



Original article

Synopsis of the genus *Mapania* (Cyperaceae, Mapanioideae, Hypolytreae) in the Colombian Amazon

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ABSTRACT: *Mapania* is a genus placed in the tribe Hypolytreae, subfamily Mapanioideae of the family Cyperaceae. It includes about 100 species worldwide, widely distributed throughout the tropics. In South America, this genus is represented by 14 species, five of them in Colombia. Its presence in the Colombian Amazon is uncertain due to lack of knowledge of the group and dubious records. The aim of this study is to present a taxonomic synopsis of *Mapania* for the Colombian Amazon. Specimens from COAH and COL herbaria as well as online databases were revised. Presence of five species is reported: *Mapania effusa* whose occurrence in Colombia is confirmed, *M. pycnocephala* and *M. pycnostachya* new records for the Amazon region, *M. maguireana* and *M. theobromina* new records for the Colombian flora. Morphological descriptions, information about the habitat, geographic distribution, notes, and photographs for these species are presented along with a key to identify the Colombian species of this genus.

Keywords: Amazon rainforest, Apaporis River basin, Guiana shield, Neotropics.

RESUMEN (Sinopsis del género *Mapania* (Cyperaceae, Mapanioideae, Hypolytreae) en la amazonia colombiana): *Mapania* es un género ubicado en la tribu Hypolytreae, subfamilia Mapanioideae, de la familia Cyperaceae. A nivel global contiene cerca de 100 especies ampliamente distribuidas en los trópicos. En Suramérica este género se encuentra representado por 14 especies, cinco de estas presentes en Colombia. Su presencia en la Amazonia colombiana es incierta debido a la falta de conocimiento del grupo y los registros dudosos. El objetivo de este estudio es presentar una sinopsis de la taxonomía de *Mapania* para la amazonia colombiana. Se revisaron especímenes de los herbarios COAH y COL, así como bases de datos en línea. Se reportan cinco especies: *Mapania effusa* cuya presencia en Colombia se confirma, *M. pycnocephala* y *M. pycnostachya* nuevos registros para la región Amazonia, *M. maguireana* y *M. theobromina* nuevos registros para la flora colombiana. Se presentan descripciones morfológicas, información del hábitat, distribución geográfica, notas y fotografías para estas especies junto con una clave para la determinación de las especies colombianas de dicho género.

Palabras clave: bosques amazónicos, cuenca río Apaporis, escudo guyanés, Neotrópico

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INTRODUCTION

Mapania Aubl. is a genus belonging to the tribe Hypolytreae, subfamily Mapanioideae, of the sedge family Cyperaceae (Simpson *et al.* 2007, Muasya *et al.* 2009, Larridon *et al.* 2021). It is the largest genus in its tribe with about 100 species (Larridon *et al.* 2021) and it is closely related to *Hypolytrum* Rich. and *Scirpodendron* Zipp. ex Kurz (Simpson *et al.* 2007, Muasya *et al.* 2009). It includes five sections, three of them with neotropical distribution: *Mapania* sect. *Mapania* Benth. & Hook., *M.* sect. *Mapaniopsis* D.A. Simpson, *M.* sect. *Pycnocephala* C.B. Clarke (Simpson 1992, 1996).

Species of *Mapania* are widely distributed throughout the tropics, being mainly forest dwellers (Simpson 1996, Goetghebeur 1998). In south America, there are 14 species occurring mostly in seasonally flooded forest of the Amazon region (Simpson 1992, 1996). In Colombia this genus is represented by five species distributed in the Pacific lowlands, Magdalena River valley and Andean region (Bernal *et al.* 2016). The only species located in the Amazon region is *Mapania effusa* (C.B. Clarke) T. Koyama, though Bernal *et al.* (2016) consider it as a dubious record.

Morphologically this genus comprises robust herbs with inflorescences arranged in structures termed *Spicoids* (Kukkonen 1984, Simpson 1992). Spicoids are present in members of the subfamily Mapanioideae, and they are interpreted as flowers (Goetghebeur 1998) or reduced spikelets (Simpson 1992, Bruhl 1995). Due to this complex inflorescence and its morphology sometimes unusual, species of *Mapania* can be difficult to identify. Some species look different to the typical graminoid sedge being herbs with pseudopetiolated broad leaves and terminal congested inflorescence subtended by broad bracts, hence they are sometimes confused with Rapateaceae. Also, some species are confused with the related genus *Hypolytrum*. The aim of this study is to provide a taxonomic synopsis of the genus

Mapania for the Colombian Amazon. Morphological descriptions, information about the habitat, geographic distribution, notes, and photographs for each species are presented along with a key to identify the Colombian species of this genus.

