COLUMNEA CORRALESII, A NEW SPECIES OF GESNERIACEAE FROM COLOMBIA

COLUMNEA CORRALESII, UNA NUEVA ESPECIE DE GESNERIACEAE DE COLOMBIA

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ABSTRACT

Amaya-Márquez M., J. Foley Smith: *Columnea corralesii,* a new species of Gesneriaceae from Colombia. Rev. Acad. Colomb. Cienc. 37 (144): 307-310, 2013. ISSN 0370-3908.

A new species of *Columnea* belonging to section *Ortholoma* (Gesneriaceae) from Antioquia Department in Colombia (Cordillera Occidental) is described and illustrated. This species is the second one known in *Columne*a to have a corolla with 4 external appendages; the first one described with this trait was *C. paraguensis*. This trait adds to the knowledge on the diversity of corolla architecture in *Columnea,* and points out an effect of pollinators on the diversification process in this plant lineage.

Key words: *Ortholoma, Columnea*, Gesneriaceae, Colombia, Antioquia, Plant Taxonomy, Flora of Colombia.

RESUMEN

Se describe e ilustra una nueva especie de *Columnea* perteneciente a la sección *Ortholoma* (Gesneriaceae) para el departamento de Antioquia en Colombia (Cordillera Occidental). Esta especie es la segunda conocida dentro de *Columnea* por tener una corola con 4 apéndices externos; la primera descrita con esta característica fue *C. paraguensis*. Esta característica aumenta el conocimiento sobre la diversidad en la arquitectura de la corola en *Columnea*, e indica un efecto de los polinizadores en el proceso de diversificación de este linaje de plantas.

Palabras clave: *Ortholoma, Columnea,* Gesneriaceae, Colombia, Antioquia, Taxonomía de Plantas, Flora de Colombia.

Introduction

Studies on the taxonomy of *Columnea* have shown several changes during the past few years. The phylogenetic classification resulting from molecular data indicates changes at sectional classification (Smith *et al*. 2013a.). In addition, several new species of *Columnea* have been discovered either as the result of new expeditions to South America to collect Gesneriaceae (Clark & Smith 2011, Amaya-Márquez & Clark 2011; Amaya-Márquez & Smith 2012; Amaya-Már-

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quez & Marín-Gómez 2012; Smith *et al*. 2013b) or as the result of revising thousands of herbarium specimens during the last seven years by J. F. Smith for the treatment of section *Ortholoma* and M. Amaya-Márquez, L. E. Skog, and L. P. Kvist for the treatment of section *Collandra* (Amaya-Márquez 2010a, 2010b). *Columnea corralesii*, the new species reported in this paper, was discovered as a specimen in herbaria that did not match any previously described species. This species belongs to the group of species within section *Ortholoma* that have external appendages on the corolla; we

