

***Lepanthes rafaelifana*** Pupulin, *sp. nov.* TYPE: COSTA RICA. San José: Ojo de Agua, Carretera Interamericana Sur, 14 April 1967, *H. Hesperheide s.n.* (Holotype: USJ!). Fig. 1.

*Herba epiphytica parva, racemo congesto disticho folio elliptico longiore, sepalo postico ovato-lanceolato, attenuato, sepalis lateralibus connatis, lanceolatis, acuminatis, sepalorum marginibus ciliatis, petalorum lobo superiore lineari-subfalcato, longicaudato, lobo inferiore subnullo, rotundato, labello subquadrato, abrupte brevicaudato.*

Plant epiphytic, small, cespitose, suberect, to 7 cm tall. Roots slender, glabrous. Ramicauls slender, 3.5–5.0 cm long, enclosed by 7–9 lepanthiform, minutely ciliate sheaths with dilated, ciliated ostia. Leaf thinly coriaceous, elliptic to ovate-elliptic, minutely tridenticulate at apex, 16–20 mm long, 5–8 mm wide, cuneate at the base into a petiole about 1 mm long. Inflorescence a congested, distichous, successively many-flowered raceme to about

30 mm long, produced behind the leaf by a filiform peduncle to 18 mm long. Floral bracts 2 mm long, sparsely muriculate; pedicel 1.5 mm long; ovary 2 mm long, winged. Flowers rather large, with yellowish sepals striped by red, rose-purple petals, the lip and column yellowish. Dorsal sepal ovate-lanceolate, attenuate, sparsely ciliate to muriculate, 6 mm long, 2.3 mm wide, 5-veined, connate to the lateral sepals for 0.5 mm. Lateral sepals narrowly lanceolate, acuminate, ciliate, 5 mm long, 1.3 mm wide, connate 3.5 mm. Petals transversely bilobed, 3.5 mm long, 0.8 mm wide at the base, the upper lobes linear-attenuate, subfalcate, long-caudate, 6 mm long, 0.4 mm wide, the lower lobes triangular, rounded at apex, 0.6 mm long, 0.9 mm wide. Lip subquadrate, appressed to the column, apically abruptly constricted into a short tail, 0.6 mm long, 0.4 mm wide, the body apparently connate to the the column base. Column stout, 1.5 mm long, the anther dorsal, the stigma apical. Anther cap cordate, 2-celled.

**Distribution:** only known from Costa Rica.

**Ecology:** epiphytic in montane cloud forest at about 2800 m on the Cordillera de Talamanca.

**Etymology:** named after Rafael Lucas Rodríguez C., who first depicted the species in 1967.

This species is known only by the type specimen, including two ramicauls with leaves and inflorescences and two immature buds, and the accurate illustration by Rafael Lucas Rodríguez C. (#494), a copy of which is preserved at the herbarium of the Escuela de Biología of the Universidad de Costa Rica, in San José. Apparently, no subsequent collection has been

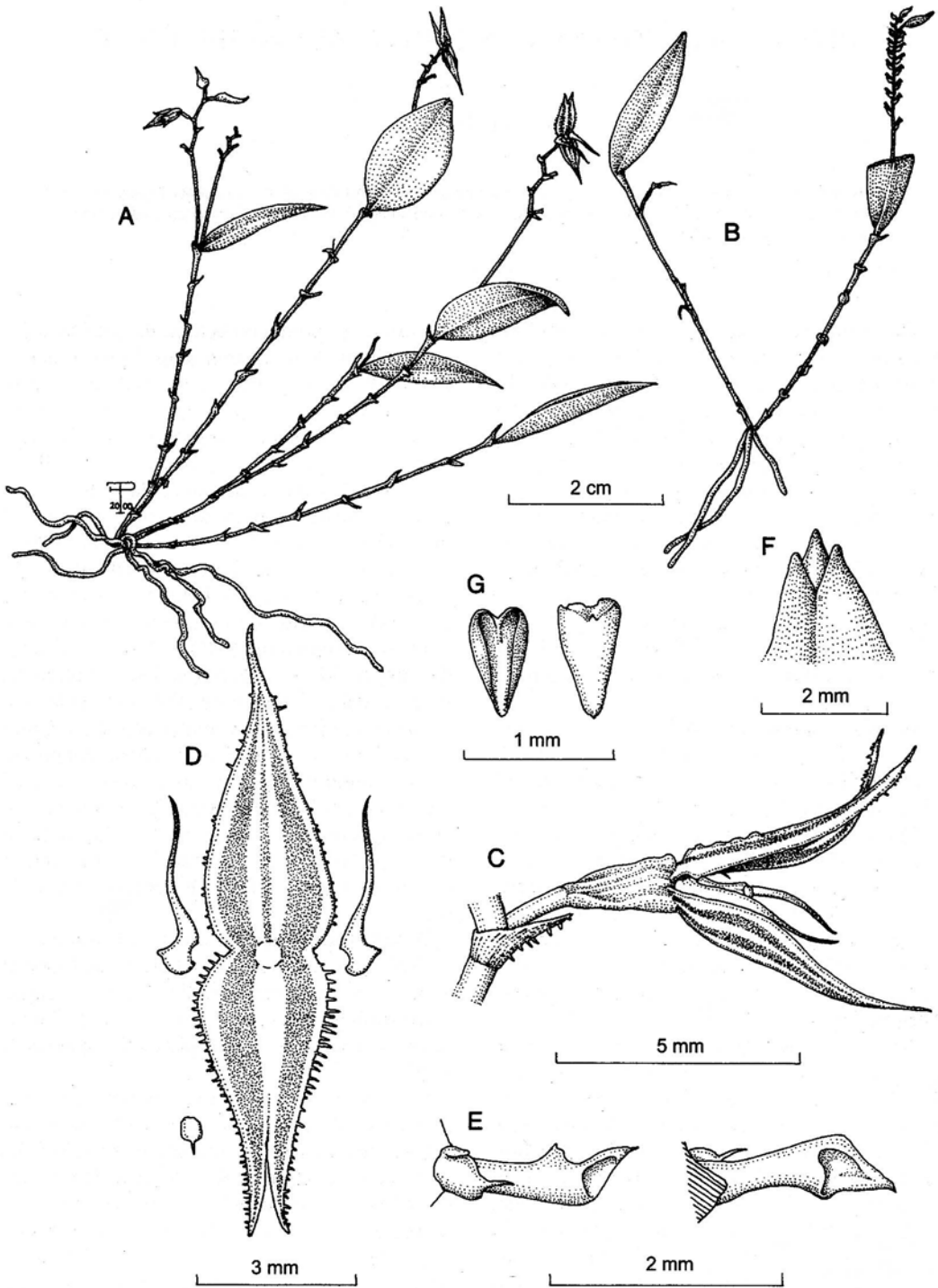


FIGURE 1. *Lepanthes rafaiana* Pupulin. A-B, habit; C, flower; D, dissected perianth; E, column (lateral and three-quarter view); F, apex of leaf; G, anther cap. Illustration voucher: *H. Hesperheide s.n.* (USJ). A, C, E-G, from the original drawing by R. L. Rodríguez; B, drawn from the holotype; D, modified from the original drawing by R. L. Rodríguez.

made. The above description and the accompanying illustration were prepared from the actual material kept at USJ and inking a copy of Rodríguez's original drawing.