Soata y Cocuy), bosque andino y matorrales, 3350 m, árbol grande, Sep 15 1938, *Cuatrecasas & Gracia-Barriga 1793* (COL, holotype; F, P, US, isotypes). DISTRIBUTION: COL. SERIES: *Denticulata*.
102. **DIPLOSTEPHIUM TERGOCANUM** Cuatrec., *Webbia* 24: 175. 1969. TYPE: COLOMBIA. Magdalena: Sierra Nevada de Santa Marta, en las cabeceras del Río Sevilla, entre grandes piedras en la base la subida al segundo pico al este de la cabecera de la hoya; flanco occidental del pico, 3770 m, "station 19", arbusto de 3 m, olor de *Espeletia*, tallos inferiores desnudos, hojas verdes haz, blanco lanosas envés, brácteas involucrales purpúreas; vilanos de blanco a rosado; muy resinoso, pegajoso, Jan 28 1959, *Barclay & Juajibioy 6762* (US, holotype). DISTRIBUTION: COL. SERIES: *Saxatilia*.
103. **DIPLOSTEPHIUM TOLIMENSE** Cuatrec., *Trab. Mus. Nac. Ci. Nat., Ser. Bot.* 29: 26, fig. 8. 1935. TYPE: COLOMBIA. Tolima: Cordillera Central, Nevado del Tolima, 3800–4000 m, páramo, May 15 1932, *Cuatrecasas 2884* (MA, holotype; F, photo and fragment). DISTRIBUTION: COL. SERIES: *Floribunda*.
- Diplostephium boyacense* Cuatrec., *Caldasia* 2: 222. 1943. TYPE: COLOMBIA. Boyaca: Cordillera oriental, Páramo de Guantiva, Alto de Canutos, vertiente sur, árbol 7 m, 3200–3400 m, Aug 3 1940, *Cuatrecasas 10356* (COL, holotype; F, P, US, isotypes).
104. **DIPLOSTEPHIUM VACCINOIDES** S.F. Blake, *Proc. Biol. Soc. Wash.* 49: 77. 1936. TYPE: PERU. Junín: Hacienda Runatullu, 3800 m, 1909–1914, *Weberbauer 6633* (GH, type; USM, isotype; US, fragment and photograph). DISTRIBUTION: PER. SERIES: *Diplostephium*.
105. **DIPLOSTEPHIUM VENEZUELENSE** Cuatrec., *Caldasia* 2: 233. 1943. TYPE: VENEZUELA. Mérida, Tabay, 2500–3000 m, arbusto de 2–5 m de altura; hojas aromáticas, cabezuelas amarillo ocre, Nov 18 1930, *Gehriger 473* (VEN, holotype; G, MO, NY, F, US, isotypes). DISTRIBUTION: VEN. SERIES: *Floribunda**.
106. **DIPLOSTEPHIUM VERMICULATUM** Cuatrec., *Caldasia* 2: 229. 1943. TYPE: PERU. Huánuco, between Huánuco and Pampayaca, 1927, *Kanehira s.n.* (F, holotype). DISTRIBUTION: PER. SERIES: *Rupestria**.
107. **DIPLOSTEPHIUM VIOLACEUM** Cuatrec., *Caldasia* 2: 232. 1943. TYPE: COLOMBIA. Caldas: Cordillera Central, vertiente occidental, vert. SW del Nevado del Ruiz, Termales, 3400 m, arbusto de 2 m, o árbol hasta 8 m, flores centrales violáceas, lígulas blancas, "romerillo", Jun 4 1940, *Cuatrecasas 9229* (COL, holotype; P, F, US, isotypes). DISTRIBUTION: COL. SERIES: *Rosmarinifolia*.
108. **DIPLOSTEPHIUM WEBERBAUERI** Cuatrec., *Brittonia* 8: 181. 1956. TYPE: Peru. Junín: prov. Tarma, cerros al oeste de Huacapistana 3500 m, estepa de gramíneas con arbustos esparcidos, [without date], *Weberbauer 2224* (USM, holotype). DISTRIBUTION: PER. SERIES: *Diplostephium**.
109. **DIPLOSTEPHIUM WEDDELLII** S.F. Blake, *Contr. U. S. Natl. Herb.* 24: 79. 1922. TYPE: COLOMBIA. Magdalena: Sierra Nevada de Santa Marta, prov. del Riohacha, 4000–4400 m, arbusto, flores amarillas, Mar 1 1852, *Schlim 806* (P, holotype; BM, F, G, K, isotypes; F, photo). DISTRIBUTION: COL. NOTE: Blake provided a new epithet for *D. sessiliflorum* Wedd., since the later is a homonym of *D. sessiliflorum* Spreng. (which is a synonym of *Liabum sessiliflorum* Less). SERIES: *Rupestria*.
- Diplostephium sessiliflorum* Wedd., *Chl. And.* 1: 204. 1857. Nom. illeg. non *D. sessiliflorum* Spreng. 1826.
110. **DIPLOSTEPHIUM WURDACKII** Cuatrec., *Proc. Biol. Soc. Wash.* 77: 135. 1964. TYPE: PERU. Amazonas: Prov. Chachapoyas: upper slopes and summit of Cerro Yama-uma above Taulia, 12–15 km SSE (145°) of Molinopampa,

