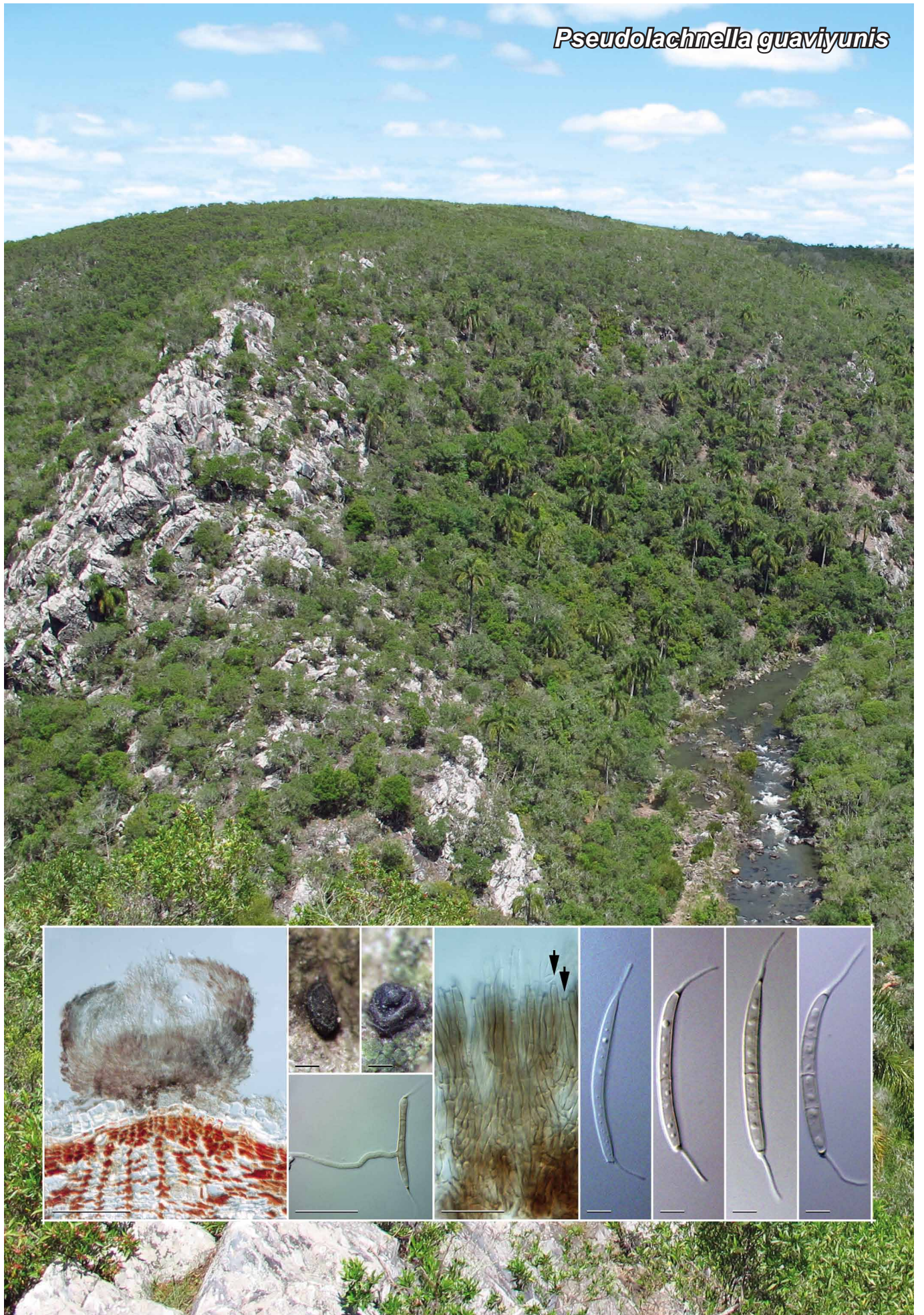


Pseudolachnella guaviyunis



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***Pseudolachnella guaviyunis* Marinc., T.A. Duong, M.J. Wingf. & C.A. Perez, sp. nov.**

Etymology. A common name of the host plant in Uruguay, Guaviyú.