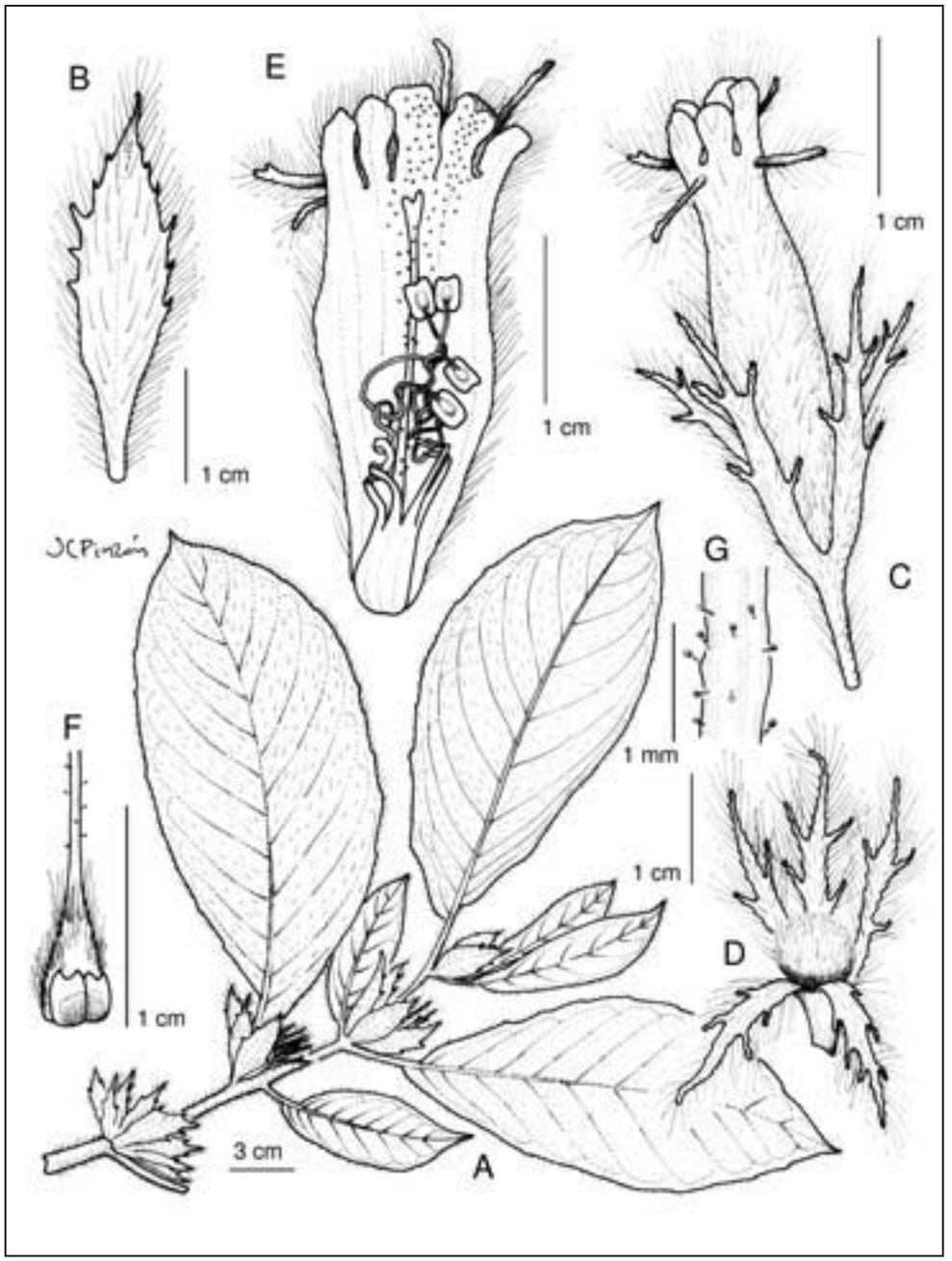

Figure 1. *Columnea corralesii* M. Amaya & J. F. Smith **A.** Vegetative and reproductive shoots showing the anisophylly in the pair of leaves per node, and the conspicuous inflorescences with several bracts of different size. **B.** Bract. **C.** Flower. **D.** Calyx. **E.** Corolla dissected to show interior glabrous surface, except on the dorsal lobes where it is densely glandular; androecium curled toward the corolla base indicating the flower was in the female stage. **F.** Nectary, two connate glands dorsal to the ovary. **G.** Detail of glandular indumentum on the style.

assign this species to section *Ortholoma* until a new name for this group of species is available.

Columnea corralesii M. Amaya & J. F. Smith, sp. nov. Figure 1.

TYPE: COLOMBIA. **Antioquia**: municipio de Frontino, corregimiento de Nutibara, cuenca alta del Río Cuevas, 2070 m alt., 17 Nov. 1986, *Sánchez, D. et al. 477* (holotype: COL, isotype: MEDEL).

Columnea corralesii differs from *C. paraguensis* by having larger petioles, 11-12 veins on the larger leaf of each node, 8-12 bracts per inflorescence, and a red corolla with a subactinomorphic limb. The smaller leaf in each node is five times larger than in *C. paraguensis*.

