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Dendrobium fitrianum

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Summary: A new species of *Dendrobium* is described as *Dendrobium fitrianum*

Key words: Orchidaceae, *Dendrobium fitrianum*, new species, Sumatra

Summary: We describe *Pleurothallis ramiromedinae*, recently found in southern Colombia and northern Ecuador. The new species is similar to *P. perijaënsis* of *Pleurothallis* subsect. *Macrophyllae-fasciculatae*, but differs from all species in the subsection by lateral sepals that are widely divergent rather than connate into a synsepal.

Key words: Andean flora, Pleurothallidinae, section *Macrophyllae-fasciculatae*

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Dendrobium fitrianum (section Pedilonum, Orchidaceae), a new species from Sumatra

Lina S. Juswara, André Schuiteman, Peter O'Byrne, and Jeffrey Champion

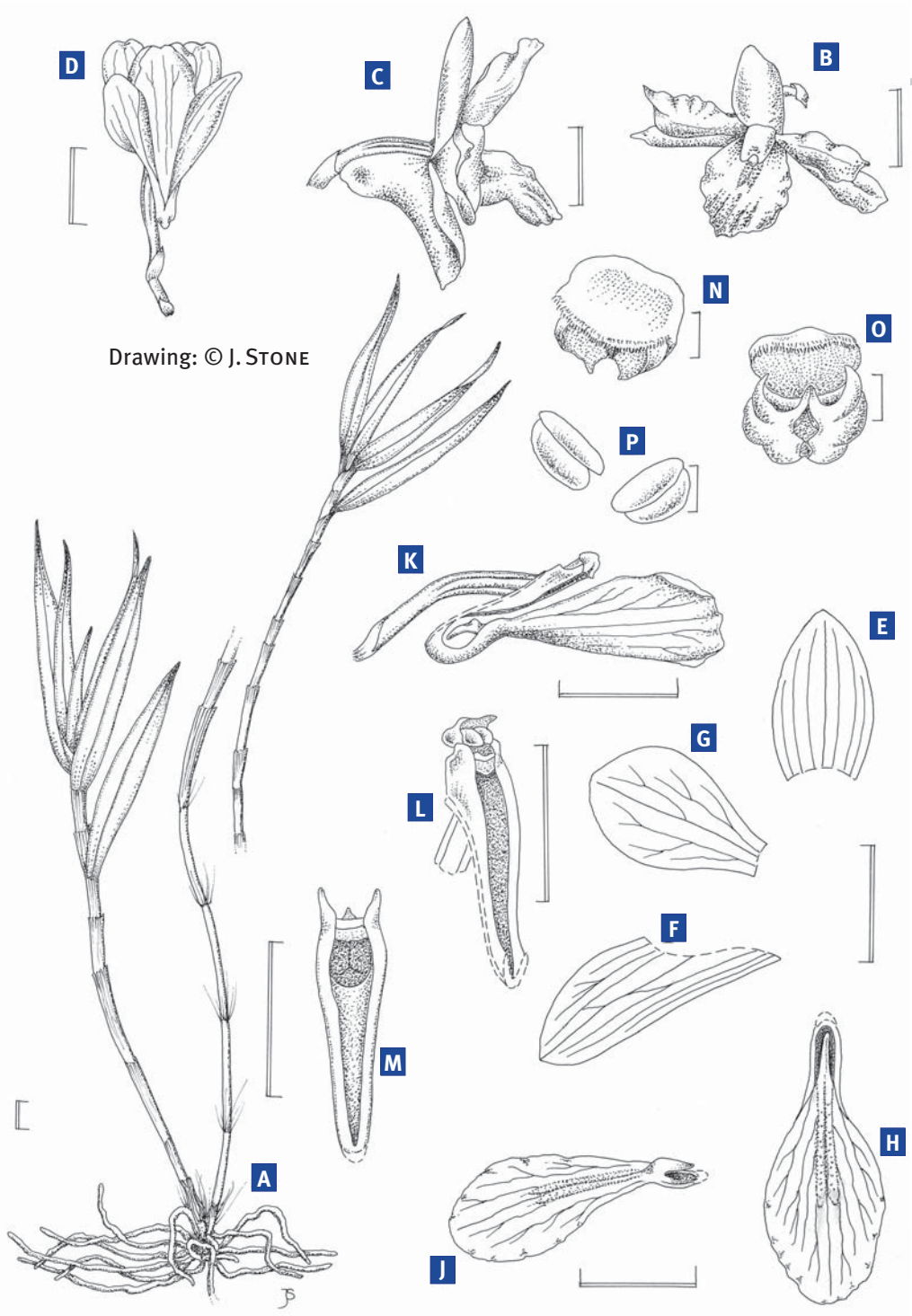
The attractive new species of *Dendrobium* described in this paper has been available in the trade for some years, but the origin of the plants was not known with certainty. On some commercial websites it is listed as *Dendrobium* sp. from Borneo, but this species is not included in Jeffrey Wood's magnificent recent book on Dendrobium of Borneo (Wood, 2014). Indeed, trustworthy sources in Indonesia have informed us that the species is found near Mt. Dempo, a dormant volcano in South Sumatra.

