

Fig. 3. Flowers of *Lepanthes* species of the *L. guatemalensis* group in Costa Rica: **a**, *L. durikäensis*; **b**, *L. edwardsii*; **c**, *L. leporina*; **d**, *L. ruberrima*; **e**, *L. guanacastensis*; **f**, *L. sanctiorum*; **g**, *Lepanthes sanctiorum* (autogamous form); **h**, *L. schugii*; **i**, *L. tapantiensis*.

Lepanthes sanctiorum Bogarín & Pupulin, *sp. nov.*

Type: COSTA RICA. **San José:** Dota, San Lorenzo, parte alta de San Lorenzo de Dota, potreros en el camino hacia el proyecto hidroeléctrico Pirrís, 9°36'23.7"N 83°59'36.5"W, 1800 m, legit Daniel Jiménez, floreció en cultivo en el Jardín Botánico Lankester, 1 marzo 2011, *D. Bogarín 8415* (holotype, JBL-spirit). *Illustrations:* Fig. 3F, 3G, 9, 10.

Habitu Lepanthes tapantiense Pupulin & Bogarín *affinis sed stirpe pedunculoque brevior, latitudine petalorum lobulos labelli aequantibus, lobulis labelli in apice divergentibus etiam floribus synsepalo naviculare sepalibus lateralibus usque ad apicem conjunctis, polliniis anguste oblongis caudiculis perbrevis.*

Epiphytic, caespitose, erect herb, to 1.1 cm tall. Roots coarse, glabrous, to 0.6 mm in diameter. Ramicauls slender, 1.2–4.8 mm long, enclosed by 2–3 concealing, glabrous, brownish, lepanthiform sheaths, slightly dilated at the acute apices. Leaf elliptic to obovate-elliptic, rounded, minutely retuse, with a short abaxial apicule, thin-coriaceous, cuneate at the base into a short conduplicate petiole, 3.5–7.7 × 1.8–3.7 mm including the petiole. Inflorescence a distichous, loose, successively 1- to 2-flowered raceme to 7 mm long, produced over the leaf by a slender, terete peduncle, 3.5 mm long, provided with 1 brownish, adpressed, lanceolate, acute bracts to 0.7 mm long. Floral bracts subequal to the bracts of the inflorescence, 0.7 mm long, shorter than the ovary; pedicel terete, to 1 mm long, persistent; ovary subclavate, winged, ca. 1 mm long, the margins of the crests cartilaginous, irregularly crenulate. Flowers large for the plant, the sepals yellow, basally flushed with red between veins, the petals proximally red, distally yellow, the lip yellow, suffused with red at the base of the blades, the column pinkish-red, the anther lilac-violet.

Sepals connate, forming a spreading 3-lobed calyx with caudate lobes. Dorsal sepal ovate-triangular, 3-veined, acuminate or ending into a filiform tail, connate at the base to the lateral sepals for 1.3 mm, irregularly and shallowly crenulate along the basal margins, 5.1 × 2.7 mm including the tail. Lateral sepals ovate, abruptly constricted at apex into a filiform tail 1.4 mm long, connate to each other for ca. 1.2 mm, the somewhat margins crenulate, 5.1 × 3.5 mm. Petals transversely bilobed, 0.8 × 1.5 mm, glabrous, with the upper lobe oblong, rounded, 0.8 × 1.0 mm; the lower lobe smaller than the upper lobe, suborbicular, 0.8 × 0.4 mm, the upper lobe obliquely triangular-ovate, minutely rounded. Lip 3-lobed, bilaminar, 1 long mm across the lateral lobes, the body 2 mm long, when spread, the lateral blades narrowly triangular-falcate, subparallel, without convergent or connivent apices, slightly concave adaxially, not joining at the acute, apex, basally adpressed to the column, the lobules 1.6 × 0.3 mm, the connectives cylindrical, the appendix filiform, glabrous. Column terete, minutely papillose, ca. 1 mm long, the anther subdorsal, the stigma ventral. Anther cap ovate, 2-celled, the base deeply emarginated, the apex provided with 2 flap-like, subquadrate, diverging lobes. Pollinia 2, narrowly linear-oblong, strongly complanate, with a rounded viscidium.

Etymology: Named after the type locality, the region known as Los Santos (the Saints) of Dota, León Cortés and Tarrazú of San José, in central Pacific Talamanca range.

Distribution: Known only from Costa Rica.

