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*Octomeria doucetteana*

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Eight new species of Pleurothallidinae (Orchidaceae)  
Described from the collection of Alfonso DOUCETTE

Luke E. MATTHEWS

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**Summary:** A new species of *Lepanthes* is described as *Lepanthes alphonsiana*; a new species of *Lepanthopsis* is described as *Lepanthopsis maculanthina*; a new species of *Masdevallia* is described as *Masdevallia alphonsiana*; a new species of *Octomeria* is described as *Octomeria doucetteana*; two new species of *Phloeophila* are described as *Phloeophila alphonsiana* and *Phloeophila doucetteana*; a new species of *Pleurothallis* is described as *Pleurothallis doucetteana*; a new species of *Stelis* is described as *Stelis uvaegelata*.

**Key words:** Neotropics, *Lepanthes alphonsiana*, *Lepanthopsis maculanthina*, *Masdevallia alphonsiana*, *Octomeria doucetteana*, *Phloeophila alphonsiana*, *Phloeophila doucetteana*, *Pleurothallis doucetteana*, and *Stelis uvaegelata*

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# Eight new species of Pleurothallidinae (Orchidaceae)

Described from the collection of Alfonso DOUCETTE

Luke E. MATTHEWS

**Abstract:** Recent investigation conducted by Luke M. MATTHEWS in the orchid collection of Alfonso DOUCETTE Madison, WI, USA, have revealed eight species of Pleurothallidinae that include a unique species belonging to the *Lepanthes* sect. *Lepanthes* with bifalcate petals, a tiny flowered species belonging to *Lepanthopsis* sect. *Lepanthopsis*, a showy new species belonging to *Masdevallia* subsect. *Caudatae* distinguished by the spotted sepals and pandurate lip, a miniature species belonging to *Octomeria* sect. *Octomeria*, two new species of *Phloeophila*, a new species belonging to *Pleurothallis* subg. *Restrepioidia* that was long confused with *P. talpinarioides*, and *Stelis* belonging to the “Crocodelanthae” group. A review of the relevant botanical literature on Pleurothallidinae has not found any match for these unusual species. We take this opportunity to name *Lepanthes alphonsiana* L.E. MATTHEWS, *Lepanthopsis maculanthina* L.E. MATTHEWS, *Masdevallia alphonsiana* L.E. MATTHEWS, *Octomeria doucetteana* L.E. MATTHEWS, *Phloeophila alphonsiana* L.E. MATTHEWS, *Phloeophila doucetteana* L.E. MATTHEWS, *Pleurothallis doucetteana* L.E. MATTHEWS, and *Stelis uvaegelata* L.E. MATTHEWS, as species new to science.

**Introduction:** The Pleurothallidinae is a unique subtribe of orchids distinguished from others in the orchid family by the joint between the ovary and

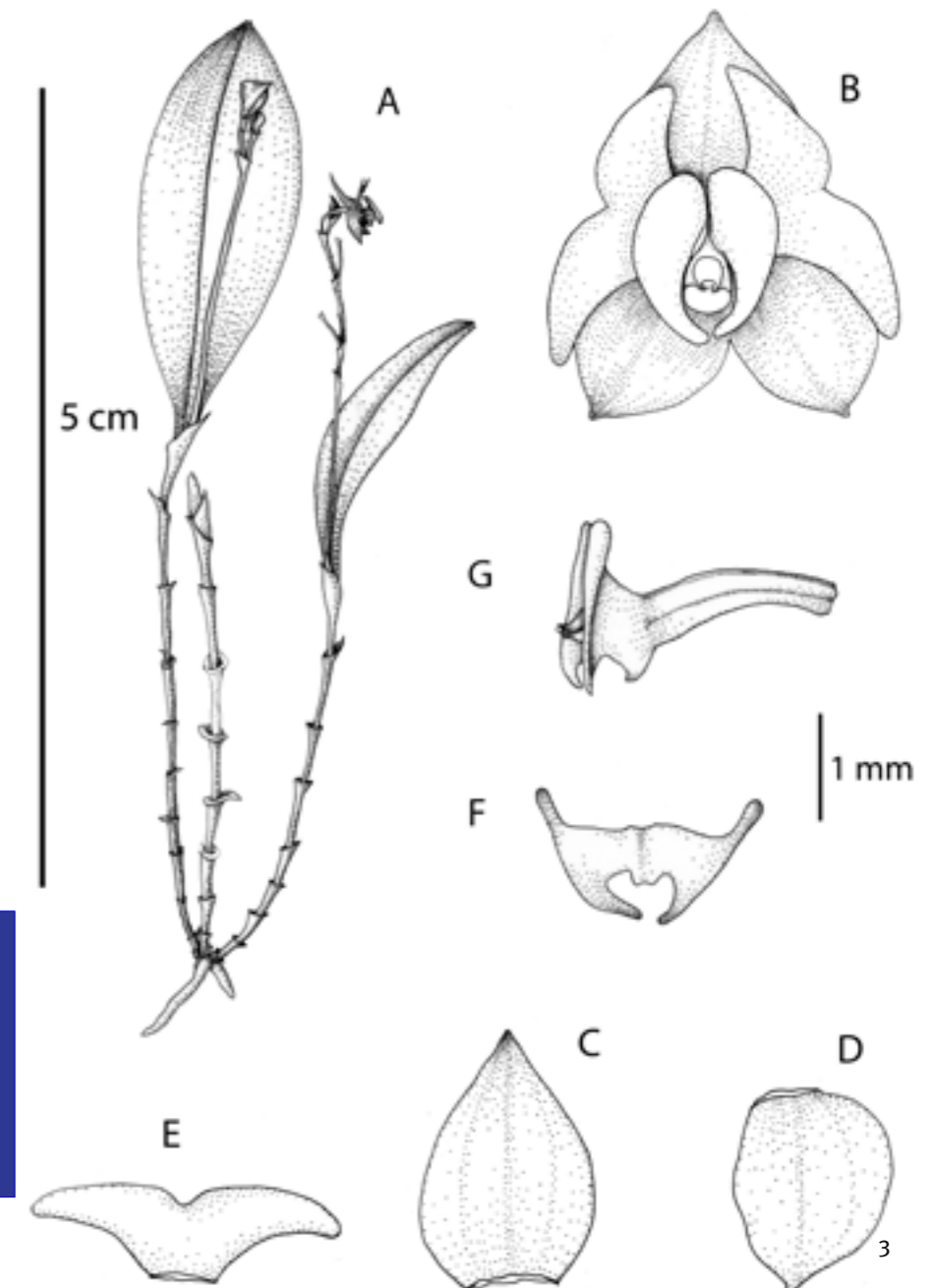
the pedicel (DRESSLER 1981). The species are distributed across the neotropics in a wide range of habitats from sea level to over 4,000 m in elevation (PRIDGEON 2005). In those habitats, they have evolved a variety of different adaptations to help them cope with water loss and attracting a pollinator and various other pressures in order to survive. This has resulted in a wide range of vegetative and floral forms that make the group fascinating to study. Here, I describe eight new

species discovered in the extraordinary collection of Alfonso DOUCETTE.

*Lepanthes alphonsiana* L.E. MATTHEWS, sp. nov.

**Type:** HORTICULTURE. Without collection data, purchased from a Panamanian vendor at the 2015 Pacific Orchid Expo, flowered in cultivation 15 Dec 2017, Doucette 249 (holotype: WIS).

**Diagnosis:** *Lepanthes alphonsiana* is most similar to *L. bifalcis* but can be



*Lepanthes alphonsiana*.  
A. Habit, drawn to 5 cm scale.  
B. Flower. C. Dorsal sepal. D. Lateral sepal. E. Petal. F. Upper surface of lip.  
G. Flower in profile with sepals and petals removed. B–G drawn to 1 mm scale. Drawn from the holotype, illustration by Alfonso DOUCETTE.



*Lepanthes alphonsiana*. A. Detail of the holotype flower. B. Inflorescence on the "clonotype." Image courtesy of Alfonso DOUCETTE.

multaneously few flowered raceme; peduncle terete, 9.1–12.9 mm long, 0.1 mm in diam.; bracts, tubular, membranous, 0.7–1.0 mm long, 0.1 mm wide; pedicel, terete, 0.6–0.9 mm long, 0.1 mm in diam.; ovary, terete, six-sulcate, 0.4 mm long, 0.1 mm in diam. The flower resupinate; dorsal sepal, narrowly ovate-triangular, subacute, translucent purple, 2.0–2.2 mm long, 0.9–1.2 mm wide; lateral sepals narrowly elliptical, acute, fused at the base before the middle, translucent purple, 1.9 mm long, 0.7 mm wide; petals elliptical-subfalcate, acute, translucent purple, 0.7–0.9 mm long, 0.5 mm wide; lip, trilobed, lateral lobes wrapped around the column, central lobe ovate, subacute, dark purple, 0.9–1.3 mm long, 0.5–0.7 mm wide; column terete, stout, transversely bilobed, the lobes of the stigma extending around the anther cap, cream, 0.2 mm long, 0.5 mm wide.

**Etymology:** The new name is a portmanteau formed by combining two Latin words: macula, meaning speck, and ianthina, meaning violet. The interstitial -ai- was removed for euphony. The name refers to the flower's diminutive size and purple coloration.

