

TWO NEW SPECIES OF *MACROCLINIUM* (ORCHIDACEAE) FROM COSTA RICA

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ABSTRACT. Two new Costa Rican species of *Macroclinium*, *M. doderoi* and *M. robustum*, are described and illustrated.

Recent studies and systematic collections of Costa Rican Oncidiinae intended to complete the projects of *Icones Plantarum Tropicarum* and *Flora Costaricensis*, Orchidaceae, have resulted in the discovery of many new taxa in the last few years (Johannsen, 1991; Pupulin, 1994; Pupulin & Mora, 1994; Pupulin 1995; Dressler & Pupulin, 1996; Pupulin, 1996). Two new species of *Macroclinium* from Costa Rican Valle Central are described herein.

Macroclinium doderoi Mora & Pupulin, sp. nov. FIGURE 1.

TYPE: Costa Rica. Prov. Cartago: Turrialba, Caño Seco Torito, 1,500 m, 19 July 1994, epiphyte in secondary, moist tropical forest, along a minor tributary of Rio Torito, R. L. Dressler, D. E. Mora & R. Dodero s.n. (Holotype: USJ; Isotype: USJ).

Species a *M. glicensteinii* J. T. Atwood similis, sed labello ecalloso, lobulis lateralibus tortis, lamina sagittata et petalis subfalcatis differt.

Plant epiphytic, small, pendent, with abbreviate rhizome. Roots filiform, glabrous, 1 mm in diameter. **Pseudobulbs** inconspicuous, elliptic-ovate, monophyllous, covered by 3-5 conduplicate, leafy bracts, 3.5 × 2 mm. **Leaves** conduplicate, laterally complanate, lanceolate to narrowly elliptic-lanceolate, acute, 18 × 2 mm, the basal leaves articulate with imbricating bracts provided with hyaline, scarious margins. **Inflorescence** a subcapitate raceme, 5-6-flowered, to 4 cm long, with many subcapitate branches produced successively from the last node before the rachis, provided with a long, triangular, acute bract near the base. Floral bracts triangular, acuminate, shorter than pedicel. Ovary with pedicel subclavate, about 7 mm long. **Flowers** large for the plant, with white, hyaline sepals, petals and lip, the petals with a purple blotch near the base, the column lavender to purple. **Dorsal sepal** lanceolate, attenuate, 9 × 1.6 mm. **Lateral sepals** narrowly lanceolate, long-attenuate, 11 × 1.1 mm. **Petals** ovate-lanceolate, falcate, attenuate, 9 × 1.3 mm. **Lip** free,

short clawed, inserted at a very narrow angle with the column, the claw 0.9 mm long; lamina with 2 short, twisted lobes near the base, slightly reflexed toward the column, and a narrow, linear isthmus, then abruptly sagittate, long attenuate, with erose-dentate margins, 7.5 × 2 mm at mid-point. **Column** terete, slender, with abruptly reflexed apex, 5.5 mm long. Anther cap cucullate, narrowly ovate-triangular, bare, 1-celled. **Pollinia** 2, ovate-pyriform, strongly complanate, on a long, obtriangular stipe provided with 2 lateral projections; viscidium elliptic, brown.

ETYMOLOGY: Named in honor of Rodolfo Dodero, of Turrialba, an ardent Costa Rican orchidologist and collector, who on many occasions helped to discover new orchid species from the country.

PARATYPES: Costa Rica. Prov. Cartago: Turrialba, Guayabo, near La Fuente, F. Pupulin, D. E. Mora and R. Dodero 234 (USJ); Santa Teresita, F. Pupulin & D.E. Mora s.n. (USJ).

