Anthurium dairon-cardenasii, a New Species of *Anthurium* sect. *Belolonchium* (Araceae) for Colombia

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Abstract. A new species of *Anthurium* Schott (Araceae) is described, belonging to section *Belolonchium* (Schott) Engl. *Anthurium dairon-cardenasii* López-Flor., Croat & Marco Correa is dedicated in honor of the great botanist Dairon Cardenas López, who dedicated his life to the study of the Amazon. The species was recorded in Caquetá, Colombia, in a lower montane wet forest in the framework of the Caquetá BIO project.

Key words: Andes Mountains, *Anthurium*, Caquetá, section *Belolonchium*.

Anthurium Schott (Araceae) is a genus widely distributed in the Neotropics with 950 accepted species; however, it is estimated that its number may increase (Boyce & Croat, 2011 onward). The genus includes 20 sections, one of the largest being *Belolonchium* (Schott) Engl. (Engler, 1905) with 220 described species. Section *Belolonchium* is characterized by plants that grow at high elevations and have fibrous cataphylls, heavily veined cordate leaves, a thick, hooding spathe, and a pendent spadix (Croat & Sheffer, 1983; Carlsen & Croat, 2019). Colombia has 358 species of *Anthurium* (Bernal et al., 2019). The department of Caquetá registers 31 species of *Anthurium*; however, this number will increase as more studies of the family are made in the region (Bernal et al., 2019).

Caquetá is home to three large ecosystems ranging from the broad expanse of Amazonian lowland forests to the Andean-Amazonian piedmont forests and the Andean forests of the eastern slopes of the Andes Mountain range. These ecosystems are considered complex, especially the so-called cloud forests of the eastern Andes (Armenteras et al., 2007). In them, although tree diversity is not so high compared to lowland forests, herbaceous and shrub vegetation does occupy a large fraction of the vegetation from the standpoint of its abundance and diversity, in addition to the high degree of epiphytes of both vascular and non-vascular plants. This is due to the presence, during much of the day, of fog banks or what have recently been named as flying rivers (Toledo, 2009; Cifuentes & Cote, 2022).

Materials and Methods

The species we name and describe in this article was reported during the Caquetá BIO expedition ("Fortalecimiento de la gestión integral de la biodiversidad y los servicios ecosistémicos para el establecimiento de herramientas que contribuyan a su conservación en áreas de posacuerdo del departamento del Caquetá," BPIN 2018000100003). An unpublished Lucid key containing important taxonomic characters of all described *Anthurium* species (Croat et al., 2023) was used to identify the species as new by comparing it with previously described species, making use of the most conservative characters in the genus. Lucid is an interactive key tool that was developed by the University of Queensland and commercialized since 2014 by Identic Pty Ltd. The taxonomic description was carried out following Croat and Bunting (1979); likewise, descriptive terminology corresponds to that proposed by Beentje (2010). The definition of the life zone follows Holdridge (1967).

Taxonomic Treatment

Anthurium dairon-cardenasii López-Flor., Croat & Marco Correa, sp. nov. TYPE: Colombia. Dpto Caquetá: Florencia, Corregimiento El Caraño, margen derecha de la quebrada La Ruidosa, sendero, 2.1°52′16.33″N, 75°40′3.82″W, 2000 m, 31 Oct. 2021, *O. López & M. Correa 201* (holotype, HUAZ!; isotypes, COAH!, COL!). Figures 1, 2.

Diagnosis. *Anthurium dairon-cardenasii* López-Flor., Croat & Marco Correa differs from *A. dolichophyllum* Sodiro by having leaves with a narrowly elliptic to closed sinus with overlapping lobes when flattened (vs. hippocrepiform sinus) and 12 pairs of lateral primary veins (vs. 20 to 30 pairs). It differs from *A. oxybelium* Schott by its short internodes, larger leaves, green (vs. purple) spathe, and longer cylindrical spadix.

