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Taxonomic and nomenclatural novelties in Marcetieae (Melastomataceae) from Colombia: A new species of *Ernestia* and the identity of *Acisanthera goudotii*

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Abstract

During the development of the taxonomic treatment of *Ernestia* we came across a taxonomic novelty and a species for which taxonomic verification was needed from Colombia. Herein, we propose *Ernestia rheophytica* a new species belonging to the *sensu stricto* clade of the genus, and clarify the identity of *Acisanthera goudotii*, now treated as *E. goudotii*. We also clarify the status of the original material of *E. goudotii* and propose the lectotypification of *E. ovata* and its synonymization under *E. goudotii*. *Ernestia rheophytica*, as the name indicates, is a rheophytic species, a rare habit in Melastomataceae, especially in Marcetieae.

Key words: Caquetá, *Dichaetandra*, rheophyte, synonymization, typification, Yarí River

Introduction

Colombia is home to more than 23,000 species of vascular plants, making it the second richest country in plant species in the Americas, behind only Brazil, with over 33,000 species (Ulloa Ulloa *et al*. 2017). This scenario is repeated when referring to the diversity of Melastomataceae Jussieu (1789: 328), with Brazil totaling around 1,500 species, followed by Colombia with ca. 1,000 melastomes (Ulloa Ulloa *et al*. 2022; Goldenberg *et al*. 2024). The diversity of the family in Colombia is relatively well known, but it has still revealed numerous taxonomic novelties due to recent efforts in sampling and cataloguing richness (Almeda *et al*. 2013, 2016; Alvear *et al*. 2015; Mendoza-Cifuentes & Cárdenas 2015; Posada-H. *et al*. 2016; Mendoza-Cifuentes *et al*. 2021; Gamboa-Gaitán 2023). In the last 10 years, 35 new melastomes have been described, belonging to 12 genera in six tribes (Appendix 1).

Marcetieae M.J.R.Rocha, P.J.F.Guim. & Michelang. (in Rocha *et al*. 2018: 55) is one of the few tribes that has not yielded any new species from Colombia in the last decade. This is probably due to the information gap about the Amazonian species of the tribe, and their relatively low diversity in the Andes (Rocha *et al*. 2022). Marcetieae is composed of 20 genera and ca. 150 species, of which generic delimitations of *Ernestia* Candolle (1828: 121) and *Macairea* Candolle (1828: 109) are particularly problematic (Rocha *et al*. 2018, 2022).

In the most comprehensive and recent phylogenetic analyses of Marcetieae, *Ernestia* has been recovered in

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two unrelated clades, where the *Ernestia sensu stricto* clade (hereafter called *Ernestia s.s.*) is sister to *Macairea sensu lato* (Rocha *et al*. 2018). *Ernestia s.s.* includes five species that are perennial shrubs with 4-merous flowers, antesepalous stamens with a biaristate ventral appendage, with each arista bifurcating and with a calcarate dorsal appendage positioned along the pedoconnective (not a dorsal expansion of the ventral appendage), an ovary with an apical indumentum and generally 4-locular, and seeds with ridges in the dorsal-raphal area on the testa. This clade is restricted to western Amazonia and Colombian Andes (Rocha *et al*. 2018). The other group of *Ernestia* is composed of seven species that are perennial shrubs with 4-merous flowers, antesepalous stamens with a ventral appendage dilated at the base and aristate above, a calcarate/triangular dorsal appendage opposite the ventral appendage, a predominantly 4-locular ovary, and seeds with tubercular projections on the testa (Rocha *et al*. 2018). In turn, *Macairea* has also been recovered in two separate clades. *Macairea sensu stricto* is composed of 19 species that are shrubs or treelets, with 4-merous flowers, predominantly bicolored petals, dimorphic stamens, and filaments with glandular trichomes. The second group of *Macairea*, which includes three species [*Macairea lasiophylla* (Benth.) Wurdack (1966: 65), *M. multinervia* Bentham (1840: 291), and probably *M. philipsonii* Renner (1989: 90)] are subshrubs with 4-merous flowers, isomorphic stamens, and glabrous filaments. This combination of morphological characters did not support the transfer of these species to *Ernestia* (Rocha *et al*. 2018).

During the development of the taxonomic treatment of *Ernestia*, we came across a striking new species of the genus from Colombia and with the unusual rheophytic condition. Based on the characters listed above it should be placed within *Ernestia s.s*. Here, we describe and illustrate this new species, compare it with similar species and provide notes on its geographic distribution, habitat and preliminary conservation status. Additionally, we clarify the identity of *Acisanthera goudotii* (Naudin) Cogniaux (1885: 209), which should be treated as *Ernestia goudotii* (Naudin) Triana (1872: 36), and provide the appropriate nomenclatural treatment, including synonymization and typification.

Material and methods

***Morphology and Nomenclature*:**—We adopted the morphological terminology of Beentje (2016) for the description, but followed Weberling (1989) for general typology of inflorescence. The stamen dimetrism index (SDI) was used to quatify the relative size difference between the antesepalous and antepetalous stamens (Melo *et al*. 2021). Preliminarily, the new species was compared with all other species of the *Ernestia s.s.*, namely: *E. adenotricha* Uribe (1962: 539), *E. goudotii*, *E. karuruana* Wurdack (1966: 68), *E. quadriseta* O.Berg *ex* Triana (1872: 35–36), and *E. tenella* (Bonpl.) Candolle (1828: 121). From this, two morphologically more similar species were selected for further comparison. The morphological data of the species that are compared with the new species were obtained from protologues (Humboldt & Bonpland 1813; Candolle 1828; Wurdack 1966) and personal observations from the collections (Appendix 2). The herbarium acronyms follow *Index Herbariorum* (Thiers 2024). The typification performed is in accordance with the International Code of Nomenclature for algae, fungi and plants (Turland *et al*. 2018; hereafter referred to as ICN).

***Distribution and Conservation*:**—The geographic distribution map was generated with the online tool SimpleMappr (Shorthouse 2010). The recommendations of Magdalena *et al*. (2018) were followed to infer the geographic coordinates of *Ernestia goudotii*, *E. karuruana* and *E. tenella* collections that do not have coordinates, but present sufficient information on the labels to infer them. The conservation status was suggested following IUCN (2012, 2024) recommendations. The extent of occurrence (EOO) and area of occupancy (AOO) were estimated, when possible, using GeoCAT (Bachman *et al*. 2011), with a pre-defined cell 2 km wide. All figures were edited using GIMP 2.10.38 (Kimball *et al*. 1995–2024).