MATERIALS AND METHODS

The taxonomic treatment was conducted through an examination of 36 herbarium specimens from the *Herbario Amazónico Colombiano* - COAH and *Herbario Nacional Colombiano* - COL, in addition to digital images from the US herbarium (acronyms according to Thiers 2023). The protologues of the accepted species and type specimens were consulted in online resources (Botanicus 2021, BHL 2021, Jstor 2021). Observations were made using a stereomicroscope Leica S9D. Morphological features were recorded using a conventional precision ruler. Descriptions were based on the material examined, following specialized terminology (Kearns *et al.* 1998, Simpson 2006, Beentje 2010). Images were edited using the Photoshop® software. Records from biodiversity repositories (GBIF 2023, speciesLink 2023) were debugged and used along with the information of the herbarium labels to determine the distribution and habitat of each species. Finally, the distribution map was elaborated using the DIVA-GIS software and shapefiles were obtained from its official website (DIVA-GIS 2023).

RESULTS

In the Colombian Amazon the genus *Mapania* is represented by five species: *Mapania effusa*, *M. maguireana*, *M. pycnocephala*, *M. pycnostachya*, and *M. theobromina*. All these species are known from few records in the southeastern part of Colombia, while *M. maguireana* is also occurring in the southwest of this country, near the border with Peru (Figure 1). A taxonomic synopsis for *Mapania* in the Colombian Amazon is presented:

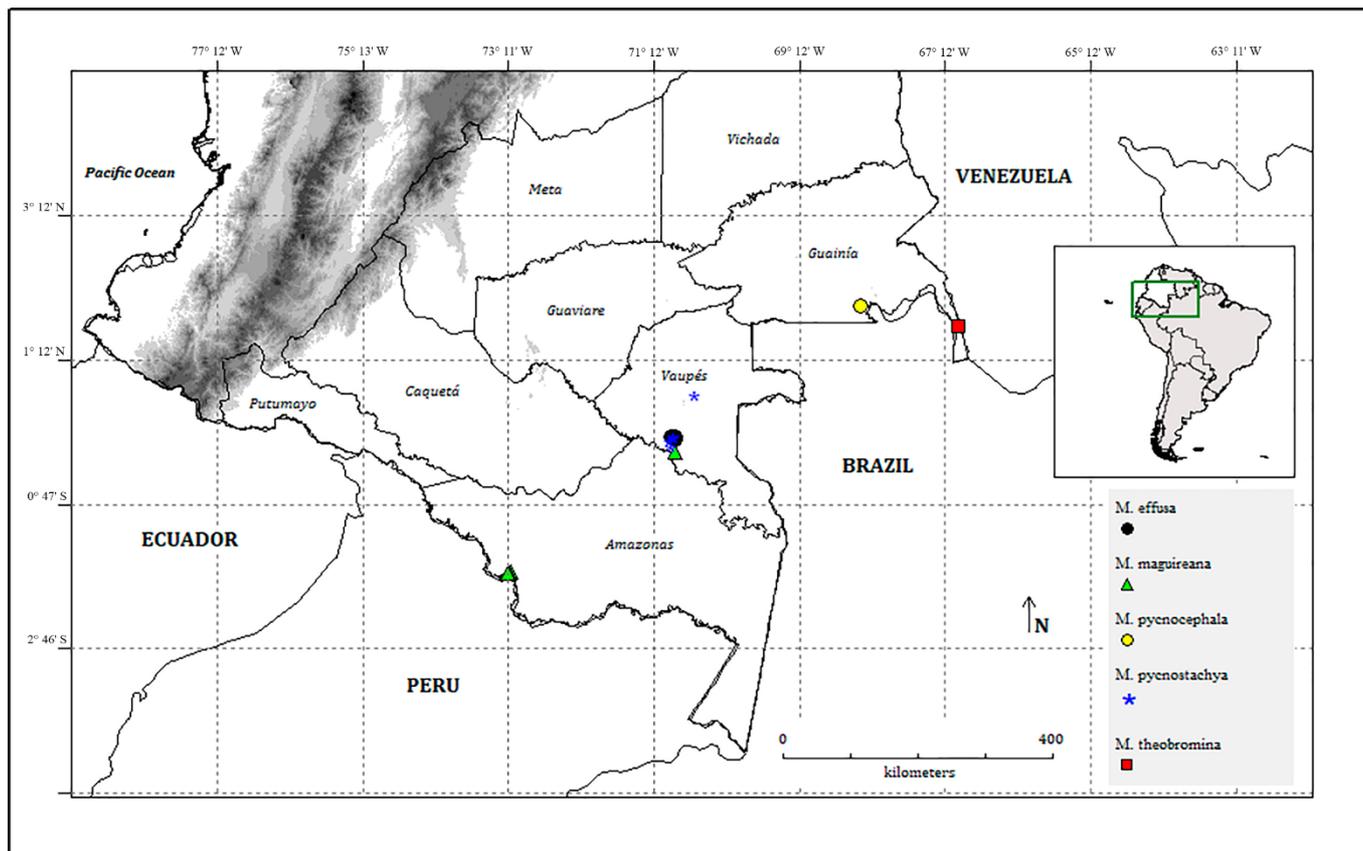


Figure 1. Distribution of *Mapania* species in the Colombian Amazon.

Mapania Aubl., Hist. Pl. Guiane 1: 47. 1775.

Moderate to robust **herbs**, rhizomatous or stoloniferous. Culm solitary and central or several lateral culms. **Leaves** 3-ranked, usually basal, often pseudopetiolate; blade linear, oblong or absent (reduced to sheaths); venation parallel with 1 main nerve; margins entire to denticulate. Peduncular bracts usually leaf-like. Inflorescence terminal, glomerated, corymbiform or paniculate (0–2 times branched) with the final peduncle subtending small clusters of spikes. **Spikes** with few to numerous spirally imbricate glume-like bracts (spicoid bracts) which subtend spicoids. Spicoid composed of 4–6 keeled scales (floral bracts) subtending 1–3 basal stamens and a terminal pistil. Stigma 2 or 3-branched. **Fruit** an achene globose, ovoid, or turbinate; hard or succulent exocarp; surface smooth or rugulose.

Distribution and richness: Pantropical, in tropical rainforest and along open swamps. About 100 species worldwide, eight in Colombia.

Notes: Some species of *Mapania* are confused with *Hypolytrum*, however, *Mapania* species usually have 1-costate leaves (vs. 3-costate), spicoids consisting of 4–6 scales (vs. 2), and fruits usually smooth to rugulose but never dotted (vs. usually ridged to wrinkled and sometimes dotted).

1. *Mapania effusa* (C.B. Clarke) T. Koyama, J. Fac. Sci. Univ. Tokyo, Sect. 3, Bot. 8(3): 68. 1961.

= *Mapaniopsis effusa* C.B. Clarke, Bull. Misc. Inform. Kew, Addit. Ser. 8: 55. 1908.

Robust **herbs** to 2 m tall; rhizomatous. Culm central, triquetrous, 60–180 × 0.35–0.5 cm. **Leaves** basal; blade linear, 50–130 × 1–2 cm, apex acuminate, base narrowed into sheath, margins denticulate; pseudopetiole absent. Peduncular bracts foliaceous,

linear, margins denticulate. Inflorescence terminal, paniculate, composed of several primary peduncles, 5–20 cm long, each subtending 2–8 spreading secondary peduncles, the longer of these subtending 1–4 tertiary peduncles. **Spikes** ovate to elliptic, 3–5 mm long, in digitate clusters of 2–6 (Figure 2: a). Spicoid bracts ovate, 2–2.3 mm long, brown. Floral bracts 2.5 mm long. Stamens 3 per spicoid; stigma 2-branched. **Achene** ovoid, somewhat trigonous, 2–2.5 × 1.5–2 mm; apex acute, base rounded shortly stipitate; exocarp hard, smooth, yellow, shiny (Figure 2: b).

Distribution: Colombia (Vaupés), Venezuela, Brazil, Guyana, French Guiana, Suriname.

Habitat: Amazon rainforest, on hills and rocky outcrops of the Guiana Shield. In cleared areas in forest or savannah, between 0–700 m.