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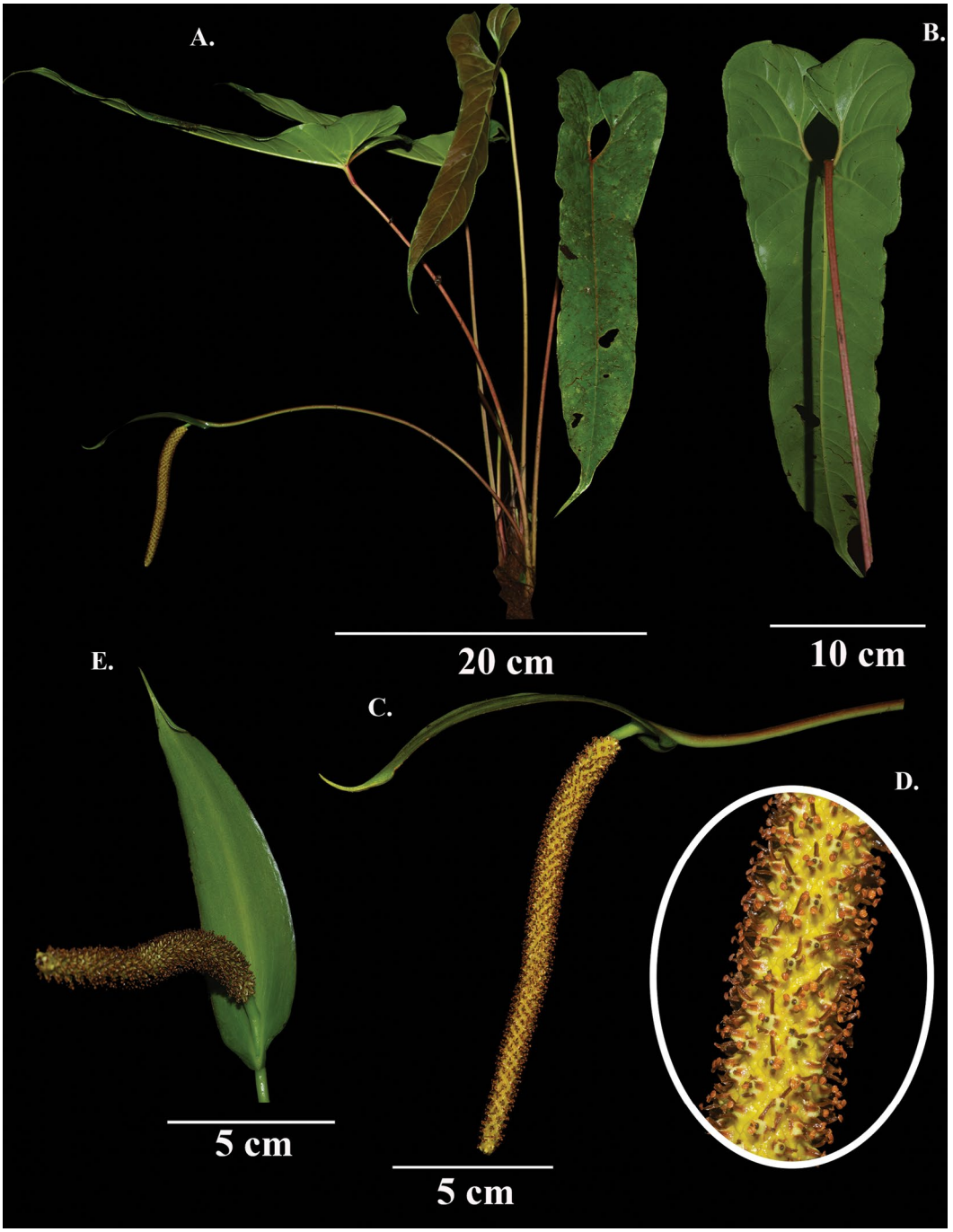

Figure 1. *Anthurium dairon-cardenasii* López-Flor., Croat & Marco Correa. —A. Habit. —B. Leaf blade. —C. Inflorescence. —D. Close-up of flowers. — E. Other view of inflorescence.

Figure 2. Holotype of *Anthurium dairon-cardenasii* López-Flor., Croat & Marco Correa (*López & Marco Correa 201*, HUAZ 025000).