Results

New species

Ernestia rheophytica D.Nunes, J.S.Murillo & Michelang., *sp. nov.* (Fig. 1)

Type:—COLOMBIA. Caquetá: Solano, Río Yarí, cañón de la Gamitana, -0.246347, -72.426274, 110 m elev., 24 January 2019 (fl., fr.), *S.E. Hoyos-Gómez, J. Domine & Abuelo Aurelio comunidad Muinane 3641* (HUA! barcode HUA0033312).

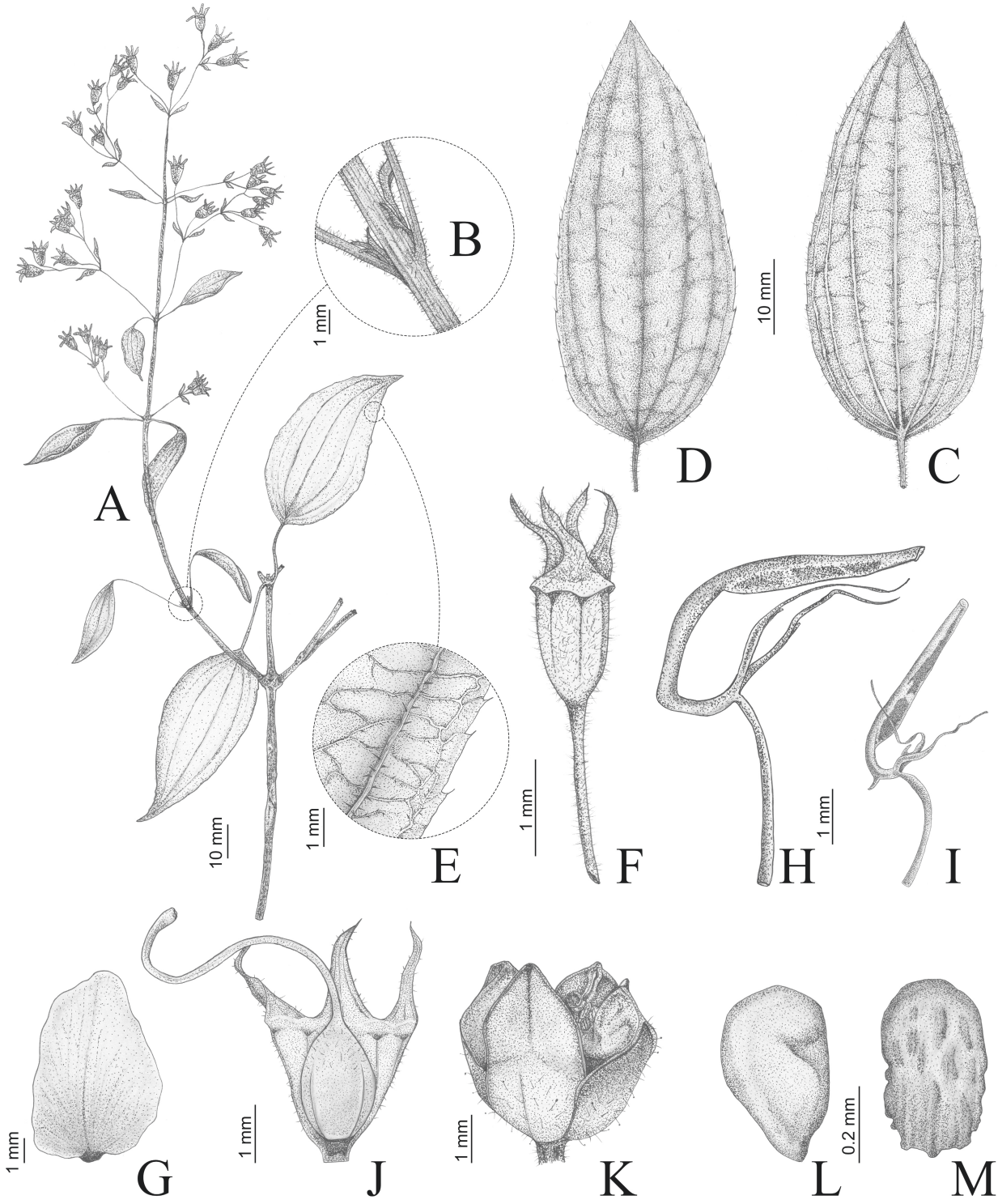

FIGURE 1. *Ernestia rheophytica*. **A.** Fertile branch. **B.** Detail of indumentum on the distal branch. **C.** Abaxial surface of the leaf blade. **D.** Adaxial surface of the leaf blade. **E.** Margin of the leaf blade. **F.** Hypanthium, sepals and pedicel. **G.** Petal. **H.** Antesepalous stamen. **I.** Antepetalous stamen. **J.** Gynoecium. **K.** Fruit. **L.** Seed (lateral view). **M.** Seed (dorsal view). Voucher: *S.E. Hoyos-Gómez et al. 3641* (HUA).

Diagnosis:—*Ernestia rheophytica* differs from all other *Ernestia s.s.* due to the exclusive combination of the rheophytic condition, pilose indumentum composed of glandular trichomes 0.2–0.3 mm long on the branches, leaves, inflorescence, bracteoles, hypanthium, outer surface of the sepals, and apex of the ovary, and the presence of ovate petals.