With 140 species, the genus *Dendrobium* is the second largest orchid genus in Sumatra, after *Bulbophyllum*, which has 162 species on this large and still underexplored island. Our new species clearly belongs to an alliance that used to be known as section *Calcarifera*, but which is now, based on DNA evidence, included in section Pedilonum (Schuiteman and Adams in Pridgeon et al., 2014). Although *Calcarifera* is not a natural group, many species traditionally included in it resemble each other as they all have a broad lip which often has a yellow or orange blotch in the centre. In addition, the lip usually has on the claw (the narrow basal part of the lip) a small hook-like appendage that points towards the base of the lip, which gave section *Calcarifera* its name (Smith, 1908). Some of the best-known species that belong to this broad-lipped alliance include *D. mutabile* Blume, *D. cumulatum* Lindl., *D. sanguinolentum* Lindl., *D. annae* J.J. Sm. and *D. spathilingue* J.J.*Sm*. .

Dendrobium fitrianum Juswara, Schuit., P. O'Byrne & Champion, **spec. nov.**

Type: Indonesia, South Sumatra, Lahat, near Mt. Dempo, cult. J. Champion Sum 6, May 20th 2016 (holotype **BO**, isotype **K**).

The new species is superficially similar to *D. spathilingue* J.J.Sm. from Java, Bali, and Borneo (Wood, 2010), but is probably not closely related to it. *D. spathilingue* differs in having verrucose roots, obtusely bilobed leaves, swollen stems tapering to base and apex, 2–6-flowered inflorescences, a lip clasping the column, an obovate lip-blade, a broader and shorter basal appendage without a raised keel, and petals and lip with erose margins. The little-known *D. kruiense* J.J.Sm. from Sumatra seems to be more closely related to *D. fitrianum*. It has 1-flowered inflorescences with flowers of similar size to *D. fitrianum*. Unfortunately, the leaves and roots of this species were not known when it was first described. Recently collected plants that agree with J.J. Smith's drawing and description show leaves similar to those of *D. fitrianum*. *D. kruiense* differs in having an obcuneate lip-blade, two keels



Drawing: © J. Stone

Dendrobium fitrianum

A. Habit; **B.** Flower, frontal view; **C.** Flower, lateral view; **D.** Flower, ventral view; **E.** Dorsal sepal; **F.** Lateral sepal; **G.** Petal; **H.** Lip; **J.** Lip, lateral view; **K.** Column and lip with pedicel and ovary; **L.** Column, lateral view; **M.** Column, ventral view; **N.** Anther, dorsal view; **O.** Anther, ventral view; **P.** Pollinia. Double scale bar = 1 cm; single scale bar = 1 mm.

on the lip that extend to the apex, petals and lip with erose margins, a lip which has a much shorter basal appendage and a claw which is not sigmoid in lateral view, and stelidia clearly overtopping the anther. The colours of *D. kruiense* are also different: flowers white tinged purple, without a yellow blotch on the lip.

