



## *Lepanthes elizabethae* (Pleurothallidinae, Orchidaceae), a new species from Colombia

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### Introduction

With over 800 species, *Lepanthes* Swartz (1799: 85) is one of the largest genera in Pleurothallidinae (Orchidaceae). It ranges from southern Mexico to Bolivia and northern Brazil. A high level of endemism is observed in the Andes of Colombia and Ecuador (Pridgeon 2005). Despite the large number of species described by Luer (1986, 1994, 1996, 2009), several new *Lepanthes* have been described by other authors (Catling & Catling 1988, Tremblay & Ackerman 1993, Ortiz 1998, Pupulin & Bogarín 2004, Pupulin *et al.* 2010).

Plants of *Lepanthes* usually grow epiphytically in cloud forests and paramos, but some on rocks and the ground have also been reported (Farfán *et al.* 2003). Species of *Lepanthes* are easily recognized by their lepanthiform sheaths, successive inflorescences arising from the upper- or underside of the leaf, usually transversely bilobed petals and often bilobed lip (Farfán *et al.* 2003), usually with an appendix attached to the sinus of the body. Inflorescences are rarely simultaneous, as in *L. foreroi* P.Ortiz, O.Pérez & E.Sánchez (2009: 137) and *L. pleurorachis* Luer (1983: 363). The greatest species diversity is found in Colombia with 305 species (Vieira pers. com). New taxa and unreported species for the Colombian flora are described and published every year (Ortiz *et al.* 2009, 2010, Calderón 2010, Pérez *et al.* 2010).

During field studies conducted in the department of Valle del Cauca, a new *Lepanthes* was found. It resembles *L. lycocephala* Luer & Escobar (1984: 147), from which it differs by the plant size and shape of upper lobes of petals, lip blades and lip appendix.

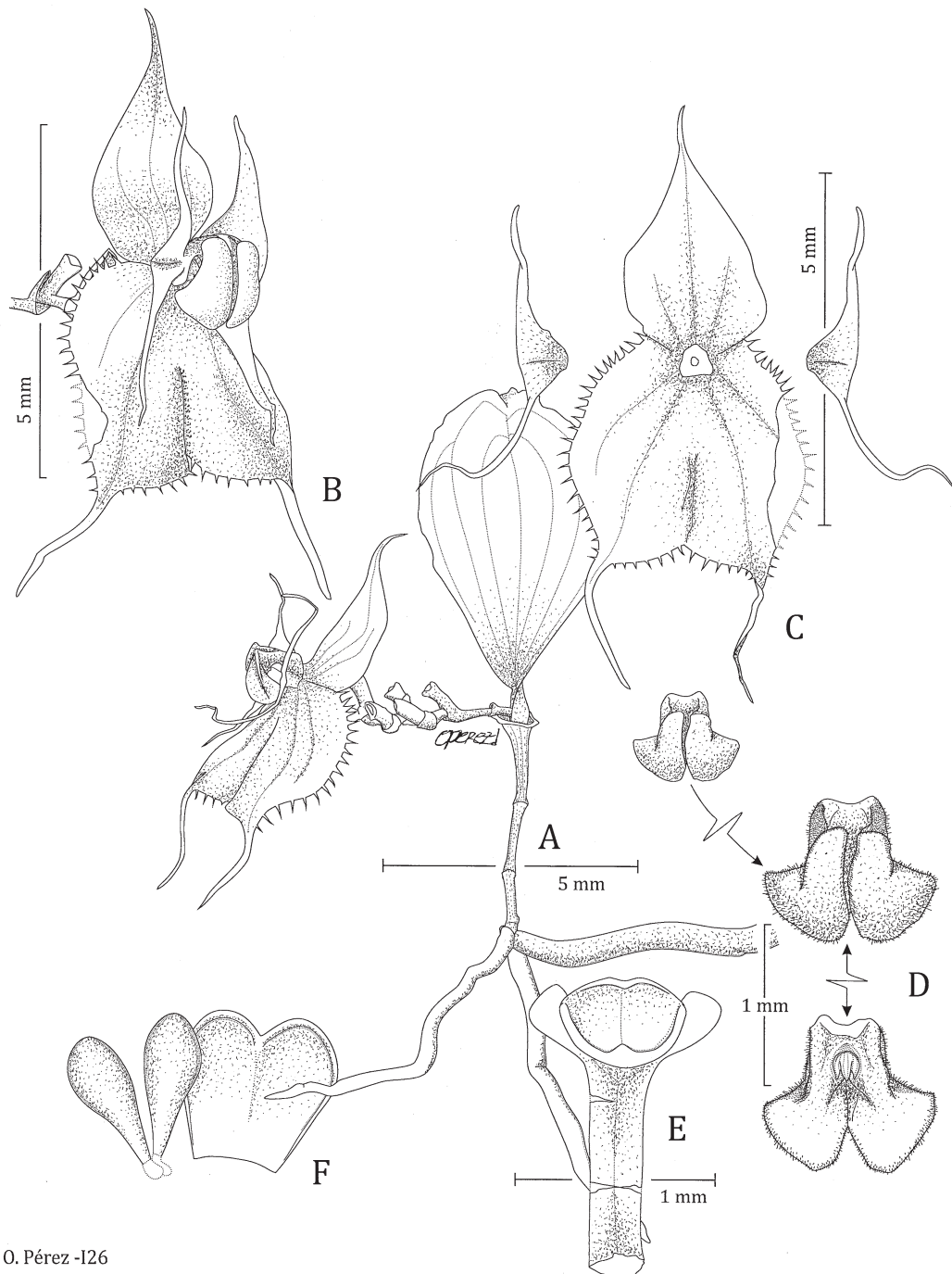
### *Lepanthes elizabethae* O.Pérez, Kolan & E.Parra, *sp. nov.* (Figs. 1, 2)

