First record of *Vanilla labellopapillata* (Orchidaceae: Vanilloideae) in the state of Amazonas, Brazil

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ABSTRACT

The first record of *Vanilla labellopapillata* is presented for the state of Amazonas, Brazil, in the region of Manaus, now the western limit of the species, which was previously known only from the type locality in the state of Pará. A brief description is provided and taxonomic and ecological aspects of the species are discussed in the light of this new finding.

KEYWORDS: Adolpho Ducke Forest Reserve, Amazon, dense ombrophilous forest, hemiepiphyte, taxonomy

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Vanilla labellopapillata A.K. Koch, Fraga, J.U. Santos & Ilk.-Borg., Syst. Bot. 38(4): 975. 2013. (Figure 1A-F).

Hemiepiphytic plant, scandent/lianescent, approximately 15 m long. Stem cylindric, glabrous, flexible, dark green, internodes (n = 10) 11.1 ± 1.8 × 0.9 ± 0.09 cm. Leaves (n = 11) 19.47 ± 2.75 × 2.21 ± 0.28 cm, linear-lanceolate, with an acute and reflexed apex, pseudo-petiole 0.99 ± 0.09 cm long. Inflorescence (n = 6) 12.2 ± 1.4 cm long, racemose, 8-13-flowered, originating of the leaf axils. Floral bracts (n = 6) 1.02 ± 0.19 × 0.65 ± 0.05 cm, ovate, apically obtuse, smaller towards the raceme apex. Flowers (n = 6) pale yellow slightly greenish, pedicellate, pedicel and ovary 5.37 ± 0.7 cm long, cylindric, green near the ovary and white near the pedicel. Sepals oblancoate, apically obtuse, dorsal 5.60 ± 0.28 × 1.00 ± 0.13 cm, lateral 5.33 ± 0.21 × 1.13 ± 0.12 cm; petals 5.40 ± 0.27 × 0.80 ± 0.14 cm, linear-lanceolate, apically obtuse, midvein prominent; lip 3.82 ± 0.24 × 2.2 ± 0.15 cm, clawed, adnate to the column along the margins of the basal half, tubular, ventral surface with rows of imbricated and denticular scales in the middle and anterior portion, papillae becoming enlarged to form a suborbicular tuft of trichomes that covers almost entirely the surface of the median lobe, distinctly trilobed, with a callosity on the disc; penicillated callus 0.35 ± 0.08 cm long.; lateral lobes 2.75 ± 0.12 × 1.05 ± 0.14 cm, rounded, lateral margins entire, apical margin fimbriate; midlobe 0.63 ± 0.08 × 0.70 ± 0.11 cm, oblong, truncate; column 2.92 ± 0.13 cm long, semi-cylindric, slender, sparsely hairy in the ventral region, attenuated at base, with two small membranaceous wings at apex; anthers versatile, saddle-shaped, stigma trilobed; pollen free, yellow. Fruit not seen.

Material examined: Brazil, Amazonas: Manaus, Reserva Florestal Adolpho Ducke, flowered in cultivation in MUSA orchid greenhouse, 19.11.2019, fl., D.R.P. Krahl & A.H. Krahl 418 (INPA); Idem, fl., D.R.P. Krahl & A.H. Krahl 419 (INPA); Idem, fl., A.H. Krahl & D.R.P. Krahl 1093 (INPA); Idem, fl., A.H. Krahl & D.R.P. Krahl 1094 (INPA); Manaus, BR 174, Km 901, Ramal Castanheira, Sítio Angelim, Dense ombrophilous forest, fl., 24.11.2019, A.H. Krahl & J.J. Valsko 1109 (INPA); Idem, fl., A.H. Krahl & J.J. Valsko 1110 (INPA).

Vanilla labellopapillata has been recently described by Koch et al. (2013) from the Pará state. In the present study it was found in two places in a dense ombrophilous forest near the city of Manaus, namely the Reserva Florestal Adolpho Ducke (RFAD), near the area of the botanical garden of the Museu da Amazônia (MUSA) (Museum of Amazonia) and Sítio Angelim, located on the Ramal Castanheira road, Km 901 of the BR 174 highway, that connects Manaus (Amazonas state) to Boa Vista (Roraima state).

According to Koch et al. (2013), V. labellopapillata is a close relative of V. insignis Ames. In V. insignis, the bracts and the flower parts are larger, the leaf is oblong-elliptic with an abruptly acuminated apex (vs. linear-lanceolate with an reflexed apex) and the penicillate callus is composed of ca. 13 rows of imbricated and congested scales (vs. 3 rows of imbricated and denticular scales) (see more details in Koch et al. 2013). Vanilla insignis was recorded from the Caribbean basin in Central America, in Honduras, Belize, Guatemala and Mexico, at an altitude of ca. 900 m. (Soto-Arenas and Cribb 2010), whereas V. labellopapillata is only found in the Brazilian Amazon, growing in floodplain forest (várzea) (Koch et al. 2013) and terra firme forest (our own observations) at an altitude of about 100 m. This last type of vegetation is therefore a novelty for V. labellopapillata, since it had been registered only for várzea forest.

Vanilla labellopapillata can also be confused with V. odorata C.Presl [=V. uncinata Huber ex Hoehne according to Garay (1978), Hamer (1984), Dodson and Dodson (1980), Soto-Arenas and Cribb (2010) and Koch et al. (2013)]. However it differs from V. labellopapillata in the longer internodes (approximately over 10 cm long vs. less than 10 cm), shorter floral bracts (less than 6 mm vs. more than 8 mm) and a distinctly trilobed lip without branched and thickened veins and with fimbriate margins (vs. obscurely trilobed lip with branched and slightly thickened veins in the distal third and long-lacerate/fimbriate to laciniate margins).
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