

*CAPPARIDASTRUM TAFALLANUM* (CAPPARACEAE),  
A NEW SPECIES FROM THE NORTHWESTERN  
ANDEAN SLOPES OF ECUADOR

XAVIER CORNEJO,<sup>1,2</sup> HUGH H. ILTIS,<sup>3</sup> AND CARLOS E. CERÓN<sup>4</sup>

**Abstract.** *Capparidastrum tafallanum* a new species of Capparaceae from the wet forests of Andean slopes at northwestern Ecuador is here described and illustrated. The status of endangered, EN B1ab(iii), is assigned to this taxonomic novelty.

**Resumen.** Se describe e ilustra *Capparidastrum tafallanum*, una nueva especie de Capparaceae de los bosques muy húmedos de las estribaciones andinas del noroccidente de Ecuador. A esta nueva especie se asigna el estatus En Peligro, EN B1ab(iii).

**Keywords:** Capparaceae, *Capparidastrum tafallanum*, Ecuador, endemic

*Capparidastrum* Hutch., a Neotropical genus of Capparaceae, comprises 19 species ranging from southern Mexico to northern Argentina (Cornejo, 2008, 2010). During the revision of Capparaceae for *Flora of Ecuador*, the following new species was found:

*Capparidastrum tafallanum* X. Cornejo, Iltis & C. Cerón, *sp. nov.* TYPE: ECUADOR. Pichincha: cantón Quito, Parroquia suburbana Nanegalito, cuenca del Río Pachijal, sector Rancho Buitrón, 78°43'W, 0°02'N, 1330–1450 m, 13 May 1999 (fl), C. Cerón 38069 (Holotype: QAP [00027340!]; Isotypes to be distributed). Fig. 1.

Species nova affinis *Capparidastrum bonifazianum* (Cornejo & Iltis) Cornejo & Iltis et *C. megalospermum* Cornejo & Iltis, a qua differt sepalis grandioribus, nectariis, filamentis et ginophoriis minoribus.

**Diagnosis:** *Treelet or tree* to 25 m tall and 41 cm or more dbh; glabrous throughout. *Stipules* narrowly-triangular, ca. 1.5 × 0.6 mm. *Leaves* unequal in size; blades coriaceous, ovate to elliptic or ovate-oblong, 11.5–32 × 6–17 cm, broadly obtuse to rounded at base, usually acuminate at apex, dark green above, pale green beneath; main lateral veins ca. 8 to 11 on each side; petioles 1–15 cm, the pulvinus 5–10 mm, dark brown to blackish. *Inflorescence* terminal, erect racemes; *peduncles* ca. 3 cm, the terminal flower-bearing portion of the axis ca. 4 cm; *floral bracts* triangular to linear, minute, deciduous; pedicels 4–5.5 cm. *Flower buds* just preceding anthesis broadly ovate to elliptic, ca. 16 × 12–14 mm. *Floral nectaries* ca. 2–3 × 3–5 mm, white (fresh), dark brown to blackish (dried). Sepals ovate to deltoid to semiorbicular, ca. 10 × 5–7 mm, broadly divergent at anthesis, greenish without, white-hyaline and shallowly erose-ciliolate at margins. Petals broadly ovate to elliptic, ca. 15–18 × 10–13 mm, somewhat fleshy, divergent, forming a teacup-shaped corolla at anthesis, subsessile at base, broadly rounded at apex, cream to white

within, creamish without, more or less entire, minutely and irregularly erose-denticulate at the margins. *Stamens* ca. 40; filaments 2–3 cm; anthers ca. 5 mm, dorsifixed on the basal third. *Gynophore* ca. 3 cm long. *Ovary* oblongoid, ca. 4–5 × 1 mm, green (fresh); *stigma* truncate to hemispherical (fresh). *Infructescence* and *fruits* not seen.

**Habitat and distribution:** *Capparidastrum tafallanum* is known only from two collections gathered ca. 6 km from each other, between 1400–1700 m, in the basin of Río Pachijal. The habitat is a secondary wet forest located at the Andean slopes of northwestern Ecuador.

**Conservation status:** The localities where *Capparidastrum tafallanum* does occur are threatened by fragmentation and massive deforestation mainly due to the advance of agricultural frontier or forest conversion to cattle farms and other land use. Therefore, according to IUCN guidelines the status of endangered, EN B1ab(iii) (IUCN, 2012), is here assigned to this species.