Shrub 0.15–0.6 m tall, virgate, rupicolous, rheophytic. **Internodes** of distal and proximal branches 4–7 cm long, subquadrangular, reddish, covered by a pilose indumentum, glandular trichomes ca. 0.2 mm long. **Leaves** membranaceous, opposite; petiole canaliculate, 1.5–2.5 cm long, covered by a pilose indumentum, glandular trichomes 0.2–0.3 mm long; mature leaf blades elliptic or lanceolate, 3–5.9 × 1.2–2.5 cm, flat, base obtuse or rounded, apex attenuate; venation acrodromous, basinerved, 3-nerved, central and one or two pairs of secondaries callous plus one pair of inconspicuous submarginal pair that does not reach the apex, tertiary veins mostly percurrent and angled forward, some of them bifurcating; abaxial surface reddish *in vivo* or beige *in sicco*, covered by a pilose indumentum, glandular trichomes 0.2–0.3 mm long; adaxial surface dark green *in vivo* or pale green *in sicco*, covered by a pilose indumentum, glandular trichomes 0.2–0.3 mm long; margin serrulate with glandular trichomes 0.2–0.3 mm long; immature leaf blades elliptic or ovate, 1.1–2 × 0.4–1 cm, base cuneate, apex attenuate, margin entire. **Inflorescences** thyrsoid, terminal, erect, indumentum just like on the distal branches, 32–48 flowers per inflorescence; peduncle 2.5–3.2 cm long, rachis 4.3–9 cm long, 2–4 nodes; mature pherophylls on the rachis just like the immature leaf blades; bracteoles elliptic or linear, 1–3 × 0.4–1 mm, concave, patent at anthesis, both surfaces with pilose indumentum, glandular trichomes ca. 0.2 mm long, sessile. **Flowers** 4-merous, pedicel 5–7 mm long, indumentum as on the rachis, glandular trichomes ca. 0.2 mm long; hypanthium cupuliform, 2.3–2.5 × 2–2.5 mm, outer surface with a pilose indumentum, glandular trichomes ca. 0.2 mm long; sepals narrowly triangular, 1.8–2.6 × 1–1.8 mm, outer surface with a pilose indumentum, glandular trichomes ca. 0.2 mm long, inner surface glabrous; petals ovate, 4.5–5 × ca. 3.5 mm, lilac, apex rounded, glabrous; stamens 8, subdimetric in length (SDI ≅ 0.18–0.20), dimorphic, glabrous; **antesepalous stamens** with filament 3–3.3 mm long, white, base of ventral appendage ca. 0.5 mm long and bifurcating into 2 aristae, 1–1.3 mm long each that bifurcates only once (a total of 2 ventral aristae), dorsal appendage ca. 0.2 × 0.2 mm, calcarate, positioned in the medial zone of the pedoconnective, pedoconnective 2–3 mm long (ca. 1 mm long from the base to the dorsal appendage + 1–2 mm long from the dorsal appendage to the apex), arched, anther arched, linear-oblong, 2.9–3.6 mm long, yellow, beak ca. 0.3 mm long; **antepetalous stamens** with filament 2.3–2.7 mm long, white, base of ventral appendage ca. 0.5 mm long and bifurcating into 2 simple aristae, ca. 1.5 mm long each (a total of 2 ventral aristae), dorsal appendage 0.1–0.2 × ca. 0.2 mm, narrowly conical, positioned in the medial zone of the pedoconnective, pedoconnective ca. 0.8 mm long (ca. 0.3 mm long from the base to the dorsal appendage + ca. 0.6 mm long from the dorsal appendage to the apex), arched, anther arched, linear-oblong, 2.2–2.9 mm long, yellow, beak ca. 0.3 mm long; **ovary** ovoid, 2–3 × 1.3–2.4 mm, 4-locular, superior, apex with pilose indumentum, glandular trichomes ca. 0.2 mm long; axillary placentation, style filiform, 5.3–6.7 mm long, glabrous, white, sigmoid, stigma capitate, ca. 0.3 mm wide. **Fruit** a loculicidal capsule covered by the hypanthium, globose, 3.7–4.5 × 3.2–3.7 mm, not exceeding the length of the hypanthium, brownish, indumentum and trichomes just like on the ovary; **seeds** ca. 38, cochleate, 0.3–0.5 × ca. 0.2 mm, brownish, testa with ridges in the raphal-dorsal direction, cells ovoid, foveolate.

***Paratype*:**—COLOMBIA. Caquetá: Solano, Río Yarí, raudal de la Gamitana, -0.224813, -72.459918, 130 m elev., 08 March 2019 (fl., fr.), *S.E. Hoyos-Gómez et al. 3705* (HUA! barcode HUA0033311).

***Etymology*:**—The specific epithet *rheophytica* (from Greek *rheo-* = pertaining to flowing water, *phyt-* = relating to plants; see Stearn 1983) refers to the condition of the species, which grows on the rocky banks of the Yarí River and exposed to the water current.

***Phenology*:**—Collected flowering and fruiting in January and March.

***Distribution, Habitat, and Preliminary Conservation Status*:**—*Ernestia rheophytica* is endemic to Colombia (Fig. 2), known only from two collections, along the banks of the Yarí River in the Department of Caquetá. This species grows in rock crevices on the banks of the river in the rheophytic belt, between 110–130 m elevation. Only two data points on geographic distribution are available, consequently EOO and AOO were not calculated. Therefore, we suggest that the conservation status of *E. rheophytica* should be categorized as Data Deficient [DD].

***Notes*:**—van Steenis (1981) defined rheophytes as "*plant species which are in nature confined to the beds of swift-running streams and rivers and grow there up to flood-level, but not beyond the reach of regularly occurring flash floods*". The specimens of *Ernestia rheophytica* have been found with their roots nestled between rock crevices along the banks of the Yarí River, where the fast currents reach the vegetation. Therefore, it should be categorized as a rheophyte.

Since 2017, two of the authors (SEH-G & RB) have been studying the rheophytic communities in Colombia, documenting its flora (Hoyos-Gómez & Bernal 2018; Hoyos-Gómez *et al*. 2023). This research has brought up some interesting new findings in different groups, including a new rheophytic species of melastome, *Miconia rheophytica* Posada-Herrera & Almeda (2018: 56), the palm *Aiphanes argos* R.Bernal, Borchs. & Hoyos-Gómez (in Bernal *et al*. 2017: 66), and *Justicia rheophytica* J.R.I.Wood & Hoyos-Gómez (in Wood *et al*. 2024: 171), all from the same locality, the Samaná Norte River, in the Andes of Antioquia. Also, a new species of *Borreria* Meyer (1818: 79) (Rubiaceae)

is being described (pers. comm. Dr. Roberto Salas), from the same locality of *Ernestia rheophytica*, both growing as rheophytes of the Middle Caquetá River, Colombian Amazonia (Hoyos-Gómez *et al*. 2023). These preliminary research on rheophytes in Colombia highlights the importance of ecological and floristic studies that surely will bring more information and new taxa in different groups, including melastomes.

