

Original article

A new species and new records of Myrtaceae from Colombia

Una nueva especie y nuevos registros de Myrtaceae en Colombia

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Abstract

A new species of *Myrcia* from lowland tropical humid forests of Antioquia, Colombia, is described and illustrated. Taxonomic affinities of the new species are discussed, as well as some of its morphological characters, the habitat in which this species is growing, and the evaluation of its conservation status. Also, seven new records of native Myrtaceae are reported for Colombia.

Keywords: Colombian flora; *Eugenia*; *Myrcia* sect. *Myrcia*; Myrciinae; Neotropical plants.

Resumen

Se describe e ilustra una nueva especie de *Myrcia* de los bosques tropicales húmedos de tierras bajas de Antioquia, Colombia. Se discuten las afinidades taxonómicas de la nueva especie, algunos de sus caracteres morfológicos, los hábitats en donde crece y se presenta una evaluación de su estado de conservación. Además, se reportan siete nuevos registros de Myrtaceae nativas de Colombia.

Palabras clave: *Eugenia*; Flora de Colombia; *Myrcia* sect. *Myrcia*; Myrciinae; Plantas neotropicales.

Introduction

Myrcia DC. (Myrtaceae), with 744 species, is a diverse genus of trees, shrubs, and subshrubs that grows in the Caribbean and from the south of Florida (United States of America) to Argentina (Lucas *et al.*, 2018; Lucas *et al.*, 2019; Santos *et al.*, 2024). *Myrcia* is the most diverse genus of Myrtaceae in Colombia, with ca. 70 species that are mainly distributed in natural Colombian regions of the Amazonia, the Andes, and the Guayanian Shield (Parra-O. *et al.*, 2024). This genus is characterized by having simple trichomes (frequently dibrachiate), well-developed panicles (sometimes reduced), calyx closed or open with five (sometimes four) distinct calyx lobes, ovary usually 2-locular (sometimes 3–4-locular), 2–3 (–9) ovules per locule, fruits with 1–2 seeds, and embryo with cotyledons foliaceous and folded, encircled by a long hypocotyl (Lucas *et al.*, 2018, Lucas *et al.*, 2019).

My ongoing studies of Colombian Myrtaceae have led to the discovery of a new species of *Myrcia* in the JAUM herbarium and seven new species records for the country, four in *Myrcia* and three in *Eugenia*.

Materials and methods

The morphological terminology used here followed the **Systematics Association Committee for Descriptive Biological Terminology** (1962), McVaugh (1958; 1968), Landrum and Kawasaki (1997), and Beentje (2010). Herbarium specimens of *Myrcia* were studied in COAH, COL, HUA, JAUM, and JBGH (herbarium acronyms follow Thiers, 2025). Vegetative and reproductive characters were dissected and studied under a stereomicroscope. The conservation analysis followed IUCN categories and criteria (IUCN, 2022).

Citation: Parra-O. C. A new species and new records of Myrtaceae from Colombia. Revista de la Academia Colombiana de Ciencias Exactas, Físicas y Naturales. 49(191):355-361, abril-junio de 2025. doi: <https://doi.org/10.18257/raccefyn.3192>

Editor: Elizabeth Castañeda

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Received: 28 de marzo de 2025

Accepted: 29 de mayo de 2025

Published on line: 12 de junio de 2025



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Results and discussion

Myrcia segoviensis C. Parra-O., sp. nov. (**Figure 1**). **TYPE:** Colombia. **Antioquia:** Segovia, 'mina María Elena en vereda La Pó', 7°09'45.373"N, 74°38'26.343"W, 266 m, 12 Feb 2021 (fl, fr), *J. Franco, D. Sánchez Gómez & D. Marín 1105* (holotypus: JAUM # 0090616!).

Diagnosis. This species is most similar to *M. icnii* C. Parra-O., from which it differentiates by having leaf blade ovate-lanceolate (vs. elliptic or obovate in *M. icnii*), leaf base subauriculate (vs. cuneate), peduncles of the inflorescence 40×2.5 mm (vs. 60×3 – 3.7 mm), narrower calyx lobes (1.4–2 mm vs. 2.6–3.3 mm), smaller ovary (0.6 mm vs. 1.8 mm), and fruits globose (vs. elliptic).