**Discussion:** The new species was originally identified as *Lepanthopsis*

Scanned images comparing flowers of *Lepanthopsis aristata* (A) and *L. maculanthina* (B) shown with a 1 mm scale. Image courtesy of Alfonso DOUCETTE.



distinguished by the lateral sepals not fused past the middle (vs. connate for their length) and the trilobed (vs. bilobed) lip tightly surrounding (vs. hanging below) the column.

Herbs presumably epiphytic, caespitose, 41.9–63.5 mm tall. The shoots with a terete stem, 21.6–35.6 mm long, 7.6–11.4 mm in diam.; sheaths, 7–10 in number, papery, lepanthiform, 3.8–5.1 mm long, 0.5–2.5 mm wide; leaf, narrowly ovate, acute, petiolate, 20.3–27.9 mm long, 7.6–11.4 mm wide. The inflorescence an ascending, successively flowered raceme; peduncle terete, 17.8–22.9 mm long, 0.5 mm in diam.; bracts, tubular, membranous, 1.0–2.5 mm long, 0.5 mm wide; pedicel, terete, 3.5 mm long, 0.5 mm in diam.; ovary, terete, six-sulcate, 1.6 mm long, 0.4 mm in diam. The flower resupinate; dorsal sepal, ovate-triangular, apiculate, translucent yellow suffused with brownish-purple, 2.9 mm long, 2.0 mm wide; lateral sepals oblique, diverging, fused at the base, apiculate, translucent yellow suffused with brownish-purple, 2.3–2.6 mm long, 1.7–1.8 mm wide; petals transversely bilobed, forked, the lobes equal, falcate, narrowly obtuse, orange suffused with rose, 0.8 mm long, 3.6 mm wide; lip, bilamellate, the blades t-shaped, glabrous, the sinus obtuse with a membranous, oblong minutely pubescent appendix, rose becoming orange near the margins, 0.7 mm long, 1.9 mm wide; column terete, straight, rose, 1.0 mm long, 0.6 mm wide.

**Eponymy:** The new name is formed with the Latin Alphonsus, the latinized version of Alfonso, combined with the honorific suffix -iana. The new species is named to honor Alfonso DOUCETTE.

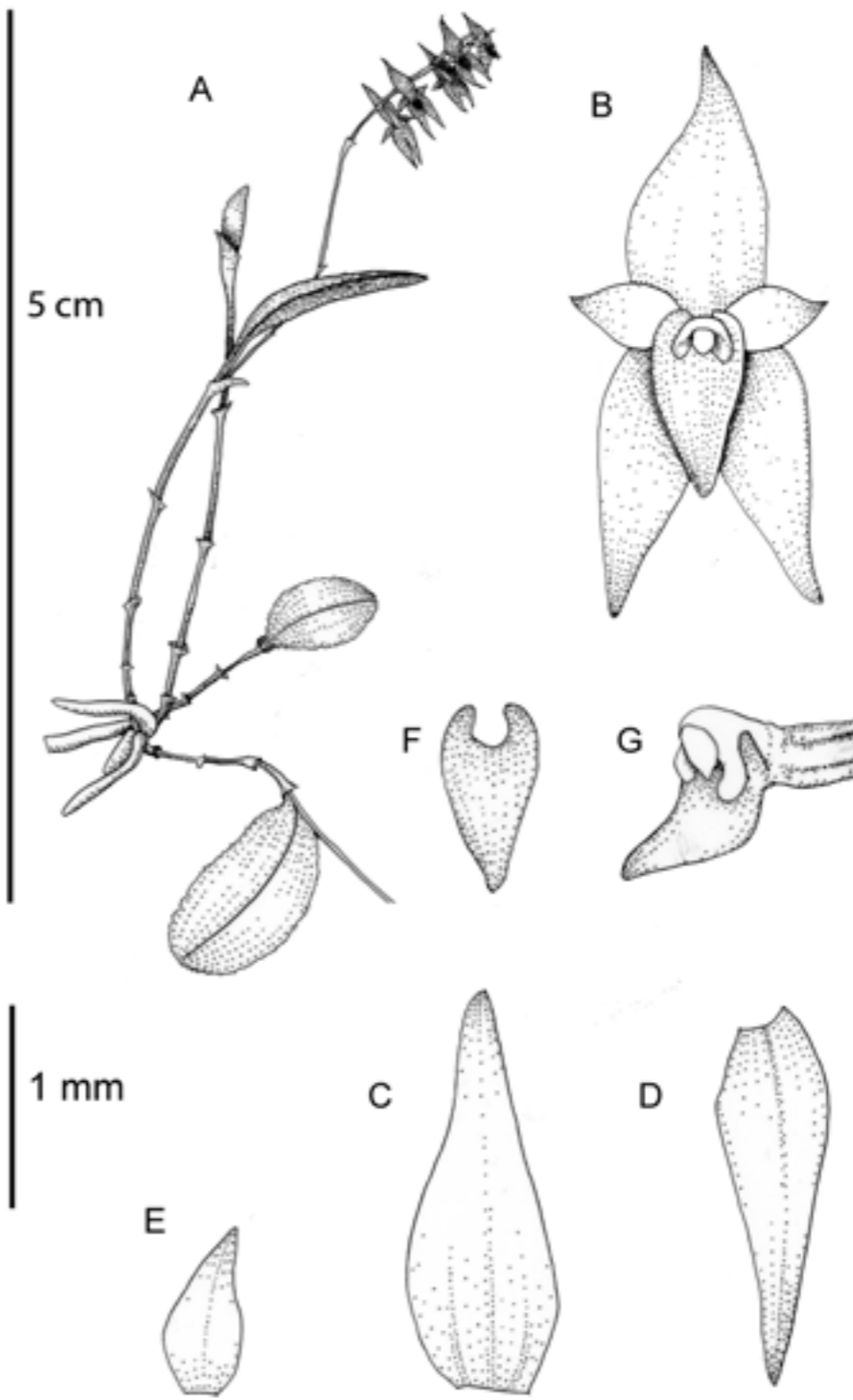
**Discussion:** The new species with highly distinctive petals are only similar to *Lepanthes bifalcis* of Ecuador. The species is readily distinguished by the lateral sepals not fused past the middle (vs. connate for their length) and the trilobed (vs. bilobed) lip tightly surrounding (vs. hanging below) the column. The species can be immediately distinguished from all *Lepanthes* species reported from Panama (BOGARIN et al. 2014) by the distinctive transversely bilobed petals with falcate lobes.

*Lepanthopsis maculanthina* L.E. MATTHEWS, sp. nov.

**Type:** HAITI. Sud: Pic Macaya National Park, secondary forest on karst, 1000 m, flowered in cultivation at the University of Wisconsin-Madison, 12 Mar 2017, Doucette 347 (holotype: **WIS!**; isotype: **USD**).

**Diagnosis:** *Lepanthopsis maculanthina* is most similar to *L. dodii* but can be distinguished by the few flowered inflorescences (up to 6 flowers vs. up to 16 flowers) whose flowers open simultaneously (vs. successively) with purple sepals (vs. yellow), elliptical-subfalcate petals (vs. elliptical-ovate), and the narrower lip (0.5–0.7 mm vs. 1.0 mm).

Herbs epiphytic, caespitose, 15.8–44.3 mm tall. The shoots with a terete stem, 6.2–35.1 mm long, 0.2 mm in diam.; sheaths, 3–5 in number, papery, lepanthiform, 2.6–9.2 mm long, 0.2–1.4 mm wide; leaf, elliptical, denticulate, obtuse, petiolate, 9.6–15.3 mm long, 5.2–7.0 mm wide. The inflorescence a horizontal to ascending, si-



*Lepanthopsis maculanthina*. A. Habit, drawn to 5 cm scale. B. Flower. C. Dorsal sepal. D. Lateral sepal. E. Petal. F. Upper surface of lip. G. Flower in profile with sepals and petals removed. B–G drawn to 1 mm scale. Drawn from the holotype, illustration by Alfonso DOUCETTE.

FORERO, flowered in cultivation at the University of Wisconsin-Madison, 16 Jul 2014, Doucette 224 (holotype: **WIS**).

**Diagnosis:** *Masdevallia alphonsiana* is most similar to *M. cloesii* but can be distinguished by the spotted sepals lacking an eyespot, pandurate lip, and the more acute retrorse tooth at the base of the petal.