3200–3450 m alt, shrub 1–2.5 m, occasional, rays pale purple, disc yellow, Aug 11 1962, *Wurdack 1672* (US, holotype; TEX, isotype). DISTRIBUTION: PER. SERIES: *Denticulata*.

111. **DIPLOSTEPHIUM YAHUARCOCHENSE** Cuatrec., *Revista Acad. Colomb. Ci. Exact.* 8: 476. 1993. TYPE: PERU. Cajamarca: prov. Chota, Laguna Yahuarcocha, arriba de Incahuasi, jalca, 3600 m, Oct 14 1985, *Sagastegui, Skellman, Mostacero, and Ramirez 12912* (US, holotype; F isotype). DISTRIBUTION: ECU, PER. SERIES: *Diplostephium*.

ACKNOWLEDGMENTS

I am grateful to Santiago Díaz Piedrahita, Mauricio Diazgranados, Santiago Madridián, Vicky Funk, Harold Robinson, and Beryl Simpson for their input and help in different stages of this manuscript. Julio Betancur (COL), Hamilton Beltran (USM), Michael Dillon (F), Vicky Funk (US), Carol Kellof (US), Haydee Montoya (USM), Diego Perico (FMB), Adriana Prieto (FMB), and Tom Wendt (TEX) facilitated access to their respective herbarium collections. The Smithsonian Institution Cuatrecasas Award (2006) of the US National Herbarium provided partial support for this study.

LITERATURE CITED

- Blake, S. F.** 1922. Key to the Genus *Diplostephium*, with descriptions of new species. *Contr. U.S. Natl. Herb.* 24: 65–86.
- Blake, S. F.** 1928. Review of the genus *Diplostephium*. *Amer. J. Bot.* 15: 43–64.
- Brako, L. and Zarucchi, J. L.** 1993. Catalogue of the flowering plants and gymnosperms of Peru. *Monogr. Syst. Bot. Missouri Bot. Gard.* 45.
- Bridson, G. D. R.** 2004. *Botanico Periodico Huntianum* ed 2. Compiler G. D. R. Bridson. Pittsburgh: Hunt Botanical Institution.
- Cuatrecasas, J.** 1943. Estudios sobre plantas andinas V. *Caldasia* 2: 209–240.
- Cuatrecasas, J.** 1963. New taxa in the genus *Diplostephium*. *Bull. Torrey Bot. Club.* 80: 401–408.
- Díaz-Piedrahita, S. and B. L. Restrepo.** 1994. Una nueva especie de *Diplostephium* (Compositae, Astereae) de Colombia. *Rev. Acad. Colomb. Cienc.* 19: 243–245.
- Díaz-Piedrahita, S. and G. Mendez-Ramirez.** 1997. Algunas novedades en Asteraceae de Colombia. *Rev. Acad. Colomb. Cienc.* 21: 401–408.
- Díaz-Piedrahita, S. and M. E. Morales.** 2002. Una especie nueva de *Diplostephium* (Asteraceae, Astereae) de los Andes de Boyacá, Colombia. *Rev. Acad. Colomb. Cienc.* 26: 5–7.
- Granda Paucar, A.** . *Diplostephium tovari* Cuatrecasas, a new synonym for *Parastrephia lucida* (Meyen) Cabrera (Compositae-Astereae). *Compositae Newsl.* 35: 44–47.
- Humbolt, F. H. A. von., A. J. Bonpland, and C. S. Kunth.** 1820. *Nova Genera et Species Plantarum*. Vol. 4. Paris: Lutetiae Parisiorum.
- Mabberley, D. J.** 1981. Edward Nathaniel Bancroft's *Obscure Botanical Publications and his Father's Plant Names*. *Taxon* 30: 7–17.
- McNeill, J., F. R. Barrie, H. M. Burdet, V. Demoulin, D. L. Hawksworth, K. Marhold, D. H. Nicolson, J. Prado, P. C. Silva, J. E. Skog, J. H. Wiersema, & N. J. Turland,** eds. 2006. *International Code of Botanical Nomenclature (Vienna Code)*, adopted by the Seventeenth International Botanical Congress Vienna, Austria, July 2005 (*Regnum Veg.* 146). Königstein, Germany: A.R.G. Gantner.
- Stafleu, F. A. and R. S. Cowan.** 1981. *Taxonomic Literature*. Ed2. *Regnum Veg.* Utrecht: Bohn, Scheltema and Holkema.
- Vargas, O. M. and S. Madridián.** 2006. Clave para la identificación de las especies de *Diplostephium* (Asteraceae, Astereae) en Colombia. *Rev. Acad. Colomb. Cienc.* 30: 489–494.
- Weddell, H.** 1857. *Chloris Andina* Vol. 1. Paris: P. Bertrand.

