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## A NEW SPECIES OF *MASDEVALLIA* (ORCHIDACEAE: PLEUROTHALLIDINAE) FROM PERU

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**ABSTRACT.** *Masdevallia vilcabambensis*, a new species from the department of Cuzco in Peru, is described and illustrated. It is similar to *M. minuta*, but it has much smaller plants and flowers, the flowers are yellowish and blotched with purple, and the sepals abruptly reflexed at the middle. Also, *M. vilcabambensis* is exclusively known from around 2500 meters elevation, whilst *M. minuta* is restricted to warm regions below 350 meters of altitude.

**KEY WORDS :** Orchidaceae, Pleurothallidinae, *Masdevallia vilcabambensis*, Peru, new species

**Introduction.** The cloud forest of the region of Vilcabamba in Peru hosts an astonishing variety in plant species, and the efforts by botanists and concerned institutions to enlighten this floristic mega diversity promote the continue discovery of taxa new to the science. The characteristic climate of the cloud forest, with its high humidity and the constant presence of fog, favors the establishment of a rich epiphytic flora, among which the family Orchidaceae is outstanding for the great number of species (Schweinfurth 1944, 1951, 1958—1961, 1970, Bennett & Christenson 1993, 1995, 1998, 1999, 2001, Rodríguez 1999).

The orchids of the subtribe Pleurothallidinae (Tribu Epidendreae) account for approximately 3000 species, which means more or less 10% of the world orchids. Among them, *Masdevallia* Ruiz & Pav. has nearly 500 species, 150 of which are endemic to Peru, but it is easy to estimate that this number will quickly increase as new difficult-to-reach areas still covered with pristine vegetation will be explored.

The genus *Masdevallia* is distributed from southern Mexico to the South of Brazil, with the greatest species diversity in the central mountain ranges of Colombia, Ecuador, Peru, and Bolivia. It is characterized by terrestrial, epiphytic or lithophytic plants provided with non-pseudobulbous stems and a single leaf, fleshy to coriaceous, cuneate at the base. The basal inflorescences can be single- or many-flowered, with the peduncle usually cylindrical. The flowers are showy and frequently with brilliant

colors. The sepals are always adnate, with the free apexes ending in more or less elongate tails. Species of *Masdevallia* are most commonly found in wet and cold climates, with some taxa spanning toward more temperate regions.

**Taxonomic treatment.** During one of the explorations done by the team of the Missouri Botanical Garden to collect material from the Vilcanota River basin, Efraín Mountañés Sucelli, one of the team members, discovered a tiny orchid that is described here as new:

*Masdevallia vilcabambensis* L. Valenzuela & E. Sucelli, *sp. nov.*

**TYPE:** Perú. Convención: Vilcabamba, Oyara, 2500 m, 13°01'29"S 72°50'08"W, 22 Febrero 2007, L. Valenzuela 8896, E. Sucelli, I. Huamantupa, G. Calatayud, F. Zamora & N. Suárez (holotype, CUZ; isotype MO).

FIG. 1.

Species *Masdevallia minuta* Lindl. similis, sed statura multo minore, floribus minoribus, sepalis reflexis, habitat diverso recedit.

*Herb* epiphytic, small, up to 25 mm tall. *Ramical* to 23 mm long. *Leaves* obovate-elliptic, glabrous, 10-25 x 5-8 mm, narrowed toward the base into a conduplicate petiole 8-12 mm long. *Inflorescences* single-flowered, emerging from the basal sheaths, 2 -3 per ramical, to 20 mm long, green. *Flowers*