**Uses:** As the sweet pulp of the fruits is occasionally eaten by humans as well as by wild mammals (Cerón 38069, Cevallos *et al.* 2457); it is most likely that Pre-Hispanic gatherers also ate the fruits of this new species.

**Phenology:** *Capparidastrum tafallanum* bear flowers during May through June. Similar to the morphologically closely related species *C. bonifazianum*, *C. megalospermum* and *C. macrophyllum*, it is most likely that the flowers are ephemeral and nocturnal. The pollinators are unknown.

**Local name:** *Chirimoya de monte* (Spanish, Cerón 38069).

**Etymology:** This new species is named to honor Juan José Tafalla y Nabasques (1755–1811), a Spanish pharmacist from Navarra, and a leader of the first expedition that documented the plant species from Ecuador. His historical collections, often unfairly attributed to Hipólito Ruiz or José Pavón, who never visited Ecuador (e.g., the type of *Capparis didymobotrys*), and the corresponding color plates

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<sup>1</sup>Herbarium GUAY, Facultad de Ciencias Naturales, Universidad de Guayaquil, Av. Juan Tanca Marengo y Las Aguas, Casilla 09-01-10634, Guayaquil, Ecuador; xcornejoguay@gmail.com

<sup>2</sup>Author for correspondence

<sup>3</sup>Department of Botany, University of Wisconsin, 430 Lincoln Drive, Madison Wisconsin 53706, U.S.A.

<sup>4</sup>Herbario “Alfredo Paredes” (QAP), Escuela de Biología de la Universidad Central, Apartado 17.01.2177, Quito, Ecuador.

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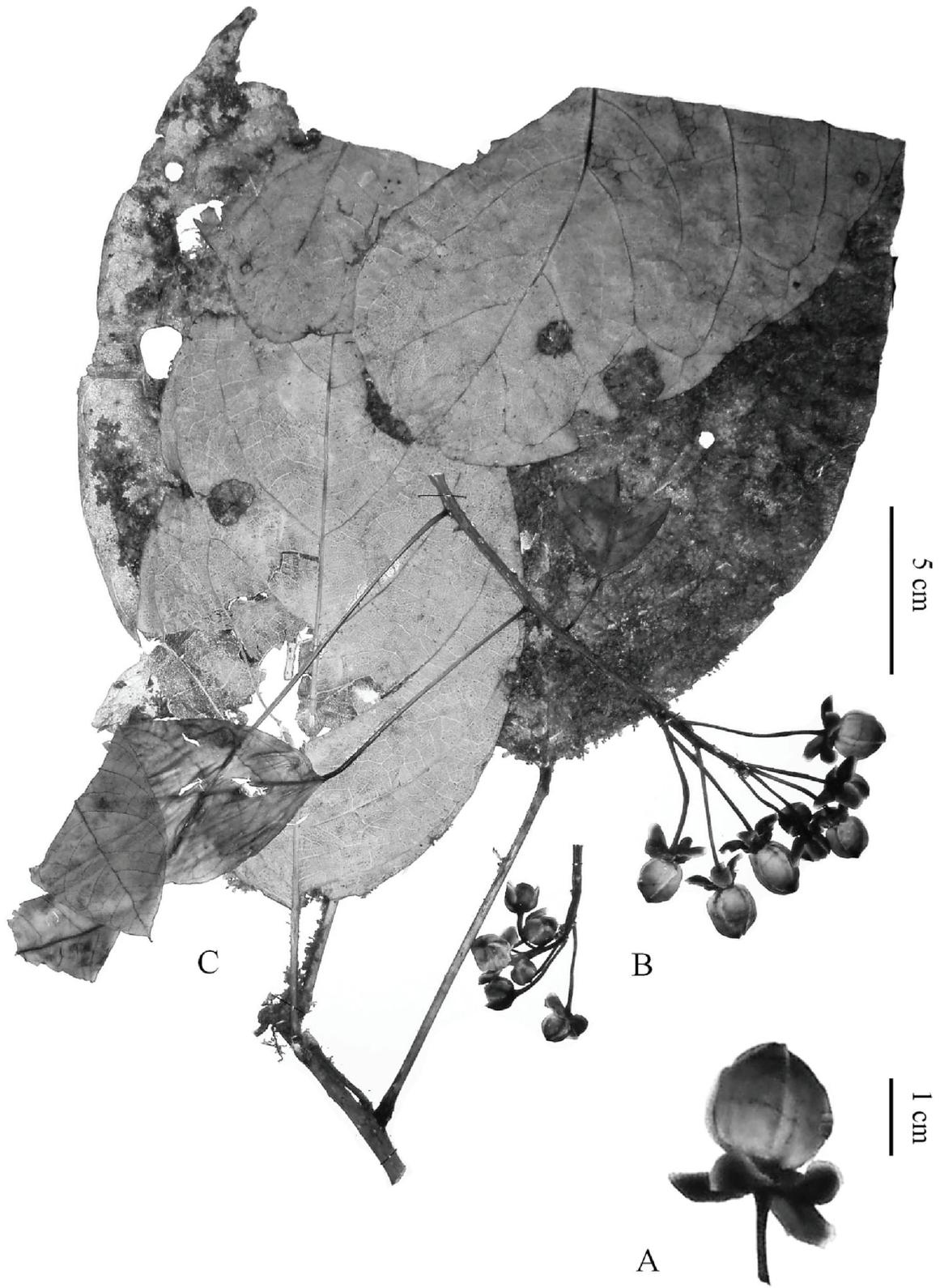