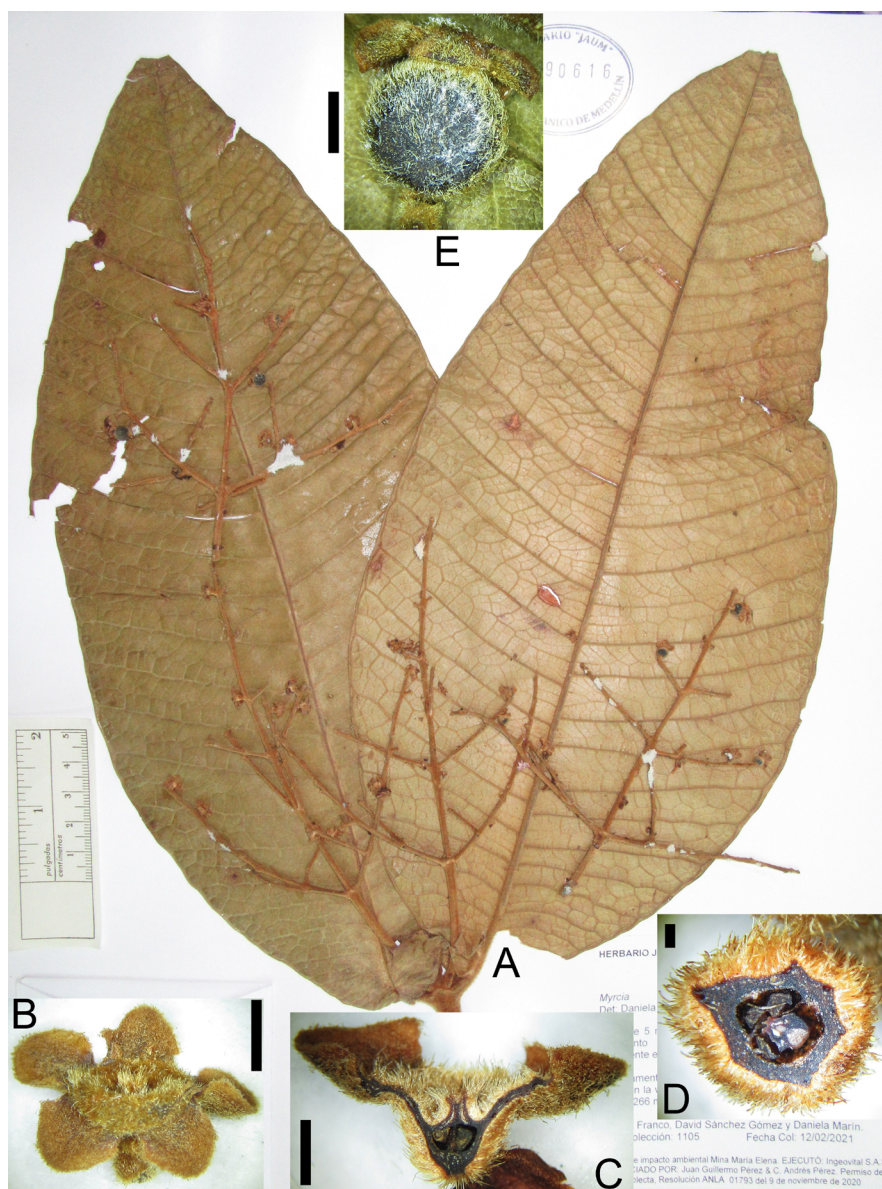


Figure 1. *Myrcia segoviensis* C. Parra-O. **A.** Flowering and immature fruiting branch. **B.** Flower disk with calyx lobes (stamens and petals removed). **C.** Longitudinal section of hypanthium and ovary. **D.** Transversal section of hypanthium and ovary. **E.** Immature fruit. **A-E** [from the holotype *J. Franco et al. 1105* (JAUM # 0090616)]. Scale for B = 2 mm, scale for C = 1 mm, scale for D = 0.2 mm, scale for E = 2 mm. Photos: C. Parra-O.