Habitat: epiphytic on *Cupressus lusitanica* trees in fences on exposed condition at around 1800 m of elevation in premontane rain forest on the Pacific watershed of Cordillera de Talamanca in southern Costa Rica.

Additional material examined (paratypes)

COSTA RICA. **Cartago:** La Unión, San Rafael, Cerros de La Carpintera, Campamento Escuela Iztarú, 9°53'08.2"N 83°58'15.6"W, 1778 m, bosque húmedo premontano, epífitas en potreros arbolados, 30 octubre 2008, *D. Bogarín 5456*, R.L. Dressler, R. Gómez, F. Pupulin, & R. Trejos (JBL-spirit).

This new species is distinguished by the small size of the plants, less than 1.1 cm long, the short peduncle less than 10 mm long, the petals as wide as the lip length and the blades of the lip distinctly diverging at apex. It could be similar to *L. tapantiensis* and *L. schugii* but the later have longer plants and peduncles more than 1.3 cm long, the petals are distinctly narrower than the lip length and the blades of the lip are subparallel to converging at apex. Some plants collected at La Carpintera (Bogarín & al. 5456) present autogamous flowers, navicular synsepals, the sepals joined until the apex and the pollinia narrowly oblong, with short caudicles (ratio caudicle/pollinium 1:10) Fig. 3G, 10. Populations from the type locality have flat synsepals, free apices of the sepals and the pollinia elliptic-subovate, with long caudicles (ratio caudicle/pollinium 1:2). We considered the specimens from La Carpintera the same as the species we are describing as *L. sanctiorum*. In spite of the former differences, the overall shape and color of flowers are very similar and the differences could be explained by the autogamous condition of the flowers.