Conidiomata scattered, oval to rounded in outline, up to 688 µm long, up to 416 µm wide, up to 199 µm deep, cupulate with the edge slightly curved-in in sectional view, filled with agglutinated conidial mass, olivaceous-black; basal stroma well-developed, subepidermal, up to 85 µm thick, of *textura angularis* or *epidermoidea*, cells thick-walled, subhyaline when intercellular to pale brown, cells bordering the lateral wall becoming darker and thicker; lateral walls consisting of cells of *textura porrecta* in a few strata, cells thin-walled, pale brown to brown, marginal cells of each strata becoming darker. *Conidiomatal setae* absent. *Conidiophores* arising in the concavity of the conidioma, septate and branched at the base, pale brown, smooth. *Conidiogenous cells* phialidic, discrete, subhyaline to pale brown, cylindrical, with conspicuous collarette, often showing percurrent proliferation, 15–26 × 2–3 µm. *Conidia* hyaline when young and becoming pale brown with age, fusiform, straight or slightly curved, gradually tapering towards the apex, with an obtuse, truncate base, smooth or verruculose with age, bearing cellular appendages at both ends, (26.5–)33–36(–43.5) × (2–)2.5–3(–3.5) µm, aseptate when young, developing 3 septa with age, germinating from any of 4 cells; *apical appendages* 5.5–14 µm long, centric; *basal appendages* 4.5–13 µm long, excentric, both appendages 0.5–1 µm wide at the base and tapering towards the apex.

Culture characteristics — The cultures on 2 % malt extract agar showing optimum growth at 25 °C in the dark, reaching 22 mm after 22 d, sterile, above iron-grey, reverse fuscous-black (Rayner 1970), growing circular, radially striated with lobate edge, mycelia flat, velvety, medium dense, exuding dark brown pigmentation around the colony in 2 mm width.

Typus. URUGUAY, Quebrada de los Cuervos, on *Myrcianthes pungens*, Oct. 2012, M.J. Wingfield & C. Perez (holotype PREM 60964, culture ex-holotype CBS 134695 = CMW 39055, ex-isotypes CMW 39018–39020; ITS sequence of CBS 134695 GenBank KJ834524, LSU sequence of CBS 134695 GenBank KJ834525, MycoBank MB808837).

Colour illustrations. *Myrcianthes pungens* trees growing at the 'Quebrada de los Cuervos' in Uruguay; conidioma in sectional view (bar = 100 µm) and on the host substrate (350 µm), germinating conidium (25 µm), branched conidiophores and phialidic conidiogenous cells with conspicuous collarette (arrows) (20 µm); conidia from young to mature (5 µm).

Notes — Cupulate fruiting structures were found on the bark of *Myrcianthes pungens* in Uruguay. The morphological features of this isolate best match those of the genus *Pseudolachnella*, other than the absence of noticeable conidiomatal setae. Currently there are eight *Pseudolachnella* species recognised worldwide from herbaceous stems or leaves of monocotyledonous host plants, mostly palm trees in Asia (Nag Raj 1993, Zhao et al. 2004, Sato et al. 2008). The Uruguayan collection introduced as the new species *P. guaviyunis*, is recognised here primarily based on conidial morphology and DNA sequence data.

Both *Pseudolachnella* and *Pseudolachnea* are closely related to *Dinemasporium*. When Sutton (1980) limited *Dinemasporium* to the species with aseptate conidia, he restricted the species with septate conidia to *Pseudolachnea*. Nag Raj (1993) further limited *Pseudolachnea* to the species with 1-septate conidia and *Pseudolachnella* to those with multiseptate conidia. No sexual state is known for *Pseudolachnella* and *Pseudolachnea*, whereas one species of *Dinemasporium* is known based on its sexual state, *Phomatospora dinemasporium* (*Xylariales*). However, the identity of the sexual state in this case is considered to be doubtful (Duan et al. 2007).

A recent study applying ribosomal DNA sequence data revealed the phylogenetic placement of *Pseudolachnea* and *Dinemasporium* within the chaetosphaeralean clade. However, the phylogenetic position of *Pseudolachnella* could not be determined due to the lack of cultures (Crous et al. 2012b). The present study suggests that *Pseudolachnella* resides in the *Chaetosphaeriales* but that it is distantly related to *Pseudolachnea*, thus consistent with the views of Nag Raj (1993).

A case study of *Dinemasporium* and related genera by Crous et al. (2012b) suggested that the appendage morphology could be a useful characteristic in species delimitation but not in generic separation. *Pseudolachnella* species are heterogeneous in terms of appendage morphology: short (to 4 µm) or long (to 47 µm) in length, simple or branched, single or multiple in number. *Pseudolachnella guaviyunis* can be distinguished by its simple appendages at both ends of the conidia, measuring up to 14 µm in length.

A megablast search of the NCBI GenBank nucleotide sequence database using the ITS sequence of *Pseudolachnella guaviyunis* showed that its closest relatives are *Pseudolachnea fraxini* (GenBank JQ 889287; Identities = 464/533 (87 %), Gaps = 23/533 (4 %)) and *Dinemasporium strigosum* (GenBank JQ889283; Identities = 495/579 (85 %); Gaps = 34/579 (5 %)). A megablast search using the LSU sequence of *Pseudolachnella guaviyunis* showed that it was most similar to *Pseudolachnea fraxini* (GenBank JQ889301; Identities = 810/839 (97 %); Gaps = 1/839 (0 %)) and *Dinemasporium strigosum* (GenBank JQ 889299; Identities = 807/841 (96 %); Gaps = 3/841 (0 %)).

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