Macroclinium doderoi may be easily distinguished from its Costa Rican relatives for a unique set of characters, such as the subcapitate inflorescence, the lip entirely free from the column, the very short claw and the absence of a callus between the lateral lobes of the lip. As main differences from *M. doderoi*, *M. glicensteinii* J.T.Atwood has a cushion-like, hairy callus, and lanceolate petals. Both *M. cordesii* (L.O.Wms.) Dodson and *M. paniculatum* (Ames & Schweinf.) Dodson have a subcapitate inflorescence and free lip, but they also have a long claw with prominent callus at the base of the lamina. *Macroclinium lineare* (Ames & Schweinf.) Dodson is another species with short claw from Costa Rica and Panama, but its linear lip without auricles and the clump of papillae at the lip base distinguish it from *M. doderoi*, which has a sagittate lip with two twisted lobes near the base.

Macroclinium robustum Pupulin & Mora, sp. nov. FIGURE 2.

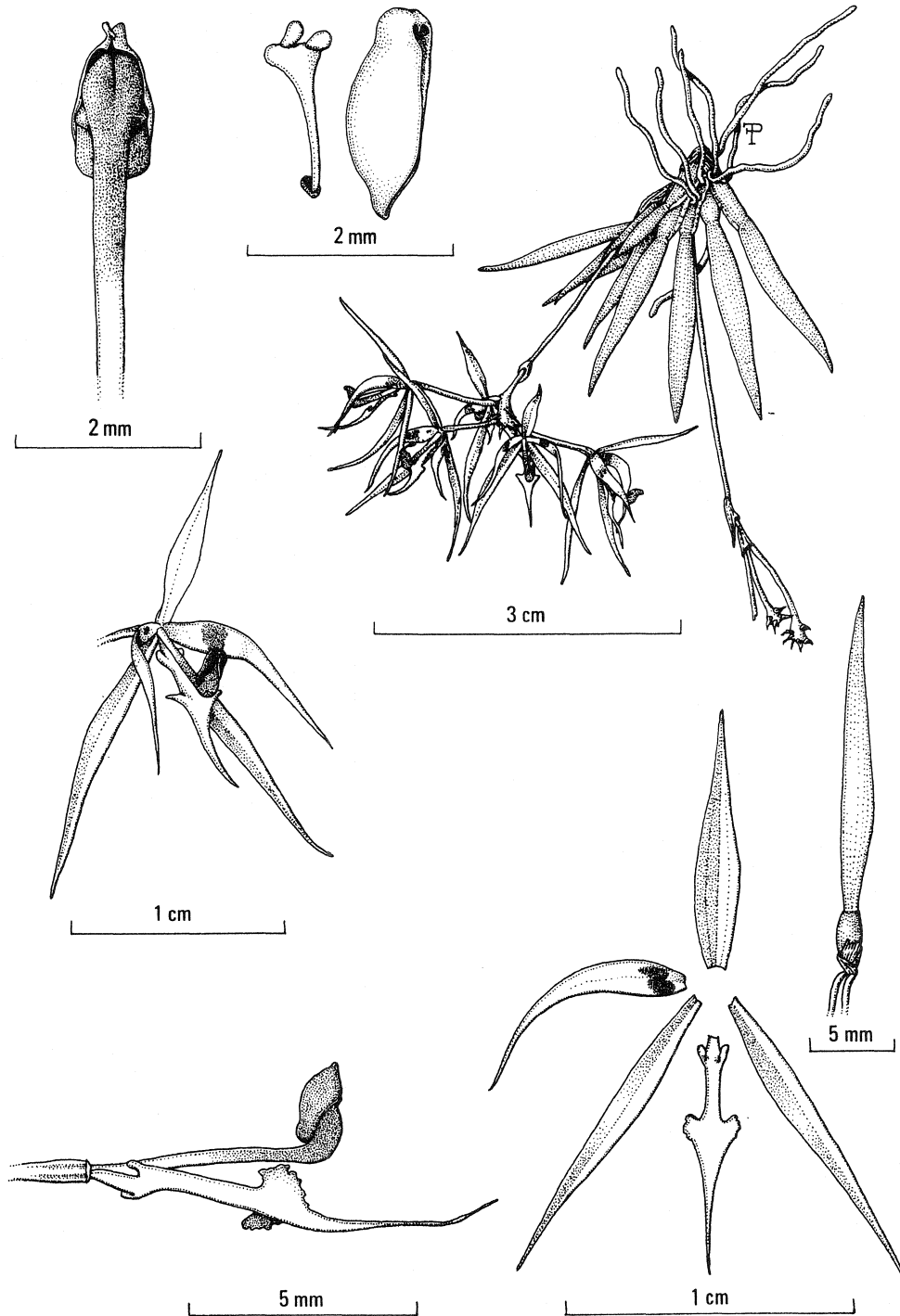


FIGURE 1. *Macroclinium doderoi* Mora & Pupulin. Voucher: Costa Rica. Prov. Cartago: Turrialba, Caño Seco Torito, along a minor tributary of Rio Torito, R. L. Dressler, D. E. Mora & R. Dodero s.n. (USJ).