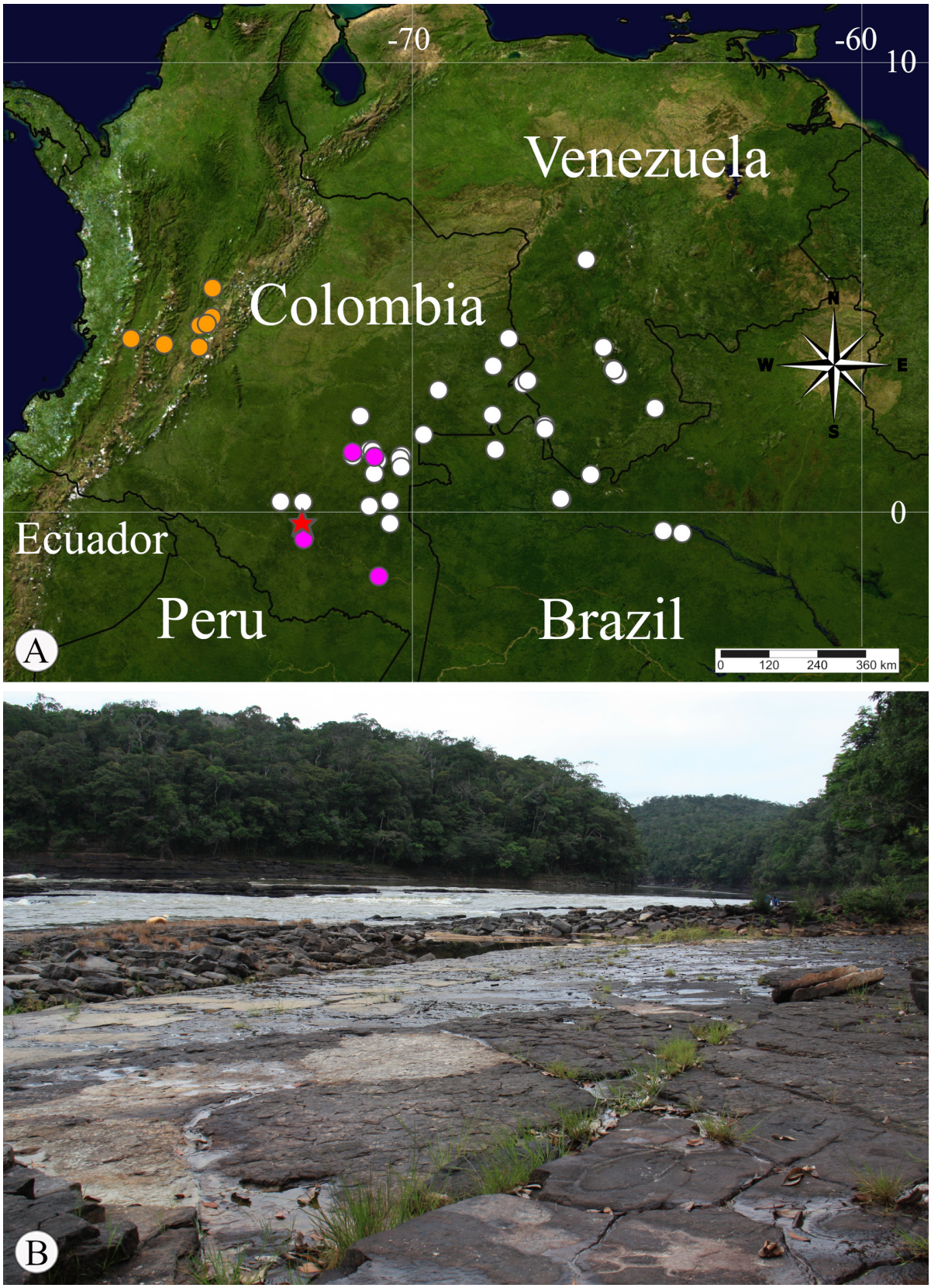

FIGURE 2. Geographic distribution map of *Ernestia rheophytica* and putative relatives, and *E. goudotii*. **A.** Distribution of *E. rheophytica* (red star), *E. karuruana* (pink circles), *E. tenella* (white circles), and *E. goudotii* (orange circles). **B.** Habitat of the *E. rheophytica* on the banks of the Yarí River, Solano, Caquetá, Colombia. Photo: Saúl E. Hoyos-Gómez (B).

Among the Melastomataceae, rheophytism is rare, now totaling 25 species worlwide (see van Steenis 1981; Costa *et al*. 2020; Stone 2023; Mendoza-Cifuentes *et al*. 2024). Most rheophyte melastomes are concentrated in the tribes Miconieae Candolle (1828: 152) and Sonerileae Triana (1866: 457) (six species each), Melastomateae Bartling (1830: 329) (five), and Memecyleae Chamisso (1836: 217) (four), but there are also records in Trioleneae Bacci *et al*. (2019: 20) and Marcetieae (two each). In Marcetieae, only *Macairea linearis* Gleason (1931: 417) was known as a rheophyte, a species endemic to the summit of Cerro Duida, Amazonas, Venezuela, growing in the river bed (Gleason 1931; Renner 1989). *Ernestia rheophytica* is the second rheophytic species described for the tribe.

***Affinities*:**—*Ernestia rheophytica* should be considered as a species of *Ernestia s.s.* (see Rocha *et al*. 2018) due to its floral merosity, morphology of the androecium and seeds, as well as the presence of an indumentum on the ovary. Among the species of *Ernestia s.s.*, *E. karuruana* and *E. tenella* are the species that most morphologically resemble *E. rheophytica*. The three species sharing subquadrangular branches, leaf blades with attenuated apex, glabrous stamens, and capsules that do not exceed the length of the hypanthium. Furthermore, the length of the hypanthium (2.3–2.5 mm long in *E. rheophytica*, ca. 2.5 mm long in *E. karuruana*, and 2–2.5 mm long in *E. tenella*), the dimensions of the ovoid ovary (2–3 × 1.3–2.4 mm, ca. 2 × 1.3 mm, and ca. 2 × 2 mm, respectively), and the dimensions of the globose capsule (3.7–4.5 × 3.2–3.7, 4–4.5 × ca. 3 mm, and 3–5 × 3–3.5 mm, respectively) also morphologically approximates these three species.