Epiphytic herb. Roots smooth, glabrous, c. 2 mm diam. Stems tufted, terete, unbranched, erect to spreading, 70 – 100 cm long; internodes 1 – 6 cm long, 0.3 – 0.7 cm diameter. Leaves distichous; sheaths tubular, smooth, glabrous; leaf blades narrowly lanceolate, 6.5 – 20 × 0.9 – 3 cm, acuminate, thin-textured; leaves and leaf-sheaths densely and minutely brown-punctate. Inflorescences 1- or 2-flowered, arising laterally from the older, leafless stems; peduncle 1 – 5 mm long, with a basal scale c. 3 mm long. Floral bract clasping the pedicel, 4 – 5 mm long. Flower opening widely, c. 3 cm long, 3.5 cm wide when fully open, light violet-purple, including pedicel and ovary; lip white, in the centre with a rectangular orange-yellow blotch, apical part (c. 5 mm) light violet-purple; column white, anther creamy white, pollinia yellow. Pedicel-with-ovary 1.6 – 2 cm long, terete, glabrous. Dorsal sepal ovate, 1.5 – 1.7 × 0.9 – 1.2 cm, obtuse, 7-veined. Lateral sepals obliquely triangular-oblong, rounded, margins recurved in natural position, along inner margin 1.7 cm long, along outer margin 2.5 cm long, c. 1.2 cm wide in the middle, 7-veined. Mentum 1 – 1.2 cm long, c. 0.6 cm wide in lateral view, cylindrical, straight, obtuse. Petals broadly obovate to subrhombic, 1.7 cm long, 1 cm wide, margins entire, apex broadly rounded, veins 3, branching. Lip spathulate, 2.5 cm long when flattened; claw linear-oblong, 0.6 cm long, 2.6 mm wide, concave, somewhat sigmoid in lateral view, adnate to the column-foot for c. 1.6 mm; blade elliptic, 1.9 × 1 cm, apex subtruncate, at the base with a straight, adaxially keeled, 0.5 cm long, horn-like appendage which projects backwards over the claw, on the blade with two low, rounded, parallel keels which are irregularly verrucose especially towards the apex and extend from the base to about halfway the blade. Column c. 0.4 cm long, 0.4 cm wide; stelidia hemi-elliptic, subfalcate, 2 mm long, not overtopping the anther, ending in a small tooth pointing towards the dorsal side. Anther cap helmet-shaped, 2.7 mm wide, along the apical margin with numerous short, straight hairs.

Distribution: Indonesia, known only from South Sumatra, Lahat, said to be found near the foot of Mt. Dempo.
Ecology: Unknown.
Etymology: Named after Mrs. Fitri Yanti Champion, the wife of one of the authors.

Notes: Many photos of what we believe to be *D. fitrianum* can be found on the internet. They show some variation in colour; in some specimens the sepals and petals are white with pur-

ple tips. We also noticed images of flowers with narrower petals and apparently a relatively longer mentum that otherwise resemble *D. fitrianum*. Without having seen actual specimens of these we cannot say if they are referable to *D. fitrianum* or represent another, related taxon.

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We would like to thank the curator of Herbarium Bogoriense for making the specimens available to us. We are also grateful to Yandra Nofrizal from the Botany Division at the Research Center for Biology, Indonesia, for help with preparing the map and to Judi Stone for the fine line drawing.

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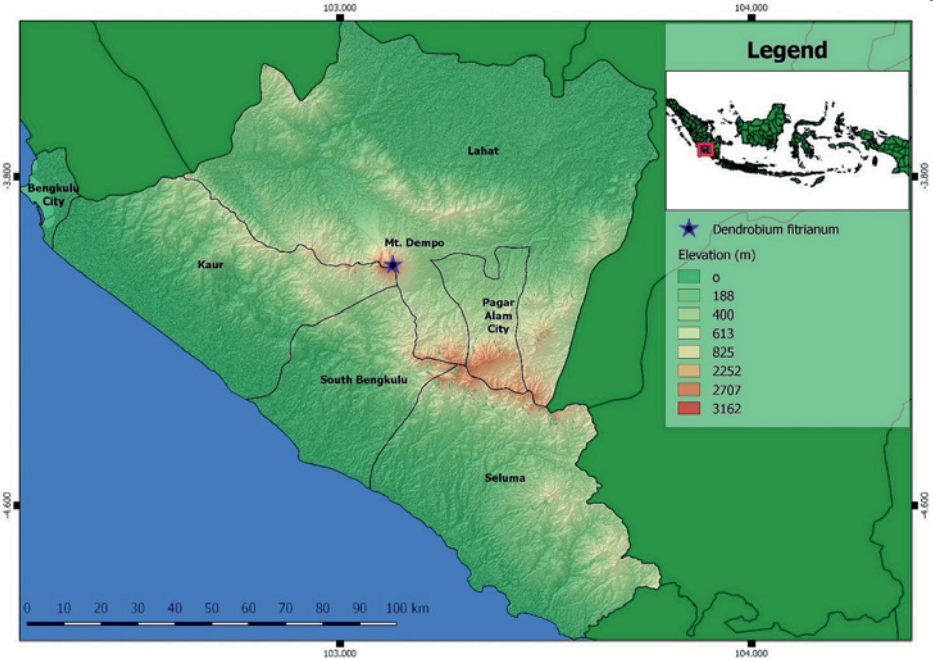

