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A NEW SPECIES OF *TRICHOCENTRUM* (ORCHIDACEAE) FROM COSTA RICA[1]

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ABSTRACT

A new species of *Trichocentrum, T. cymbiglossum* Pupulin, is described from Atlantic slopes of the Costa Rican Cordilleras.

IN THEIR REVISION of Costa Rican *Trichocentrum* species, Pupulin and Mora-Retana (in press) recorded the presence in the country of *T. candidum* Lindl., a Central American species previously reported from Mexico, through Guatemala, to El Salvador (Williams, 1951; Ames and Correll, 1953; Hamer, 1974). Although the authors stressed some morphological differences between the Costa Rican plants and the typical form of *T. candidum*, they provisionally assigned the plants from Costa Rica to *T. candidum* awaiting the opportunity to study living material of this taxon from Guatemala.

Trichocentrum candidum was originally described in 1843 by J. Lindley from a specimen Skinner collected in Guatemala. Rolfe (1893) described *T. albiflorum*, a new species from Mexico collected by H. Fink in 1891, but Williams (1951) suggested that this taxon may not be distinct from *T. candidum*, and a comparison between the type material of both the species at Kew revealed no significant differences. The synonymy of Mexican *T. albiflorum* and *T. candidum* from Guatemala has been also confirmed by Hàgsater (pers. comm.).

A comparison between Guatemalan and Costa Rican material concerning *T. candidum* was already done by Teuscher (1961), on a specimen collected in Guatemala by Mr. R. W. Spencer near Amatitlan and a Costa Rican plant collected by C.K. Horich, but he concluded that though the flowers look quite different, "they evidently represent the same species," (Teuscher, 1961).

In 1991 I had the opportunity to obtain through Dr. A. Behar two living specimens of *T. candidum* collected by Otto Mittelstaedt in Guatemala, at Finca Santa Maria Buena Vista, Guanagasapa, in the Province of Escuintla. These plants flowered in Italy in early 1993, allowing a close comparison with pressed specimens, photographs and critical drawings of material from Costa Rica. Due to the consistence of the morphological differences between the two taxa, that are constant in both groups of plants, *Trichocentrum* populations native to the Costa Rican Atlantic watershed of the Cordillera de Tilaran and Cordillera Central are therefore proposed as a new species.

Trichocentrum cymbiglossum Pupulin *sp. nov.* TYPE: COSTA RICA. Prov. of Alajuela: San Carlos, Laguna Bosque Alegre, *F. Pupulin 5* (Holotype: USJ!). Fig. 1.

Species ad *Trichocentrum candido* Lindl. similis, sed labello concavo late rhombico, alis columnae ovato-triangularibus marginibus fimbriatis et petalis acutis apice non apiculato differt.

Plant epiphytic, cespitose, with very reduced rhizome. **Pseudobulbs** minute, rounded, unifoliate, about 4 mm long. **Leaf** linear-elliptic to elliptic, elastic to slightly fleshy, obtuse to acute, some-

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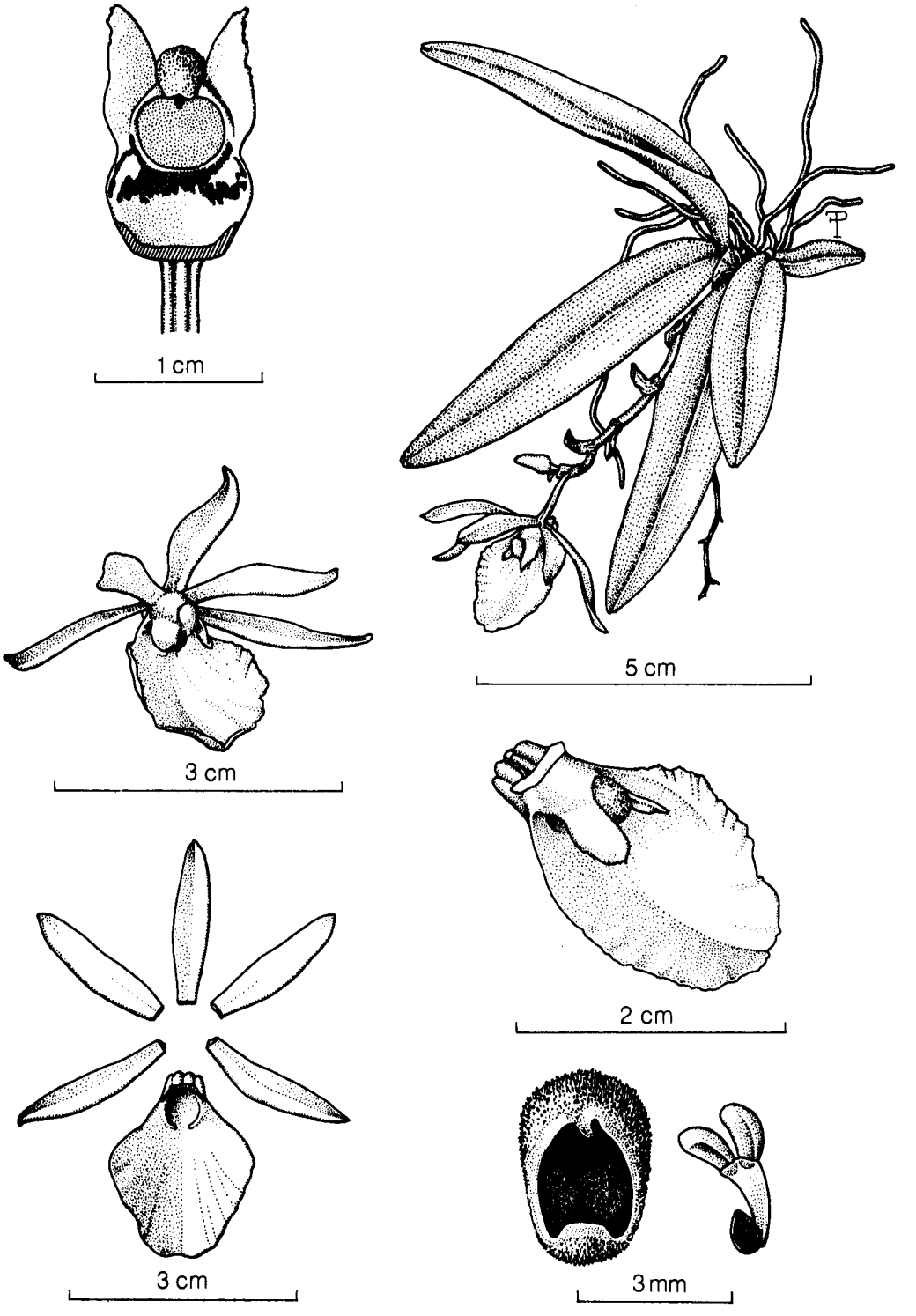