APPENDIX 1. *Diplostephium* doubtful names and synonyms now associated with to other genera. GCC: global Compositae checklist (<http://compositae.landcareresearch.co.nz/>). IPNI: International Plant Name Index (<http://www.ipni.org/> consulted in 2006).

Name	Synonym of	Source
<i>Diplostephium aculeatum</i> Nees	<i>Olearia ramulosa</i> (Labill.) Benth.	GCC
<i>Diplostephium acuminatum</i> DC.	<i>Aster acuminatus</i> Nees	IPNI
<i>Diplostephium amygdalinum</i> Cass.	<i>Doellingeria umbellata</i> (Mill.) Nees var. <i>umbellata</i>	GCC
<i>Diplostephium amygdalinum</i> Sweet	<i>Doellingeria umbellata</i> (Mill.) Nees	GCC
<i>Diplostephium amygdalinum</i> var. <i>humilius</i> DC.	<i>Doellingeria umbellata</i> (Mill.) Nees	IPNI
<i>Diplostephium boreale</i> Spreng.	<i>Oclemena reticulata</i> (Pursh) G.L.Nesom	GCC
<i>Diplostephium canum</i> A.Gray	<i>Hazardia cana</i> (A.Gray) Greene	GCC
<i>Diplostephium cornifolium</i> DC.	<i>Doellingeria infirma</i> (Michx.) Greene	GCC
<i>Diplostephium corymbosum</i> Donn.Sm.	<i>Archibaccharis corymbosa</i> (Donn.Sm.) S.F.Blake	Blake 1922
<i>Diplostephium dichotomum</i> DC.	<i>Oclemena reticulata</i> (Pursh) G.L.Nesom	GCC
<i>Diplostephium extenuatum</i> Nees	<i>Felicia fruticosa</i> (L.) G.Nicholson subsp. <i>fruticosa</i>	GCC
<i>Diplostephium filifolium</i> Nees	<i>Felicia filifolia</i> (Vent.) Burt Davy subsp. <i>filifolia</i>	GCC
<i>Diplostephium flavidum</i> V.M.Badillo	<i>Pentacalia polymera</i> (Klatt) Cuatrec.	US Type
<i>Diplostephium foliosum</i> Rusby	<i>Gynoxys foliosa</i> (Rusby) S.F.Blake	US Type
<i>Diplostephium fruticosum</i> Nees	<i>Felicia fruticosa</i> (L.) G.Nicholson subsp. <i>fruticosa</i>	GCC
<i>Diplostephium grandiflorum</i> Spreng.	<i>Liabum grandiflorum</i> (Kunth) Less.	GCC
<i>Diplostephium hispidum</i> Nees ex DC.	<i>Heterotheca villosa</i> (Pursh) Shinnors	GCC
<i>Diplostephium humile</i> (Willd.) Sweet	<i>Doellingeria infirma</i> (Michx.) Greene	GCC
<i>Diplostephium igniarium</i> Spreng.	<i>Liabum igniarium</i> Less.	GCC
<i>Diplostephium incanum</i> Hieron.	A member of the Senecioneae	Blake 1922, Brako & Zarucchi 1993
<i>Diplostephium lepidophyllum</i> Nees	<i>Olearia lepidophylla</i> (Pers.) Benth.	GCC
<i>Diplostephium linariifolium</i> Nees	<i>Ionactis linariifolia</i> (L.) Greene	GCC