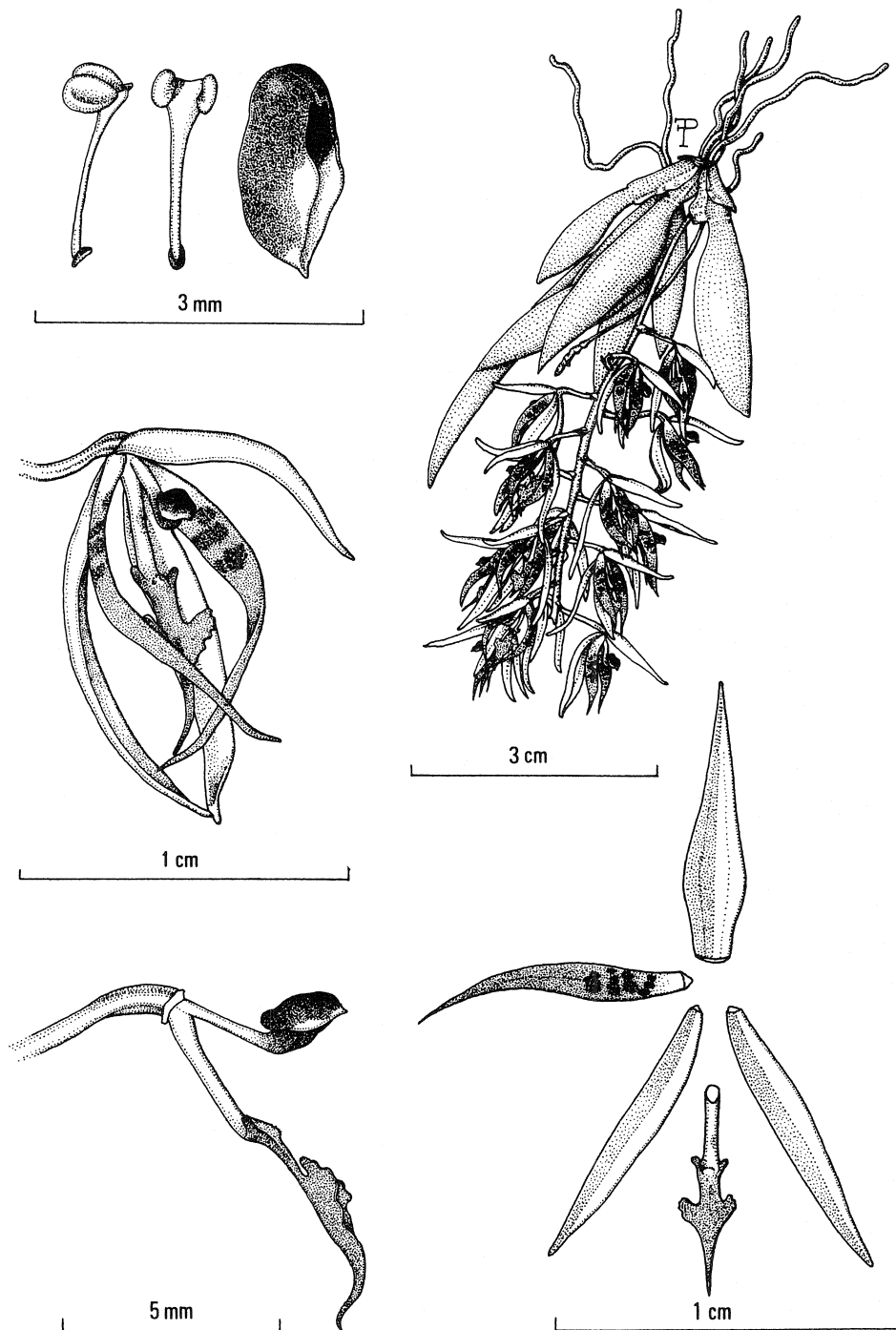


FIGURE 2. *Macroclinium robustum* Pupulin & Mora. Voucher: Costa Rica. Prov. San José: Alajuelita, on hills over Barrio La Mora, F. Pupulin & M. Flores 315 (USJ).

TYPE: Costa Rica. Prov. San José: Alajuelita, on hills over Barrio La Mora, 1,850 m, 17 July 1995, epiphyte on *Cupressus lusitanicus* in montane cloud forest, *F. Pupulin & M. Flores 315* (Holotype: USJ; Isotype: USJ).

Species a *M. ramonense* (Schltr.) Dodson similis, sed inflorescentia laxa, ungue labelli terete robustissima, callo in disco bilobato papilloso vel hirsuto, in basi verruculoso differt.

Plant epiphytic, cespitose, pendent, with abbreviate rhizome. Roots filiform, glabrous, 1 mm in diameter. **Pseudobulbs** ovate, monophyllous, covered by 2–5 conduplicate, leafy bracts, to 8.5 × 5 mm. **Leaves** linear-lanceolate, subfalcate, laterally complanate, acute, rugose, 5.3–6.2 × 0.5–0.7 cm, the basal leaves articulate with imbricating bracts provided with hyaline, scarious margins. **Inflorescence** a lateral, many-flowered (11–17 flowers), lax raceme, to 8.6 cm long, produced from the axil of the upper leafy bracts; peduncle filiform, provided with 2, triangular, acute bracts 8 mm long. Floral bracts triangular, acuminate, 4.5 mm long. Ovary with pedicel linear-subclavate, about 8 mm long. **Flowers** rather large for the genus, with greenish white sepals, petals lavender with purple blotches, and lip lavender. **Dorsal sepal** lanceolate, acuminate, concave, dorsally carinate, 12–13 × 3–3.5 