In addition to the characteristics mentioned above, *E. rheophytica* shares other characteristics with *E. karuruana*, such as: the length of the peduncle (2.5–3.2 cm long in *E. rheophytica* and ca. 3 cm long in *E. karuruana*) and the length of the rachis (4.3–9 cm long and ca. 6 cm long, respectively), outer surface of the hypanthium, sepals and apex of the ovary covered by the pilose indumentum, inner surface of the sepals glabrous, antesepalous stamens with a total of 2 aristae on each ventral appendage, and the length of the pedoconnective (2–3 mm long and 2–4 mm long, respectively). However, both species differ due to the indumentum on branches, leaves, bracteoles, peduncle, rachis and pedicels, length of the internodes, petioles, pedicels, antesepalous stamens and style, dimensions and shape of the mature leaf blades, bracteoles, hypanthium and petals, and the number of flowers per inflorescence. These characters are compared in Table 1. Furthermore, both species are not sympatric (Fig. 2).

Ernestia rheophytica is also morphologically similar to *E. tenella* due to its sessile bracteoles, glabrous petals, antesepalous stamens with dorsal appendage ca. 0.2 × 0.2 mm, concomitantly with overlapping length of the canaliculate petiole (1.5–2.5 cm long in *E. rheophytica* and 0.8–1.8 cm long in *E. tenella*), width of the mature leaf blades (1.2–2.5 cm wide and 1.2–2.6 cm wide, respectively), length of the anther (2.9–3.6 mm long and 3–3.5 mm long, respectively), and length of the style (5.3–6.7 mm long and 4.5–8 mm long, respectively). However, both species are readily differentiated by the indumentum covering branches, leaves, bracteoles, peduncle, rachis, pedicels, outer surface of hypanthium and sepals, length of the internodes, peduncles, rachis, pedicels, sepals and antesepalous stamens, veins on the mature leaf blades, dimensions and shape of the bracteoles and petals, and the number of flowers per inflorescence. These, among other characters, are summarized in Table 1. Furthermore, apparently, both species are not sympatric (Fig. 2).

TABLE 1. Comparative morphological characters among *Ernestia rheophytica* and putative relatives.

Characters	*E. rheophytica*	*E. karuruana*	*E. tenella*
Indumentum and trichomes on the branches and leaves	Pilose indumentum, glandular trichomes, ca. 0.2 mm long	Sparse and hispid indumentum, eglandular trichomes 2–4 mm long, rare glandular	Dense and hirsute indumentum, glandular trichomes 0.5–2 mm long
Length of internodes	4–7 cm long	2–3.5 cm long	2.5–3 cm long
Length of petioles	1.5–2.5 cm long	ca. 0.5 cm long	0.8–1.8 cm long
Leaf blades	Elliptic or lanceolate, 3-nerved with central and innermost pair callous, marginal pair tenuous not reaching the apex	Ovate, 5-nerved with central and innermost pairs callous, marginal pair tenuous not reaching the apex	Elliptic or ovate, 5-nerved with central and innermost pairs callous, marginal pair tenuous not reaching the apex
Base of leaf blades	Obtuse or rounded	Subcordate	Cuneate or rounded
Margin of Leaf blades	Serrulate	Serrate	Serrate
Length of peduncle	2.5–3.2 cm long	ca. 3 cm long	3.3–5.5 cm long
Length of rachis	4.3–9 cm long	ca. 6 cm long	14–17 cm long
Nodes of inflorescence	2–4	4–6	5–7

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TABLE 1 (Continued)

Characters	*E. rheophytica*	*E. karuruana*	*E. tenella*
Bracteoles	Elliptic or linear, 1–3 × 0.4–1 mm, concave, sessile	Lanceolate, ca. 2 × 0.5 mm, flat, stalk ca. 2 mm long	Ensiform, ca. 1 × 0.3 mm, flat, sessile
Flowers per inflorescence	32–48	68–76	93–117
Length of pedicel	5–7 mm long	ca. 1 mm long	1.5–3 mm long
Hypanthium	Cupuliform, 2.3–2.5 × 2–2.5 mm, outer surface with a pilose indumentum	Obovoid, 2.5 × 1.5–1.7 mm, outer surface with a pilose indumentum	Cupuliform or campanulate, 2–2.5 × ca. 2 mm, outer surface with a sparse and hirsute indumentum at base and sparse trichomes at apex
Sepals	1.8–2.6 mm long, inner surface glabrous	4–4.5 mm long, inner surface glabrous	3–3.5 mm long, inner surface with capitate-glandular trichomes 0.1 mm long at base
Petals	Ovate, 4.5–5 × ca. 3.5 mm, glabrous	Obovate, 9–10.5 × 6–8 mm, with an eglandular trichome, ca. 1 mm long	Obovate, ca. 7 × 4 mm, glabrous
Antesepalous stamens	Filaments 3–3.3 mm long, ventral appendage 1–1.3 mm long each (a total of 2 aristae on each appendage), dorsal appendage ca. 0.2 × 0.2 mm, pedoconnective 2–3 mm long anther 2.9–3.6 mm long, beak ca. 0.3 mm long	Filament ca. 5.5 mm long, ventral appendage 3.8–4.8 mm long each (a total of 2 aristae on each appendage), dorsal appendage 0.3–0.4 × 0.6–0.7 mm, pedoconnective 2–4 mm long, anther arched, ca. 5.5 mm long, beak ca. 1 mm long	Filament ca. 5 mm long, ventral appendage 1.8–2 mm long each (a total of 2 or 3 aristae on each appendage), dorsal appendage ca. 0.2 × 0.2 mm, pedoconnective 4–4.5 mm long, anther arched, 3–3.5 mm long, beak ca. 0.3 mm
Ovary	2–3 × 1.3–2.4 mm, 4-locular	ca. 2 × 1.3 mm, 3–4-locular	ca. 2 × 2 mm, 4-locular
Length of style	5.3–6.7 mm long	ca. 8.5 mm long	4.5–8 mm long

The identity of *Acisanthera goudotii*

Ernestia goudotii (Naudin) Triana (1872: 36, t. 2, fig. 23d). ≡ *Dichaetandra goudotii* Naudin (1849: t. 14, fig. 4a–d). ≡ *Acisanthera goudotii* (Naudin) Cogniaux (1885: 209). Type: Nueva Granada [Colombia]. Prope Chaparal, 1844 (fl., fr.), *J. Goudot s.n.* (holotype: P! barcode P01155901; isotype: BR! barcode BR0000005521272 [fragment]).