Herbs epiphytic, caespitose, 56.2–108.7 mm tall. The shoots with a terete stem, 16.0–24.5 mm long, 2.0 mm in diam.; sheaths, three, papery, compressed, 7.0–14.0 mm long, 2.0–4.0 mm wide; leaf, saphulate, petiolate, erect, obtuse, 62.6–121.8 mm long, 16.0–22.0 mm wide. The inflorescence an ascending, solitary flowered; peduncle terete, 77.1 mm long, 1.7 mm in diam.; bracts, tubular to inflated and compressed, membranous, 12.5 mm long, 1.7–2.6 mm wide; pedicel, terete, 15.5 mm long, 2.3 mm in diam.; ovary, terete, six-sulcate, 7 mm long, 2.2 mm in diam. The flower with broadly spreading sepals; dorsal sepal, elliptical-obovate, fused at the base to the lateral sepals, white spotted with purple, translucent at the base, 21.9 mm long, 9.9 mm wide, contracted into a filiform tail, 46.9 mm long, 1.3 mm in diam.; lateral sepals oblong, white spotted with purple, suffused with

low), elliptical-subfalcate petals (vs. elliptical-ovate), and the narrower lip (0.5–0.7 mm vs. 1.0 mm). *Masdevallia alphonsiana* L.E. MATTHEWS, sp. nov. **Type:** HORTICULTURE. Without collection data, purchased from Socrates

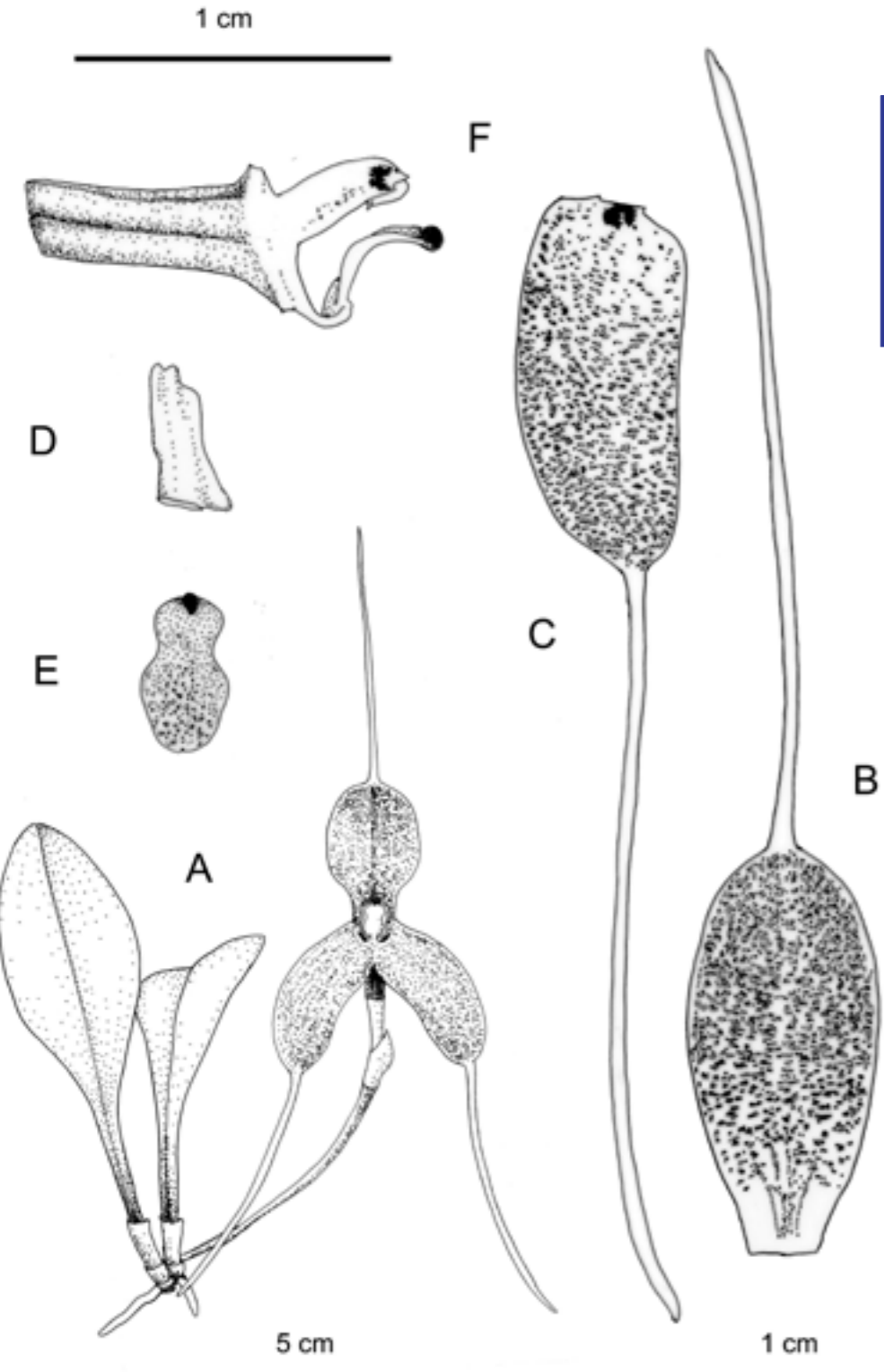
*aristata*, with which it grows sympatrically. The new species can be distinguished by the shorter sepals (1.9–2.2 mm vs. 3.0–5.0 mm) elliptical-subfalcate and acute petals (vs. elliptical-ovate and subacute to obtuse) and the sub-hastate lip (vs. ovate-cordate). *Lepanthopsis hatiensis* is recognized as a heterotypic synonym of *L. aristata* (LUER 1991) and can be distinguished from *L. maculanthina* by the same features (cf. DOD 1986). The species appears to be most similar to *Lepanthopsis dodii* but can be distinguished by the few flowered inflorescences (up to 6 flowers vs. up to 16 flowers) whose flowers open simultaneously (vs. successively) with purple sepals (vs. yellow),

*Masdevallia alphonsiana* L.E. MATTHEWS, sp. nov.

**Type:** HORTICULTURE. Without collection data, purchased from Socrates



Comparison of *Masdevallia cloesii*, A., and *M. alphonsiana*, B. Images courtesy of Alfonso DOUCETTE.



*Masdevallia alphonsiana*. A. Habit, drawn to 5 cm scale. B. Dorsal sepal. C. Lateral sepal. B–C drawn to 1 cm scale. D. Petal. E. Upper surface of lip. F. Flower in profile with sepals and petals removed. D–F drawn to 1 cm scale. Drawn from the holotype, illustration by Alfonso DOUCETTE.

to pandurate: *M. cloesii*, *M. pandurilabia*, *M. vexillifera*, and *M. wurdackii*. The new species can be distinguished from *M. cloesii*, *M. pandurilabia*, and *M. vexillifera* by the presence of a dark purple spot at the base of the flower, termed “eye-spot” by LUER (2002). The new species can be distinguished from *M. wurdackii* by the whitish base color of the sepals (vs. cream to yellow-green), the shorter tails (42.9–46.9 mm vs. 70.0–95.0 mm), and the oblong (vs. “irregularly oblong”) petals (LUER 2002). I do not suspect the plant represents a hybrid given the unique combination of spotted sepals with an eyespot, and a pandurate lip. There are no hybrids registered between any of the species that listed above that could have imparted the spotted sepals to a species with eyespots (RHS 2017).

***Octomeria doucetteana* L.E. MATTHEWS, sp. nov.**

**Type:** HORTICULTURE. Without collection data, purchased from Mundiflora as *Octomeria portillae*, flowered in cultivation 13 Jan 2018, Doucette 251 (holotype: **WIS**).

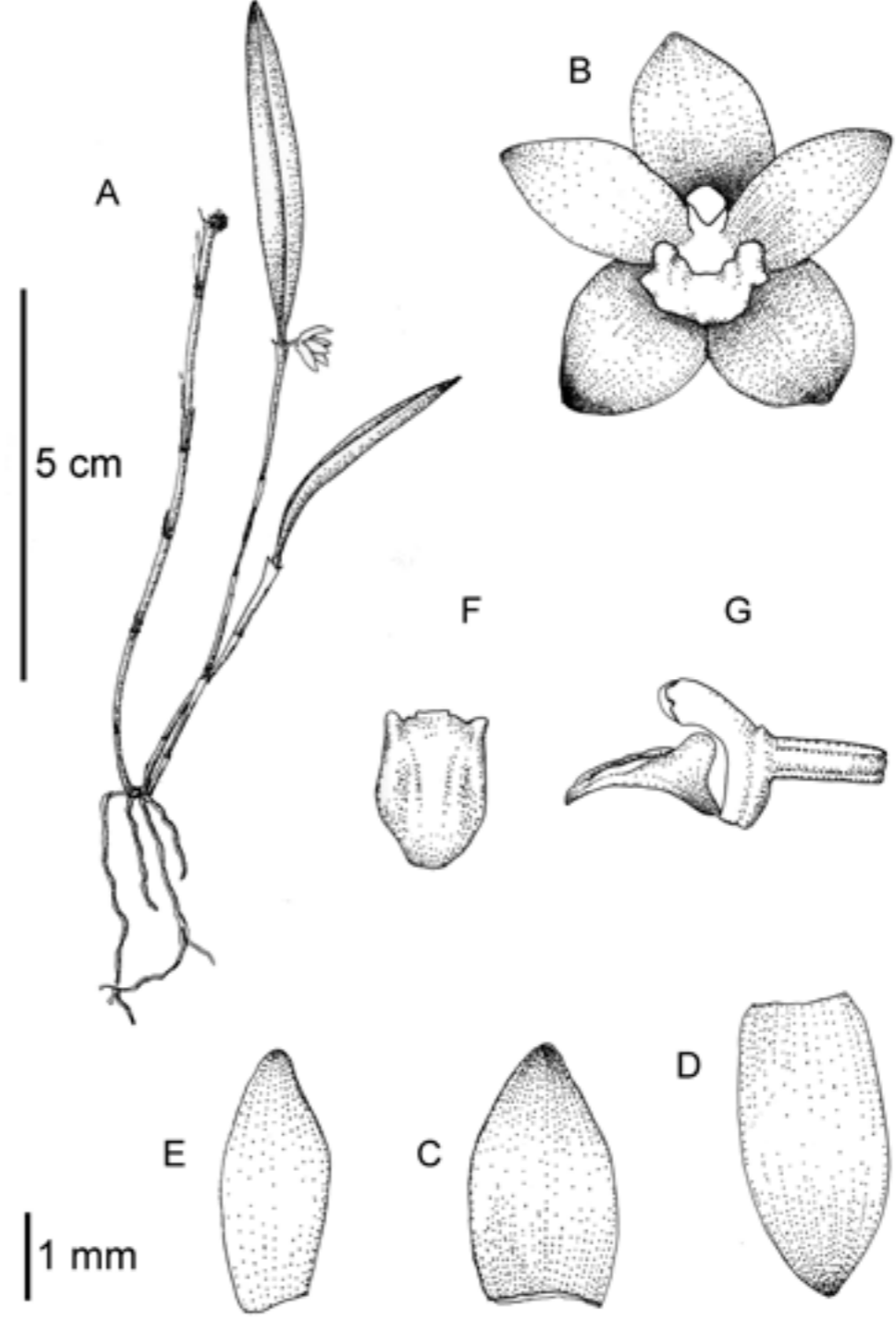
**Diagnosis:** *Octomeria doucetteana* is most similar to *O. portillae* but can be distinguished by the shorter (3.2 mm vs. 3.5 mm), broader (1.9 vs. 1.5 mm), yellow sepals suffused with orange at their apices (vs. yellow), and the bicolored lip (yellow-red vs. yellow), smaller (1.7 × 1.2 mm vs. 2.5 × 2.0 mm), subquadrate-trilobed (vs. ovate-trilobed) lip with ill defined keels.

