Columnea incredibilis and Cremosperma filicifolium - two remarkable new Gesneriaceae from western Colombia.

Nord. J. Bot. 8: 253-257.

REFNO: 1358

KEYWORDS:

Colombia, Columnea, Cremosperma

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Kvist, L. P. & Skog, L. E. 1988. *Columnea incredibilis* and *Cremosperma filicifolium* – two remarkable new Gesneriaceae from western Colombia. – Nord. J. Bot. 8: 253–257. Copenhagen. ISSN 0107-055X.

Two new Gesneriaceae from western Colombia are described. The showy flowers of *Columnea incredibilis* have extremely long (3.2–3.8 cm) filiform appendages located at the outer side of the corolla lobes. The anisophyllous leaves of *Cremosperma filicifolium* are incised and resemble fern fronds, a very rare feature in the Gesneriaceae.

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Introduction

There is probably no region in the world with a greater richness of Gesneriaceae than western Colombia. Many species known from this area still await description and more probably await discovery. Two unusual and remarkable new Gesneriaceae from the Department of Cauca in western Colombia are described here. Both were collected by Haught in 1946. Both appear to be rare, known from few collections, and do not yet exist in cultivation.

Columnea incredibilis Kvist et L. Skog, sp. nov.

Type: Haught 5383, Colombia, Prov. Cauca, Chuara, 70 m, 23 Dec. 1946 (US holotype).

Species insignis formibus herbaceis terrestrialibus surculis dorsiventralibus foliis oppositis per paria valde inaequalibus; corollis lobis angustatis elongatis 3.5–4.0 cm longis a speciebus nobis notis. – Fig. 1.

Terrestrial herbs, up to 1 m tall, shoots strongly dorsiventral. Stems 4-angled, diam. 4–6 mm, glabrous to villous near apex; internodes 2–7 cm long. Leaves opposite, strongly anisophyllous. The blade of the larger leaf in a pair oblanceolate, 20–25 × 6–8 cm, apex acuminate, base acute, upper leaf surface dull green, glabrous, lower leaf surface, sparsely pilose, fresh green with 1–2 (−several) small, translucent, red dots near the primary vein at ca. 3/4 the distance from the base of the lamina, number of veins per side 8–10; petiole 8–12 mm long; the blade of the smaller leaf in a pair oblanceolate, 15–20 × 3–5 mm. Inflorescences in axils of the larger leaf of a pair, of reduced cymes with 1–3 flowers; epeduncule; bracts 2–3, sessile, oblanceolate, 6–10 × 2–3 mm, sericeous. Flowers showy; calyx lobes subequal, nearly free, 20–25 mm long, pectinate, strigose, hairs 3–6 mm long; corolla tubular, sub-ventricose, 3.0–3.5 cm long (apart from longer appendages from bases of corolla lobes), diam. 4.5 mm at base, widened to 9 mm, diam. 6 mm in throat, outside deep red, strigose, inside glabrous, limb subequal with small 3–4 mm long lobes, to the outer side of each lobe is attached a 3.2–3.8 cm long, filiform, red, sericeous appendage; stamens included, filaments 25–30 mm long, sparsely pilose, basally adnate to corolla tube for 1–2 mm and fused in pairs for 5–6 mm, anthers 3.0 × 2.5 mm; ovary cone-shaped, 4–5 mm high, glabrous to sericeous apically, style 20–25 mm long, stigma stomatomorphic-bilobed; disc a dorsal bilobed gland. Fruit and seeds not seen. – Fig. 1.

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1cm
e
d
b
1mm
1cm
.5cm
1cm
a
f
g
h
A.R.Tangerini
c
1cm

Additional specimens examined. Colombia. Cauca: El Tambo, La Costa, in primary forest, 800 m, Sneidern 878 (S).

Distribution. Apparently endemic to Cauca. The label of the type reads "abundant in wet forest".

The showy deep red flowers of *Columnea incredibilis* are very similar in structure to those of a soon-to-be published species from Carchi in northwestern Ecuador with smaller yellow flowers (see photograph in Crowley 1985). Both of these species are unusual in having filiform appendages arising from the outside of the corolla lobes that appear to be an outer whorl of lobes. The function of the extremely long, narrow corolla appendages in the two species is unknown. The appendages of *C. incredibilis* are adpressed sericeous, while those of the Ecuadorean species have erect hirsute hairs.

The presence of conspicuous corolla appendages, which strongly exceed the size of the lobes, is not restricted to the two *Columnea* species discussed here. Other species with these characters are occasionally split off in a separate genus *Trichantha* (Morton 1963, Wiehler 1973). These species, e.g., *C. moorei* Morton, *C. illepida* Moore and *C. minor* Hanst., possess appendages located at the sinuses of the lobes of the limb rather than at the lobes. Without an anatomical investigation it is not possible to determine with certainty which whorl should be considered the lobes and which are the appendages. However, we are interpreting the inner whorl to be the lobes because they more closely resemble the lobes of the *Columnea* species that have the appendages at the sinuses of the lobes.