Type:—COLOMBIA. Valle del Cauca: Municipio de Yumbo, Corregimiento de DAPA, Bosque de Niebla residual entre las fincas Cielo Azul y DEBUSALE, ca. 1800 m, 10 October 2010, Pérez, González & Buß 999 (holotype CUVC!).

*Lepanthes elizabethae* is similar to *L. lycocephala*, from which it is easily distinguished by the minute plant habit, triangular, strongly acuminate upper lobe of the petals, dolabriform blades of the lip without erect lobes near the base, and rounded, trilobed appendix of the lip.

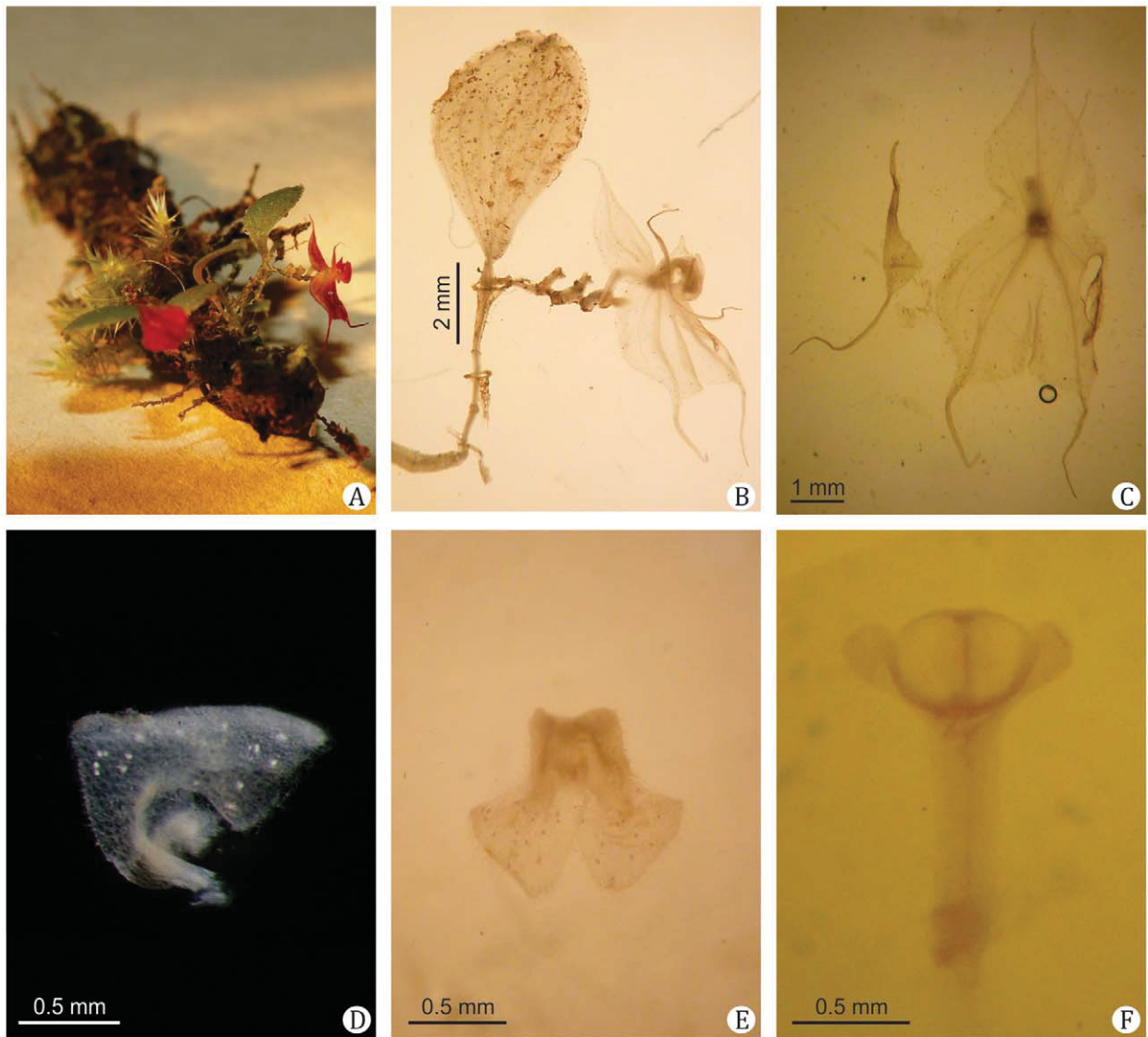
Epiphytic, minute *plant*, up to 13 mm tall. *Roots* filiform, 0.5 mm in diameter. *Ramicaul* slender, erect, ca. 3.7 mm, covered by 2–4 ribbed lepanthiform sheaths with the ribs minutely denticulate and ostia minutely ciliate. *Leaves* suborbicular to obovate, obtuse, the apex slightly folded towards the abaxial surface, the base cuneate, contracted into a petiole 0.8 mm long, margin slightly undulate, shortly ciliate, 7.4 × ca. 5.0 mm. *Inflorescence* racemose, secund, successive, dense, 3.2 mm long, including the peduncle 1.6 mm long, borne from the abaxial surface of the leaf. Floral bracts cylindrical, 0.3–0.5 mm long. *Pedicel* 1 mm; *ovary* 1.2 mm long, smooth. *Flowers* minute, pink-reddish; slightly stained with yellow at the base of the sepals and petals. *Sepals* membranaceous, glabrous, ovate, acute, mucronate; the dorsal one triveined, entire, 3.6 × 2.1 mm,