Herbs presumably epiphytic, caespitose, 65.0–106.0 mm tall. The shoots with a terete stem, 35.0–45.0 mm long, 1.5 mm in diam.; sheaths, 4–5 in number, papery, tubular, compressed, becoming fibrous with age, 12.0–21.0 mm long, 1.5–2.0 mm wide; leaf, narrowly elliptical, subacute, petiolate,

yellow, with a dark purple spot at the base, 18.7 mm long, 9.4 mm wide, contracted into filiform tail, 42.9 mm long, 1.2 mm in diam.; petals white, semi-translucent, oblong, tridenticulate, with a retrorse tooth, 4.6 mm long, 1.9 mm wide; lip, pandurate, with a low callus at the base, and a small raised callus at the apex, white, spotted with purple, suffused with yellow toward the base, marked with red-purple at the apex, 4.5 mm long, 2.7 mm wide; column semiterete, straight, marked with purple, 3.7 mm long, 1.3 mm wide.

**Eponymy:** The new name is formed with the Latin *Alphonsus*, the latinized version of Alfonso, combined with the honorific suffix *-iana*. The new species is named to honor Alfonso DOUCETTE.

**Discussion:** The new species belongs to the *Masdevallia* subsect. *Caudatae* VEITCH and is and can be distinguished from all other species in the section by the combination of spotted sepals and a pandurate lip. There are only a few species of *Masdevallia* subsect. *Caudatae* that have both spotted sepals and a lip that is subpandurate

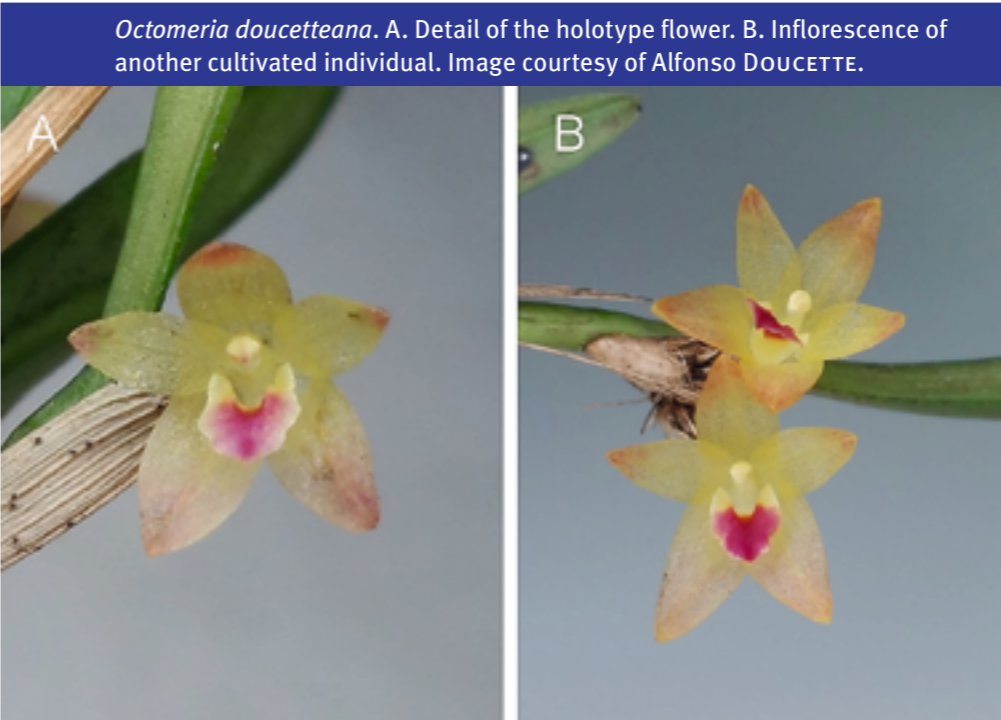


*Octomeria doucetteana*. A. Habit, drawn to 5 cm scale. B. Flower. C. Dorsal sepal. D. Lateral sepal. E. Petal. F. Upper surface of lip. G. Flower in profile with sepals and petals removed. B–G drawn to 1 mm scale. Drawn from the holotype, illustration by Alfonso DOUCETTE.

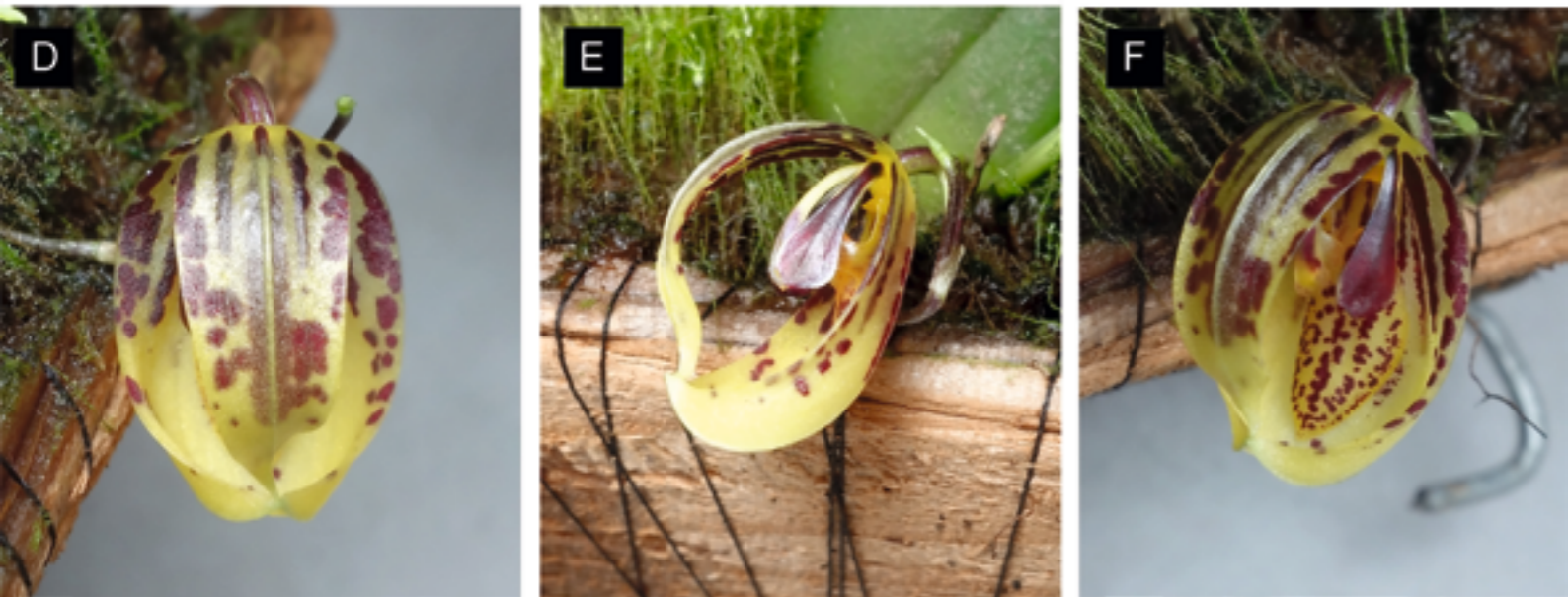
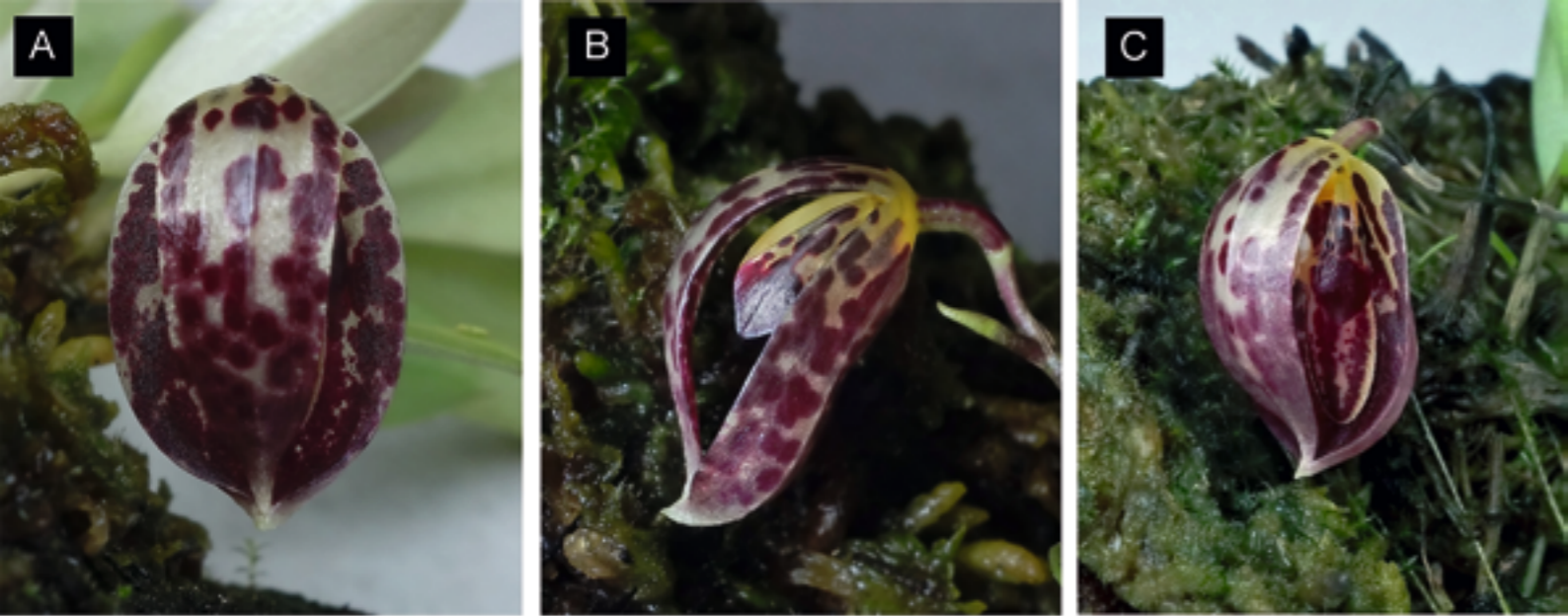
fleshy, 30.0–45.0 mm long, 6.8–6.9 mm wide. The inflorescence a fasciculate inflorescence producing one to three flowers successively; peduncle terete, 0.5 mm long, 0.5 mm in diam.; bracts, lanceolate, papery, deciduous, 4.0 mm long, 1.0 mm wide; pedicel, terete, 1.0 mm long, 0.5 mm in diam.; ovary, terete, six-sulcate, 1.5 mm long, 0.5 mm in diam. The flower resupinate; dorsal sepal, oblong-ovate, triangular, translucent yellow suffused with peach toward the apices, 3.2 mm long, 1.9 mm wide; lateral sepals oblong, translucent yellow suffused with brownish-purple, 3.7 mm long, 1.7 mm wide; petals oblong-lanceolate, similar in color to the sepals, 3.3 mm long, 1.6 mm wide; lip, trilobed, lateral lobes erect, bicarinate, truncate, obtuse, yellow, purple past the middle, 1.7 mm long, 1.2 mm wide; column terete, sub-arcuate, cream, 1.3 mm long, 0.5 mm wide.