The habit of *C. incredibilis* and its Ecuadorean relative is different, however, from other species with appendages, and similar to those *Columnea* species that Wiehler (1973) placed in the genus *Dalbergaria.* Both species also possess 1–2 (−several) small, translucent, red dots on the lamina close to the primary vein (not shown in Fig. 1). The translucent red dots on the lamina also occur in species referred to *Dalbergaria.* The dots possibly attract the pollinators, because according to Jones & Rich (1972) similar red spots on the leaves of *Columnea florida* Morton serve to attract pollinating hummingbirds in Costa Rica. The combination of the corolla appendages and the habit provides a link between the genera *Trichantha* and *Dalbergaria* which Wiehler (1973) had separated from *Columnea.*

Cremosperma filicifolium Kvist et L. Skog, sp. nov.

Type: Haught 5359, Colombia, Prov. Cauca, Rio San Juan de Micuy, 50 m, 21 Dec. 1946, (US holotype, COL isotype).

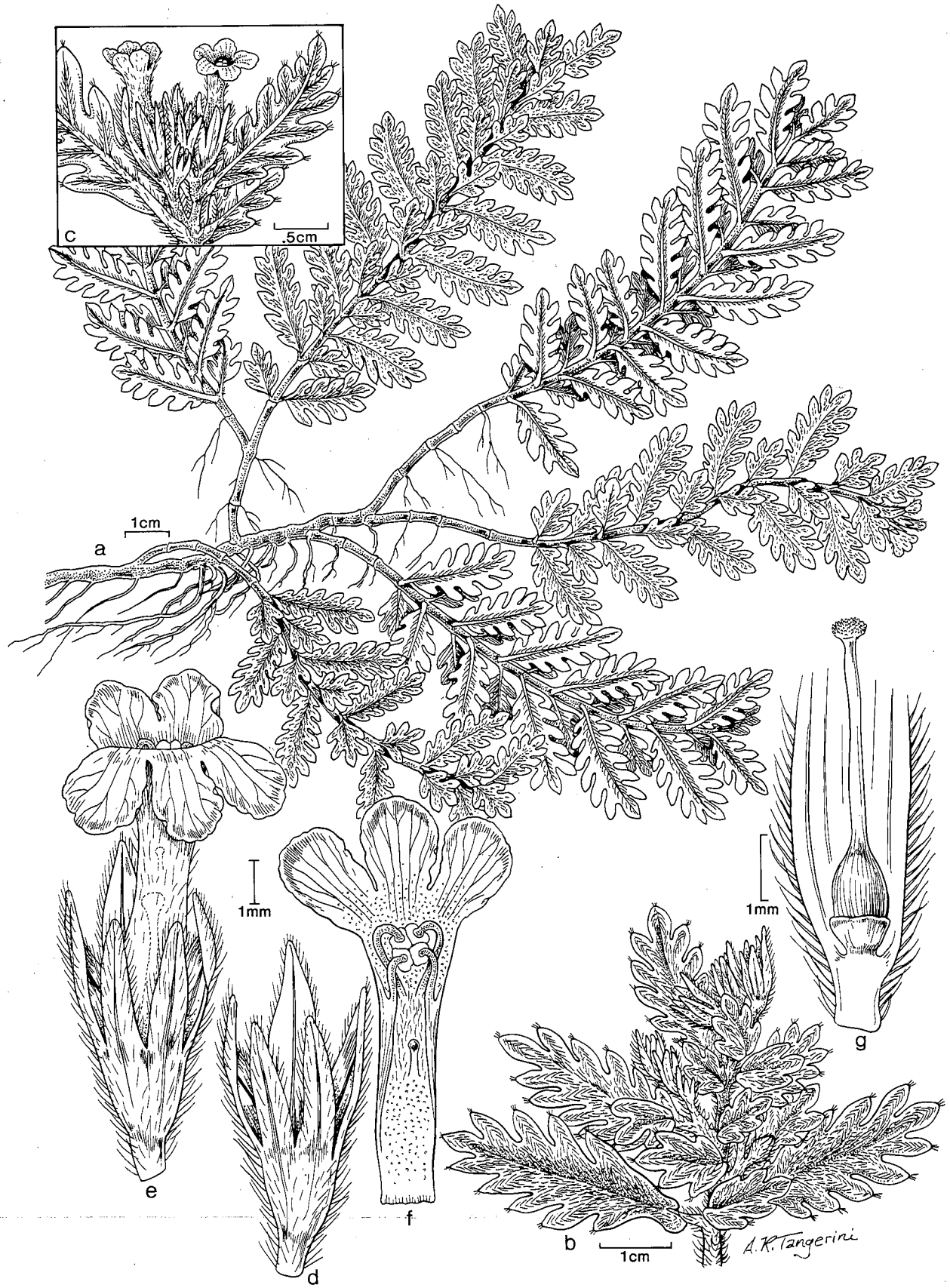
Species filiis oppositis per paria valde inaequalibus incisis planis subsessilis in venis sericeis; filamentis 6 mm longis ad basim corollae 5 mm adnatis a speciebus nobis notis facile distincta. – Fig. 2.

