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The Addition of a New Species of *Chondrorhyncha* Lindl. (Orchidaceae) to the Flora of Colombia.

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Abstract
A new species of *Chondrorhyncha* Lindl. is described from Colombia.

An undescribed species, in the *Chondrorhyncha* complex, was discovered in the department of Choco, Colombia. At first there was the possibility that this new species could be described as a *Benzingia* Dodson ex Dodson due to the gray-green tint of the foliage. However, the presence of a small pseudobulb would have eliminated *Benzingia* as the genus. Harding (2008) states that in the genus *Benzingia* "There is no pseudobulb, but the short stem is surrounded by imbricating distichous leaves bearing membranous sheaths". In addition, the genus *Benzingia* includes species with diverse floral morphology making it difficult to accept as a group of similar species as per the traditional definition of a genus. The molecular data from chloroplast DNA (Pupulin, 2009) seems to indicate a close relationship between *Benzingia hirtzii* Dodson ex Dodson and *Benzingia reinchenbachiana* Dodson ex Dodson, which are morphologically similar, and between *Benzingia cornuta* Dodson ex Dodson and *Benzingia estradae* Dodson ex Dodson, which are also similar morphologically and between *Benzingia caudata* Dodson ex Dodson and *Benzingia hajeckii* Dodson ex Dodson, also both morphologically similar. However, all three pairs are morphologically diverse from each other. The limited and selective chloroplast data only "can not resolve the taxonomy".

Another genus, which was considered, is *Stenotyla* Dressler. The generic name is derived from the Greek "stenos", narrow and "tylo" callus in reference to the very narrow callus with 2-4 teeth. Most species in the genus have the narrow callus however, some species have a broad callus similar to the new species. The type of the genus *Chondrorhyncha*, *Chondrorhyncha rosea* Lindl. has a narrow callus. Again making it difficult to accept the genus *Stenotyla* as a group of similar species. The species included the genera *Benzingia* and *Stenotyla* need serious reconsideration before these genera should be fully accepted.

Many species originally in the genus *Chondrorhyncha* have been placed in new genera supposedly because *Chondrorhyncha* was polyphyletic based on pollination syndromes and chloroplast DNA (Whitten, et al., 2005). However, many of the genera that have been separated from *Chondrornchya*, such as *Benzingia* and *Stenotyla* also appear to be polyphyletic based on morphology and chloroplast DNA. There exists a lack of consistency in the taxonomy of the *Chondrorhyncha* complex.

Until a more complete and impartial study using **nuclear** DNA, which truly represents the morphology and evolutionary history of the species and a more detailed study to better understand the reasons for the morphological variation between the species of the *Chondrorhyncha* complex, the new species is here described as a *Chondrorhyncha.*