**Eponymy:** The new name is formed with the surname DOUCETTE combined with the honorific suffix *-ana*. The new species is named to honor Alfonso DOUCETTE in whose collection the new species was discovered.

**Discussion:** The new species belongs to a pair of species from the Andes with leaves less than 1 cm wide that are narrowly ovate to narrowly elliptical and dorsal sepals between 2.5 and 4.0 mm in length: *Octomeria moscosoae* and *O. portillae*. The species keys out in LUER (2010) to *O. portillae* but can be distinguished by the shorter (3.2 mm vs. 3.5 mm), broader (1.9 vs. 1.5 mm), yellow sepals suffused with orange at their apices (vs. yellow), and the bicolored lip (yellow and red vs. yellow), smaller (1.7 × 1.2 mm vs. 2.5 × 2.0 mm), subquadrate-trilobed (vs. ovate-trilobed) lip with ill defined keels. The new species can be distinguished from *O. moscosoae* by



*Octomeria doucetteana*. A. Detail of the holotype flower. B. Inflorescence of another cultivated individual. Image courtesy of Alfonso DOUCETTE.



the broader leaves (6.8–6.9 mm vs. 2.0–3.0 mm), yellow-orange and red (vs. white) flowers, and the smaller (1.7 × 1.2 mm vs. 2.3 × 1.8 mm), subquadrate-trilobed (vs. oblong-trilobed) lip.

**Phloeophila alphonsiana** L.E. MATTHEWS, *sp. nov.*

**Type:** COLOMBIA. Without collection data, purchased from J&L Orchids, as a *Ophidion cunabulum*, flowered in cultivation at the University of Wisconsin-Madison, 4 February 2018, Doucette 252 (holotype: **WIS**).

**Diagnosis:** *Phloeophila alphonsiana* is most similar to *P. cunabulum* but can be distinguished by the grey-beige (vs. yellow) mottled (vs. spotted) sepals with a narrower aperture, mottled (vs. striped) petals, and the elliptic (vs. obovate) lip with three linear, quasi-geometric markings (vs. spotted) and a densely cellular-papillose (vs. entire) margin.

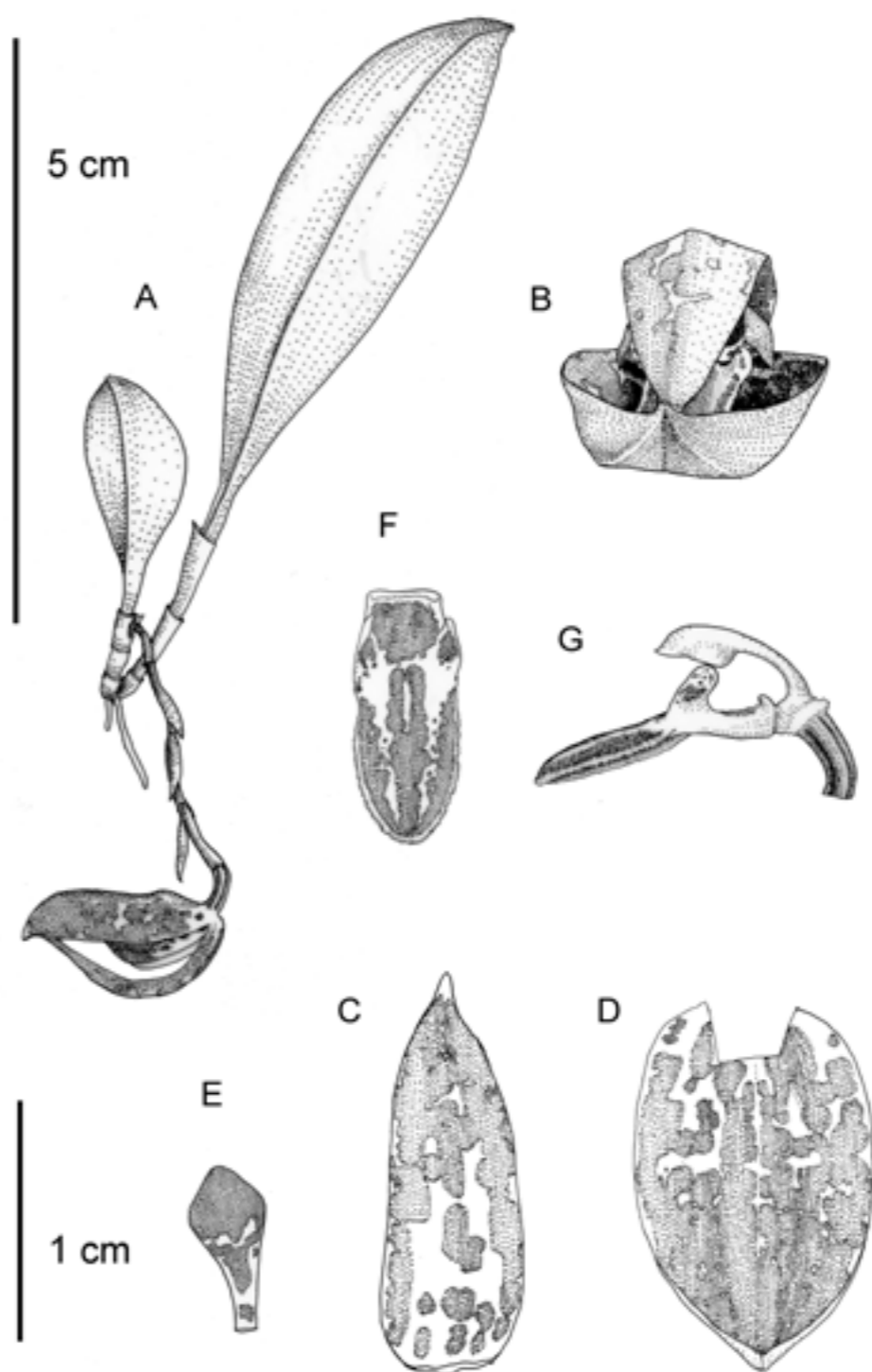
Herbs epiphytic, caespitose, 29.0–76.0 mm tall. The shoots with a terete stem, 5.0–10.0 mm long, 2.0 mm in diam.; sheaths, three, papery, compressed, marked purple, 4.0–20.0 mm long, 1.5–2.0 mm wide; leaf, elliptic, petiolate, erect, 24.0–66.0 mm long, 11.0–17.0 mm wide. The inflorescence a descending, flexuous, successively flowered raceme; peduncle terete, 20.0 mm long, 1.0 mm in diam.; bracts, tubular, membranous, 3.0–4.0 mm long, 1.0–2.0 mm in diam.; pedicel, terete, 4.5 mm long, 1.0 mm in diam.; ovary, terete, six-sulcate, 4.0 mm long, 2.0 mm in diam. The flower two-apertured, oriented with the lateral sepal above the dorsal sepal and parallel to the ground; dorsal sepal, elliptic, acute, fused at the base and apex to the lateral sepals, grey-beige mottled with dark purple, 16.0 mm long, 6.0 mm wide; lateral sepals fused into a shallowly concave, ovate, subacute synsepalum, grey-beige mottled with dark purple, 17.0 mm long, 11.0 mm