Terrestrial; **internodes** short, 1–1.3 cm, 1.4–1.6 cm diam.; **cataphylls** 10–12.5 cm, 2.5–2.7 cm wide at base, persisting as dark red-brown fibers with fragments of epidermis. Leaves with **petiole** semi-erect, 42.3–45.5 cm, 5 mm diam., tinged reddish purple, subterete, obtusely and narrowly sulcate; geniculum 1.4–1.7 cm, slightly more reddish; **blade** spreading to pendent from petiole, narrowly triangular-sagittate, 32.7–36 × 10–11 cm (averaging 34.3 × 10.5), 3.2 times longer than broad, 0.8 times as long as petiole, broadest across posterior lobes near base, long-acuminate at apex, subcoriaceous, above dark green drying dull brownish yellow, below light green, tinged purplish violet when young, drying dark grayish brown; **anterior lobe** 28–30 × 10–11 cm, concave on margins; **posterior lobe** 4.1–6 cm, 4–5 cm wide midway, directed somewhat upward in life; **sinus** narrowly elliptic to closed with lobes overlapping when flattened, 4.3–5.6 cm deep, 4.2–5 cm wide; **basal veins** 4(5) pairs, 1st pair free to base, 2nd pair fused 1.6–2.2 cm, 3rd and 4th pairs fused 2.7–3.3 cm; **posterior ribs** 4.7 cm, naked along sinus; **primary lateral veins** 12 per side, arising at 35°–40°, scarcely apparent above, narrowly rounded and slightly paler below; tertiary veins darker than surface, weakly visible on fresh material, drying scarcely apparent; **collective veins** arising from 1st or 3rd pair of basal veins, weakly loop-connected, mostly 2–5 mm from margin. **Inflorescence** with peduncle spreading, 35 cm, 2.9 times longer than spathe, reddish toward base, green toward apex; **spathe** 12 × 2.2 cm, green, lanceolate, spreading, curved, hooding spadix, directed nearly straight from peduncle, narrowly long-acuminate at apex, acute at base; **spadix** stipitate 8 mm, greenish yellow, pendent, 12.1 cm, 1.2 cm diam., cylindric; flowers rhomboid, 5 to 6 visible per spiral, 2.5 × 3 mm, lateral tepal 1.3 × 1 mm; pistil 2 mm; stamens persisting emergent, 2.3 mm, thecae not divergent. Berries unknown.

Distribution and habitat. *Anthurium dairon-cardenasii* is endemic to Colombia, known only from the type locality in Caquetá Department at 2000 m elevation in a lower montane wet forest life zone (Holdridge, 1967) (Fig. 3).

Etymology. The epithet refers to the biologist Dairon Cardenas López, an eminent botanist who dedicated a large part of his life to the study of plants in the Colombian Amazon, becoming the largest collector of plant specimens in Colombia. He was curator of the JAUM herbarium of the Joaquín Antonio Uribe Botanical Garden of Medellín and curatorial director of the COAH herbarium of the Amazonian Institute of Scientific Research - Sinchi, from where he supported studies of young, talented botanists who later ended up leading similar work in different institutions. This is a tribute and a posthumous thank you for the support given to the creation of the HUAZ herbarium of the Universidad de la Amazonia.

Discussion. This species is characterized by its terrestrial habit, short internodes, persistent reddish-brown cataphyll fibers, subterete petiole, narrowly triangular-sagittate blades with a usually closed sinus, one pair of free basal veins, a prominent, considerably naked posterior rib, a spreading, long-pedunculate inflorescence with a green lanceolate spathe, and a stipitate, cylindric spadix with exserted stamens. *Anthurium dairon-cardenasii* is seemingly most closely related to *A. macrourum* Sodiro and *A. masfense* Sodiro, both of which occur at high elevations on the eastern slopes of the Andes, but both differ in having typically hippocrepiform sinuses.

In the second author's unpublished Lucid Anthurium Key, the species also groups with *A. dolichophyllum* Sodiro, *A. oxybelium* Schott, and *A. variegatum* Sodiro. *Anthurium dolichophyllum*, from the western slopes of the Andes, also differs in having a hippocrepiform sinus and 20 to 30 pairs of primary lateral veins; *A. oxybelium* differs in having longer internodes, typically smaller leaves, a typically purplish spathe, and more short-cylindroid spadices; and *A. variegatum* differs by having a purple spathe with green lines.