Description. Tree, 5 m tall; hairs when present 0.5–1.6 mm, simple, pale golden to pale golden brown, with a thickened base. **Branches** compressed, light vinaceous, moderately to densely pubescent; old branches not seen. **Leaves** petiolate, the petioles 6–7 mm long, brownish-orange, moderately to densely pubescent, adaxially surface not seen; blades ovate-lanceolate, 32–33 × 14–15 cm, coriaceous, slightly to moderately bullate, the upper surface glabrous, with scarcely raised glandular dots, the lower surface slightly pubescent, with glandular dots not perceptible; apex not seen; base subauriculate; margin entire; midvein slightly sulcate to clearly sulcate, slightly to moderately pubescent above, markedly convex, moderate to densely pubescent below; lateral veins 24–27 pairs, flat to slightly sulcate, glabrescent to slightly pubescent above, convex, moderately pubescent below; marginal veins 2, the innermost 1–3 mm from the margin, the outermost 0.1–0.4 mm from the margin. **Inflorescences** axillary, paniculate, 15–27 cm long, with an unknown number of flowers per panicle, the axes compressed, densely pubescent, brownish-orange when dry; peduncles 40 × 2.5 mm; bracts and bracteoles not seen; flower buds not seen, flowers sessile or on a subcompressed pedicel 0.2–0.7 (1.1) × 0.5–0.8 (1) mm, the pedicel densely pubescent; calyx lobes 5, depressed ovate, 1.4–2 × 1.4–2 mm, subcoriaceous, moderately pubescent outside and inside, the apex obtuse; petals broadly ovate, 2.3–2.4 × 1.4–2.1 mm, subcoriaceous, glabrous outside, moderately to densely pubescent inside, glabrous or scarcely pubescent at margin, the apex obtuse, the base truncate; hypanthium 1.4–1.6 mm in diameter, prolonged 0.5 mm above the ovary, densely pubescent outside and inside; disk semi-quadrangular, 2.7–3.5 mm, densely pubescent; style 4.2 mm long, moderately pubescent at base and half of its extension, glabrous at the top; stamens 70–90; filaments 1.5–2.8 mm, anthers subglobose to ellipsoid, 0.2–0.3 mm long, with 1 subapical gland; ovary 0.6 mm in diameter, 2–locular, 2 ovules per locule. **Immature fruits** globose, blackish when dry, 4–6 mm in diameter, with scarce to moderate puberulence denser at the apex, on a terete pedicel 0.5–0.6 × 1–1.4 mm, crowned by remnants of calyx lobes. **Immature seeds** 2, subglobose, 3.8–4 × 3.4–3.7 mm, seed coat smooth and somewhat lustrous, with sparse glands; mature seeds and embryo not seen.

Etymology. *Myrcia segoviensis* refers to the type locality in the municipality of Segovia, Department of Antioquia, Colombia.

Geographical distribution and habitat. *Myrcia segoviensis* grows in lowland tropical humid forests in Segovia municipality, Antioquia, at 266 m; this new species seems to be endemic to Colombia.

Phenology. *Myrcia segoviensis* has been collected with flowers and immature fruits in February.

Conservation. This species is only known from the type; therefore, its conservation status is preliminarily assessed here as “Data Deficient” (DD), following IUCN Red List criteria (IUCN, 2022).

Comments. *Myrcia segoviensis* is apparently related to *M. icnii*, but the characters given in the diagnosis can differentiate the two species. Although mature fruits and seeds of the species are not known, its paniculate inflorescence, five calyx lobes, and bilocular ovary place it in *Myrcia*. *Myrcia segoviensis* has a pilose floral disc, a thickened staminal ring, and the hypanthium shortly extended above the summit of the ovary, characters which according to Lucas *et al.* (2018) are typical of species belonging to *Myrcia* sect. *Myrcia*.

New records

Eugenia bullatifolia M. L. Kawas. & A. J. Pérez, Harvard Pap. Bot. 20: 84. 2015.

This species was only known from the lowland rainforest of the Yasuní National Park in Ecuador (Kawasaki & Pérez, 2015; Kawasaki *et al.*, 2019). The specimen studied here represents a new record of this species for Colombia, where it grows in flooded lowland Amazonian forests. *Eugenia bullatifolia* fruits were not known when this species was described (Kawasaki & Pérez, 2015). Here, I provide a description of mature fruits and seeds from the specimen examined:

Fruits globose, subglobose or suboblate, 2.5–4 cm in diameter, moderately pubescent, turning yellow when mature (*in schedá*), pedicellate, the pedicel subcompressed, 10–15 × 1–1.3 mm, slight to moderately pubescent; seed 1, ellipsoid, 1–2 × 0.8–1.3 cm; seed coat coriaceous; embryo eugenoid with fused cotyledons and partially visible hypocotyl.

Specimens examined: COLOMBIA. **Amazonas:** ‘corregimiento de El Encanto, bosque inundable a orillas del río Caraparaná’, 01°43’58.0”S, 73°14’04.0”W, 119 m, 14 Apr 2022 (fr), *A. Barona et al.* 6265 (COAH!).