Notes: Sometimes confused with robust species of *Hypolytrum* but can be distinguished from this genus by their leaves with a main nerve (vs. 3 main nerves) and the presence of four floral bracts in each spicoid (vs. 2).

Material examined: COLOMBIA. Vaupés: río Kananarí, cerro Isibukurí, 15 Mar 1952, *L.E. Mora-O APA-349* (COL); Piedra de arenisca, 250–700 m, 4 Jul 1951, *R.E. Schultes & I. Cabrera 13385* (US); Quarzite base, near summit general location, 23 Jan 1952, *R.E. Schultes & I. Cabrera 15026* (US); corregimiento de Pacoa: comunidad Morroco, cerro Morroco, 0°7'45.8"N, 70°56'38.5"W, 595 m, 27 Feb 2018, *N. Castaño 10600* (COAH); 0°7'43.2"N, 70°56'38.2"W, 604 m, 26 Feb 2018, *D. Cárdenas 49905* (COAH); 0°7'43.2"N, 70°56'38.2"W, 604 m, 26 Feb 2018, *D. Cárdenas 49818* (COAH); 0°8'6.1"N, 70°56'36.5"W, 492 m, 9 Feb 2013, *J.S. Barreto 3134* (COAH); cuenca del río Cananari, inmediaciones del Parque Nacional Natural Yaigojé Apaporis, 0°8'32.2"N, 70°57'31.6"W, 170 m, 24 Feb 2018, *J. Betancur 21871* (COAH).

2. *Mapania maguireana* T. Koyama & Steyerl., *Mem. New York Bot. Gard.* 17(1): 65. 1967.

Herb to 40 cm tall, rhizomatous. Culm central, triquetrous, 15–28 × 0.25–0.3 cm, scabrid mostly apically. Basally with numerous sheaths. **Leaves** basal and usually with 1 caulinar leaf arranged like a bract; blade oblong, 10–30 × 4–7 cm, apex acuminate to caudate, base obtuse, margins apically denticulate; pseudopetiole present, 8–12 cm long. Peduncular bracts foliaceous, linear to lanceolate, margins denticulate. Inflorescence terminal, glomerate, 1.5–2 × 2 cm (Figure 2: c). **Spikes** sessile, typically indistinct. Spicoid bracts lanceolate, 4–4.9 mm long, white. Floral bracts 3–4 mm long; whitish. Stamens 2 per spicoid; stigma 2-branched. **Achene** rounded, 1–1.2 × 1 mm; apiculate, base shortly stipitate; exocarp hard, cancellated, olive green to dark brown, some white yellowish (Figure 2: d).

Distribution: Colombia (Amazonas, Vaupés), Venezuela, Brazil, Guyana.

Habitat: Amazon rainforest, understory vegetation. Mostly in mountains areas and gallery forest, between 100–1000 m.

Notes: This species is usually confused with Rapateaceae but in Cyperaceae perianth is absent or reduced to bristles or scales (vs. present) and its fruits are achenes (vs. loculicidal capsules). Likewise, it is similar to *Mapania pycnocephala* which also can have leaves oblongs with apex caudate and evident pseudopetiole, and small round fruits. In *Mapania maguireana* the inflorescence is whitish (vs. reddish), spicoid and floral bracts are shorter (up to 4.9 and 4 mm long vs. up to 7 and 8.5 mm long, respectively).

Material examined: COLOMBIA. Amazonas: corregimiento El encanto, grupo étnico Murui, 1°45'25"S, 73°11'48"W, 170 m, 4 Aug 2021, *N. Marín-C 6244* (COAH); camino a la quebrada Venado, 1°43'55"S, 73°09'57.3"W, 137–149 m, 12 Apr 2022,

A. Zuluaga 5316 (COAH); trocha que va de la comunidad al sector Venado al occidente, 1°44'40.3"S, 77°11'28.3"W, 148 m, 19 Feb 2021, *C. Castro 2754* (COAH). Vaupés: corregimiento de Pacoa, río Apaporis, margen izquierda 3 km a dentro, bosque secundario con dosel de 7 m, 0°4'49"S, 70°54'1.9"W, 163 m, 15 Oct 2015, *N. Castaño 6651* (COAH); *M. Montoya-J 2704* (COAH).

