

***MACRADENIA* (ORCHIDACEAE): A CONFIRMED GENUS FOR COSTA RICAN FLORA**

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ABSTRACT. The presence of the orchid *Macradenia brassavolae* Rchb.f. is confirmed in Costa Rica on the basis of two collections from the Caribbean drainage. The species is described and illustrated.

RESUMEN. Se confirma la presencia en Costa Rica de la orquídea *Macradenia brassavolae* Rchb.f. con base en dos recolectas de la vertiente Caribe del país. Se presenta una descripción y una ilustración de la especie.

KEY WORDS: Orchidaceae, *Macradenia brassavolae*, Costa Rica

The genus *Macradenia* R. Br. includes some twelve species widely distributed in the Neotropics, from southern Florida to Brazil and Bolivia. Species in the genus present a well developed clinandrium and prominent rostellum, with a elongate anther which lies dorsally on the column. Traditional systematics place *Macradenia* in a broad subtribe Oncidiinae s.l. (Dressler 1981, 1993a) or in more narrowly defined subtribes Notyliinae (Bentham 1881, Senghas 1995) and Macradeniinae (Schlechter 1926, Szlachetko 1995), mainly defined by the position of the anther and the shape of rostellum remnant. Recent molecular analysis of the Oncidiinae (M. Whitten, pers. comm.) show the position of *Macradenia* into a well defined clade including several orchid genera with "spiranthoid" column (i.e. dorsal anther and terminal rostellum), largely corresponding to subtribe Notyliinae sensu Bentham (1881). Due to gross affinities in column structure, Schlechter (1915) reduced *Warmingia* Rchb.f. into synonymy under *Macradenia*, but molecular data (M. Whitten, pers. comm.) do not support this interpretation.

Macradenia brassavolae was originally described by Reichenbach f. from Guatemala

(*Warszewicz s.n.*, W-R 37663!, the type), and it was successively reported in Mesoamerica from México (Soto Arenas 1988), Belize (Halcrow & Halcrow 1967), Honduras (Hamer 1984, distribution map), Nicaragua (Hamer 1984), and Panama (Allen 1949). In Costa Rica it was first recorded by Mora-Retana and García (1992). Because no specimens of *M. brassavolae* are kept in the national herbaria studied by the authors, it is likely they had no opportunity to examine any actual specimens collected in the country. Dressler (1993b) included Costa Rica in the distribution range of *M. brassavolae*, but Atwood and Mora-Retana (1999: 88) only indicated that the species should be expected in Costa Rica, and formally excluded it from the treatment of Subtribe Oncidiinae for the *Flora Costaricensis*. However, we can substantiate here the presence of *M. brassavolae* in Costa Rica on the basis of two collections from Caribbean drainage lowlands:

COSTA RICA. Limón: abandonos enguamillados, húmedos, pantanos, yolillosos de Goldengrove, drenaje del Río Reventazón, 15 m, octubre 23, 1951, *Antonio Molina y Paul J. Shank s.n.* (epífita, flor color carne) (EAP, photo!).