mm. **Lateral sepals** linear-lanceolate, acute, slightly concave, 14–15 × 1.8 mm. **Petals** ovate-lanceolate, sigmoid, long-attenuate, 12 × 1.5 mm. **Lip** shortly connate with the column, long clawed, the claw linear, terete, 3.2 mm long; lamina with two short, subquadrate, twisted lobes near the base, reflexed toward the column, and a linear isthmus, then abruptly sagittate-cordate, with erose margins, 6 × 2.6 mm wide at mid-point. **Column** short, terete, slender at the base, thickened toward the abruptly reflexed apex, 3 mm long. Anther cap ovate-cu-

cullate, apically mucronate, bare, 1-celled. **Pollinia** 2, ovate, strongly complanate, on a long, obtriangular stipe; viscidium elliptic, yellow.

ETYMOLOGY: From the Latin *robustus*, “strong, robust,” in reference to the stout appearance of the flowers.

PARATYPES: Costa Rica. Prov. San José: Alajuelita, on hills over Barrio La Mora, *F. Pupulin & M. Flores 316* (SEL, Herb. Pupulin). Same locality, *F. Pupulin & M. Flores s.n.* (USJ).

Macroclinium robustum is the only Costa Rican species with both a raceme and a papillose-hirsute callus on the disc of the lip. Moreover, the long and stout claw easily distinguish it from its closest relative, *M. ramonense* (Schltr.) Dodson. Among Costa Rican *Macroclinium*, *M. robustum* is one of the species with highest altitudinal range reaching highest elevations. At the type locality, plants of this species are known only on *Cupressus lusitanicus* trees.

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