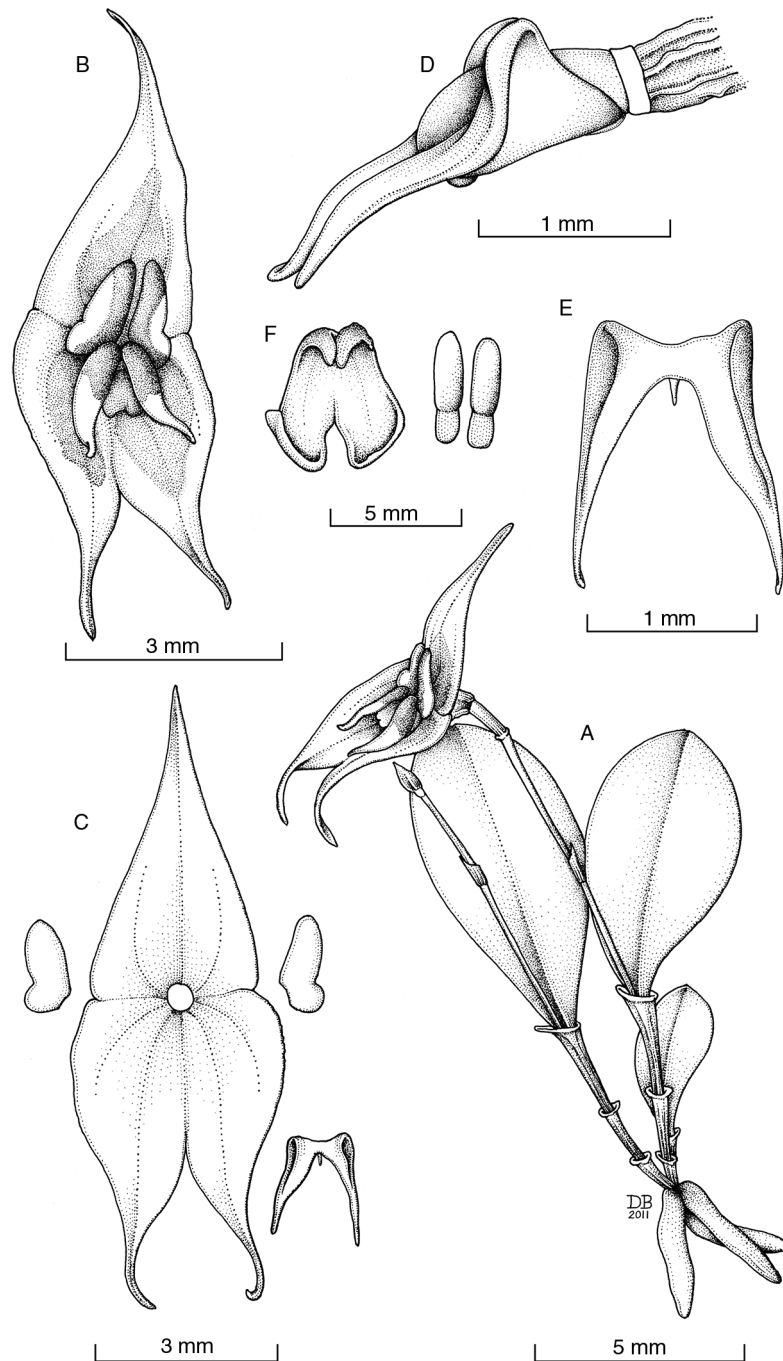


Fig. 9. *Lepanthes sanctiorum*: **a**, habit; **b**, flower; **c**, dissected flower; **d**, ovary, column and lip, lateral view; **e**, lip, adaxial view; **f**, anther cap and pollinia. All drawn by D. Bogarín from Bogarín 8415 (JBL).

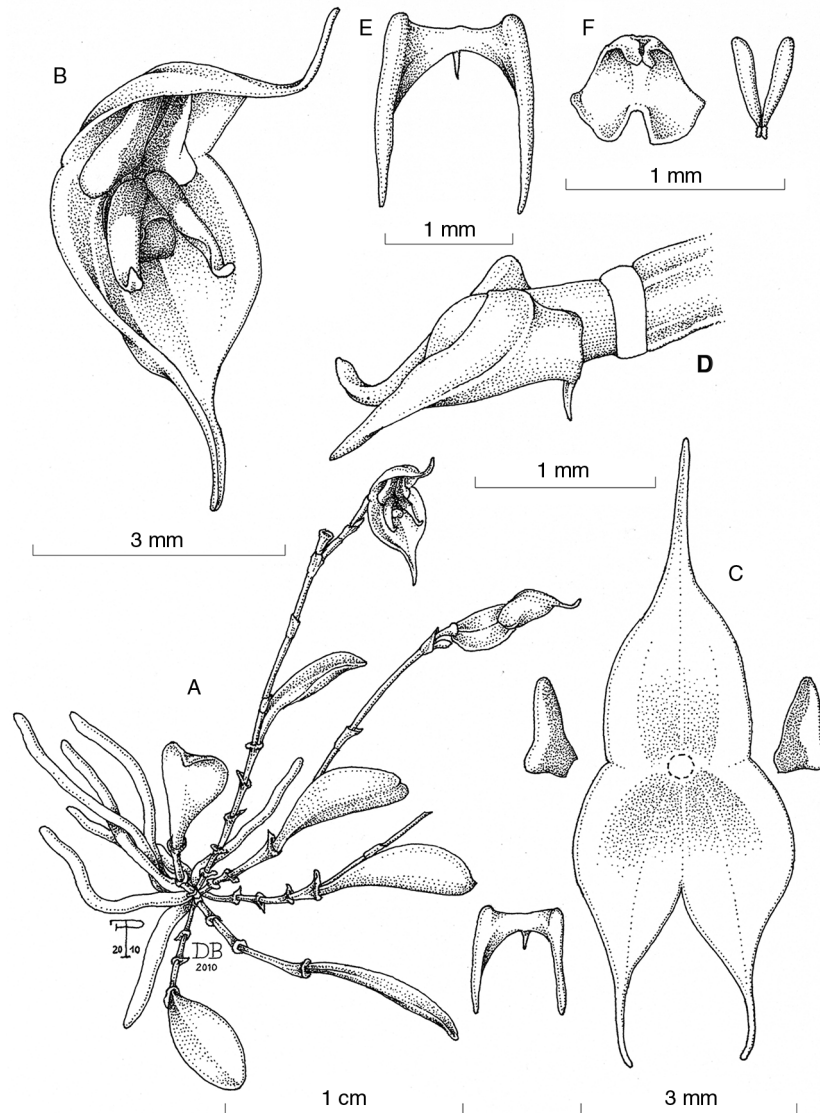


Fig. 10. *Lepanthes sanctiorum* (autogamous form): **a**, habit; **b**, flower; **c**, dissected flower; **d**, ovary, column and lip, lateral view; **e**, lip, adaxial view; **f**, anther cap and pollinarium. Drawn by the authors Bogarín 5456 (JBL).