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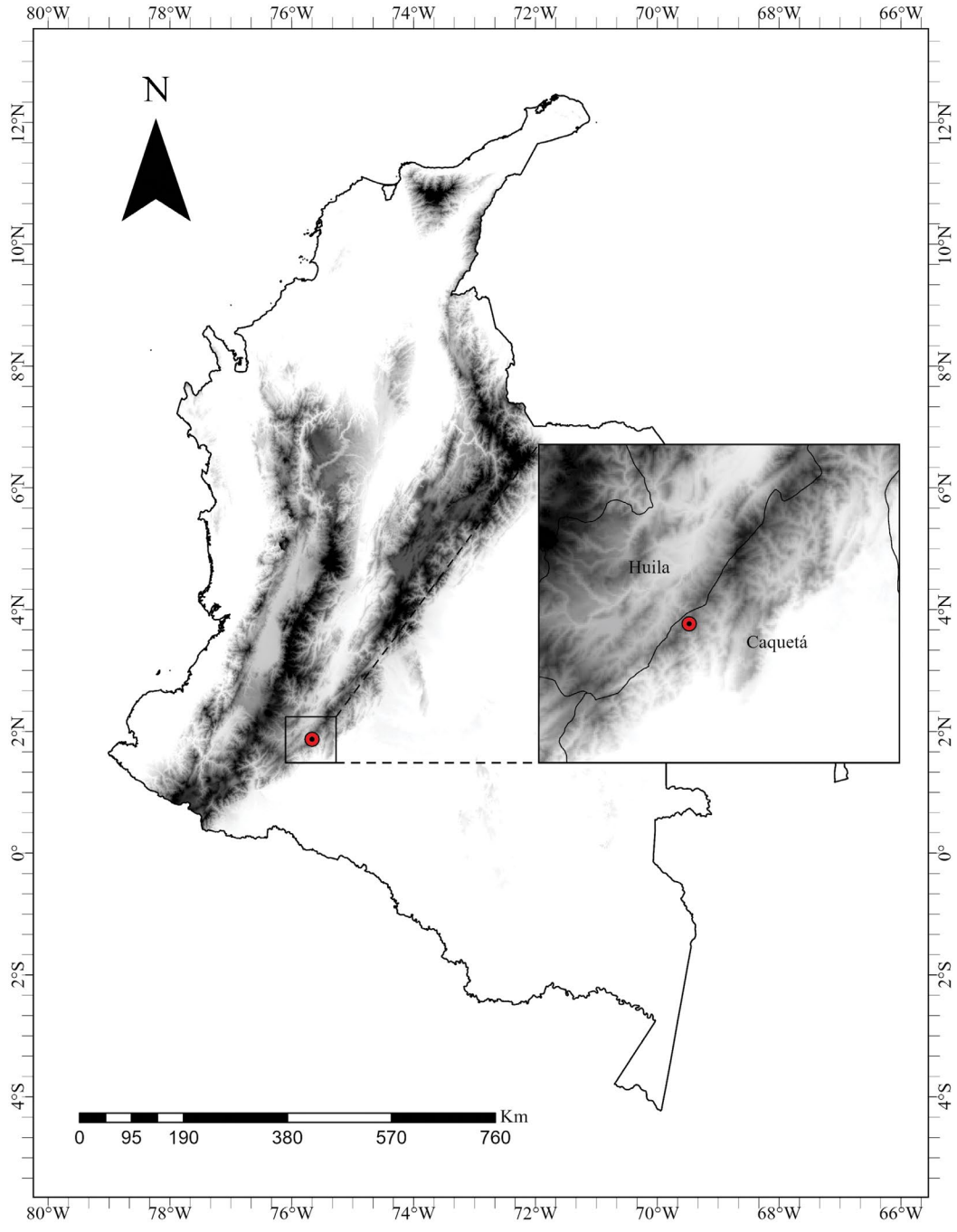

Figure 3. Distribution of *Anthurium dairon-cardenasii* López-Flor., Croat & Marco Correa in the municipality of Florencia, department of Caquetá, Colombia (red dots).

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