= *Ernestia ovata* Cogniaux (1887: 929). Type: Novae Granatae [Colombia]. habitat ad Cerro de Anvila prope Panche in descensu occidentali Andium occid., 1400 m elev., 17 February 1876 (fl., fr.), *E.F. André 1701* (**lectotype, designated here**: K! barcode K000530824; isolectotypes: BR! barcode BR0000005185962 [fragment], F! [online] barcode V0132344F, K! barcode K000530825, MO! barcode 101229288, NY! barcode 00228573). ***syn. nov.***

***Notes*:**—*Ernestia goudotii* was initially described as *Dichaetandra goudotii*, the type species of the monotypic genus, which differed from the Naudin's concept of *Ernestia* by the morphology of the ventral appendages (Naudin 1850). According to Article 38.8 of the ICN, the generic name and *D. goudotii* were effectively published in Naudin (1849), when he published an illustration with analysis composed of the complete flower with pedicel and bracteoles, details of antesepalous and antepetalous stamens, gynoecium, and a cross section of the ovary showing the four locules. Later, Naudin (1850) provided a description for the genus and species, accompanied by a discussion of their morphological relationships. The illustration of *D. goudotii* in Naudin (1849) was based on *J. Goudot s.n.*, the only collection analyzed by him in the description (Naudin 1850).

Later, Triana (1872) transferred *D. goudotii* to *Ernestia* and considered *Dichaetandra* Naudin (1849: t. 14, fig. 4a–d) as a section to allocate the species with 5-merous flowers under his expanded concept of *Ernestia*, including *E. cordifolia* O.Berg *ex* Triana (1872: 36) [now *Pseudoernestia cordifolia* (O.Berg *ex* Triana) Krasser (1893: 149)] and *E. goudotii*. However, *E. goudotii* has 4-merous flowers, as explained in the description and illustration provided by Naudin (1849, 1850), and in Triana's (1872) illustration.

Cogniaux (1885) transferred *Ernestia goudotii* to *Acisanthera* Browne (1756: 217), proposing *A. goudotii* as a new combination and noting in his key that this species has 4-merous flowers and a 4-locular ovary. At the same time, in his treatment of *Acisanthera*, *Dichaetandra* was recognized as *Acisanthera* sect. *Dichaetandra* Cogniaux (1885: 209) to allocate only 4-merous species of the genus. Since then *A. goudotii* has been neglected in treatments involving *Acisanthera*, most likely due to the difficulty of accessing the original collection and divergences in the literature regarding its floral merosity.

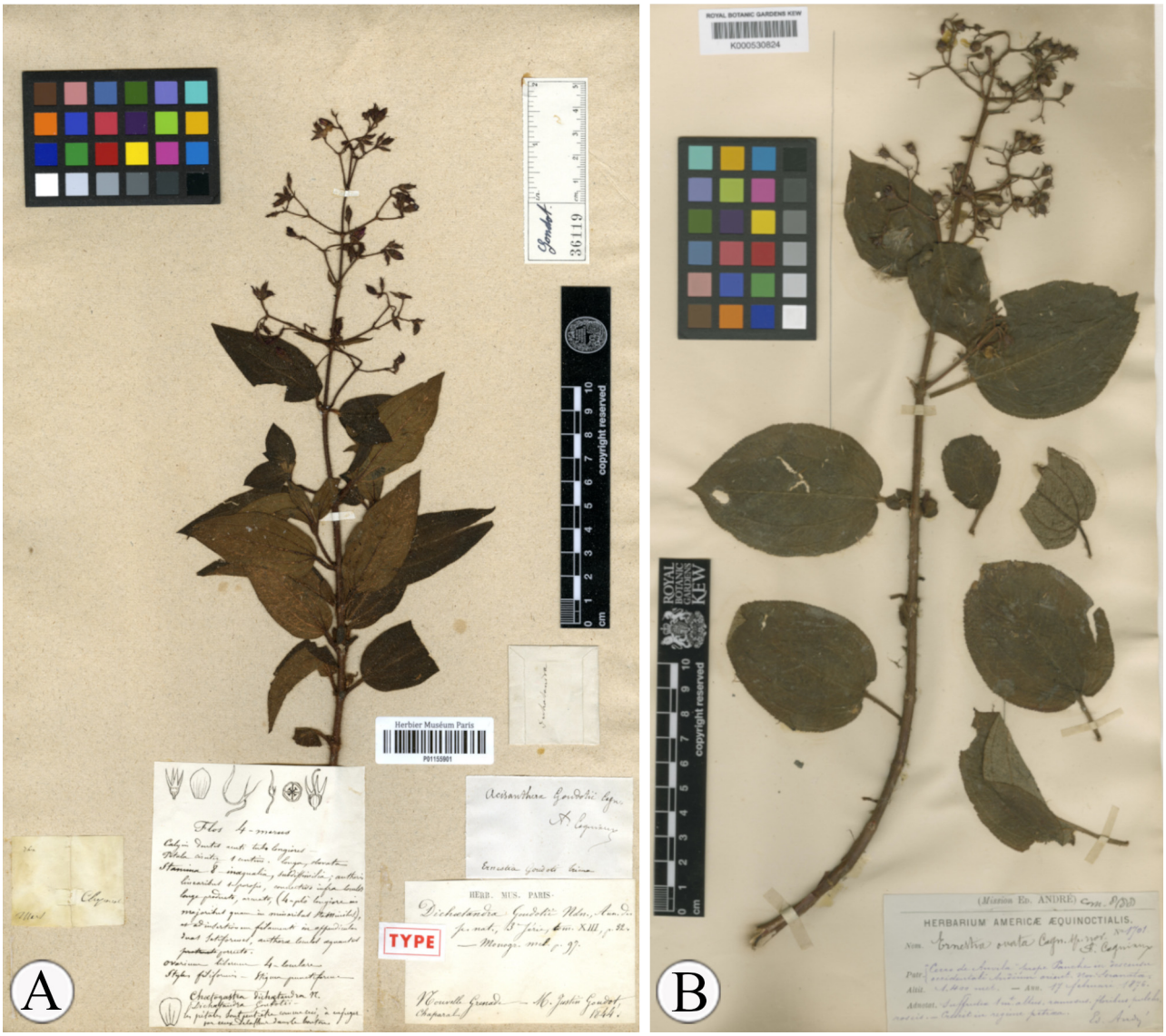

FIGURE 3. Details of the types of *Ernestia goudotii* and *E. ovata*. **A.** Holotype of *E. goudotii* at P herbarium. **B.** Lectotype of *E. ovata* at K herbarium. Sources: ©Muséum National d'Histoire Naturelle and ©Royal Botanic Gardens, Kew, respectively.