<i>Diplostephium linifolium</i> (L.) Sweet	<i>Senecio rosmarinifolius</i> L.f.	Mabberly 1981
<i>Diplostephium linifolium</i> Forbes	Unknown, <i>Aster acris</i> ?	IPNI
<i>Diplostephium liratum</i> (Sims) Nees	<i>Olearia stellulata</i> (Labill.) DC.	GCC
<i>Diplostephium longipes</i> Cass.	<i>Felicia fruticosa</i> (L.) G.Nicholson subsp. <i>fruticosa</i>	GCC
<i>Diplostephium lyratum</i> Nees	<i>Olearia stellulata</i> (Labill.) DC. var. <i>lirata</i> (Sims) Benth.	GCC
<i>Diplostephium madagascariense</i> Humbert	<i>Madagaster madagascariensis</i> (Humbert) G.L.Nesom	GCC
<i>Diplostephium melastomoides</i> Spreng.	<i>Liabum melastomoides</i> Less.	GCC
<i>Diplostephium microphyllum</i> (Vent.) Nees	<i>Olearia ramulosa</i> (Labill.) Benth.	GCC
<i>Diplostephium moranense</i> Nees	<i>Symphotrichum moranense</i> (Kunth) G.L.Nesom	IPNI
<i>Diplostephium nubigenum</i> Spreng.	<i>Oligactis nubigena</i> (Kunth) Cass.	GCC
<i>Diplostephium obovatum</i> DC.	<i>Oclemena reticulata</i> (Pursh) G.L.Nesom	GCC
<i>Diplostephium obtusatum</i> Nees	<i>Chrysocoma obtusata</i> (Thunb.) Ehr.Bayer	GCC
<i>Diplostephium paniculatum</i> Donn.Sm.	<i>Archibaccharis serratifolia</i> var. <i>paniculata</i> Blake	Blake 1931
<i>Diplostephium phlogotrichum</i> Nees	<i>Olearia stellulata</i> (Labill.) DC.	GCC
<i>Diplostephium ramulosum</i> Nees	<i>Olearia ramulosa</i> (Labill.) Benth.	GCC
<i>Diplostephium rigidum</i> (Pursh) Sweet	<i>Aster linariifolius</i> L.	Mabberly 1981

APPENDIX 1. Continued.

Name	Synonym of	Source
<i>Diplostephium sessiliflorum</i> Spreng.	<i>Oligactis sessiliflora</i> (Kunth) H.Rob. & Brettell	GCC
<i>Diplostephium solidagineum</i> Spreng.	<i>Liabum solidagineum</i> (Kunth) Less.	GCC
<i>Diplostephium stellulatum</i> Nees	<i>Olearia stellulata</i> (Labill.) DC.	GCC
<i>Diplostephium teretifolium</i> Nees	<i>Felicia filifolia</i> (Vent.) Burt Davy subsp. <i>filifolia</i>	GCC
<i>Diplostephium tovari</i> Cuatrec.	<i>Parastrephia lucida</i> (Meyen) Cabrera	Granda Paucar 2000
<i>Diplostephium umbellatum</i> DC.	<i>Doellingeria umbellata</i> (Mill.) Nees	GCC
<i>Diplostephium verbascifolium</i> Spreng.	<i>Ferreyranthus verbascifolius</i> (Kunth) H.Rob. & Brettell	GCC
<i>Diplostephium volubilis</i> Spreng.	<i>Oligactis volubilis</i> (Kunth) Cass.	GCC