Herbs, epiphytic, saxicolous or terrestrial on cobbly ground, shoots dorsiventral, plane and appressed to substratum, 10–15 cm long, often with adventitious roots. Stems terete, diam. 1–2 mm, branching at base; internodes 3–6 mm long. Leaves opposite, strongly anisophyllous, nearly sessile, incised; the blade of the larger leaf in a pair 12–25 × 5–10 mm, with 5–6 incisions at each side, above dark green, sericeous along veins to glabrous along margin, below green-violet, glabrous apart from sericeous veins; the blade of the smaller leaf in a pair 4–9 × 3–5 mm, with (1−) 2 incisions at each side. Inflorescences in upper leaf axils, of congested cymes with 3–6 flowers; peduncles 2–3 mm long, pilose; bracts lacking; pedicels 1–2 mm long, pilose. Calyx equal, 4–5 mm long, 10-costate, outside sericeous, inside glabrous, tube 2.0–2.5 mm long, lobes lanceolate, 2.5–3.0 mm long, 1.0 mm wide at base; corolla bilabiate, tubular, white, tube 6–7 mm long, diam. 1.0–1.5 mm, outside sparsely pilose, inside puberulent in throat, lobes truncate-obtuse, upper lobes 1.0–1.5 × 1.0–1.5 mm, lateral lobes and lower lobe 1.5–2.0 × 1.5–2.0 mm; stamens didynamous, filaments 6 mm long, adnate to corolla tube 5 mm, glabrous, anthers 0.7 × 0.5 mm, coherent at their apices, thecae confluent; ovary ovoid, 1.5 mm long, glabrous, style 3.5–4.0 mm long, glabrous, stigma capitate; nectary annular, 0.5 mm high. Fruits and seeds not seen. – Fig. 2.

Distribution. Apparently endemic to Cauca, Colombia. Known only from the type.

The plane shoots with anisophyllous, incised leaves give plants of *Cremosperma filicifolium* a curious similarity to ferns. The appearance is furthered by rather unimpressive flowers. Incised leaves are rare in Gesneriaceae (found to a lesser degree also in *Phinaea lacerata* C. Morton from Panama and *Paradrymonia lacera* Wiehler from Ecuador, and in addition in a few Asiatic species), and makes it impossible to mistake *C. filicifolium* for any other species of Gesneriaceae. In species of *Cremosperma* the filaments of the stamens are usually adnate to the corolla tube base for about half of their length (Kvist & Skog 1988). *Cremosperma filicifolium* differs in having the filaments adnate to the corolla for about 5/6 of their length. In most other aspects *C. filicifolium* is a typical species of *Cremosperma.*

Fig. 1. *Columnea incredibilis.* – a: Habit. – b: Detail of lower leaf surface. – c: Calyx and bracts. – d: Sepal. – e: Corolla. – f: Corolla opened to show corolla lobes and stamens. – g: Pistil and nectary. – h: Nectary. – Haught 5383 (US).


c
.5cm
1cm
a
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f
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1cm
A.K. Tangerini

Acknowledgements – We are grateful to Alice Tangerini for the careful execution of the drawings, and to Christian Feuillet and Harold Robinson for reading the manuscript.

References

Crowley, A. C. 1985. *Columnea* choices. – The Gloxinian 35 (6): 19–24.

Jones, C. E. & Rich, P. V. 1972. Ornithophily and extrafloral color patterns of *Columnea florida* Morton (Gesneriaceae). – Bull. S. Calif. Acad. Sci. 71: 113–116.

Kvist, L. P. & Skog, L. E. 1988. The genus *Cremosperma* (Gesneriaceae) in Ecuador. – Nord. J. Bot. 8: 259–269.

Morton, C. V. 1963. A revision of *Trichantha* (Gesneriaceae. – Contr. U.S. Natl. Herb. 38. 1–27.

Wiehler, H. 1973. One hundred transfers from *Alloplectus* and *Columnea* (Gesneriaceae). – Phytologia 27: 309–330.

Fig. 2. *Cremosperma filicifolium.* – a: Habit. – b: Detail of branch apex with inflorescence. – c: Branch apex and flowers. – d: Calyx. – e: Calyx and corolla. – f: Upper part of corolla opened with stamens and staminode. – g: Corolla base with pistil and nectary. – Haught 5359 (US).