

Myoxanthus ortizianus (Orchidaceae), a new species from southern Colombia

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Abstract: With over 3000 species, Colombian orchid flora represents one of the richest in the World. The neotropical subtribe Pleurothallidinae is the most diverse, but it is still a poorly recognized Orchidaceae group and numerous new discoveries within national representatives are described every year. An examination of material collected recently in the Colombian department of Putumayo revealed the existence of a new species of *Myoxanthus*, named *M. ortizianus*, which is described, illustrated and placed within an identification key for national species of the nominal section of the subgenus *Myoxanthus*.

Key words: Colombia, *Myoxanthus*, new species, Pleurothallidinae, Putumayo, taxonomy, Valle de Sibundoy

1. Introduction

The genus *Myoxanthus* was proposed by Poeppig & Endlicher (1835) to identify a newly collected species characterized by a well-developed ramicaul with a fascicle of single flowers arising simultaneously at its apex and distinguished by basally connate lateral sepals, an oblong-ligulate lip and an apically irregular gynostemium with a pair of teeth in the apical part and a concave column-foot. The new genus was synonymized with *Pleurothallis* by Lindley only a year later (Lindley 1836) and, in 1859, the same author placed all known *Myoxanthus* species in the section *Aggregatae* of *Pleurothallis* (Lindley 1859). At this time, just a few species of the genus had been recognized and over the next 120 years it enlarged to almost 40 taxa. In 1982, *Myoxanthus* was re-established (Luer 1982), supported by vegetative anatomy (Pridgeon 1982; Pridgeon & Stern 1982).

In 1992, Luer divided the genus into three subgenera based on an inflorescence arrangement and the structure of the sheaths enclosing the ramicaul. The same author established additional three sections within the largest subgenus – *Myoxanthus*. The molecular studies of Pridgeon *et al.* (2001), together with the results of detailed studies on the leaf anatomy resulted in the unification of the subgenera *Satyria* and *Silenia* into a new genus *Echinella* Pridgeon & M. W. Chase.

As currently recognized, *Myoxanthus* includes plants distinguished by the presence of coralloid raphide clusters in the foliar epidermis, scruffy sheaths and few-flowered inflorescence arising from near the ramicaul apex. The sepals are usually pubescent, the petals are often thickened towards the apex and the thick lip is hinged on the column-foot. The gynostemium is variously toothed or winged apically and the anther cap is cellular-glandular (Luer 1992; Pridgeon *et al.* 2001).

The geographical range of the genus is restricted to the Neotropics, from Mexico to southern Brazil. In Colombian flora, 14 species have been registered thus far. Most of them occur above 1000 m a.s.l. Only three species, *Myoxanthus affinis* (Lindl.) Luer, *M. monophyllus* Poepp. & Endl and *M. trachychlamys* (Schltr.) Luer, were reported from the warm lowland regions of the country (Ortiz Valdivieso & Uribe Vélez 2007).

During the course of the study on the Colombian orchids, a distinctive species of the section *Myoxanthus* subgenus *Myoxanthus* was found and it is described here as new.

2. Material and methods

The comparative research was conducted in the herbaria COL, HPUJ, K, MEDEL, UGDA and W. Dried *Myoxanthus* specimens as well as flowers preserved in liquid were examined according to the standard