Fig. 1. *Trichocentrum cymbiglossum* Pupulin

what minutely retuse, sessile, narrowed to a conduplicate base, dark green, 5.3-7.5 cm long, 1.7-2.5 cm wide. **Inflorescence** lateral, basal, pendent, racemose, rarely branched, shorter or equalling the leaves, 2-8 cm long; rhachis abbreviated, fractiflex of 1-7 successive flowers. **Bracts** papiraceous distichous, ovate, cucullate, acute, 6-7 mm long. **Pedicellate ovaries** 4-7 mm long including the pedicel. **Flowers** rather large and showy, to 4.2 cm wide, with sepals and petals greenish white, free, spreading, and white lip. **Dorsal sepal** elliptic-lanceolate, acute, subcarinate, 15-19.3 mm long, 3-5 mm wide, slightly reflexed at apex. **Lateral sepals** obliquely linear-subfalcate, acute, 13.5-18 mm long, 3 mm wide. **Petals** oblanceolate-oblong, acute, 18.7 mm long, 4.2-5 mm wide. **Lip** adnate to the column, broadly rhomboid, concave, retuse, carinate, with subundulate margins, cuneate at the base to produce a short, flat, truncate, 4-lobed spur, 20-26 mm in greatest length, 19-22 mm wide at the middle. **Column** short, about 5 mm long, with a pair of erect-spreading, ovate-triangular, acute wings, with erose margins at apex. **Anther** cucullate, white, papillose. **Pollinia** 2, pyriform, on a short, obtriangular stipe; viscidium peltate, brown.

ETYMOLOGY: From the Greek *cymbe*, "cup," and *glossa*, "tongue, lip," in reference to the cup-shaped, concave lip.

DISTRIBUTION: Endemic to Costa Rica.

REPRESENTATIVE SPECIMENS: COSTA RICA. Prov. of Alajuela: Reserva de Juan Castro Blanco, *A. Herrera s.n.* (USJ!). Prov. of Cartago: Turrialba, Tres Equis, *F. Pupulin & M. Flores 12* (USJ!); Palomos de Santa Teresita, *F. Pupulin 195* (Herb. F. Pupulin!); Rio Estrella, near San Isidro de Tejar, *F. Pupulin & A. Flores 18* (USJ!).

The most distinctive morphological difference between *T. cymbiglossum* and *T. candidum* lies in the shape of the lip. In *T. cymbiglossum* the lip is rhomboid or rounded, deeply concave, about as wide as it is long, carinate and only slightly notched at apex, whereas the lip of *T. candidum* is elliptic-obovate, about twice as long as wide, deeply notched at the tip and almost flat, sometimes curving downward in the distal third. Furthermore, the sepals and petals of *T. cymbiglossum* are narrow and acute, and the column wings are ovate-triangular and denticulate-erose at apex. On the contrary, *T. candidum* presents wide, apiculate sepals and petals, and Lindley's sketches of the type specimen at Kew clearly shows rounded column wings with entire margins.

T. cymbiglossum is usually found in evergreen forests at medium or low elevations, where the climate is generally moist and warm and seasonality is not well defined. The plants grew invariably in medium or dark shade and in very moist sites, on small branches or trunks covered by dense mats of live mosses. The new vegetative season generally begins in April or May, and 2-7 flowers are borne in succession from September to November. The distribution of the species in Costa Rica seems to be limited to the low and medium Atlantic elevations of northern and central Cordilleras, with the exception of the high basin of the Rio Reventazon, whose function as thermic corredor between the two watershed has been noted already by Gómez (1986).

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