3. *Mapania pycnocephala* subsp. *fluviatilis* (Sandwith) T. Koyama, Mem. New York Bot. Gard. 17(1): 66. 1967.

= *Mapania fluviatilis* Sandwith, Bull. Misc. Inform. Kew 1933: 495. 1933.

Herb to 60 cm tall, rhizomatous. Culm central, triquetrous, 25–58 × 0.25–0.5 cm. Basally with numerous sheaths. **Leaves** mostly basal; sometimes with 1 or 2 caulinar leaves and arranged like bracts; blade linear or oblong, 50–80 × 4–6 cm, apex acuminate to caudate, base obtuse, margins apically denticulate; pseudopetiole present. Peduncular bracts foliaceous, linear to lanceolate, margins denticulate. Inflorescence terminal, glomerate, 1.5–3.5 × 2–5 cm (Figure 2: e). **Spikes** sessile. Spicoid bracts lanceolate, 7 mm long, brown to reddish. Floral bracts 8.5 mm long. Stamens 2 per spicoid; stigma 2-branched. **Achene** rounded to ovoid, 1.3–1.5 × 1 mm; apiculate, base shortly stipitate; exocarp hard, smooth, dark brown or black, shiny (Figure 2: f).

Distribution: Colombia, Venezuela, Brazil, Guyana, Suriname, French Guiana.

Habitat: Amazon rainforest; understory vegetation and banks of rivers, between 0–800 m.

Notes: This species can be confused with *M. maguireana* (see comments above) and *M. pycnostachya*. It differs from the latter in being more robust, having wider leaves to 7 cm (vs. <2 cm in *M. pycnostachya*) and brown to reddish inflorescence

(vs. whitish). In addition, *M. pycnocephala* subsp. *fluviatilis* has 2 stamens per spicoid (vs. 1) and rounded, hard achenes (vs. lanceolate, spongy achenes).

Material examined: COLOMBIA. Guainía: Panapaná, comunidad Miraflores, 1°56'51.5976"N, 68°22'8.634"W, 115 m, 23 Apr 2014, *G. Aymard 14160* (COL).

4. *Mapania pycnostachya* (Benth.) T. Koyama, Mem. New York Bot. Gard. 17(1): 60. 1967.

= *Diplasia pycnostachya* Benth., J. Linn. Soc., Bot. 15: 512. 1877.

Herb to 1 m tall, rhizomatous. Culm central, triquetrous, 30–50 × 0.2–0.3 cm, scabrid mostly apically. **Leaves** basal; blade linear, 50–70 × 1.5 cm, apex acuminate, base narrowed into pseudopetiole, margins denticulate; pseudopetiole present, up to 8 cm long. Peduncular bracts foliaceous, linear, margins denticulate. Inflorescence terminal, glomerate, 2–3 × 1.5–2.5 cm (Figure 2: g). **Spikes** sessile, usually obscure. Spicoid bracts lanceolate, 4–6 mm long, chartaceous, light brown. Floral bracts 6–7 mm long; whitish. Stamens 1 per spicoid; stigma 2-branched. **Achene** turbinate, 4–5 × 1.5–2 mm; apex spongy, acute; base with a dark brown spot; surface smooth, shiny (Figure 2: h).

Distribution: Colombia (Vaupés), Venezuela, Brazil, French Guiana.

Habitat: Amazon rainforest; mountain areas, seasonally flooded forests, and margins of streams, between 100–800 m.

Notes: This species is similar to *M. pycnocephala* subsp. *fluviatilis* (See notes above).

Material examined: COLOMBIA. Vaupés: corregimiento de Pacoa, gran resguardo del Vaupés, comunidad de Buenos Aires, 0°4'3.3"N, 70°59'2.6"W, 150 m, 11 Feb 2013, *J.S. Barreto 3154* (COAH); caño

Malla, río Kananarí, camino hacia el cerro Totuma, 100–250 m, 19 Apr 2009, *J. Betancur 13596* (COL, COAH); río Kananarí, cerro Isibukurí, 4 Dec 1951, *R.E. Schultes & I. Cabrera 14709* (COL); *R.E. Schultes & I. Cabrera 14705* (US). Mitú, comunidad de San Pedro del Ti, caño Ti, 0°41'55.4"N, 70°38'23"W, 192 m, 3 Oct 2018, *M. Fernández 1399* (COAH).