Eugenia longisepala M. L. Kawas. & B. Holst, J. Bot. Res. Inst. Texas 3 (2): 614. 2009.

Described in the Amazonian provinces of Orellana and Sucumbíos in Ecuador (**Kawasaki & Holst**, 2009a). One of the northernmost known localities for *E. longisepala* in Ecuador is in Orellana (*Korning & Thomsen* 58651 (AAU, QCA)), very near the border between Ecuador and Colombia. Until now, in Colombia, this species has been found only in the Amazonian seasonally flooded forests of the Amazonas department, near the Caquetá River. *Duque et al.* 4838 has shorter petioles (5–6 mm) than the typical petiole length of *E. longisepala* (20–25 mm), but otherwise the specimen matches the morphological descriptions of this species (**Kawasaki & Holst**, 2009a; **Kawasaki et al.**, 2019).

Specimens examined: COLOMBIA. **Amazonas:** Araracuara, 01°06’47”S, 71°35’40”W, 200–300 m, 6 Mar 2001 (fr), *A. Duque et al.* 4838 (COAH!).

Eugenia octopleura Krug & Urb., Bot. Jahrb. Syst. 19 (5): 653. 1895.

Native to Mexico, Mesoamerica, the Antilles, and Venezuela (**Holst**, 2008; **Barrie**, 2009; **Gala et al.**, 2023), this species grows in tropical and dry forests of La Guajira and Tolima departments, and in tropical humid forests of Antioquia and Chocó departments in Colombia.

Specimens examined: COLOMBIA. **Antioquia:** ‘in valley of río Anorí between Dos Bocas and Anorí, 26 km S & 23 km W (air) of Zaragoza’, 400–700 m, 10 Aug 1976 (fr), *J. Shepherd* 529 (COL!, HUA!). **Chocó:** Bahía Solano, ‘corregimiento El Valle, Parque Nacional Natural Utría’, 20–180 m, 13 Nov 2023 (fr), *J. Jiménez et al.* 4483 (JAUM!). **La Guajira:** ‘vía Mingueo – San Antonio’, 300 m, 17 Nov 1985 (fr), *H. Cuadros* 2432 (COL!, JBGPI!, MO-n.v.). **Tolima:** ‘El Líbano’, 1580 m, 17 Jul 1947 (fr), *H. García-Barriga* 12212 (COL!).

Myrcia carinata (M. L. Kawas. & B. Holst) A.R. Lourenço & E. Lucas, Phytotaxa 373 (1): 74. 2018. Basionym: *Calypttranthes carinata* M. L. Kawas. & B. Holst, Harvard Pap. Bot. 14 (1): 3. 2009.

Previously known only from Perú (**Kawasaki & Holst**, 2009b; **Burton et al.**, 2022), these specimens are a new record of this species for Colombia; it grows in the Araracuara region, in seasonally flooded forests near the Caquetá River and in ‘terra firme’ forests near the Putumayo River.

Specimens examined: COLOMBIA. **Amazonas:** Araracuara, ‘plano inundable’, 1°02’39”S, 71°34’11”W, 200–300 m, 12 Mar 2001 (fr), *A. Duque et al.* 4846 (COAH!); ‘río Caquetá, tra. 23, 10 m al lado norte (mar. izquierda), frente a la isla de las Palmas’, 26 May 1986 (fr), *P. Palacios et al.* 1340 (COAH!); ‘aproximadamente 50 m en dirección 110° de la margen izquierda (bajando) del río Caquetá, 8 km arriba de la Isla de Guandal’, 1°01’30”N, 71°33’41”W, 03 Oct 1997 (buds), *M. Sánchez et al.* 6319 (COAH!); ‘aproximadamente 50 m en dirección 110° de la margen izquierda (bajando) del río Caquetá, frente al Quebradón del Sábalo’, 1°02’39”N, 71°34’11”W, 22 May 1998 (buds), *M. Sánchez et al.* 7103 (COAH!). **Putumayo:** ‘Puerto Leguizamo, vía Puerto Leguizamo – La Tagua, Km 19’, 0°09’20”S, 74°46’40”W, 19 Jan 2000 (fr), *S. Suárez et al.* 1336 (COAH!, COL!).