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Pleurothallis ramiromedinae Thoerle & Hirtz (Pleurothallidinae; Orchidaceae), a new species from Colombia and Ecuador

Lisa Thoerle
Alexander C. Hirtz
Ramiro Medina Trejo

Abstract: A new species from Ecuador and Colombia, *Pleurothallis ramiromedinae*, is described, illustrated, and compared with a similar species. *Pleurothallis ramiromedinae* is similar to *P. perijaënsis* of *Pleurothallis* subsect. *Macrophyllae-fasciculatae,* but differs by sepals and petals that are coarsely pubescent, vs. glandular or papillose on a cellular level; lateral sepals that diverge widely, vs. unite to form a synsepal; and the column with dilated stigmatic lobes, externally pubescent and shortly lacerate at the margins, vs. undilated and glabrous. It differs from all species in the subsection by lateral sepals that are widely divergent rather than connate into a synsepal.

Key words: Andean flora, Pleurothallidinae, section Macrophyllae-fasciculatae

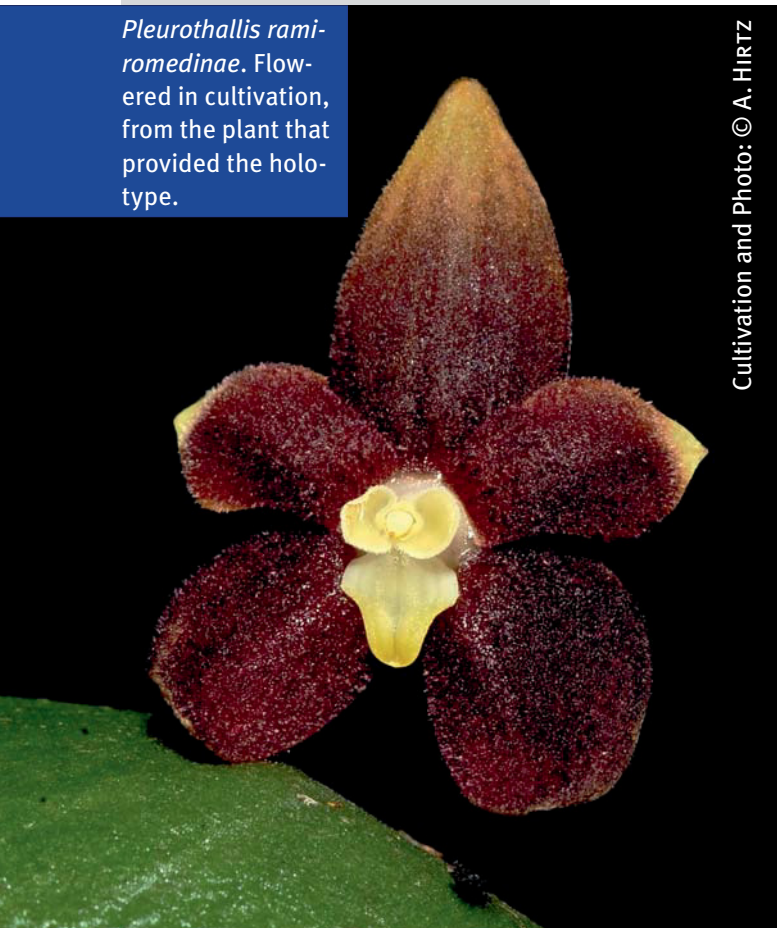
Introduction: Although we describe *Pleurothallis ramiromedinae* Thoerle & Hirtz without proposing an infrageneric placement, *Pleurothallis* subsection *Macrophyllae-fasciculatae* (Lindl.) Luer, the largest in the genus with over 300 recorded names, is the closest of the choices. *Pleurothallis ramiromedinae* shares some characteristics found in many to all of the species assigned to this subsection: a caespitose plant with sessile leaves, cordate at the base and often deflexed; a fascicle of single-flowered inflorescences arising from the apex of the ramicaul, subtended by a spathe; and flowers with a lip with a basal glenion (Luer 2005). The flowers differ from all species of the subsection by the lateral sepals, essentially free and divergent rather connate into a synsepal. The new species fits in none of the infrageneric possibilities as they are currently defined.

Pleurothallis ramiromedinae Thoerle & Hirtz, sp. nov.