FIGURE 1. *Capparidastrum tafallanum*: A, flowerbud preceding anthesis; B, inflorescences; C, branch and leaves. Based on Cerón 38069 (QAP [00027340]), the holotype.

prepared from plants *in situ*, remained forgotten in MA (Spain) herbarium for approximately 200 years. Tafalla's manuscripts, collections, and plates were rediscovered and finally edited and published in *Flora Huayaquilensis* (Estrella, 1989); a masterpiece of plants of the Guayaquil region written in a 19th century style.

**Additional specimens examined:** ECUADOR. Pichincha: cantón Quito, Parroquia Nanegalito, cuenca del Río Pachijal, sector Rancho Buitrón, 78°46'W, 0°02'N, 1340–1600 m, *M. Cevallos et al.* 2457 (QAP); same locality, *M. Cevallos et al.* 95 (QAP).

*Capparidastrum tafallanum* is assigned to *Capparidastrum* subgen. *pulviniglans* Cornejo & Iltis based on the absence of indument; large leaves with elongate petioles, often of unequal lengths; the absence of a hypanthium, with petals divergent at anthesis; and fleshy floral nectaries that are rounded, and cushion shaped (Cornejo and Iltis, 2008).

*Capparidastrum tafallanum* has flowers with a short gynophore and filaments of 2–3 cm, similar in length to those of the South American *C. osmanthum* (Diels) Cornejo & Iltis. However, measurements of several floral elements of *C. tafallanum* largely differs from those of *C. osmanthum*, such as flower bud sizes preceding anthesis (ca. 16 vs. 6–12 mm long), pedicels (4–5.5 vs. 2–4 cm long), sepals (ca. 10

x 5–7 vs. 1–3.5 x 1.5 mm), petals (ca. 15–18 x 10–13 vs. 9–13 x 5–8 mm), anthers (ca. 5 mm vs. 1.5–2.5 mm long), and ovaries (ca. 4–5 vs. ca. 2 mm long). Vegetatively, *C. tafallanum* resembles *C. bonifazianum* from western Ecuador and southwestern Colombia. However, the former species differs from *C. bonifazianum* by the distinctively larger sepals (ca. 10 vs. 4–6 mm long), the narrower floral nectaries (3–5 vs. 5–8 mm wide), the shorter filaments (2–3 vs. 5.5–8 mm long), shorter gynophore (ca. 3 vs. 6–8 cm long), and it occurs at a higher elevation (1330–1600 m vs. 0–850 m). *Capparidastrum tafallanum* is also similar to *C. macrophyllum*, but the former species differs from the latter by the shorter gynophore (ca. 3 vs. 7–12 cm long), shorter filaments (ca. 2–3 x 5.5–10 cm), fewer stamens (ca. 40 vs. 80–130), and the different pattern of distribution, separated by the Andean chain (western Ecuador vs. widely distributed in Amazonia to premonatne slopes of the northern Andes in Venezuela and Colombia). *Capparidastrum tafallanum* also resembles *C. megalospermum*, a species restricted to the wet forests of northwestern Ecuador and southwestern Colombia, but this new species is easily distinguished by the distinctive shorter gynophore (ca. 3 vs. ca. 8 cm) and different altitudinal pattern of distribution (1330–1600 m vs. 0–500 m).

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