Chondrorhyncha chocoensis Uribe-Velez and Sauleda, *sp. nov.*

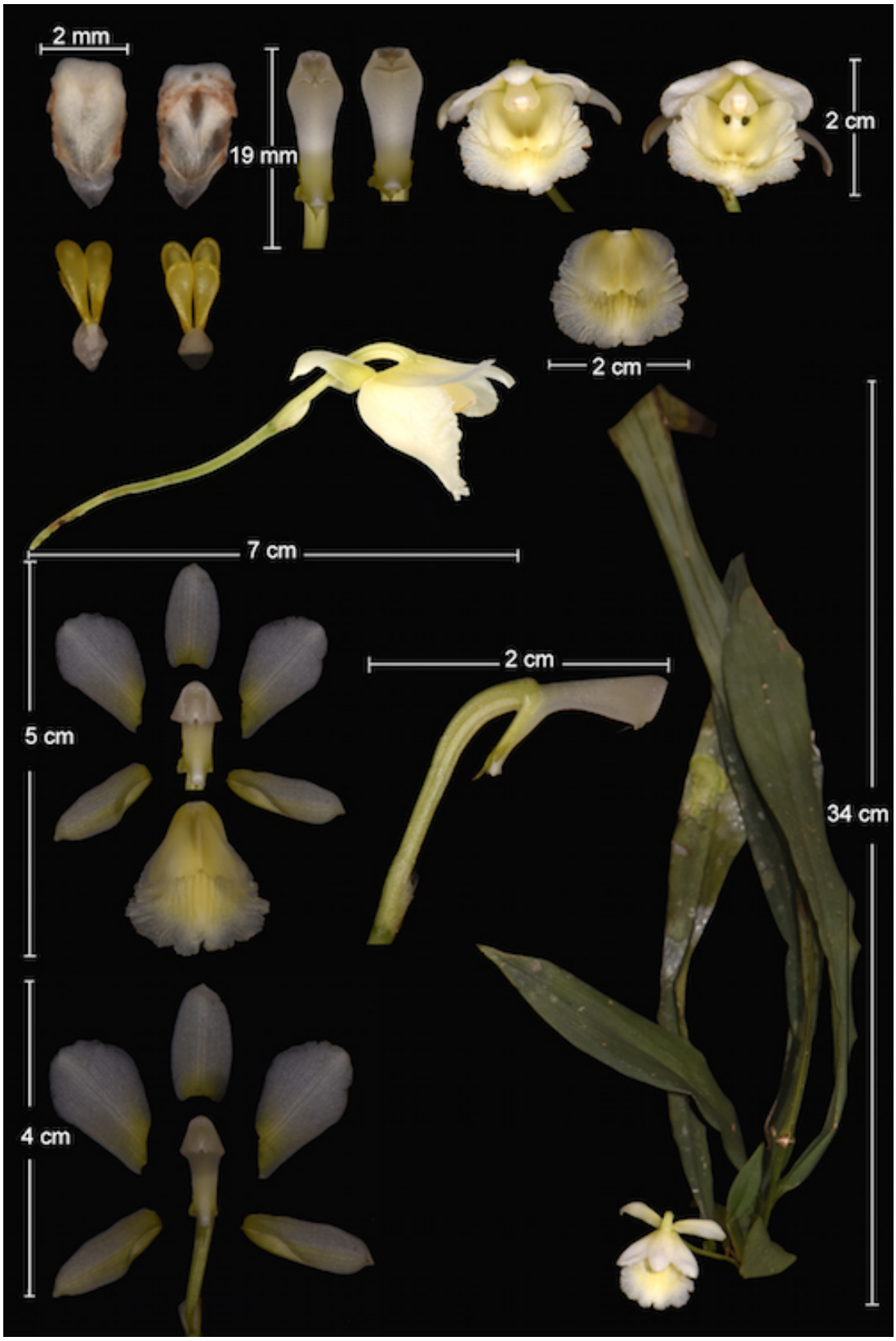
TYPE: Colombia, Departamento de Choco. From cultivation. Collected by *Cristobal Papiernik, s. n.,* July 2017. (Holotype, HPUJ).

Diagnosis

Chondrorhyncha chocoensis Uribe-Velez and Sauleda is similar to *Chondrorhyncha rosea* Lindl. (type of genus) but differs in color, shape of labellum and callosity of labellum. *Chondrorhyncha chocoensis* has a creamy-yellow labellum with a darker yellow callus, *C. rosea* has a basally yellow labellum with reddish-purple spots and lines, the labellum of *C. chocoensis* is orbicular and centrally slightly concave with an erose margin, *C. rosea* has an obovate labellum, deeply concave centrally and an undulate margin. The narrow callus of *C. rosea* has three teeth, the broad callus of *C. chocoensis* has two teeth with smaller teeth on each side. The column structures of *C. rosea* and C. *chocoensis* are almost identical, leading to the placement of *C. chocoensis* in the genus *Chondrorhyncha.*

Description

Plant epiphytic, erect. cespitose, to about 38 cm tall. Pseudobulb to 5mm wide, 2 mm thick, enclosed by and 3-4 leaves and 2-3 acute, lanceolate leaf bracts basally. Roots canescent. Leaves lanceolate to linear lanceolate, acuminate, membranaceous, to 38 cm long, 4 cm wide, basally narrowing and becoming conduplicate. Inflorescence solitary flower; peduncle slender, round, to 6 cm long, with 1 ovate, acute floral bract.
Ovary with 3 ridges, 1.5 cm long, pedicel 2.5 cm long including the ovary. Flowers light creamy-yellow, the center of labellum and callus dark yellow. Dorsal sepal oblong to obovate, obtuse, to 22 mm long, 10 mm wide, covering the petals and column. Lateral sepals lanceolate to narrowly oblong, subacuminate, concave, deflexed, appearing falcate, 25 mm long, 9 mm wide. Petals broadly elliptic to oblong, obtuse, distal margins undulate, 27 mm long, 10 mm wide. Labellum with a claw, to 9 mm long, orbicular, slightly concave, margin erose, callus broad, thickened, bilobed, partly free, 2-toothed with each tooth having a smaller tooth on each side, with three ridges extending from under the callus, central ridge twice as wide as the two ridges on each side. Column oblanceolate, to 1 cm long, 5 mm wide near the apex, rostellum narrow to 3 mm wide, 1 mm long, with three lobes, central lobe apiculate, lateral lobes obtuse. Anther cap oblong, 2 celled, to 3 mm long, 2 mm wide. Pollinia 4, obovate, in 2 unequal pairs, viscidium triangular, to 1 mm wide. Capsule not observed.



Chondrorhyncha chocoensis Uribe-Velez and Sauleda.

Chondrorhyncha chocoensis Uribe-Velez and Sauleda.

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