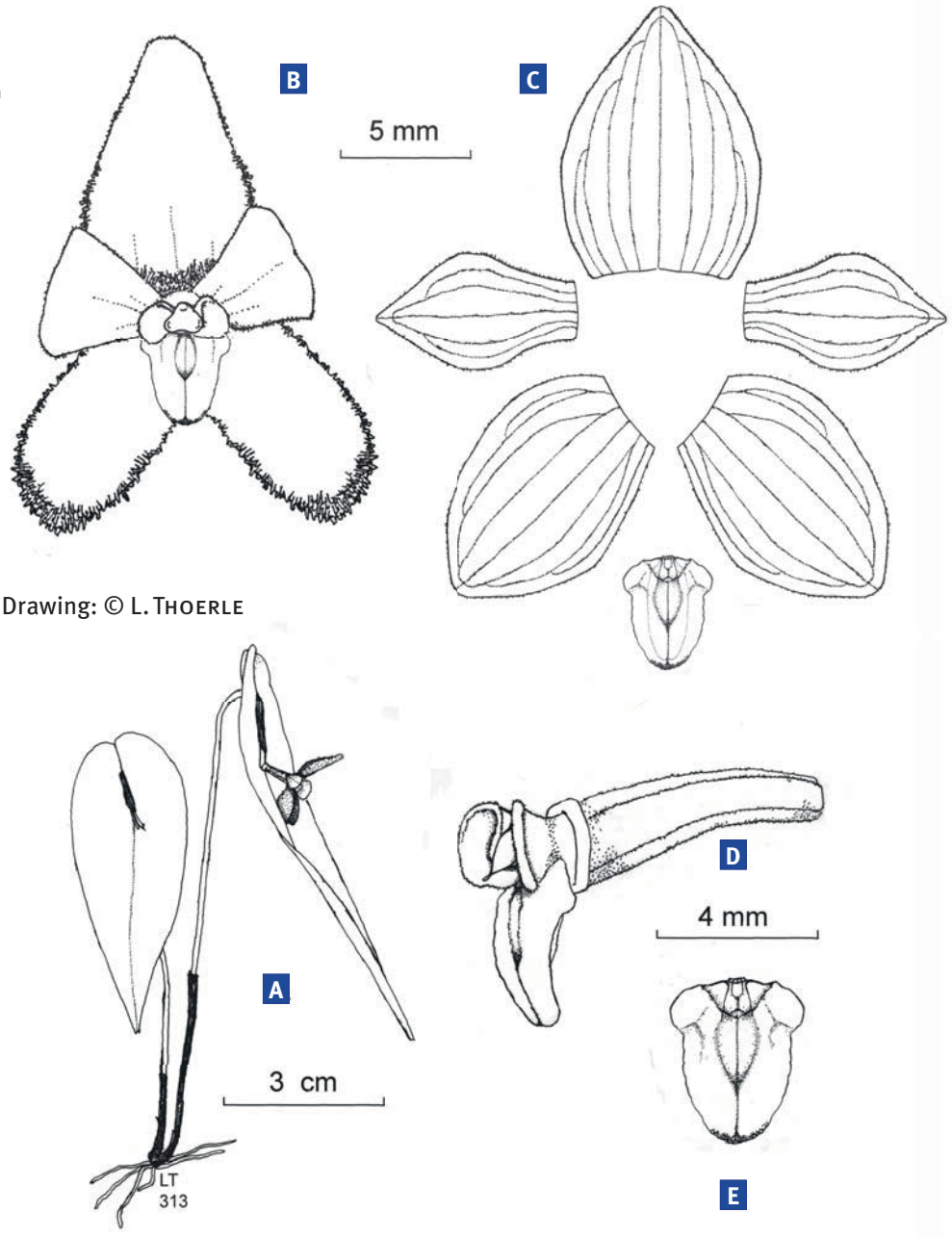
Type: Ecuador. Sucumbíos, near La Bonita, 1,600 m, May 27th 2010, collected by I. Acaro of Mundiflora; purchased from Mundiflora and flowered in cultivation by A. Hirtz, Sep. 15th 2017, A. Hirtz **10943** (holotype: Universidad Católica de Ibarra).

Diagnosis: Pleurothallis ramiromedinae is similar to P. perijaënsis, but differs by sepals and petals that are coarsely pubescent, vs. glandular or papillose on a cellular level; lateral sepals that diverge widely, vs. unite to form a synsepal; and the column with dilated stigmatic lobes that are externally pubescent and shortly lacerate at the margins, vs. undilated and glabrous.