COSTA RICA. Heredia: Sarapiquí, La Rambla,

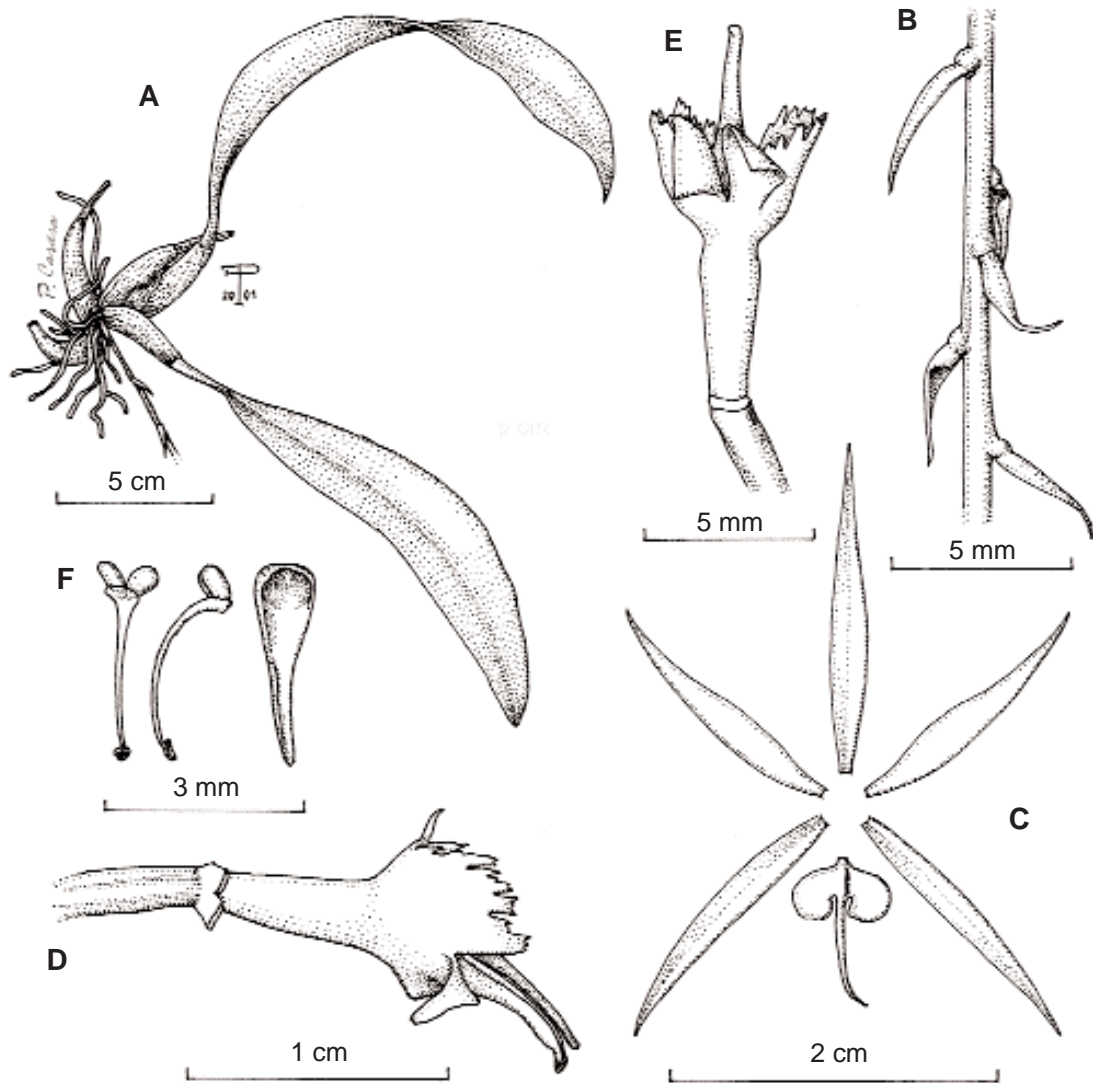


FIGURE 1. *Macradenia brassavolae* Rchb.f. A - Habit. B - Rhachis. C - Dissected perianth. D - Column, lateral view. E - Column, ventral view. F - Pollinarium and anther cap. A, from the living specimen; B-F, from rehydrated material. ILLUSTRATION VOUCHER: C. Ossenbach 122 (USJ).

83°54' W, 10°24' N, ca. 60 m., collected by Santos Muñoz Vega, 1999, flowered in cultivation at Horquetas de Sarapiquí, 20 Oct. 2001, C. Ossenbach 122 (USJ!).

The following description is provided, based on Costa Rican material:

Macradenia brassavolae Rchb.f., Bot. Zeit. (Berlin) 10: 734. 1852.

FIG. 1.

Serrastylis modesta Rolfe, Bull. Misc. Inform. 1894: 158. 1894. *Macradenia modesta* (Rolfe)

Rolfe, Orch. Rev. 4: 357. 1896. TYPE: COLOMBIA. Hab. Andes of New Grenada, Cauca, F.C. Lehmann s.n. (K).

Plant epiphytic, caespitose, to about 20 cm tall. *Roots* slender, flexuous, glabre. *Pseudobulbs* conic-pyriform to subcylindric, rounded in section, 3.2 cm long, 0.8 cm wide, monophyllous, subtended at the base by 2-3 lanceolate-triangular, acute, scarious bracts to 2.4 cm long. *Leaf* narrowly elliptic to linear-elliptic, subcoriaceous, obtuse to acute, 17-

20 cm long, 2.8-3.1 cm wide, narrowing at the base into a conduplicate petiole about 1.3 cm long. *Inflorescence* lateral, from the base of pseudobulb, a slender, pendulous, many-flowered raceme to 17 cm long; peduncle terete, to 6 cm long, with several narrowly triangular, acuminate, scarious bracts. *Floral bracts* narrowly triangular, provided at the base with a subglobose thickening, to 8 mm long. *Flower* with pale brown to rose-brown sepals and petals, the margins yellowish green, the lip white with purple-brown blotches. *Sepals* subsimilar, narrowly lanceolate, acuminate, 20 mm long, 2.3 mm wide. *Petals* similar to the sepals, widest at the base, 16 mm long, 2.5 mm wide. *Lip* sessile, 3-lobed, obcordiform, 9 mm long; 6 mm wide, the lateral lobes suborbicular, rounded, the median lobe linear-filiform, the disc with a low longitudinal keel from the base to the insertion point of midlobe. *Column* fleshy, subterete from a narrow base, 7 mm long, abruptly dilated above into a deeply cucullate clinandrium, the margins conspicuously lacerate, provided ventrally with two subquadrate flaps surrounding the stigma, the rostellum long, narrowly linear. *Anther cap* narrowly triangular, cucullate at the base, 2-celled. *Pollinia* 2, obovate, slightly complanate, on a long, linear, apically dilated stipe; viscidium elliptic.

ECOLOGY AND PHENOLOGY: Epiphytic in tropical rain forest, basal belt, 15-100 m, usually in very wet sites, restricted to the Caribbean drainage. Flowering occurs at least from October to December.

CONSERVATION STATUS: It is rather surprising that such an attractive species, with its long inflorescences and pretty flowers, remained so far unknown to the many orchid growers living in the country, but the scattered available data suggest it should be considered a rare species in northern Mesoamerica. In Costa Rica *M. brassavolae* is known only from two collections, and a single specimen collected in 1928 (*Englesing 275*, AMES, photo!) is so far the only record of this species from Nicaragua (Hamer 1984, 2000).

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