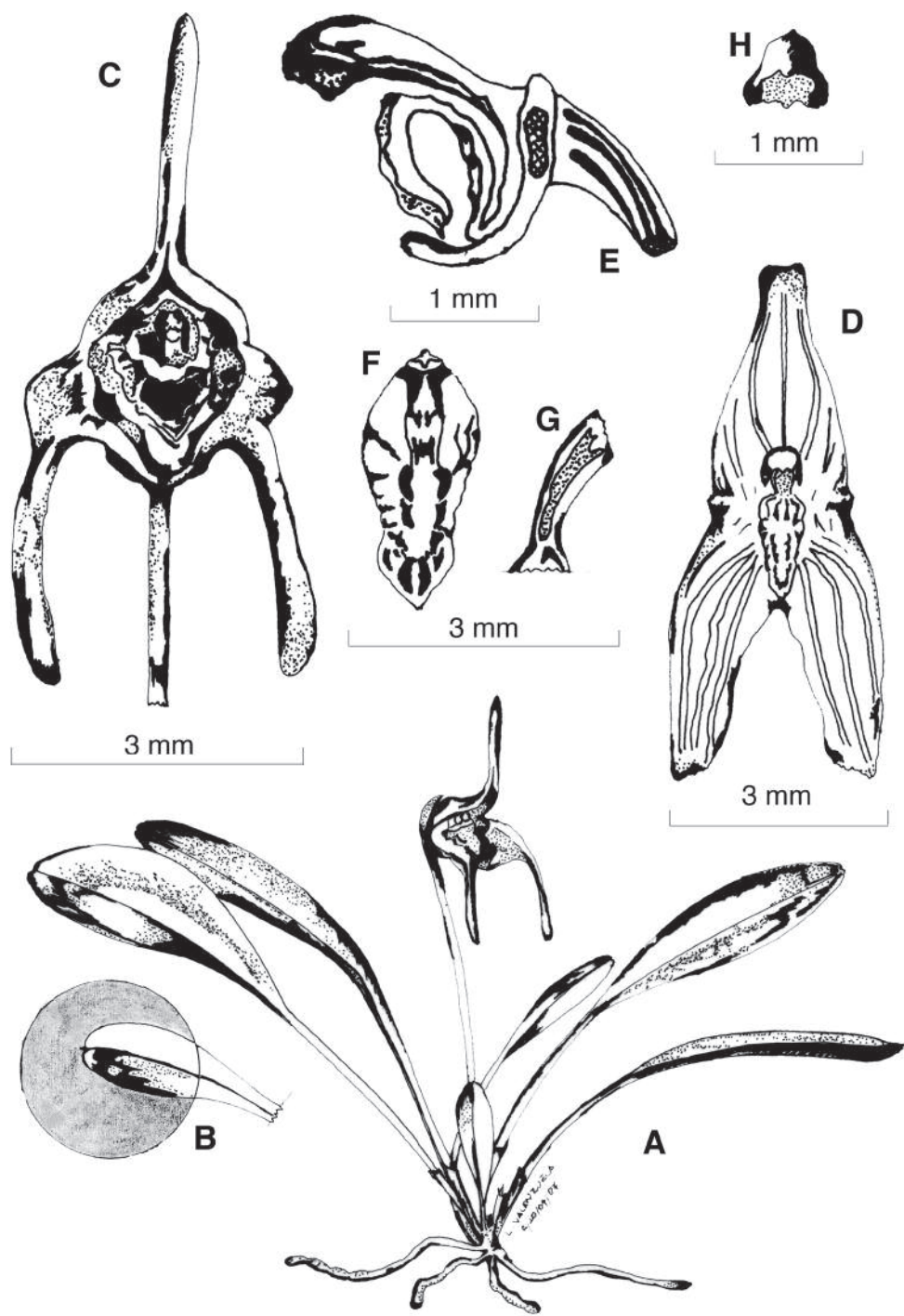


FIGURE 1. *Masdevallia vilcabambensis* L. Valenzuela & E. Suclli. A - Habit. B - Apex of the leaf, abaxial view. C - Flower. D - Flower, spread (the petals removed), the reflexed tails not visible. E - Column and lip, lateral view. F - Lip. G - Petal. H - Anther cap. Drawn by L. Valenzuela from the holotype.

with yellowish sepals, blotched vivid purple at the base, the tails yellow; petals and lip purple; column green with the apex cream-hyaline. *Sepals* narrowly triangular-ovate, connate at the base ca. 1 mm, ending into reflexed, conduplicate tails, 3 x 1 mm excluding the tail. *Petals* obcuneate-subfalcate, truncate, 1.5 x 1 mm. *Lip* narrowly ovate-subpandurate, abruptly reflexed-folded at the middle, acute, 2 x 1.5 mm. *Column* terete, slender, subclavate, with shallow clinandrium, 1.6 mm long. *Anther cap* cucullate, helmet-shaped, cream.

**DISTRIBUTION AND ECOLOGY:** Epiphytic in cloud forest at an altitude of between 2400-2500 m. The plants grow in shady places, on the stems of vines (up to 2 cm in diameter) covered with mosses, at medium height (up to 3 meters from the ground), forming small populations usually of 4-8 individuals.

**ETYMOLOGY:** Named from the district to which belongs the locality where the species was found, in the district of Vilcabamba, the historical place where the Incas directed by Manco Inca offered their last resistance to the Spanish invasion in 1532.

The only species similar to *M. vilcabambensis* is *M. minuta* Luer, but the former has much smaller plants and flowers, the flowers are yellowish, blotched with purple (vs. white in *M. minuta*), the disposition of the column and the shape of the sepals, and sepals abruptly reflexed at the middle (vs. straight). Furthermore, *M. minuta* is restricted to warm regions below 350 meters, while *M. vilcabambensis* is exclusively known from a cold region at around 2500 meters elevation.

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