

Pleurothallis tomtroutmanii K.W. Holcomb, sp. nov.

Plant small, epiphytic, caespitose, roots very slender.

Ramicauls very slender, erect to suberect, 5-6.75 cm long, with a thin, tubular sheath below the middle and another at the base.

Leaf suberect to spreading, thinly coriaceous, ovate, acute, 3-3.75 cm long, 1.5-1.75 cm wide, the base sessile, rounded to subcordate.

Inflorescence arching, pendent, very flexible, 7 to 9-flowered raceme significantly longer than the leaf, 5-5.25 cm long including the peduncle, borne from a 1 cm long spathaceous bract at the base of the leaf; floral bracts infundibular, 1.5-2 mm long; pedicels 1.5-2 mm long; ovary 1 mm long, flowers resupinate.

Labellum (Lip) purple or yellow with irregular purple patches, trilobed, oblong, 3-veined, 3 mm long, 2 mm wide, with a well-developed glenion at the base, the dorsal surface glabrous, convex at the base, deflexed just above the base, gradually becoming concave below the apex, the sides concave at the base gradually becoming convex making the lip widest just above the middle, the lateral lobes basal, erect, flanking the column and curved into horn-like structures, the apical lobe sharply acuminate.

Sepal dark purple or yellow with irregular purple patches, 3-veined, 6 mm long, 4 mm wide at the base, concave at base, folded into a tight tube 2 mm wide at the apex.

Synsepal dark purple or yellow with irregular purple patches, 3-veined, 7 mm long, 5 mm wide at the base, concave at base, folded into a tight tube 2 mm wide at the apex

Petals colored as the sepals, entire, linear to linear-ovate, acute, attenuate, 7 mm long, 1 mm wide, 1-veined.

Column semiterete, 2 mm long, 2 mm wide, anther apical, stigma apical, the foot obsolescent.

Eponymy: Named for Thomas Fulwood Troutman (1920-2008), a dear friend and mentor to the author. Mr. Troutman was also a dedicated volunteer at the Atlanta Botanical Garden for 30-years. The Atlanta Botanical Garden is now home to a substantial *ex situ* collection of *Pleurothallidinae*.

ECUADOR: Without collection data. Obtained from Ecuagenera, Gualaceo, Ecuador by Andy's Orchids, Encinitas, California, as *Pleurothallis tryssa*. Acquired from Andy's Orchids by the author in 2017. Flowered in cultivation by the author in 2017. *K. W. Holcomb (Holotype: GEO 18022)*

Distribution: Although the exact location of the holotype is unknown, *P. tomtroutmanii* has been observed *in situ*. The species was first observed in January 2019, and again in January 2021, in San Miguel de los Bancos in Pinchincha, Ecuador (Fig 5, 6 and 7). Both observations were documented with photographic evidence on iNaturalist.org as *Pleurothallis tryssa*. In July 2021, *P. tomtroutmanii* was photographed in the Manduriacu Reserve (Fig 8). This observation was documented on flickr.com as *Pleurothallis tryssa*. All of the specimens observed in the field have been yellow with irregular purple patches. However, a dark purple specimen similar to the holotype (Fig 7) was found at the site in San Miguel de los Bancos growing amongst the spotted specimens in January 2021. Based on the few observations of *P. tomtroutmanii* in the field, the dark purple color of the holotype is assumed to be atypical for the species.

Morphological Comparison: While reviewing the holotype material for *P. tryssa* (SEL 223), it was discovered that flowers from the holotype had not been preserved in spirits. Flowers are present on the dried specimen, but considering the historical value of the holotype material, the possibility of damaging or destroying it by removing and rehydrating the preserved flowers presented an unacceptable level of risk. Therefore, the morphological comparison of the two species is based on the written descriptions and illustrations for *P. tryssa* without studying preserved flowers.

Luer published the protologue for *P. tryssa*, which included a written description and corresponding illustration, in *Selbyana* in 1975. In 1998, he published a 2nd written description and corresponding illustration which was included in his *Icones Pleurothallidarum*. Both descriptions and illustrations were studied and compared to *P. tomtroutmanii*. Several significant morphological differences were identified, which are discussed in this article.

Pleurothallis tomtroutmanii is superficially similar to *Pleurothallis tryssa*. Vegetatively, the plants are virtually indistinguishable. However, there are significant morphological differences in the flowers of the two species. The dorsal sepal and synsepal of *P. tomtroutmanii* are folded into a tight tube at the apex (Fig 3 and 4). This characteristic gives the flowers a very slender appearance compared to the rather robust flowers of *P. tryssa* which have much wider sepals (Fig 4). The lip of *P. tomtroutmanii* is significantly longer than *P. tryssa*, 3 mm long versus 1.5 mm, and has minutely denticulated margins, which are completely absent in *P. tryssa* (Fig

2). Finally, *P. tomtroutmanii* has much longer inflorescences than *P. tryssa*. The inflorescence of *P. tomtroutmanii* is up to three-times the length of the leaf (Fig 1), whereas the inflorescence of *P. tryssa* is typically just slightly longer than the leaf.