However, after analysing the original collection and studying the literature, we confirmed that the flowers of this species are 4-merous and have a 4-locular ovary, in addition, it should be treated as *Ernestia*. Apparently, the specimen deposited at P was missing, but in 2021, after contacting the herbarium curator, the specimen type of *Dichaetandra goudotii* was rediscovered and its image was made available (Fig. 3A). Consequently, the BR specimen (BR0000005521272) represents a fragment of the original material, presumably maintained by Naudin with the P specimen (P01155901, Fig. 3A) at the time of the description. It is likely that Célestin Alfred Cogniaux (1841–1916) took the fragment to BR for his studies, as he did this with many collections of Melastomataceae. Therefore, the lectotypification of the P specimen designated by Guimarães *et al*. (2017) was a mistake and the specimen at P should be interpreted as the holotype (see Article 8.3 of the ICN).

Cogniaux (1887) described *Ernestia ovata* based on a specimen collected by Édouard François André (1840–1911) in Colombia and proposed that it should be placed in *Ernestia* sect. *Ernestia* ("Euernestia"). The characters of *E. ovata* correspond exactly those of *E. goudotii* and we have no doubts that they belong to the same entity. Therefore, here we propose the synonymization of *E. ovata* under *E. goudotii*. However, it is notable that the type of *E. ovata* has broadly ovate leaf blades (Fig. 3B). *Ernestia goudotii* is readily distinguished from all species of the genus by the antesepalous stamens with ventral appendages presenting a single base and bifurcating into 2 simple aristae, absence of a dorsal appendage, and the capsule that exceeds the length of the hypanthium. In Figure 4, the first images of the living species are provided and details of the vegetative and floral morphology of this species can be seen. The typification of *E. ovata* is necessary, as none of the duplicates of *E.F. André 1701* were designated as the type at the

time of the description. We chose the specimen housed at K (K000530824, see Fig. 3B) as the lectotype and this was also annotated by Cogniaux.

FIGURE 4. *Ernestia goudotii* in the habitat. **A.** Leaves. **B–C.** Flowers in front view. Photos: Nicolás Baresch (unvouchered).

***Distribution, Habitat, and Preliminary Conservation Status*:**—*Ernestia goudotii* is endemic to Colombia (Fig. 2), in the Departments of Cundinamarca, Tolima, and Valle del Cauca, occurring especially along the Cordillera Oriental, but also in the Cordillera Central, between 496–2,550 m elevation. This species occurs in crevices of rocky outcrops, in open mountainous regions. Throughout the distribution of *E. goudotii* logging, agriculture and extensive ranching have led to extensive habitat fragmentation and transformation (Etter & van Wyngaarden 2000; Albornoz-Espinel *et al*. 2017). Additionally, this species has a restricted geographic distribution (EOO ≅ 14,038 km^2 and AOO = 28 km^2). We suggest that its conservation status should be categorized as Endangered [EN B2b(iii)].

***Specimens Examined*:**—COLOMBIA. Cundinamarca: Sasaima, vereda San Bernardo, orillas del Río Dulce, 1780 m elev., [4.983146, -74.446610], 31 December 1962 (fl.), *H. García-Barriga 18006* (COL! barcode COL000014880, NY! barcode 03166538, US! barcode 02919554); En los predios del Jardín Botánico de Bogotá, "José Celestino Mutis", 2551 m elev., October 1973 (fl.), *F. Sanchez H. 89* (COL! barcode COL000030747); Cordillera Oriental, Sierra de Subia, 2.5 kilometers from Tibacuy on road to Cumaca, 1600 m elev., [4.331958, -74.461664], 16 June 1972 (fl.), *A.S. Barclay et al. 3514* (COL! barcode COL000014878, FMB! number 1306, US! barcode 02919552). Tolima: Carmen de Apicalá, Bocatoma, [4.151222, -74.728194], 496 m elev., 09 February 2012 (fl., fr.), *J. Gantiva et al. 009* (UDBC! barcode 031692); Chaparral, carretera a Santana, 800 m elev., 27 March 1997 (fl., fr.), *L. Quiñones-M. 2915* (COL! barcode COL000014877); carretera a la López, cerca al río Amoyá, 20 July 1996 (fl., fr.), *L. Quiñones 2762* (COL! barcodes COL000027244 and COL000027246); East of Chaparral ca. 6 km, Cordillera Central, 810 m elev., [3.732214, -75.521394], 27 January 1949 (fl.), *H.L. Mason 13785* (COL! barcode COL000014879, US! barcode 02919553); Dolores, Wächs im offenen Bühnevil [illegible] im Dolores, 800–1400 m elev., March 1892 (fl., fr.), *F.C. Lehmann 4328* (F! [online] barcode V0132363F); 800–1700 m elev., March 1892 (fl.), *F.C. Lehmann 7328* (F!, MO!, NY!, and US! photos of B); [Icononzo], Icononzo a Boca de Monte, camino a Melgar, 1340–1400 m elev., [4.190500, -74.573674], 18 April 1946 (fl.), *H. García-Barriga 12035* (COL! barcode COL000029476, US! barcode 02919571).

Valle del Cauca: Cali, Corregimiento de la Buitrera, Vereda El Rosario, Cuenca media del río Lili, área quemada (hace 12 meses) y vegetación aledaña a carretera, [3.856730, -76.260380], 1338 m elev., 07 December 2010 (fl.), *G. Reina-Rodríguez et al. 1407* (FMB! number 111828).

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APPENDIX 1. Melastomataceae described for Colombia in the last 10 years (2014–2024).