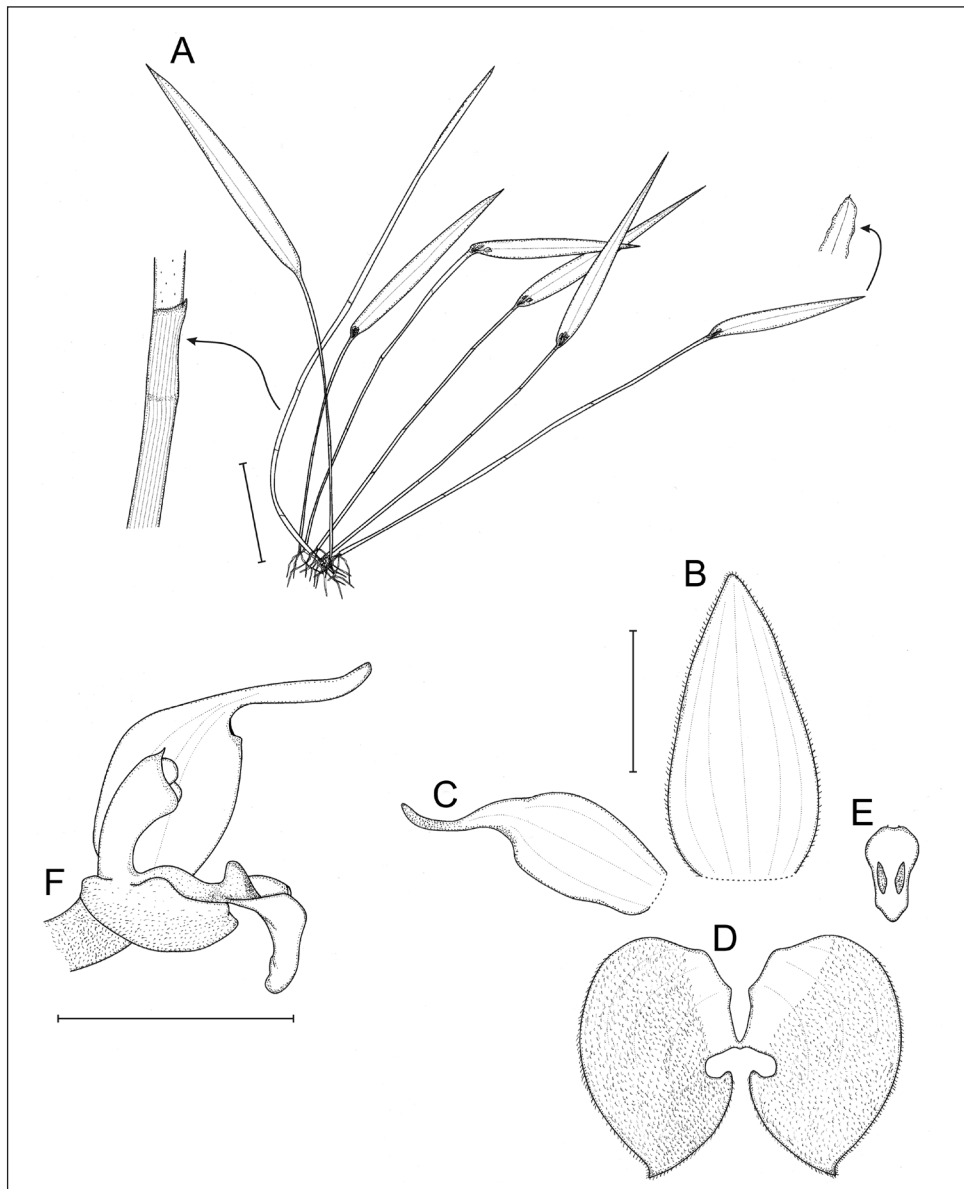


Fig. 1. *Myoxanthus ortizianus* – habit and dissected flower

Explanations: A – habit, ramicaul and leaf apex details, scale bar = 10 cm; B – dorsal sepal; C – petal; D – lateral sepals; E – lip; F – lip, gynostemium and petal, scale bars = 5 mm. Drawn from the holotype

procedures. The photographs provided on the herbarium sheets were carefully studied. First, the shape and size of the leaf blade was studied. The floral segments as well as the form of ovary and floral bracts were examined after softening flowers in boiling water. Comparison of the studied material with the designated type specimens and protologues assured the correctness of identifications. The field studies have been conducted during expeditions to Colombian department of Putumayo in 2012 and 2013.

