



Drawn by F. Pupulin and D. Jiménez from the holotype.

Figure 6. *Lepanthes machogaffensis* Pupulin & D. Jiménez. A: Habit. B: Flower. C: Dissected perianth. D: Ovary, column, and lip, lateral view. E: Lip, in natural position surrounding column (left) and spread (right). F: Pollinarium (two views). G: Detail of the ramicaul and the imbricating sheaths.



Figure 7. The purple flowers with orange-red petals are typical of *Lepanthes machogaffensis* (Pupulin 7307).



Figure 8. The acuminate leaf of *L. machogaffensis*, with the inflorescence reaching the leaf apex. Photo of the plant that served as the holotype.

Lepanthes machogaffensis Pupulin & D. Jiménez, *sp. nov.*

TYPE: COSTA RICA. Cartago: El Guarco, San Isidro, Paso Macho (Macho Gaff), after the rangers' headquarters of the Tapantí-Macizo de La Muerte National Park, basin of Río Macho, road to Queverí, 9°43'18.3"N 83°50'29.7"W, 2234 m, epiphytic in rain montane forest, 9 October 2008, F. Pupulin 7308, D. Bogarín, R. Gómez, D. Jiménez & R. Trejos (holotype, CR; isotype, Lankester Botanical Garden-Spirit collection).

A Lepanthe glabella Luer et Hirtz colore florum, sepalis marginibus sparse ciliatis, lobulo infero petalorum anguste ovato, laminae labelli reniformi-subfalcatis apicibus uncinatis, appendice externa recedit.

Plant epiphytic, caespitose, to 12 cm tall. **Roots** flexuous, ca. 1 mm in diameter. **Ramicaul** suberect to gently pendent, slender, to 7.5 cm long, enclosed by 7-10 lepanthiform sheaths, the apex dilated into an acuminate ostium, minutely ciliate along the margins. **Leaf** narrowly ovate, acute-subacuminate, subcoriaceous, green above, flushed with purple beneath, 3.5-4.5 x 0.7-1.5 cm, the cuneate base contracted into an indistinct petole. **Inflorescence** a congested, distichous, successively several-flowered raceme borne above the leaf, to 4.5 cm long including the filiform peduncle to 3 cm long. **Floral bracts** triangular, acute, amplexent, sparsely glandular, to 1 mm long. **Pedicel** terete, to 4 mm long. **Ovary** subclavate, ca. 1 mm long, with low, thin, distally undulate wings. **Flowers** resupinate, subspreading, with purple-red sepals on a dull

yellow background, the petals yellow, blotched orange-red along the midline and flushed orange on the adaxial portion of the lobes, the column purple, the anther white. **Dorsal sepal** ovate, acuminate-attenuate, 3-nerved, the margins sparsely ciliate, 7 x 2.5 mm, connate to the lateral sepals for ca. 1 mm. **Lateral sepals** narrowly ovate, attenuate, 3-nerved, with sparsely ciliate margins, 7 x 1.9 mm, connate at the base for ca. 1 mm. **Petals** transversely bilobed, 0.7 x 2.5 mm, the upper lobe subrectangular, rounded-truncate, 0.7 x 1.2 mm, the lower lobe narrowly ovate-subfalcate, subacute, 0.5 x 1.3 mm. **Lip** bilaminar, 1 x 1.2 mm, the blades ovate, concave, slightly carinate along the inner margins, the apex recurved-uncinate, minutely rounded, with longer, stiff hairs, the connectives broadly cuneate, the body basally connate to the column, the sinus protuberant, rounded-subcallose, pubescent, the appendix external, broadly triangular, truncate, pubescent. **Column** terete, stout, to 1.3 mm long, with apical stigma and dorsal anther. **Anther cap** transversely elliptic, 2-celled. **Pollinia** 2, pyriform, with viscidium.

ETYMOLOGY: named from the type locality, Macho Gaff.

DISTRIBUTION: known only from Costa Rica, on the Macizo de la Muerte, part of the Talamanca mountain range.

HABITAT: epiphytic and apparently uncommon in the montane wet forests of the Caribbean watershed in the Talamanca mountain range, Costa Rica, at 2200-2300 m elevation.

PARATYPE: same locality and collecting date as the holotype, *F. Pupulin et al.* 7309 (CR).

Lepanthes machogaffensis can be compared with the

Ecuadoran *L. glabella* Luer&Hirtz, from which it differs by the almost concolor purple flowers (vs. purple dorsal sepal and yellow lateral sepals), the sparsely ciliate (vs. entire) sepal margins, the narrowly ovate, rounded lower lobe of the petals (triangular, narrowly obtuse in *L. glabella*), and the lip provided with rheniform-subfalcate blades, uncinata at the apices (vs. oblong with rounded ends) and an external appendix (apical on the sinus in *L. glabella*).



Figure 9. The lateral sepals of *Lepanthes machogaffensis* can be almost completely straight. (*Pupulin* 7309).