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A new Neotropical species of *Restrepia* (Orchidaceae)

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Abstract

During recent field expedition in the tropical rain forests of *Chama Grande*, in Guatemala, the first author found a few *Restrepia* plants representing a new species. It is described, illustrated and compared to its closest relative, *Restrepia mayana*. It differs from the latter by producing higher plants with larger leaves, shorter inflorescences, flowers of different colour with a differently shaped synsepal and a longer column.

Résumé

Au cours d'explorations récentes dans les forêts tropicales de pluie de *Chama Grande*, au Guatemala, le premier auteur a trouvé une petite population de *Restrepia* représentant une espèce nouvelle. Celle-ci est décrite, illustrée et comparée à son plus proche parent, *Restrepia mayana*. Elle s'en distingue par des plantes plus hautes produisant des feuilles plus grandes, des inflorescences plus courtes, des fleurs de couleur différente avec un synsepale de forme différente et une colonne plus longue.

Resumen

Durante una expedición de campo en las selvas tropicales de Chama Grande, en Guatemala, el primer autor encontró una pequeña población de plantas de *Restrepia* que representa una nueva especie. Se describe, ilustra y compara con su pariente más cercana, *Restrepia mayana*. Se diferencia de esta última por producir plantas más altas con hojas más grandes, inflorescencias más cortas, flores de diferente color con un sinsépalo de forma diferente y una columna más larga.

Keywords: Neotropics, Pleurothallidinae, *Restrepia mayana*, taxonomy.

Mots clés : Néotropiques, Pleurothallidinae, *Restrepia mayana*, taxinomie.

Palabras clave: Neotrópico, Pleurothallidinae, *Restrepia mayana*, taxonomía.

Introduction

Restrepia Kunth (1816: 366, t. 94) was dedicated to José Manuel Restrepo (1782-1863), a Colombian lawyer, governor, secretary of cabinet director of the mint and historian, who investigated the geography and natural history of the Andes of the Antioquia Department, in Colombia (Archila *et al.*, 2018). Although its most striking floral character is the shape of the synsepal, petals and dorsal sepal with osmophores at the apex, the gynostemium is an important organ to differentiate from the rest of the Pleurothallidinae genera, because it has a very thin part of the column and the apex with a strongly pronounced clinandrium – to such a degree that it hides the anther to the naked eye – and an ventral anther, in addition to having a disc-shaped column foot.

For many years the taxonomic reference for the study of Orchidaceae in Guatemala has been the work of Ames & Correll (1953), who did not recognize the genus *Restrepia* although they included two species, however under the name *Pleurothallis* (see Archila *et al.*, 2013). This last work provided the more recent monography of the genus and proposed five species:

Restrepia muscifera (Lindley, 1842: 79) Reichenbach f. ex Lindley (1859: 2)

Restrepia xanthophthalma Reichenbach f. (1865: 300)

Restrepia mayana Archila, Chiron & Szlachetko (2013: 236)

Restrepia archilarum Chiron & Szlachetko (in Archila *et al.*, 2013: 237)

Restrepia cobanensis Archila, Chiron & Szlachetko (2013: 238)

Later three additional species have been published, interestingly showing the largest plant, the biggest flower and the smallest flower in Guatemala, respectively:

Restrepia valverdei Archila, Jiménez Rodriguez & Véliz (2015: 15)

Restrepia nicolaii Archila, Szlachetko & Chiron (in Archila *et al.*, 2017: 3)

Restrepia vasquezgarciae Archila, Chiron & Reyes V. (2019: 13)

During recent explorations, plants of *Restrepia* have been collected. After carefully examining the flowers we found that these plants were something new for Guatemala. Then after comparing them with the data found in the literature we came to decide that they represented a new species, which is here described and illustrated.

Key to Guatemalan *Restrepia* species

1. Inflorescence peduncle at least 3 cm long 2
- 1a. Inflorescence peduncle less than 2.5 cm long..... 3
2. Flowers orange with coffee-brown lines on the synsepal, inflorescence peduncle 5 cm long..... *R. mayana*
- 2a. Flowers yellow with dotted red lines, inflorescence peduncle 3 cm long..... *R. franciscoximenezii*
3. Plants at least 22 cm high 4
- 3a Plants less than 20 cm high..... 5
4. Flowers yellow *R. archilarum*
- 4a. Flowers purple *R. valverdei*
5. Flowers green with purple dots on the basal part of the synsepal, plants less than 5 cm high..... *R. vasquezgarciae*
- 5a Flowers not green, plants more than 5 cm high 6
6. Flowers yellow with red dots, synsepal elliptic, spots very small and abundant at base..... *R. nicolaii*
- 6a. Flowers deep purple or dotted, synsepal lanceolate or oblanceolate 7
7. Flowers fully purple, plants 19 cm high, synsepal oblanceolate with straight and acute apex..... *R. cobanensis*
- 7a Flowers with spots or dots, plants less than 19 cm high, synsepal not as above .8