Species	Tribes	References
Adelobotrys latifolius Schulman	Merianieae	Schulman & Ruokolainen (2015: 108)
Allomaieta javierbarrigae Humberto Mend.	Cyphostyleae	Mendoza-Cifuentes (2018: 11)
Allomaieta pterocalycina J.S.Murillo & H.David	Cyphostyleae	Murillo-Serna & David-Higuita (2021: 190)
Alloneuron trinervium J.S.Murillo, Michelang. & H.David	Cyphostyleae	Murillo-Serna *et al*. (2022: 44)
Axinaea minutiflora E.Cotton	Merianieae	Cotton *et al*. (2014: 80)
Blakea cubarralensis Urrea & L.Carvajal	Pyxidantheae	Urrea *et al*. (2024: 60)
Blakea reflexa Humberto Mend. & Urrea	Pyxidantheae	Urrea *et al*. (2023: 17)
Chaetolepis sumapacensis Humberto Mend. & C.Castro	Melastomateae	Mendoza-Cifuentes & Castro (2023: 330)
Graffenrieda cardenasii Humberto Mend. & Edwin Trujillo	Merianieae	Mendoza-Cifuentes & Trujillo (2024: 2–5)
Graffenrieda maklenkensis Humberto Mend., Alvear & Almeda	Merianieae	Almeda *et al*. (2014: 42)
Meriania alexandrae Posada-Herrera & Humberto Mend.	Merianieae	Posada-Herrera & Mendoza-Cifuentes (2023: 3)
Meriania barbosae Humberto Mend., Alvear & Almeda	Merianieae	Mendoza-Cifuentes *et al*. (2014: 24)
Meriania fantastica Alvear, Humberto Mend. & Almeda	Merianieae	Mendoza-Cifuentes *et al*. (2014: 26)
Meriania juan-canoi Posada-Herrera, Idárraga & Alzate	Merianieae	Posada-Herrera *et al*. (2020: 226)
Meriania neillii Humberto Mend.	Merianieae	Mendoza-Cifuentes (2021: 85)
Meriania ramosii Humberto Mend.	Merianieae	Mendoza-Cifuentes (2021: 101)
Miconia anchicayensis Gamba & Almeda	Miconieae	Gamba & Almeda (2014: 49)
Miconia brigittei Humberto Mend. & Posada-Herrera	Miconieae	Mendoza-Cifuentes & Posada-Herrera (2018: 75)
Miconia cornifera Humberto Mend., Posada-Herrera & H.David	Miconieae	Mendoza-Cifuentes *et al*. (2019a: 251)
Miconia curvitheca Posada-Herrera & Humberto Mend.	Miconieae	Posada-Herrera & Mendoza-Cifuentes (2016: 13)
Miconia formicaria Gamba & Almeda	Miconieae	Gamba & Almeda (2014: 80)
Miconia garagoana Humberto Mend., Ariza-Cortés & L.Carvajal	Miconieae	Mendoza-Cifuentes *et al*. (2024: 146–147)
Miconia hernandogarciae Humberto Mend. & A.Idarraga	Miconieae	Mendoza-Cifuentes *et al*. (2018: 21–22)
Miconia indicoviolacea Gamba, Almeda & Alvear	Miconieae	Gamba *et al*. (2014: 171)
Miconia lorenaensis J.S.Murillo, Londono-E. & H.David	Miconieae	Murillo-Serna *et al*. (2021: 166)
Miconia mahechae Humberto Mend.	Miconieae	Mendoza-Cifuentes (2022: 2)
Miconia mailynii Humberto Mend. & Aguirre-Santoro	Miconieae	Mendoza-Cifuentes *et al*. (2018: 17)
Miconia renatoi Gamba & Almeda	Miconieae	Gamba & Almeda (2014: 122)
Miconia rheophytica Posada-Herrera & Almeda	Miconieae	Posada-Herrera & Almeda (2018: 56)
Microlicia colombiana Humberto Mend. & R.Romero	Lavoisiereae	Mendoza-Cifuentes *et al*. (2019b: 88–89)
Monochaetum carbonoi Alvear & Almeda	Melastomateae	Alvear & Almeda (2014: 28)
Monochaetum longicaudatum Alvear & Almeda	Melastomateae	Alvear & Almeda (2014: 31)
Monochaetum perijensis Alvear & Almeda	Melastomateae	Alvear & Almeda (2014: 33)
Monochaetum tonaense Alvear & Almeda	Melastomateae	Alvear & Almeda (2019: 124)
Wurdastom lateriflora Humberto Mend.	Cyphostyleae	Mendoza-Cifuentes (2020: 22)

APPENDIX 2. Examined collections of *Ernestia karuruana* (1) and *E. tenella* (2).
Arbeláez, M.V. & J. Manaidego 1085 (1)
Aymard, G. & L. Delgado 7944 (2)
Black, G.A. 48-2599 (2)
Bonpland, A.J.A. & F.W.H.A. von Humboldt 967 (2)
Bunting, G.S. *et al.* 3717 (2)
Croizat, L. 448 (2)
Cuatrecasas, J. 6952 (2)
Davidse, G. & J.S. Miller 27263 (2)
Gentry, A.H. & B.A. Stein 46439 (2)
Gutierrez V., G. & R.E. Schultes 928 (2)
Humbert, H. & A. Fernandez 27350 (2)
Liesner, R.L. 7094 (2)
Liesner, R.L. & G. Carnevali 22894 (2)
Maguire, B. & J.J. Wurdack 34634 (2), 35597 (2)
Maguire, B. *et al.* 29584 (2), 30969 (2)
Martínez, X. *et al.* 2660 (1)
Meirelles, J. *et al.* 691 (2)
Michelangeli, F.A. 386 (2)
Nunes, D. *et al.* 1274 (2)
Pires, J.M. & N.T. Silva 7965 (2)
Poole, J.M. 1754 (2)
Renner, S.S. 2002 (2)
Sastre, C. 2318 (1)
Schultes, R.E. & I. Cabrera 14255 (2), 15704 (2), 17543 (2), 19176 (1), 19636 (2), 22645 (1)
Spruce, R. 2467 (2)
Steyermark, J.A. 57739 (2)
Steyermark, J.A. *et al.* 123651 (2), 125797 (2)
Tate, G.H.H. 198 (2), 328 (2)
Tillett, S.S. *et al.* 751-19 (2)
Triana, J.J. 35 (2)
van Roosmalen, M.G.M. *et al.* 1173 (2)
Weber, A.C. & A. Knob 5019 (2)
Weiss & Schmidt s.n. [NY barcode 00228571] (2)
Williams, L. 13877 (2)
Zartman, C.E. 7557 (2)
Zarucchi, J.L. 1992 (2), 2051 (2)
Zarucchi, J.L. *et al.* 1846 (2)