Visual comparison of the flower top, profile, and 3/4 profile for *Phloeophila alphonsiana* (A–C) and *P. cunabulum* (D–F). Photos courtesy Alfonso DOUCETTE.

wide; petals spatulate, acute, translucent, mottled purple, 10.0 mm long, 4.5 mm wide; lip, trilobed, elliptic, subacute, lateral lobes erect, densely cellular-papillose margin, grey-beige with three linear-mottled markings and a narrow transverse callus at the base, 11.0 mm long, 4.0 mm wide; column semiterete, sub-arcuate, winged, hooded, unmarked, yellow, 10.0 mm long, 2.5 mm wide.

**Eponymy:** The new name is formed with the Latin Alphonsus, the latinized version of Alfonso, combined with the honorific suffix -iana. The new species is named to honor Alfonso DOUCETTE.

**Discussion:** The new species is most similar to the distinctive *Phloeophila cunabulum* but can be immediate-



ly distinguished from the species by the grey-beige (vs. yellow) mottled (vs. spotted) sepals with a narrower aperture, mottled (vs. striped) petals, and the elliptic (vs. obovate) lip with three linear, quasi-geometric markings (vs. spotted) and a densely cellular-papillose (vs. entire) margin.

**Phloeophila doucetteana** L.E. MATTHEWS, *sp. nov.*

**Type:** HORTICULTURE. Without collection data, originally purchased from Ecuagenera by Andy's Orchids, as a *Ophidion pleurothallopsis*, flowered in cultivation at the University of Wisconsin-Madison, 4 January 2017, Doucette 345 (holotype: **WIS**).

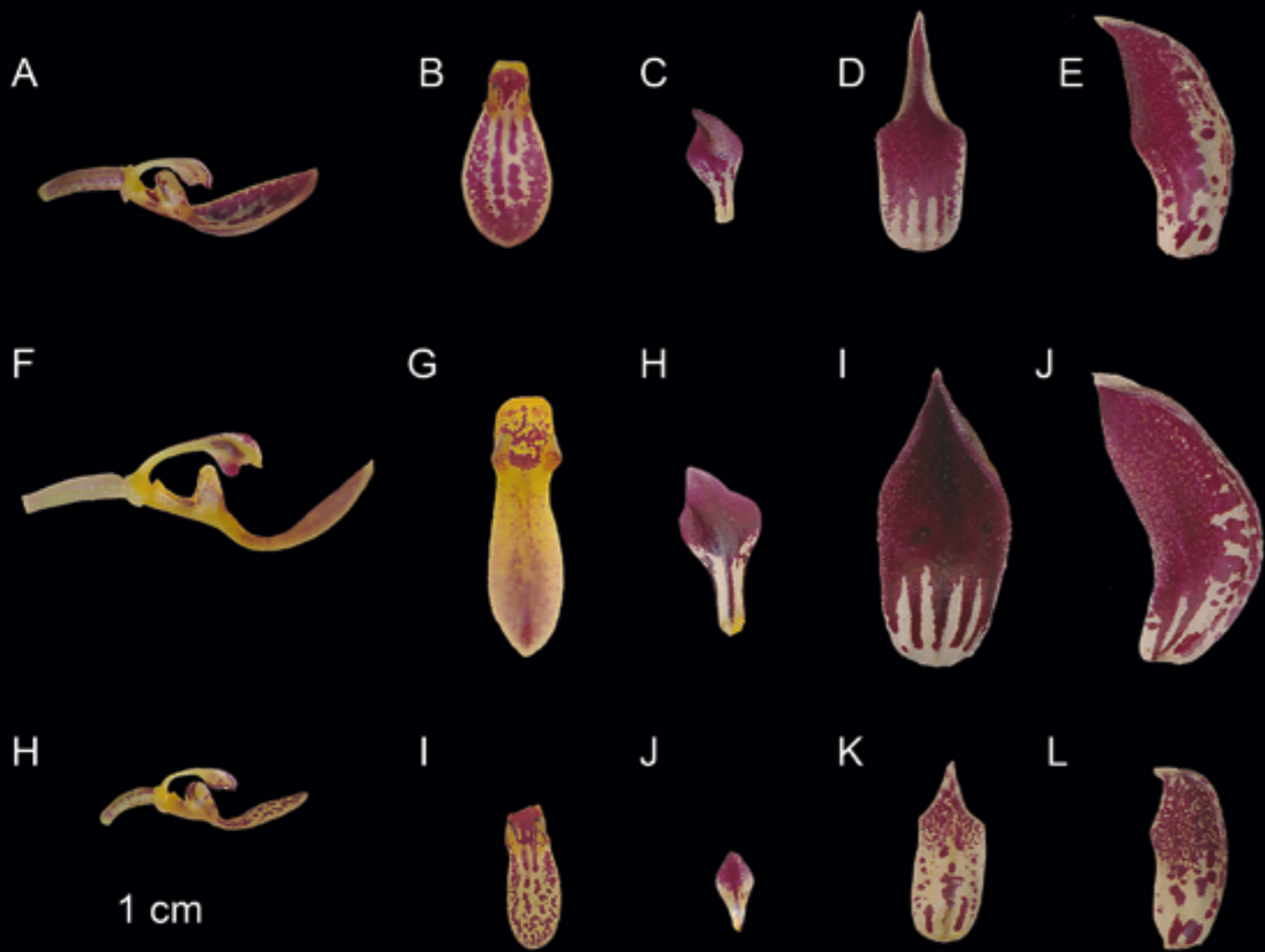
**Diagnosis:** *Phloeophila doucetteana* is most similar to *P. pleurothallopsis* but can be distinguished by the leaves, which are horizontal to descending (vs. erect) and verrucose (vs. glabrous), the solid purple color of the sepals (vs. spotted), and the low keel (vs. flat) of the lip.



*Phloeophila alphonsiana*. A. Habit, drawn to 5 cm scale. B. Flower. C. Dorsal sepal. D. Lateral sepal. E. Petal. F. Upper surface of lip. G. Flower in profile with sepals and petals removed. B–G drawn to 1 cm scale. Drawn from the holotype, illustration by Alfonso DOUCETTE.

Herbs epiphytic, caespitose, 56.2–108.7 mm tall. The shoots with a terete stem, 16.4–30.9 mm long, 0.8–0.9 mm in diam.; sheaths, three, papery, compressed, marked purple, 2.7–26.1 mm long, 1.4–2.0 mm wide; leaf, lanceolate, petiolate, horizontal to descending, minutely verrucose, 39.8–77.8 mm long, 10.7–11.7 mm wide. The inflorescence a descending, flexuous, successively flowered raceme; peduncle terete, 14.7–19.0 mm long, 0.3 mm in diam.; bracts, tubular, membranous, 2.5 mm long, 0.3–1.1 mm in diam.; pedicel, terete, 4.6–7.5 mm long, 0.3 mm in diam.; ovary, terete, six-sulcate, 4.5 mm long, 1.2 mm in diam. The flower saccate, two-apertured, pendent; dorsal sepal, ovate, concave, acute, fused at the base and apex to the lateral sepals, minutely pubescent along the free margin, purple, translucent streaks at base, 13.1 mm long, 5.9 mm wide; lateral sepals sub-falcate, minutely pubescent along the free margin, translucent mottling toward base, 13.7 mm long, 6.2 mm wide, connate to form a deeply concave synsepalum; petals spatulate, acute, translucent, purple above the middle with a purple stripe below the middle, 7.5 mm long, 3.5 mm wide; lip, trilobed, oblong, sub-pandurate, subacute, lat-

Visual comparison of similar *Phloeophila* species. A. *Phloeophila cymbula*. B. *Phloeophila doucetteana*. C. *Phloeophila pleurothallopsis*. Photos courtesy Alfonso DOUCETTE.



Visual comparison of floral parts of similar *Phloeophila* species. A–E. *Phloeophila cymbula*. F–J. *Phloeophila doucetteana*. H–L. *Phloeophila pleurothallopsis*. A, F, H: Flower profile with sepals and petals removed. B, G, I: Upper surface of lip. C, H, J: Petal. D, I, K: Dorsal sepal. E, J, L: Lateral sepal.

eral lobes erect, with a low keel running down the lamina, yellow suffused with purple, 10.9 mm long, 3.5 mm wide; column semiterete, sub-arcuate, winged, hooded, beige marked with purple, 5.7 mm long, 2.0 mm wide.