3. Description and taxonomic notes

Myoxanthus ortizianus Kolan. & Szlach., *sp. nov.*
(Figs. 1-2)

Species similar in flower morphology to Myoxanthus priapus Luer, distinguished by the presence of the scruffy sheaths of the ramicaul, the long pedicels and ovaries, the simultaneously produced flowers with oblong-ovate lip and the obliquely ovate lateral sepals. Type: COLOMBIA, Putumayo. Valle del Sibundoy. Vereda San José del Chunga. Alt. ca 2200 m. 19 Jan 2007. Flowered in cultivation Mar 2007. *ex cult.* R. Medina T. 466 (holotype: HPUJ!, MEDEL – photos, UGDA! – drawing).

Etymology. Dedicated to Pedro Ortiz Valdivieso (1926-2012), an eminent Colombian orchidologist.

Description: Epiphytic, caespitose plants. Roots filiform. Ramicaul stout, erect, up to 45 cm long, enclosed by a few tubular sheaths 4.5-5 cm long, basal

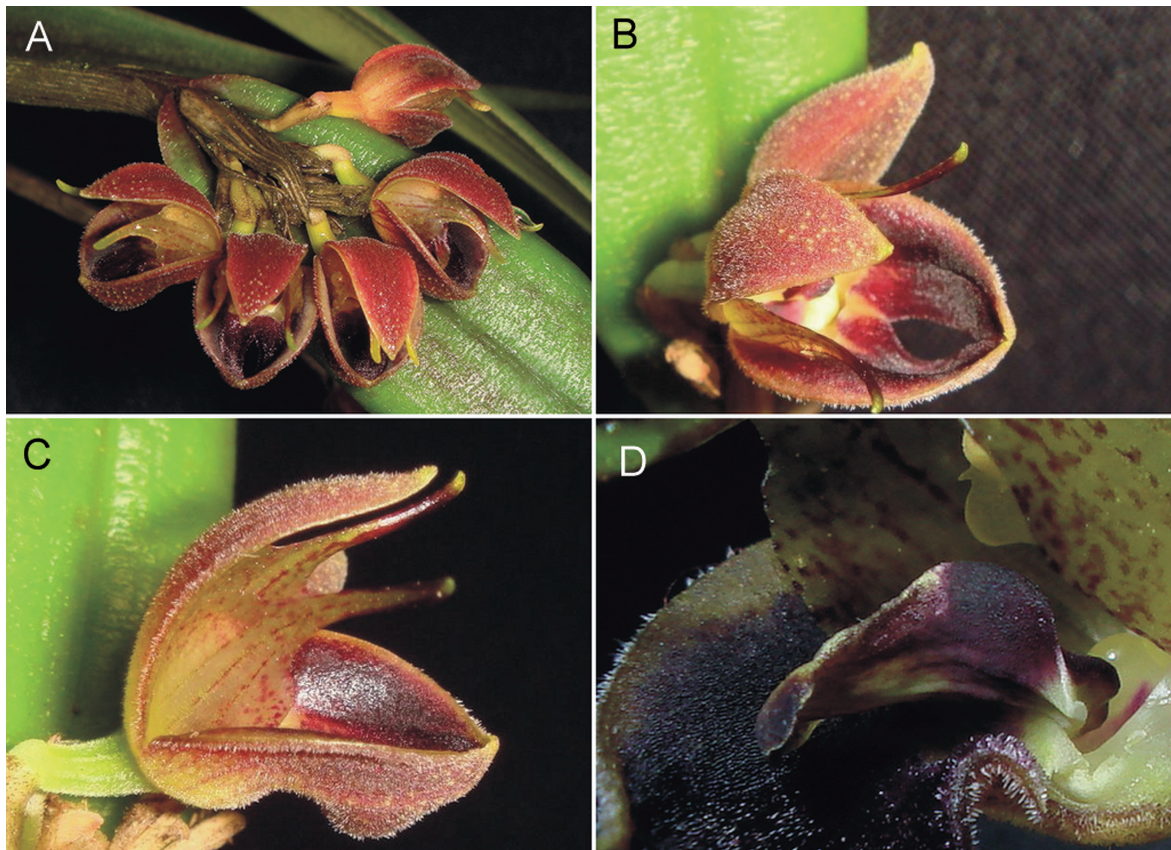


Fig. 2. *Myoxanthus ortizianus* – inflorescence and flower details
 Explanations: A – inflorescence, B – flower closeup, C – flower (side view), D – lip closeup. Photos by R. Medina