5. *Mapania theobromina* D.A. Simpson, *Kew Bull.* 51(4): 728. 1996.

Robust **herbs**; rhizomatous. Culm central, triquetrous, 60–100 × 0.2–0.4 cm. **Leaves** basal; blade linear, 70–110 × 1.5 cm, apex acuminate, base narrowed into sheath, margins and midrib denticulate; pseudopetiole absent. Peduncular bracts foliaceous, linear, margins denticulate. Inflorescence terminal, paniculate, composed of several primary peduncles, up to 30 cm long, each subtending up to 4–5 spreading secondary peduncles. **Spikes** lanceolate to oblong, 10–12 × 2 mm, in digitate clusters of 2–4 (Figure 2: i). Spicoid bracts ovate, 2 mm long, dark brown. Floral bracts 1.5 mm long; whitish. Stamens not seen; stigma 2-branched. **Achene** ovoid, 2.5 × 1.5 mm; apex apiculate, base rounded; exocarp hard, rugose, golden, dull (Figure 2: j).

Distribution: This species is endemic to the Parque Nacional Serranía La Neblina in southern Venezuela (Amazonas) and surrounding areas, in the eastern part of Colombia (Guainía) and probably northwestern Brazil (Amazonas).

Habitat: Amazon rainforest, understory vegetation. On hills, riverbanks, and lower montane forests, between 100–500 m.

Notes: This species is closely related to *Mapania effusa*; according to Simpson (1992, 1996), they are in the section *Mapaniopsis*. Despite the superficial resemblance between these species, *M. theobromina* is less robust and has longer spikes (10–12 mm long) than *M. effusa* (3–5 mm long); likewise, its fruits are

golden-brown and rugose (vs. yellow and smooth). In absence of fruit, *M. theobromina* can also be confused with *Diplasia karatifolia* due to its elongated spikes and the similarity between their inflorescences. Nevertheless, the latter is more robust (1–3 m tall), has wider leaves (up to 4 cm), longer spikes (15–30 mm) and more stamens per spicoid (> 5) than the former.

Material examined: Colombia, Guainía: corregimiento de la Guadalupe, caño Cariaco. 1°39'35.4"N, 67°00'56.1"W, 130 m, 21 Jan 2018, *M. Fernández-L 1114* (COAH).

KEY TO IDENTIFY COLOMBIAN SPECIES OF *MAPANIA*

1. Plants bladeless, leaves reduced to sheaths; peduncular bracts widely elliptic to lanceolate; stigma 3-branched 2
1. Plants with leaves fully developed; peduncular bracts linear or linear to lanceolate; stigma 2-branched 3
2. Achenes olive to brown, dull, surface rugose *M. sylvatica*
2. Achenes black, shiny, surface smooth .. *M. assimilis*
3. Inflorescence glomerate or corymbiform, spikes compactly clustered into heads 4
3. Inflorescence paniculate, spikes elongated loosely arranged on peduncles 7
4. Inflorescence glomerate 5
4. Inflorescence corymbiform *M. cuatrecasasii*
5. Leaves linear up to 2 cm wide; achenes with conical spongy apex *M. pycnostachya*
5. Leaves linear or oblong up to 7 cm wide; achenes with hard rounded to acute apex 6
6. Inflorescence whitish; spicoid bracts < 5 mm long *M. maguireana*
6. Inflorescence reddish; spicoid bracts ≥ 5 mm long *M. pycnocephala*
7. Spikes > 6 mm long; achenes rough *M. theobromina*
7. Spikes ≤ 5 mm long; achenes smooth *M. effusa*



Figure 2. *Mapania* species in the Colombian Amazon. *Mapania effusa*: a) tertiary peduncle with 4 spikes, b) achene. *Mapania maguireana*: c) glomerate inflorescence with sessile spikes, d) achene. *Mapania pycnocephala* subsp. *fluviatilis*: e) glomerate inflorescence with sessile spikes, f) achene. *Mapania pycnostachya*: g) glomerate inflorescence with sessile spikes, h) achene. *Mapania theobromina*: i) secondary peduncle with 3 spikes, j) achene. Scale bar: b, d, f, j = 0.5 mm; h = 1 mm; a, i = 5 mm; c, g = 1 cm; e = 2 cm.

