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Cryptocentrum beckendorffii (Orchidaceae: Maxillariinae), an extraordinary new species from Andean Peru

GERMAN CARNEVALI^{1,4}, WILLIAM CETZAL-IX² & W. MARK WHITTEN³

¹Herbarium CICY, Centro de Investigación Científica de Yucatán, A. C. (CICY), Calle 43. No. 130. Col. Chuburná de Hidalgo, Mérida 97200, Yucatán, México; email: carneval@cicy.mx

²El Colegio de la Frontera Sur, Unidad Chetumal, Av. del Centenario, km 5.5, Chetumal, Quintana Roo 77000, México

³Herbarium FLAS, Florida Museum of Natural History, University of Florida, P.O. Box 117800, Gainesville, FL 32611-7800, USA

⁴Orchid Herbarium of Oakes Ames, Harvard University Herbaria, 22 Divinity Avenue, Cambridge, Massachusetts 02138, USA

Abstract

Cryptocentrum beckendorffii is described and illustrated from a single cultivated plant reputedly from the Amazonian slopes in the Cuzco region of Andean Peru. This species is similar to *C. pseudobulbosum*, also from the Amazonian slopes of the Andes, with which it shares sympodial habit with pseudobulbs unlike most species of the genus, which are monopodial and lack pseudobulbs. It differs from *C. pseudobulbosum* in its larger pseudobulbs, which are totally naked upon maturity, thinly coriaceous, conduplicate foliar blades, sheaths enveloping the pseudobulbs lacking foliar blades and the much longer inflorescences with thin peduncles, among other characters. The putative phylogenetic position of this species is discussed. An identification key and a map of the species of *Cryptocentrum* present in Peru are provided. The conservation category of the species according to IUCN criteria was assessed as data deficient (D).

Key words: Amazonian Andes, Cuzco state, IUCN, Machu Picchu, Neotropical orchids

Introduction

Cryptocentrum Benth (1881: 325) is one of the most clearly distinct aggregations within subtribe Maxillariinae. The genus includes 20 species and three subspecies, ranging from Costa Rica through Panama and from western Colombia to northeastern Bolivia along both sides of the Andes, with two disjunct species in the Guayana region, one endemic there (Carnevali 1996, 2001, Carnevali *et al.* 2012). The genus was last revised in its entirety in 1996 (Carnevali 1996), and several accounts of the genus have appeared in recent taxonomic and phylogenetic (Carnevali 2001, Blanco *et al.* 2007, Whitten *et al.* 2007, Carnevali *et al.* 2009) or floristic treatments (Dressler 1993, 2003, Carnevali 1999, 2005).

The spurred flowers of the genus are unique in Maxillariinae. Sixteen of the known species are further characterized by a phylogenetically derived monopodial habit. Of these, three species (one with three subspecies) have spiral phyllotaxy, which is unusual among the advanced Epidendroideae. Until recently, only two species were known with a sympodial, pseudobulbous habit. The recent discovery of this extraordinary species on the Amazonian slopes of Andean Peru raises this number to three.

The description was prepared using the terminology of Carnevali (1996, 2001) and Carnevali *et al.* (2009). Flowers from herbarium specimens were soaked in concentrated ammonium hydroxide for about one minute and then rinsed in water until soft and ready for study under a dissecting microscope. Thus pretreated, they were then temporarily preserved in a 70:25:5 ethanol:water:glycerine solution for further study and eventually returned to their herbarium sheets. Maps for Peruvian *Cryptocentrum* species were produced by plotting known locality data extracted from available herbarium specimens and relevant literature (Carnevali