including a tail 1 mm long; the lateral ones connate to 1.8 mm, biveined, margin strongly dentate, teeth obtuse,  $5.3 \times 2.0$  mm, including a tail 2 mm long. *Petals* minutely pubescent, transversely bilobed,  $1.0 \times 5.4$  mm; the upper lobe triangular, strongly acuminate, 2.4 mm long; the lower lobe triangular, ending in a tail, 3.0 mm long, excluding the tail 2.1 mm long. **Lip bilaminar**, basally adnate to the column, pubescent, blades dolabriform, base of the blades obtuse, apex truncate, connective cuneate,  $1.3 \times$  ca. 2.0 mm, the appendix small, rounded, tomentose, parallel to the connective, trilobed, the lobes short, obtuse. *Column* arcuate, 1.7 mm long spread, with a pair of rounded apical wings. *Pollinia* 2, pyriform, ca. 0.5 mm long. *Anther cap* cordate in outline, base truncate, cucullate, translucent, 2-celled.



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**FIGURE 1.** Illustration of *Lepanthes elizabethae*. A. Plant habit. B. Flower. C. Floral dissection. D. Lip details. E. Column. F. Pollinarium and anther cap; drawn by O. Pérez from the holotype.



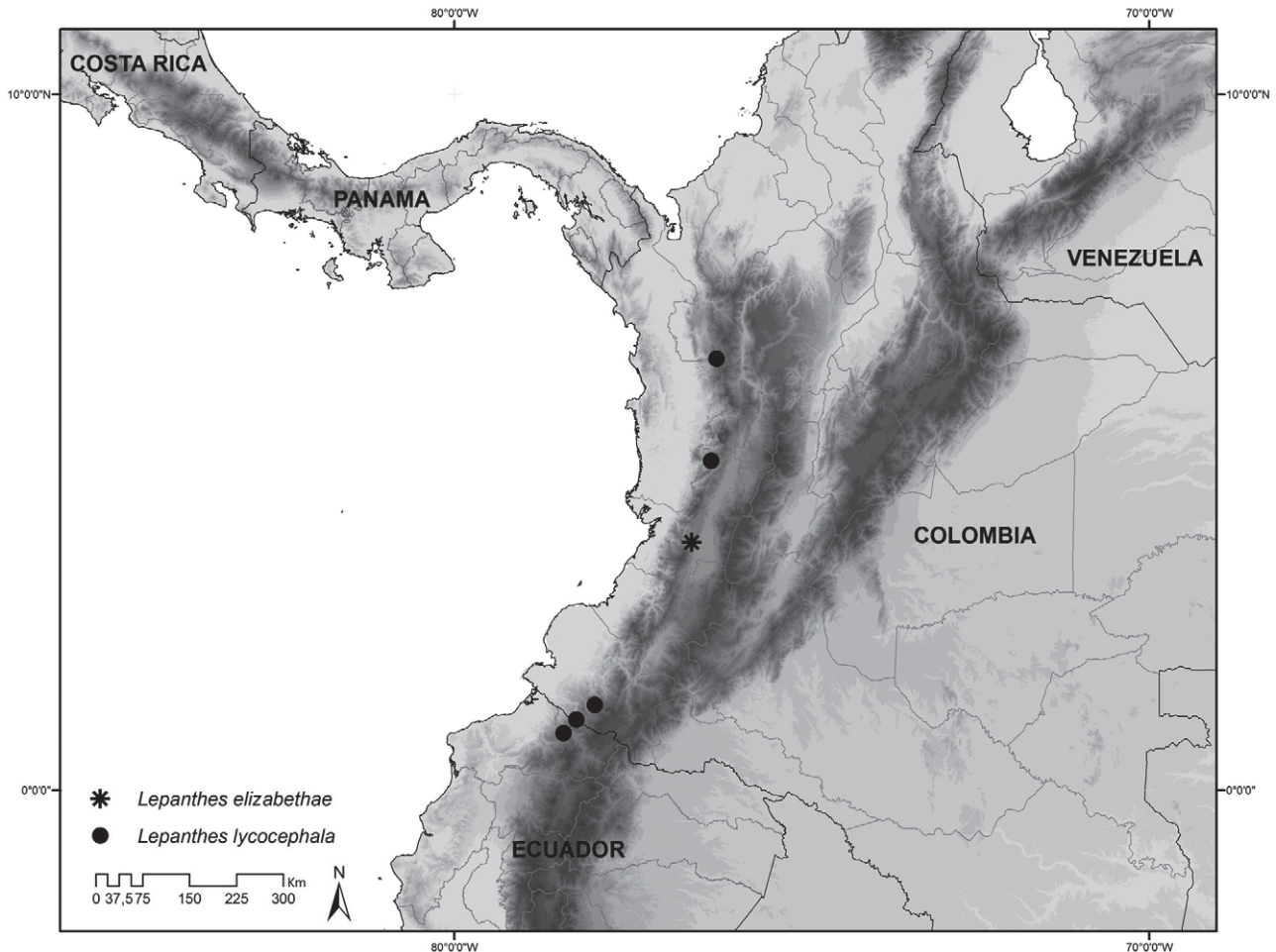
**FIGURE 2.** *Lepanthes elizabethae*. A. Habit. B. Flowering plant. C. Sepals and one petal. D. Lip (side view). E. Lip (ventral view—note the appendix just below the sinus). F. Column. (Photos O. Pérez.)