Suffrutescent 2 m high; stem subterete, 0.5-0.9 cm diam., indument reddish pilose (15-18 celled trichomes); internodes 2.5-5 cm long. **Leaves** opposite, anisophyllous in a pair, papyraceous; larger leaf petiolate, petioles 3-3.5 cm long, pilose (10-12 celled trichomes); blade asymmetrical, oblong, 19-21 X 8-10 cm, base oblique, shorter side acute, longer side rounded, apex acute, margin dentate, adaxially green, densely reddish pubescent (4-7 celled trichomes), veins obscure; abaxially green, sparsely reddish villous (7-11 celled trichomes), 11-12 veins on the larger side of the blade; smaller leaf petiolate, petioles 1-1.8 cm; pilose (10-12 celled trichomes), blade asymmetrical, oblong to narrow oblong, 6.6-7 X 2.2-3 cm, base oblique, apex acuminate, margin dentate, adaxially green, reddish pubescent (4-7 celled trichomes), veins obscure; abaxially reddish villous (10 celled trichomes), 6-8 veins on the larger side of the blade. **Inflorescence** fasciculate of 4 flowers in the axil of each leaf; bracts 8-12, lanceolate, 1-3.3 X 0.2-1.1 cm, abaxially reddish villous (7-12 celled trichomes), adaxially densely reddish villous (7-12 celled trichomes), margin dentate, teeth 5 per side, subulate, ciliate. **Flower** shortly pedicellate, pedicel 0.1-0.5 cm long, pilose (10-15 celled trichomes). **Calyx** asymmetrical, sepals free, unequal, lanceolate, 1.6-2 X 0.2-0.3 cm, adaxially golden villous (10-15 celled trichomes), abaxially golden villous (10-15 celled trichomes), margin laciniate (2 segments per side). **Corolla** red, tube sigmoid, subventricose, slightly constricted at corolla base and throat, curved down at the limb; with four external appendages between the lobes, each lobe 4 mm long; corolla tube 3-3.5 cm long, 0.5-0.7 in the middle, 0.4 cm wide at the throat, constricted at the base 0.4 cm, base dorsally gibbous, gibba 0.4-0.5 X 0.4-0.5 cm, limb subactinomorphic, lobes erect, subequal, oblong, 0.4-0.5 X 0.3-0.4 cm; outside densely lanate (12-15 celled trichomes), inside glabrous, except on the two dorsal lobes where it is densely glandular. **Androecium** of 4 stamens, filament 2.8 cm long, glabrous, basally connate by 0.4 cm of their length forming a staminal blade; anther sagittate, 0.3 X 0.2 cm. **Gynoecium** with a conical ovary, densely sericeous, 0.4 X 0.5 cm**,** style 3 cm long, glandular along its length; stigma bilobed. **Nectary** of two bidentate glands 2 X 2 mm each, basally dark colored. **Fruit** not seen when mature. **Seeds** not seen.

Etymology. The species is named after the philosopher José Enrique Corrales Enciso to acknowledge his contribution to build up the Faculty of the National University of Colombia. As the founder of the professor's Cooperative he put his vi-

Table 1. Comparison of *C. corralesii* M. Amaya & J. F. Smith with *C. paraguensis* M. Amaya & J. F. Smith

Character	*C. Corralesii* M. Amaya & J. F. Smith	*C. paraguensis* M. Amaya & J. F. Smith
Petiole of larger leaf	3-3.5 cm	0.4-1 cm
Number of veins on the larger leaf	11-12	9-10
Petiole of shorter leaf	1-1.8 cm	Sessile
Shorter leaf's size	6.6-7 X 2-3	1.3-2 X 0.2-0.3 cm
Number of bracts	8-12	2
Bracts' size	1-3.3 X 0.2-1 cm	1.8-2.4 X 0.2-0.3 cm
Sepal	Adaxially golden villous	Adaxially glandular
Corolla orientation respect to the calyx	Slightly oblique	Erect
Corolla color	Red	Yellow
Corolla limb symmetry	Subactinomorphic	Bilabiate
Corolla length	3-3.5 cm	2.4 cm
Filament indument	Glabrous	Pilose (unicellular trichomes)
Style length	3 cm	1.8 cm

sionary ideas and leadership to the service of the community, and with that he has helped to make economic and spiritual dreams true.

Phenology: Flowers recorded only in November with immature fruits at this time.

Distribution. *Columnea corralesii* is only known from the Andean forests in Colombia. The species was recorded on the West Cordillera at the municipality of Frontino, Department of Antioquia, at 2070 m of elevation, and at the moment is only known for the type specimen.

Distinctive features. *Columnea corralesii* is similar to *C. paraguensis* by having the larger leaf of each node closer in size (19-21 X 8-10 cm in *C. corralesii*; 15-16 X 5.-5.5 cm in *C. paraguensis*) and both with oblique bases; both species have pedicels between 0.1-0.6 cm long, sepals that are free, lanceolate and with laciniate margins, and corollas that are sigmoid with 4 external appendages at the limb. However, despite these common traits, the two species can be easily separated by a set of characteristics presented in Table 1.

Acknowledgments

To the National University of Colombia for the opportunity to do research. To Diego Giraldo-Cañas for revising the manuscript and making valuable suggestions. To Juan Carlos Pinzón for the drawings.

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Recibido: 28 de abril de 2013
Aceptado para su publicación: 6 de septiembre de 2013