Myrcia glomerata (Cambess.) G.P. Burton & E. Lucas, Phytotaxa 460 (1): 26. 2020. Basionym: *Calypttranthes glomerata* Cambess., Fl. Bras. Merid. (quarto ed.) 2 (20): 372. [1829] 1833.

This species grows in Ecuador, Brazil, Bolivia, Argentina, Paraguay, and Uruguay (**Kawasaki et al.**, 2019; **Lourenço et al.**, 2020). Specimens reported here are the first

records for Colombia. It is found in montane forests of the Central Cordillera in the Risaralda department, between 1900-1950 m.

Specimens examined: COLOMBIA. **Risaralda:** Pereira, ‘corregimiento La Florida, Santuario de Flora y Fauna Otún Quimbaya’, 4°44’17”N, 75°34’01”W, 1900 m, 22-28 Feb 2004 (fr), *F. Alzate et al.* 2230 (HUA!); Pereira, ‘Santuario de Flora y Fauna Otún Quimbaya’, 1950 m, Jan 2001 (fr), *W. Vargas* 8876 (COL!); Pereira, ‘Otún Quimbaya, La Suiza’, 23-28 Jan 2000 (fr), *W. Vargas* 6986 (COL!, HUA!).

Myrcia minutiflora Sagot, Ann. Sci. Nat., Bot., sér. 6, 20: 185. 1885.

It is native to Venezuela, Guyana, Suriname, French Guiana, Perú, and Brazil (McVaugh, 1969; Lucas *et al.*, 2016; Holst, 2002, 2003). Specimens mentioned here are the first records of this species for Colombia. They grow in lowland and ‘terra firme’ forests of the Amazonas department, at 200 m.

Specimens examined: COLOMBIA. **Amazonas:** Leticia, ‘comunidad de Palmeras, margen izquierda del río Amazonas’, 3°48’51”S, 70°15’44”W, 200 m, 8 Oct 2018 (fr), *D. Cárdenas et al.* 29686 (COAH!); *ibidem*, 9 Aug 2018 (fr), *N. Castaño et al.* 11826 (COAH!).

Myrcia poeppigiana O. Berg., Fl. Bras. 14 (1): 157. 1857.

This species grows in the Amazonian region of Perú and Brazil (McVaugh, 1958; Holst, 1993). Specimens mentioned here are the first record for Colombia. *Myrcia poeppigiana* grows in ‘terra firme’ forests of the Guaviare and Vaupés departments, between 230-345 m. In his description of *Myrcia poeppigiana*, McVaugh (1958) mentioned that the bracts and bracteoles of this species were “...unknown, probably deciduous as the inflorescence expands...” (p. 657); nevertheless, he also mentioned that the morphological characters of *M. poeppigiana* “...seems to suggest its close relationships to *M. bracteata* and *M. huallagae*, from both of which it is readily distinguished by the slender bractless inflorescence...” (p. 658). Cárdenas *et al.* 47786 has inflorescences at the start of its expansion, and its bracts and bracteoles are evident; both organs are covered with the same type of flexuous hairs described by McVaugh (1958) that cover other organs of the plant. Bracts observed here are developed on nodes of secondary branching of inflorescences. I provide here the description of bracts and bracteoles from the specimen examined, as follows: bracts linear, 3–6 × 0.2 mm, hirsute abaxially, glabrous adaxially, truncate in the base, deciduous; bracteoles 2, axillary at base of hypanthium, linear or filiform, 1.5–3 × 0.1 mm, hirsute abaxially, glabrous adaxially, truncate in the base, deciduous after anthesis.

Specimens examined: COLOMBIA. **Guaviare:** Calamar, ‘río Itilla, margen izquierda’, 2°00’55”N, 73°02’51”W, 10 Nov 2016 (buds), *D. Cárdenas et al.* 47786 (COAH!). **Vaupés:** ‘área no municipalizada de Papunahua, comunidad de Pacú, alto río Cuduyari, camino que conduce al río Querari’, 1°33’01.2”S, 70°59’23.1”W, 232 m, 2 Apr 2023 (fr), *A. Barona et al.* 6999 (COAH!).

Acknowledgments

I am grateful to the directors and curators of COAH, HUA, JAUM, and JBGP for providing me access to their collections. Two anonymous reviewers made helpful comments on the manuscript. I also want to thank the Herbario Nacional Colombiano (COL) – Instituto de Ciencias Naturales, at the Universidad Nacional de Colombia, for their support.

Conflict of interest

The author declares that he has no conflicts of interest.

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