**Distribution and habitat:**—*Lepanthes elizabethae* is only known from the eastern slope of the Western Cordillera of the Andes, vicinity of Dapa, department of Valle del Cauca, Colombia (figure 3). It grows epiphytically in remnant cloud forest at about 1800–2000 m elevation. Plants were found growing on *Tibouchina* sp. (Melastomataceae) inside the forest, near creeks.

**Conservation status:**—According to the IUCN Red List (IUCN 2011), the species can be assigned as critically endangered (CR, criterion D2—very small or restricted population) due to the small population found only in the vicinity of Dapa in Colombia.

**Eponymy:**—Named after Elizabeth Santiago Ayala, researcher at the AMO herbarium, who has greatly contributed to the taxonomy of *Epidendrum*.

**Discussion:**—*Lepanthes elizabethae* is closely related to *L. lycocephala* Luer & Escobar (1984: 147), from which it differs by its minute habit, less than 1.3 cm tall, subrounded to obovate leaves (*vs.* ovate to elliptical, acute to subacute), length of the sepal tails (2 mm long in *L. elizabethae* *vs.* 1 mm in *L. lycocephala*), petals with the upper lobe triangular, strongly acuminate (*vs.* triangular, narrowly obtuse), blades of the lip dolabriform with an obtuse base (*vs.* zoomorphic lip, blades subquadrate with acute lobes at the base) and rounded, tomentose lip appendix (*vs.* oblong, pubescent). All differences between these species are summarized in the Table 1.



**FIGURE 3.** Distribution of *Lepanthes lycocephala* (based on the herbarium specimens Luer *et al.* 4626 SEL!, Luer *et al.* 15554, 16815, 17649 MO, Luer 16815 MO, and Hirtz 5866 MO) and *L. elizabethae* (type locality).

**TABLE 1.** Main differences between *L. elizabethae* and *L. lycocephala*.

	<i>Lepanthes elizabethae</i>	<i>Lepanthes lycocephala</i>
Plant size	up to 13 mm	up to 70 mm
Leaves	subrounded to obovate 7.4 × ca. 5.0 mm	ovate to elliptical 7.0–18.0 × 5.0–6.0 mm
Sepals	margin entire (dorsal sepal); tails up to 2 mm long	margin minutely denticulate (dorsal sepal); tails 1 mm long
Petals	1.00 × 5.30 mm; upper lobe strongly acuminate	0.75–1.00 × 3.75–4.00 mm; upper lobe narrowly obtuse
Lip	base of the blades obtuse	with erect, acute lobes near the base
Lip appendix	rounded, trilobed; the lobes short, obtuse, tomentose	oblong, pubescent (Luer 1984), or with a massive tuft of long hairs (Luer 1996).

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