part sparsely covered with black hairs. Leaf erect, coriaceous, blade 15-20 cm long, about 2 cm wide, linear-lanceolate, acute, base subpetiolate. Inflorescence a fascicle of 2-5 flowers; enclosed by thin sheaths 15 mm long. Flowers produced simultaneously, brownish-red, petals yellow with reddish veins, lip maroon, all sepals densely pubescent externally, lateral sepals pubescent also on the inner margins. Floral bracts 7-9 mm long. Ovary ca 6 mm long, arched, pubescent, pedicel up to 1.5 cm long, glabrous. Dorsal sepal 11 mm long, 5 mm wide, concave, narrowly ovate, subobtuse, 5-veined. Lateral sepals 8 mm long, 5 mm wide, obliquely ovate, acute, connate for 3 mm, 3-veined. Petals 6 mm long, 4.4 mm wide, ovate, abruptly contracted into an obtuse tails 5 mm long, 3-veined. Lip 3.2 mm long, 1.8 mm wide, minutely clawed, oblong-ovate, thick, base subtruncate, hinged on the column-foot; basal part with rounded sides, the apical part oblong, obtuse; almost the whole disc covered with a thick, verrucose callus. Gynostemium about 3.5 mm long, alate, with a concave column-foot 3 mm long.

Distribution, habitat and ecology: Thus far, it is known only from the Colombian Andes, the Sibundoy valley in the Department of Putumayo, where it was found growing epiphytically in the very humid montane

forest, at about 2200 m of elevation. In its natural habitat it flowers in January.

Taxonomic notes: Based on the caespitose habit of the new species, the scruffy sheaths of the ramicaul and flowers produced laterally, simultaneously from near the apex of the ramicaul, this species belongs to the nominal section of the subgenus *Myoxanthus*. The flowers of *M. ortizianus* slightly resemble those of *M. ceratohallis* (Rchb. f.) Luer, which is widely distributed through South America, as well as *M. priapus* Luer, which is known from Ecuador and Peru. Both of these species belong to the section *Antenella*. *M. ortizianus* is easily separable from these species by the oblong-ovate lip, with its lower part characterized by the presence of erect, rounded sides, and with an oblong, obtuse apical part. The new species also differs from *M. ceratohallis* in terms of the absence of a pair of teeth near the middle of the petals and on the gynostemium, as well as by virtue of the obliquely ovate lateral sepals (*vs* lateral semi-orbicular sepals). The new species may be easily distinguished from *M. priapus* by its much longer pedicels (up to 15 *vs* 2 mm) and ovaries (6 *vs* 1.5 mm long) as well as by its short connate sepals.

Conservation status: According to the IUCN red list criteria (IUCN 2011), this new species should be

classified as critically endangered (CR B2ab (III)), based on the low number of known populations and its restricted area of distribution.

Key to the species of *Myoxanthus* subgen. *Myoxanthus*, sect. *Myoxanthus* in Colombia (Luer 1992, modified)

1. Floral bracts inflated, enclosing the base of the sepals *M. monophyllus* Poepp. & Endl.
 1* Floral bracts not enclosing the base of the sepals ... 2
 2. Sepals more than 3.5 mm wide 3
 2* Sepals less than 3.5 mm wide 4

3. Petals ovate in the lower half, apically narrowed and thickened *M. speciosus* (Luer) Luer
 3* Petals ovate, abruptly contracted into an obtuse tails *M. ortizianus* Kolan. & Szlach.
 4. Lip apex narrowly rounded, gynostemium with a pair of apical teeth *M. affinis* (Lindl.) Luer
 4* Lip apex dilated, gynostemium without a pair of apical teeth *M. exasperatus* (Lindl.) Luer

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