Diagnosis: *Pleurothallis tomtroutmanii* is easily distinguished from *P. tryssa* by its slender, delicate flowers, as well as, the minutely denticulated margins on the lip.

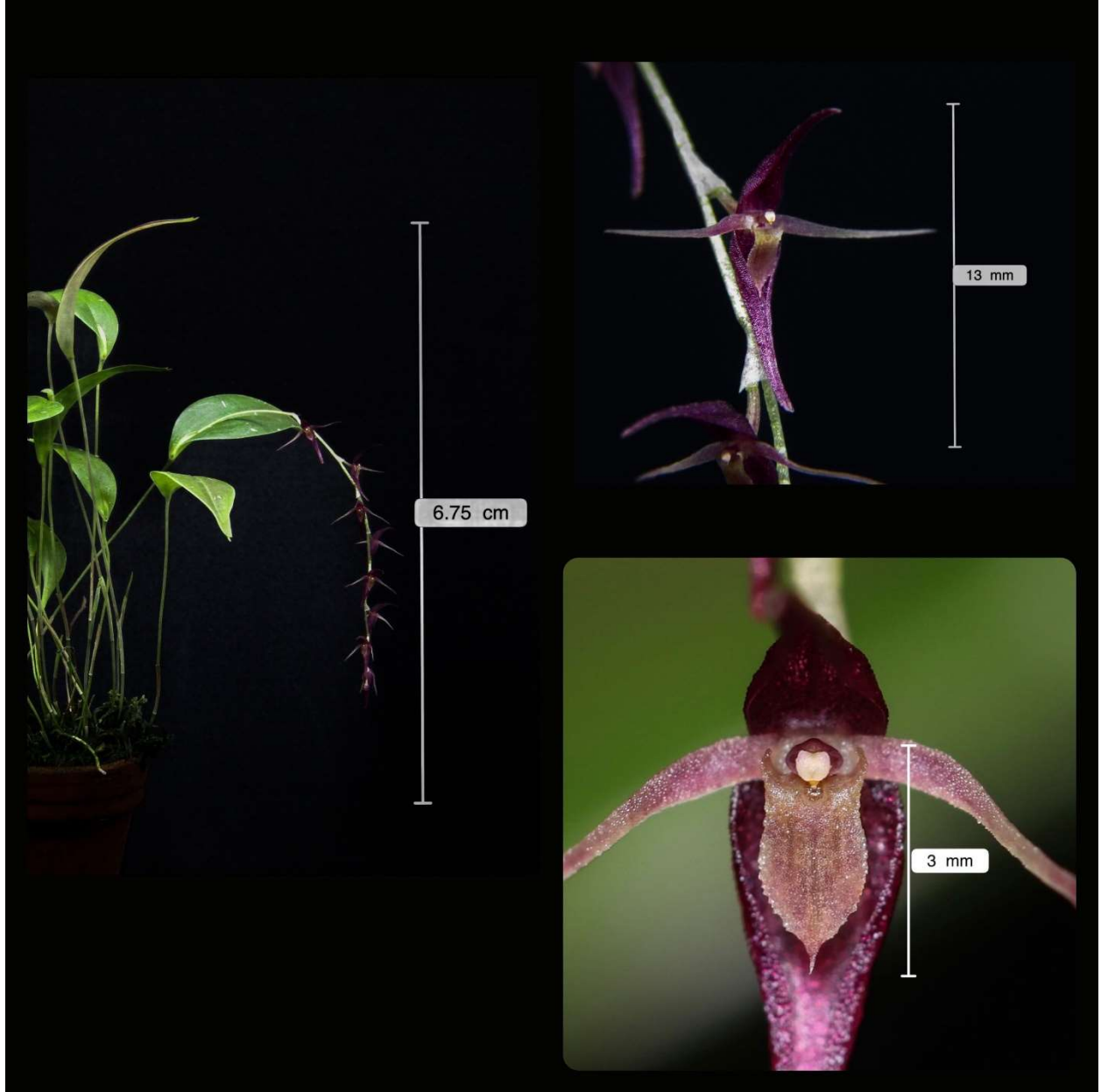


Fig. 1. *Pleurothallis tomtroutmanii*.
Photos taken of the same plant used to prepare the holotype material.



Fig 2. Comparison of the lips of *Pleurothallis tryssa* (top) and *P. tomtroutmanii* (bottom). Photos taken of plants grown by the author, including the plant used to prepare the holotype material.



Fig 3. The dorsal sepal and synsepal of *Pleurothallis tomtROUTMANII* form a tight tube giving the flowers a very slender appearance. Photos taken of the plant used to prepare the holotype material.