**Eponymy:** The new name is formed with the surname DOUCETTE combined with the honorific suffix -ana. The new species is named to honor Alfonso DOUCETTE in whose collection the new species was discovered.

**Discussion:** The new species has been confused in cultivation as *Phloeophila pleurothallopsis* and *P. cunabulum*. The species can be immediately distinguished from both by the horizontal to descending, sub-verrucose leaves, and the solid purple sepals (vs. spotted or yellow) and the unique lip morphology, which is oblong and sub-pancurate with a low keel running down the center of the lamina. The lips of the other two species lack the low keel. *Phloeophila cymbula* is the on-

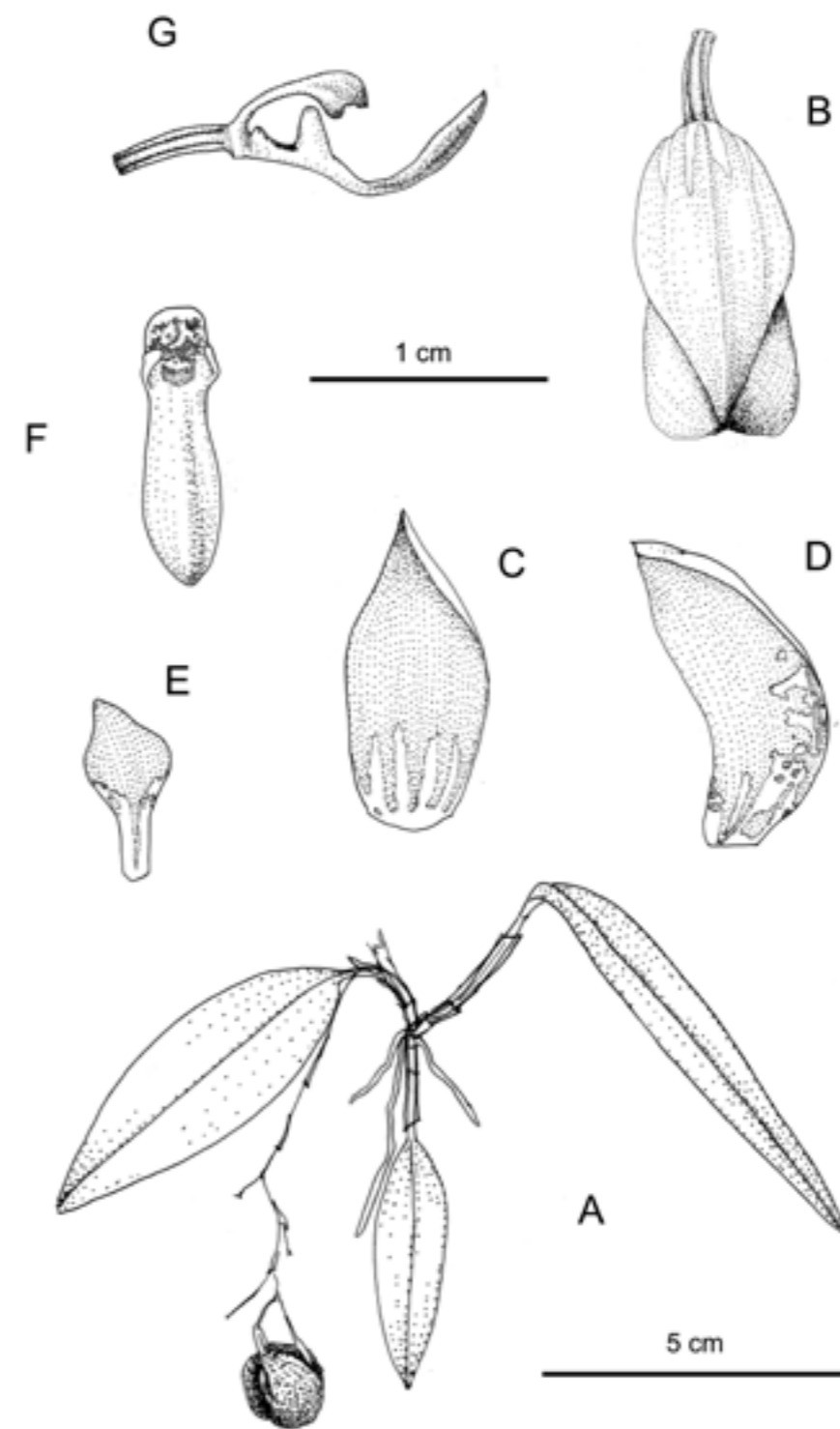
ly other species *P. doucetteana* could be confused with. It is distinguished from that species by the broader dorsal sepal lacking the involute margins of the apex and in the flat rather than concave lip. A visual comparison of *Phloeophila cymbula*, *P. doucetteana*, and *P. pleurothallopsis* is provided in figs. 12 and 13.

The new species appears to be rare in cultivation but is broadly distributed in collections in Europe and North and South America. I do not suspect the plant represents a hybrid given the unique vegetative and floral morphology of the species. There are no registered *Phloeophila* hybrids (RHS 2017). A plant resembling the species was photographed by Carlos A. Mesa L. in the Reserva de Tatamá in Colombia (pers. comm. Alfonso DOUCETTE, 1th of April 2018).

***Pleurothallis doucetteana*** L.E. MATTHEWS, **sp. nov.** (Figs. 14–15)

**Type:**—ECUADOR. Without specific locality, purchased from Ecuagenera as *Pleurothallis talpinarioides*, reportedly from Morona-Santiago, but without a specific collection locality, 2 February 2016, Doucette 344 (holotype: **QCNE**; isotype: **WIS**).

**Diagnosis:** *Pleurothallis doucetteana* is most similar to the Venezuelan, *Pleurothallis talpinarioides* but differs in the narrow spathe held against the center of the leaf (vs. broad spathe held away from the leaf), the sub-petiolate (vs. petiolate) leaf, the sepals marked heavily with purple (vs. rose white), and the lip with an apical apiculum (vs. no apiculum).



*Phloeophila doucetteana*. A. Habit, drawn to 5 cm scale. B. Flower. C. Dorsal sepal. D. Lateral sepal. E. Petal. F. Upper surface of lip. G. Flower in profile with sepals and petals removed. B–G drawn to 1 cm scale. Drawn from the holotype, illustration by Alfonso DOUCETTE.

**Eponymy:** The new name is formed with the surname DOUCETTE combined with the honorific suffix -ana. The new species is named to honor Alfonso DOUCETTE.

**Notes:** The species is best attributed to *Pleurothallis* subgen. *Restrepioidia* sect. *Restrepioidea* based on its well developed stems enveloped by only a few tubular sheaths, solitary flowers, connate lateral sepals, attenuate petals, trilobed lip, and stout, semiterete, hooded column. The new species described here is immediately distinguished from all known species in the section by the combination of purple sepals, and purple, apiculate lip. Despite the superficial similarity, the new species is readily distinguished from *P. talpinarioides* by the. The new species is also similar to *P. tentaculata* but can be distinguished by the smaller plant size, the purple sepals, and the apiculate lip.

Since LUER's (2000) treatment of the species in *Pleurothallis* subgen. *Restrepiodeae* sect. *Restrepiodeae*

Epiphytic, caespitose herbs, roots 0.8 mm in diam. Stems unifoliate, 61.0–116.7 × 1.5–1.8 mm, enveloped by 2–3 tubular, papery sheaths, 3.5–30.1 × 1.5–1.8 mm. Leaves erect, coriaceous, elliptic, sub-petiolate, acute with a tridentate apex, 60.0–93.4 × 15.3–23.7 mm. Inflorescence a solitary flower produced from a fasciculate inflorescence; peduncle filiform, glabrous, 3.6 × 0.8 mm; bracts tubular, membranous 4.7 × 0.9 mm; pedicel terete, glabrous 9.6 × 0.8 mm; ovary glabrous, 6-sulcate, 9.6–10.1 × 1.5 mm; dorsal sepal translucent, heavily suffused with purple, ovate, acute, 19.1–20.0 × 5.8–6.0 mm; lateral sepals translucent, heavily suffused with purple, connate for their

length into an ovate, acute synsepal, 17.5–18.1 × 7.6–8.0 mm; petals translucent, heavily suffused with purple, ovate with an erose margin toward the apex, which is contracted into a long, dark, filiform appendage, 14.3–15.0 × 2.8 mm; lip purple, appearing orange-purple in photographs, narrowly oblong, with two lobes near the base, the margin involute past the lobes, firmbricate along the margin between the lobes and the point where the lip becomes involute, apiculate at the apex, 15.5 × 2.6 mm, unexpanded; column purple, semiterete, with a membranous, erose apex, anther cap yellow, ventral, stigma shiny, purple, concave, 2.6 × 1.0 mm.

*Pleurothallis doucetteana*. A. Detail of the holotype flower. Image courtesy of Alfonso DOUCETTE.



