



Morphological and anatomical characterization of a new natural hybrid between *Cohniella ascendens* and *C. brachyphylla* (Oncidiinae: Orchidaceae)

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Abstract

A putative natural hybrid between *Cohniella ascendens* and *C. brachyphylla* (Orchidaceae, Oncidiinae) from western Costa Rica, *C. ×francoi*, is herein newly described, illustrated and characterized based upon both morphological and anatomical characters. This taxon hybrid is most similar to *C. ascendens* but the flowers show intermediate characters between the putative parents. *Cohniella ×francoi* is similar to *C. ascendens* in its semipendulous inflorescences, callus shape, cylindrical column base with linear oblong wings, and obovate stigmatic cavity plus several anatomical characters. On the other hand, it is similar to *C. brachyphylla* in the oblong to subquadrate lateral lobes of the labellum that are in the same plane as the central lobe, and the rectangular disc of the labellum with a lateral extension of the callus in the margins. A table of diagnostic characters for the new hybrid and its putative parents, a comparative figure, and a map showing their geographical distributions are also provided.

Resumen

Cohniella ×francoi, un híbrido natural entre *Cohniella ascendens* y *C. brachyphylla* (Orchidaceae, Oncidiinae) del oeste de Costa Rica es aquí descrito, ilustrado y caracterizado por caracteres morfológicos y anatómicos. El nuevo híbrido es más similar a *C. ascendens* pero las flores presentan caracteres intermedios entre sus padres putativos. *Cohniella ×francoi* se parece a *C. ascendens* en la inflorescencia semipéndula, la forma del callo, la columna cilíndrica con las alas linear oblongas y la cavidad estigmática obovada, además de varios caracteres anatómicos. Por otro lado, es similar a *C. brachyphylla* por los lóbulos laterales del labelo oblongos a subcuadrados y extendidos en el mismo plano que el lóbulo central y el disco rectangular con extensiones laterales del callo en los márgenes. Adicionalmente, proporcionamos una tabla de caracteres diagnósticos para el nuevo híbrido y sus padres putativos, una figura comparativa y un mapa detallando las distribuciones geográficas de los tres taxones.

Key words: Anatomy, Costa Rica, morphology, natural hybridization, *Cohniella ×francoi*

Introduction

The genus *Cohniella* Pfitzer (1889: 194) is distinguished from others members of the Oncidiinae by the relatively small and subspherical, 1-leaved pseudobulbs, succulent, terete leaves, and *Oncidium*-like flowers

reticulate wall thickening walls of the mesophyll cells, and the vascular bundles arranged in two central arches. *Cohniella* species with smooth cuticle are usually found growing under more shady and humid conditions than those with a papillose cuticle (Cetzal-Ix 2012b). This nothospecies also has two concentric rings of vascular bundles in the mesophyll, a character found only in species of the *C. ascendens* complex (albeit absent from *C. ascendens* itself), a group of species restricted to humid, shady environments (Cetzal-Ix 2012b).

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