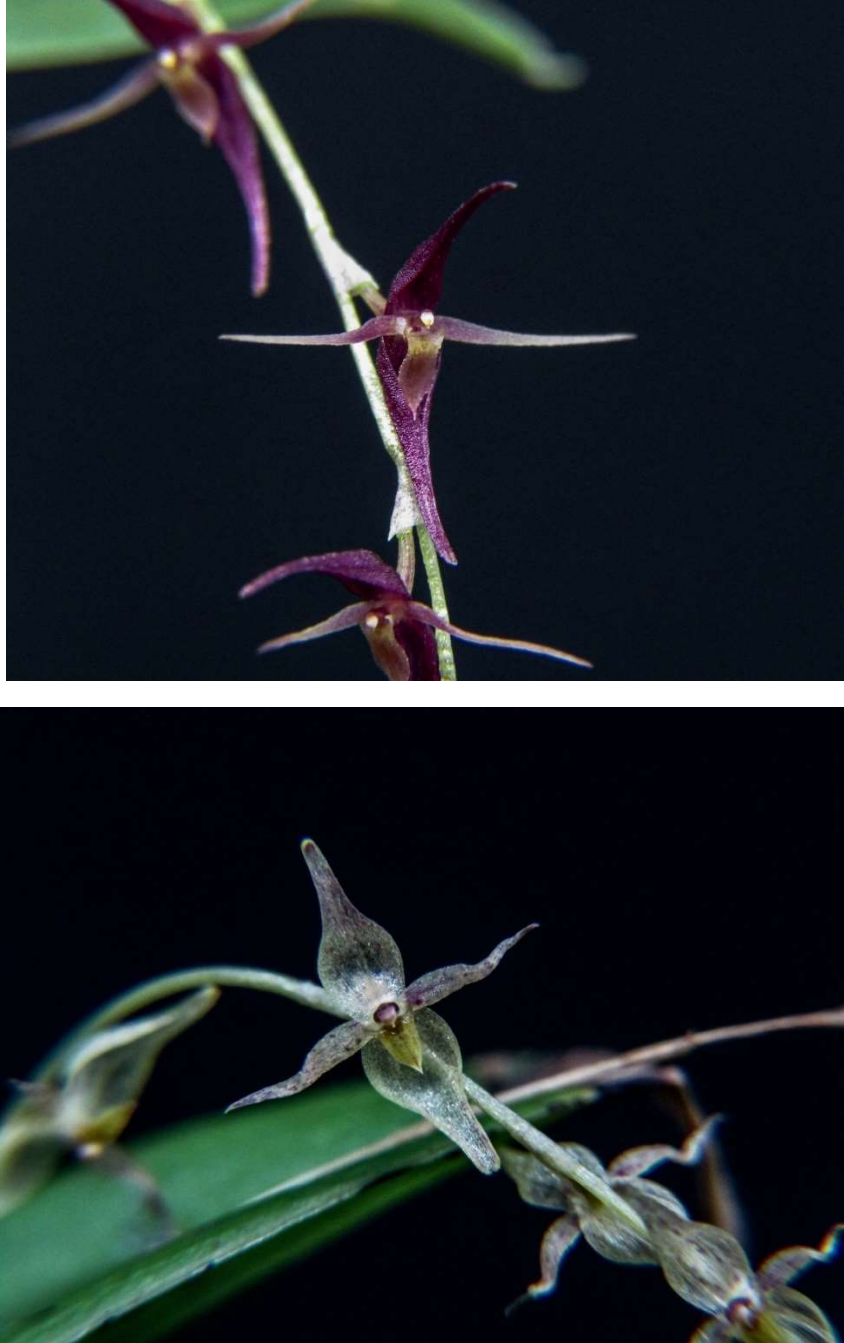


Fig 4. The slender flowers of *Pleurothallis tomtroutmanii* (top) compared to the rather robust flowers of *Pleurothallis tryssa* (bottom). Photos taken of plants grown by the author, including the plant used to prepare the holotype material.



Fig 5. *Pleurothallis tomliniana* observed *in situ* January 2019. Photo Credit: Rudy Gelis



Fig 6. *Pleurothallis tomtroutmanii* observed *in situ* January 2021. Photo Credit: Rudy Gelis.



Fig 7. *Pleurothallis tomtroutmanii* photographed *in situ* January 2021. This is the only field observation of a specimen with the dark purple color of the holotype. This plant was growing within the same population in Fig 6. above. The dark purple color of the holotype must be atypical for the species. Photo Credit: Dali Falero.



Fig 8. *Pleurothallis tomliniana* photographed *in situ* July 2021. Photo Credit: Marco F. Monteros

Acknowledgments

The author would like to thank Elizabeth Gandy, Assistant Curator, Marie Selby Botanical Gardens for providing digital images of the holotype material of *P. tyssa*.