*Pleurothallis doucetteana*. A. Habit, drawn to 5 cm scale. B. Flower. C. Dorsal sepal. D. Lateral sepal. E. Petal. F. Flower in profile with sepals and petals removed. G. Upper surface of lip. H. Lower surface of lip. B–H drawn to 1 cm scale. Drawn from the holotype, illustration by Alfonso DOUCETTE.

described *Restrepia vittata* with “white” sepals and the lip as “dull yellow, striped with deep rose”; an illustration is also provided matching *P. nuda*. *Pleurothallis vittata* var. *biflora* the basionym for *Restrepia biflora* is described by REGEL (1856) as having “albida” sepals and a lip “lineis 3 rubris notatum.”

Plants without collection data described from cultivated material and without known wild populations may represent artificial or spontaneous greenhouse hybrids. However, I feel confident that *Pleurothallis doucetteana* does not have a contemporary hybrid origin. The morphology of the species is not unusual for members of *Pleurothallis* subgen. *Restrepioidea* and it can be distinguished from all known members of the subgenus by subtle traits that appear to be fixed among the seed grown individuals at Ecuagenera, namely the purple color of the sepals and the well developed apiculum at the tip of the lip. The striking uniformity of the F2 progeny cultivated at Ecuagenera also supports *Pleurothallis doucetteana* as a species.



*Stelis uvaegelata*. A. Detail of the holotype inflorescence. Image courtesy of Alfonso DOUCETTE.

nearly 300 new species and combinations have been made in *Pleurothallis* (International Plant Names Index 2018). Of these ca. 300 new species, one is attributable to subgenus *Restrepioidea*: *Lindleyalis saueri* LUER. The species was distinguished from *P. nuda* based on “the considerably larger plant size and flower, the sepals being five centimeters long, the lip lacks the usual prominent, three purple stripes of *L. nuda* [*P. nuda*]; the basal lobes are rounded and concave anteriorly; and the midlobe is surrounded by a broad margin of dense, hairlike spicules” (LUER & THOERLE 2012). The new species differs mainly in the flower size given the shared floral morphol-

ogy and the existence of smaller flowers matching in morphology that also have yellow lips, lacking stripes, with a broad margin of “dense, hairlike spicules”.

I also reviewed synonyms attributed to *Pleurothallis nuda* (*Pleurothallis hemirhoda* PAXTON & LINDLEY, *Restrepia vittata* LINDL., *R. biflora* REGEL). The illustration of *P. hemirhoda* associated with the protologue differs from *P. doucetteana* in having unmarked sepals and a striped lip. LINDLEY (1848)

*Stelis uvaegelata* L.E. MATTHEWS, sp. nov.

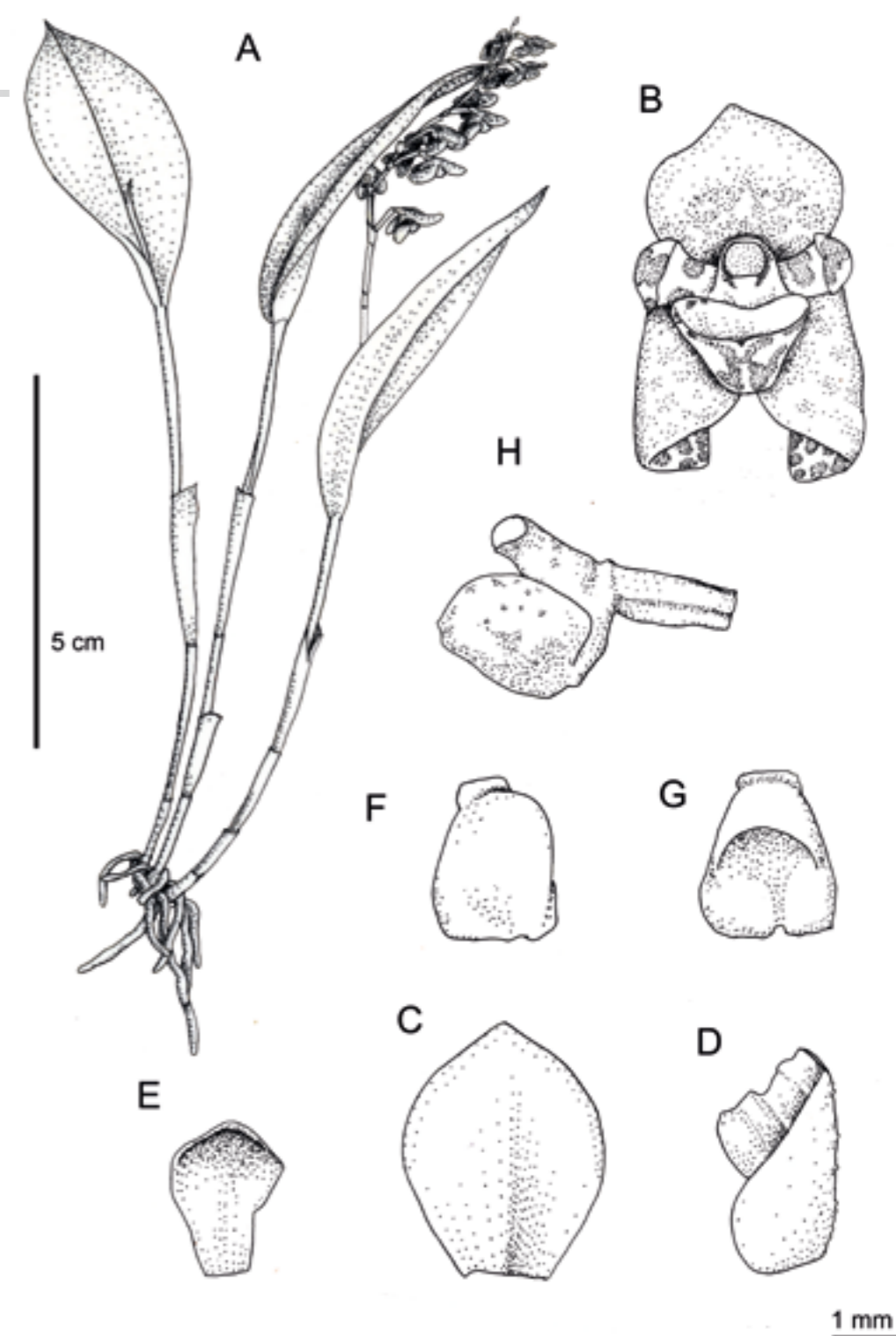
**Type:** PANAMA: Chiriqui, above Guadalupe, growing on a fallen and heavily decayed log in competition with terrestrial herbs, 2000 m, 19 Dec 2014, Doucette 224 (holotype: PMA; isotype, WIS).

**Diagnosis:** *Stelis uvaegelata* is most similar to *S. vasqueziana* KARREMANS of Bolivia but differs in the distichous (vs. secund) arrangement of the flowers, sepals that are transversely recurved 180° (vs. not), and the lip with a cleft (vs. not) apex.

Herbs terrestrial, caespitose, 98.0–122.3 mm tall, roots filiform, 1.3 in diam. The shoots with a terete stem, 55.7–77.3 mm long, 1.3–1.7 mm in diam.; sheaths, three, papery, compressed, 7.5–22.1 mm long, 1.6–3.3 mm wide; leaf, ovate, acute, coriaceous, 42.8–44.9 mm long, 18.5–19.0 mm wide. The inflorescence an ascending, simultaneously flowered raceme; peduncle terete, 37.0 mm long, 0.5 mm in diam.; bracts, tubular, membranous, 1.3–1.7 mm long, 0.5 mm wide; pedicel, terete, 1.7–2.2 mm long, 0.5 mm in diam.; ovary, terete, six-sulcate, 1.7 mm long, 0.7 mm in diam. The flower resupinate with broadly spreading sepals; dorsal sepal, broadly elliptical-obovate, free from the lateral sepals, beige mottled purple, 3.5 mm long, 2.7 mm wide; lateral sepals oblong, transversely recurved 180°, beige mottled purple, 3.1 mm long, 1.5 mm wide; petals spatulate, concave, beige, semi-translucent, spotted purple, 2.1 mm long, 1.6 mm wide; lip, cucullate, notched, beige spotted purple, 2.1 mm long, 1.8 mm wide; column terete, straight, marked with purple, 1.4 mm long, 0.5 mm in diam.

**Etymology:** The new name is formed by translating “grape jelly” into Latin. The name refers to the coloration of the perianth.

**Discussion:** The new species appears to be unique in the genus given the combination of sepals that are transversely recurved 180°, concave petals, and a cucullate lip with a cleft apex.



The species is most similar to the distinctive *Stelis vasqueziana* of Bolivia, which differs from the new species in having a secund (vs. distichous) arrangement of the flowers, sepals that are not transversely recurved, and a lip that lacks a cleft apex (LUER & THOERLE 2012). These traits also distinguish *Stelis uvaegelata* from other members of a group of species formerly attributed to *Pleurothallis* subgen. *Crocodeilanthe* (RCHB.F. & WARSZ.) LUER (LUER 1998).

**Acknowledgements:** I would like to thank Alfonso DOUCETTE for allowing me access to his very special collection of Pleurothallidinae,

*Stelis uvaegelata*. A. Habit, drawn to 5 cm scale. B. Flower. C. Dorsal sepal. D. Lateral sepal. E. Petal. F. Lower surface of lip. G. Upper surface of lip. H. Flower in profile with sepals and petals removed. B–H drawn to 1 mm scale. Drawn from the holotype, illustration by Alfonso DOUCETTE.

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