DISCUSSION

The presence of *Mapania effusa* in Colombia has been confirmed. Bernal *et al.* (2016) regarded this species as a questionable record because the only known specimens in Colombia lacked fruits. This species is distributed in the northeastern region of South America and is closely linked to rocky outcrops within the Guiana Shield region. In Colombia, it is found on hills within forested areas in the Vaupés department.

Mapania pycnocephala represents a new occurrence in the Amazon region of Colombia. Its presence in this area was anticipated based on its established global distribution pattern. This species comprises two subspecies: *M. pycnocephala* subsp. *pycnocephala* and *M. pycnocephala* subsp. *fluviatilis*. The separation between them lies in the length of their spicoid bracts, nutlet surface and distribution patterns (Simpson 2006). Based on their distribution, the former is predominantly found from Nicaragua to Peru, while the latter is observed from eastern Colombia to French Guiana (Simpson 2006, GBIF 2023, speciesLink 2023). A comparable disjunct distribution pattern is evident among other members of the genus (Simpson 1989), presumably linked to the uplift of the Andes. However, this distribution is not rigid, and both subspecies can coexist, particularly in the eastern regions of Colombia and western Venezuela.

Mapania pycnostachya also represents a novel addition to the Colombian Amazon flora. While previously documented in the Pacific lowlands by Bernal *et al.* (2016), this species is naturally tied to Amazonian forests (Kearns *et al.* 1998, Simpson 2006, Silva *et al.* 2019). The earlier report is likely a result of mistaking *M. pycnocephala* for *M. pycnostachya*, an understandable confusion due to their close resemblance particularly in the absence of

fruits. Consequently, the inclusion of the *M. pycnostachya* in this study corroborates the presence of this species for the Colombian flora.

Mapania maguireana is now confirmed as a new record for Colombia. Despite its limited number of sightings, this species demonstrates a wide distribution across the Amazon basin, ranging from Guiana to Colombia and potentially extending to Peru. Similarly, *Mapania theobromina* represents a novel presence for the Colombian flora. This species was collected in the eastern region of Colombia, situated at an approximate distance of 140 km from the Type locality. Therefore, its presence in the country is expected.

The outcomes of this study facilitate the revision of the species composition within the *Mapania* genus in Colombia, growing from five (Bernal *et al.* 2016) to eight species. Among these, five are distributed in the Amazon, rendering this region the most diverse for the genus in the country. The remaining trio of Colombian species (*M. assimilis*, *M. cuatrecasasii* and *M. sylvatica*) is predominantly situated in the Pacific region (Bernal *et al.* 2016, GBIF 2023, speciesLink 2023).

The Colombian species of *Mapania* are important elements of the understory vegetation and riverbank environments within the Amazon and Chocó biogeographic regions. Their ability to diversify in the prevailing humid conditions of these areas can be attributed to their specialized morphoanatomical features (Silva *et al.* 2019). In the Colombian Amazon most of the species occur in forests and hills along the Apaporis River basin. This area is part of the upper Amazonian forests, which are considered one of the most diverse regions in the world (Gentry 1988, Ter Steege *et al.* 2000). Additionally, this region encompasses rocky formations of the Guiana shield where high values of

endemism have been documented (Cárdenas-López *et al.* 2009, Córdoba 2014).

The species under examination in this study are restricted to the Amazon basin occurring from Colombia and Peru to French Guiana. Despite this extensive geographic distribution within the Amazon, these species have limited documented occurrences, primarily concentrated around the same locality or its vicinity (GBIF 2023, speciesLink 2023). This trend is notably pronounced in species like *M. maguireana* and *M. theobromina*, suggesting a certain level of habitat specialization. Consequently, evaluating the populations of *Mapania* species becomes imperative to determine their conservation status.

CONCLUSIONS

Mapania is a tricky genus to identify and usually confused with other taxa. Thus, its presence in the Colombian Amazon was uncertain for an extended period. This study provides key information for identify this genus and the Colombian species. Five species were recognized for the Colombian Amazon. As a result, the species richness of this genus in the country has grown to eight, with the Amazon region emerging as the richest area.

All the species examined are endemic to the Amazon basin and known from scarce records, thereby warranting heightened attention. Finally, it is interesting to note that all these species are virtually new records at the regional or national level. This observation reveals the deficient understanding of this taxonomic group in Colombia, situation that is generalized for the whole family and supports the need for additional studies.

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