

A beautiful new species of *Masdevallia* (Pleurothallidinae: Orchidaceae) from the central Andes of Colombia

Sebastián Vieira-Uribe

Sociedad Colombiana de Orquideología, Medellín, Colombia. Grupo de Investigación en Orquídeas, Ecología y Sistemática Vegetal, Universidad Nacional, sede Palmira, Colombia. utricseb@gmail.com

Diego Bogarín

Jardín Botánico Lankester, Universidad de Costa Rica, P.O. Box 302-7050 Cartago, Costa Rica, A.C. Herbario UCH, Universidad Autónoma de Chiriquí, Chiriquí, Panamá.

Abstract: A new species of *Masdevallia*, *M. jaderi*, is described and illustrated from Colombia. The new species is similar to *M. angulifera*, from which it is mainly distinguished by the incurved narrowly triangular free portions of the sepals, more than twice longer than wide.

Keywords: *Masdevallia*, Pleurothallidinae, new species, central Andes.

Running Title: Vieira & Bogarín – A beautiful new *Masdevallia*.

Introduction: *Masdevallia* Ruiz & Pav. s.l. includes more than 600 species ranging from southern Mexico to southern Brazil (Luer 1986; 2000a; 2000b; 2001; 2002; 2003). Together with *Lepanthes* Sw., *Pleurothallis* R.Br. and *Stelis* Sw., *Masdevallia* is one of the most species rich genera within Pleurothallidinae. Luer (2000) treated *Masdevallia* into 10 subgenera, 13 sections and 13 subsections. Then, Luer (2006) decided to split the genus in 15 genera in addition to the existing *Rodri-*

goa Braas, *Portillia* Königler and *Jostia* Luer, all referable to *Masdevallia*.

Masdevallia s.s. includes about 225 species classified in 9 sections (Thoerle 2007). Section *Masdevallia* includes *M. uniflora* Ruiz & Pav. (the type species of the genus) and contains 5 subsections. Among them, subsection *Saltatrices* (Rchb.f.) Luer, encompass about 26 species found exclusively in the Andes from Venezuela to Peru (Luer 1986, Luer 2002,

Thoerle 2007). The group is mainly characterized by the sepals deeply connate into a long sepaline tube that is more or less constricted above the middle or below the free segments and more or less ventricose below the constriction (Luer 1986; Gerritsen & Parsons 2005).

Phylogenetic studies by Abele (2008) show that section *Masdevallia* is supported by molecular and morphological data, however, the recognition of its five sub-

sections *Caudatae* H.J.Veitch, *Coccinea* H.J.Veitch, *Masdevallia*, *Oscillantes* Luer and *Saltatrices* is not supported. *Masdevallia* s.l. is represented in Colombia by 182 species, of which 99 are endemic. The genus is among the orchid genera with the highest species diversity in the country (Betancur et. al. 2015). Here we describe a new species of *Masdevallia* section *Masdevallia* allied to the species of subsection *Saltatrices* from Colombia:

***Masdevallia jaderi* S.Vieira-Urbe & Bogarín, Orquideología XXXIII(1):16. 2016.**

Type: COLOMBIA. Department of Antioquia, municipality of San Pedro de Los Milagros, Mexican white cedar (*Cupressus lusitanica*) plantation around Rio-grande II dam, 2400 m. Nov. 24 2012. Collected by Nora Londoño, Jáder Zapata and Jorge Jaramillo. S. Vieira 0021 (holotype: JAUM!). (Figs. 1, 2).

Diagnostic characters: This species is most similar to *Masdevallia angulifera* but it can be easily recognized by the incurved narrowly triangular free portions of the sepals, more than twice longer than wide.