8. Gynostemium apiculate at apex, flowers pink with purple dots, synsepal oblanceolate apically obtuse.....*R. muscifera*
 8a Gynostemium claviform at apex, flowers white with large spots in the basal part of the synsepal and small spots in the apical part, synsepal lanceolate obliquely acute at apex*R. xanthophthalma*

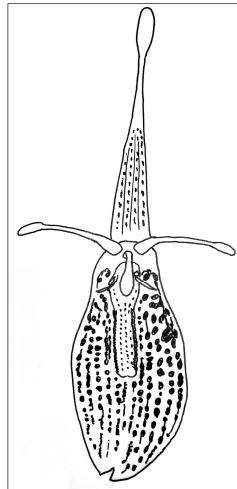
***Restrepia franciscoximenezii* Archila & Chiron, sp. nov.**

Type: Guatemala, Alta Verapaz, Municipio de Cobán, 1300 m asl, collected by Fredy Archila in “bosques tropicales lluviosos de Chama grande”, FA-5001 (BIGU; Fig. 1 & 2).

Etymology: the specific epithet refers to Fray Francisco Ximenez, author of the *Historia Natural del Reino de Guatemala*, in which he described the orchids of Guatemala in 1722.

Haec herba Restrepia mayana similis est sed plantis altioribus (15.5 cm altis vs. 10 cm), foliis majoribus (6.7 cm longis et 3 cm latis vs. 4.5 cm et 2.5 cm), caule longiore (9.2 cm vs. 4.7 cm), inflorescencia breviore (3 cm longa vs. 5 cm), floribus luteis rubro-lineatis-punctatis (vs. aurantiacis brunneo-lineatis, haud punctatis), synsepalo rhombico-ovato (vs. oblanceato), labello parum minore (0.65 cm longo et 0.1 cm lato vs. 0.75 cm et 0.15 cm), gynostemio longiore (0.4 cm longo vs. 0.3 cm), differt.

Plant large for the genus, 15.5 cm high. Ramicauls 9.2 cm long, with 6 internodes, covered with papery, flat bracts, bracts not narrow as in most of the Guatemalan species. Leaves small and fleshy, 6.7 cm long, 3 cm wide, 0.2 cm thick; lamina ovate, apically minutely tridentate, with a central rib on the abaxial face. Inflorescence 1-flowered; peduncle 3 cm long, springing from 1-2 fascicles covered by a floral spathe, with many floral bracts at the base of the fascicle. Floral bract 1, 0.5 cm long. Ovary geniculate, 0.9 cm long. Petals linear, antenna-shaped, 1.2 cm long, 0.08 cm wide, osmophore 0.25 cm long. Dorsal sepal as usual in the genus, 1.5 cm long, 0.2 cm wide at base, yellow with purple lines, with an osmophore 0.5 cm long at apex. Lateral sepals united on 98% of their length into a rhombic-ovate synsepal 1.6 cm long and 0.75 cm wide, yellow with discontinuous lines of red dots. Lip 0.65 cm long, 0.1 cm wide, oblong, slightly slit at apex, with a pair of dentate lobes at base. Column 0.4 cm long, curved, long-capitate, smooth.



Compared to its closest relative, *Restrepia mayana*, *Restrepia franciscoximenezii* produces taller plants (above 15 cm vs. 10 cm), with larger leaves (6.7×3 cm vs. 4.5×2.5 cm), shorter inflorescences (3 cm vs. 5 cm), flowers yellow with discontinuous lines of red dots (vs. orange with continuous brown lines), a rhombic-ovate (vs. oblanceolate) synsepal, a somewhat smaller lip and a longer column (0.4 cm vs. 0.3 cm). Note: the former is native to the department Quetzaltenango at more than 150 km from Coban.

Fig. 1 : *Restrepia franciscoximenezii*

[drawing Fredy Archila after the type]



Fig. 2 : *Restrepia franciscoximenezii*

A: flowering plant – B: close view of the column [Ph: Javier Archila]

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