Pleurothallis ramiromedinae. Flowered in cultivation, from the plant that provided the holotype.



Pleurothallis ramiromedinae. A yellow form. Flowered in cultivation by Mundiflora.



Drawing: © L. Thoerle

Pleurothallis ramiromedinae.

A Plant habit. **B** Flower. **C** Dissected perianth. **D** Ovary, column, and lip, oblique view. **E** Lip, front view. Drawn by L. Thoerle from the plant that provided the holotype.

Description: Medium to large, caespitose, epiphytic herb with roots ca. 1 mm in diam. Ramicauls erect to suberect, 6–15 cm long, 1.5–2 mm in diam., enclosed by 3 papery, dark brown sheaths, 2 at the base and 1 below the middle. Leaves horizontal to usually deflexed, coriaceous, cordate-ovate, slightly concave above the base, the base sessile, the apex acuminate, acute, shortly retuse, 6–18 cm long, 2.5–9 cm wide. Inflorescence a fascicle of successive, single, usually resupinate flowers, borne by a brown, papery, conduplicate, reclining spathe, 1–1.5 cm long, at the base of the leaf; peduncles 1–3 mm long, concealed within the spathe; floral bracts 3–4 mm long, concealed within the spathe; pedicels mostly enveloped by the spathe, 1.5–3 cm long; ovary sparsely pubescent, subterete, sulcate, 6–9 mm long, 1.5–2 mm in diam. Flowers opening widely; sepals abaxially carinate and coarsely pubescent along the veins, margins recurved; dorsal sepal dark red or yellow suffused with dark red centrally to nearly completely, rarely completely yellow, adaxially coarsely pubescent with the pubescence shorter and finer distally, broadly ovate, apex subobtuse to rounded, 9–12 mm long, 6–9 mm wide, 9-veined, connate to the lateral sepals for 3 mm; lateral sepals dark red, rarely completely yellow, adaxially with a coarse pubescence, oblong, obtuse, 9–11 mm long, 6–7 mm wide, diverging ca. 90°, connate 1 mm, 8-veined; petals pale yellow suffused with red centrally to nearly completely, rarely completely yellow, adaxially coarsely pubescent with the pubescence shorter distally, distal 1/3 acutely reflexing to curve behind the sepals at maturity, elliptical, acute, 7–8 mm long, 4–5 mm wide, 5-veined; lip white to yellowish or greenish white, thickly coriaceous, microscopically papillose, shield-shaped with subtle to distinct, rounded, lateral, basal lobes, the basal concavity with a flat, cuneate callus with a retuse apex surrounding a small, raised callus below an indistinct glenion, the disk with an elliptical concavity between a pair of low calli, the apex broadly rounded, the base hinged with a very short strap to the obsolescent column-foot, 4 mm long, 3–3.5 mm wide, 3-veined; column yellowish to greenish white, microscopically pubescent, semiterete, 2.5–3 mm long, 3 mm in diam., anther and stigma apical, stigma transversely bilobed with proportionally large, dilated, subcircular lobes each 1.5 mm wide with shortly lacerate margins, anther cap cream; pollinia with a brown, droplike viscidium protruding between the stigmatic lobes, otherwise not observed.

Distribution and habitat: In addition to the area of the type collection in Ecuador, *Pleurothallis ramiromedinae* is known from two locations in the Sibundoy Valley, Putumayo, Colombia at an elevation of ca. 2,000 m. It grows in very humid montane forest.

Eponymy: This species is named in honor of Ramiro Medina Trejo, in whose collection this species was first seen.

Discussion: Although the diagnosis compares *Pleurothallis ramiromedinae* to *P. perijaënsis* Dunst. [= *Acronia perijaënsis* (Dunst.) Luer] in subsection *Macrophyllae-fasciculatae*, it cannot be accommodated in that subsection or any other as they are currently defined. While species in this subsection are the most similar morphologically, the nearly free, diverging sepals of *P. ramiromedinae* (vs. connate into a synsepal) argue against its placement there. Lateral lobes are present near the base of the lip, a character that is rare in subsection *Macrophyllae-fasciculatae*; and the externally pubes-

cent stigmatic lobes are widely dilated with shortly lacerate margins. Whether the definition of an existing taxon should be expanded or a novel division should be created for it awaits DNA analysis.

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Pleurothallis ramiromedinae.
The column from the front.
Flowered in cultivation and
photographed by R. Medina Trejo.