Description. – **Plant** terrestrial (likely epiphytic), caespitose, erect, up to 11 cm tall. **Roots** white, glabrous, flexuous, to 1 mm in diameter. **Ramicauls** erect, up to 16 x 1 mm, enclosed by 2-3 ribbed, papyraceous tubular sheaths up to 2.0 cm long. **Leaves** bright green, erect, coriaceous, elliptical-obovate, obtuse, emarginate with a short apiculus, 5.0-9.0 cm long including the petiole, 0.9-1.4 cm wide, the base gradually narrowed into the petiole ca. 1.7-2.9 cm long. **Inflorescence** single flowered, to 9.5 cm long. **Peduncle** erect to suberect, green, up to 8.0 cm long, with two tubular bracts, one at the base and the other below the middle. **Floral bract** tubular, 10 mm long. **Pedicele** 12 mm long. **Ovary** light green, 1.0 cm long, with 6 straight ribs, smooth. **Flowers** light yellow, suffused with red at the sepaline tube and along the veins, petals white, spotted with red around the red longitudinal callus, suffused with orange

along the labellar margin, lip light orange spotted with red, light yellow at the apex, column white. **Dorsal sepal** oblong, shortly to cellular pubescent within above the middle, 4.0 x 0.8 cm, connate to the lateral sepals for about 2 cm to create a cylindrical, ventricose, sepaline tube, constricted above the middle, the free portion narrowly triangular, acute, 1.9 x 0.8 cm. **Lateral sepals** oblong, shortly to cellular pubescent within above the middle, 4 cm long, connate for about 2 cm into a longitudinally concave lamina 1.5 cm wide unexpanded, the free portions narrowly triangular, incurved, acute, subfalcate, 2.0 x 0.8 cm. **Petals** oblong, glabrous, 6.1 x 2.1 mm, the apex obtuse, with a longitudinal depression extending from the base, continuing along the midline and ending with the emarginate apex, the labellar margin with a longitudinal callus. **Lip** hinged beneath to the column foot, oblong-ensiform, cellular pubescent, 6.3 x 1.4 mm, with a shallow depression near the base. **Column** semiterete, 5.0 x 1.2 mm, the apex erose. Foot 2.4 mm long, with an incurved extension. Stigma ventral. **Pollinia** two, ovoid. **Anther cap** cucullate, apical.

Eponymy: We name this species after its discoverer, Jáder Zapata, from Belmira, Antioquia.

Discussion: *Masdevallia jaderi* is most similar to *Masdevallia angulifera* Rchb.f. but it is easily recognized by the incurved narrowly triangular to acuminate free portions of the sepals (vs. triangu-

lar, subacute to obtuse), more than twice longer than wide (vs. as long as wide). Other related species are *M. filaria* Luer & R. Escobar, *M. marthae* Luer & Escobar, *M. saltatrix* Rchb.f. and *M. ventricularia* Rchb.f. all having the sepals deeply connate into a long sepaline tube but with filiform free portions of sepals.

Habitat: The only known plant of this species was found growing terrestrially in a partially shaded place inside a Mexican white cedar (*Cupressus lusitanica* Mill.) plantation together with *Scaphosepalum*

antenniferum Rolfe, *Masdevallia amanda* Rchb.f., *M. sanctae-rosae* Kraenzl., *M. molossus* Rchb.f., *M. pygmaea* Kraenzl. and *M. picturata* Rchb.f.

As it is common for some naturally epiphytic species like *Masdevallia picturata*, *M. amanda* and several pleurothallids to grow terrestrially inside Mexican white cedar plantations (SVU personal observation), it is presumed that this species is an epiphytic as are the other species of subsection *Saltatrices*.

A new combination in *Masdevallia*

Some authors favor the original circumscription of *Masdevallia* proposed by Luer (2000a, 2000b, 2001, 2002, 2003) instead of the recognition of the several

genera referable to *Masdevallia* (Daström & Ruiz Pérez 2015). In this sense, we transfer the following species of *Reichantha* Luer to *Masdevallia*:

Masdevallia jorge-warneri (C.M.Sm., Bogarín & Pupulin) Bogarín, *Orquideología* XXXIII(1):18 2016.

Bas.: *Reichantha jorge-warneri* C.M.Sm., Bogarín & Pupulin, *Syst. Bot.* 40(1): 83–84. 2015.

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BIBLIOGRAPHIC REFERENCES

See spanish version.