Phlogicylindrium pawpawense
Phlogicylindrium pawpawense Crous & Carnegie, sp. nov.

Etymology. Name refers to the location where this fungus was isolated, Paw Paw Skids Road, Australia.

Classification — Phlogicylindriaceae, Xylariales, Sordariomycetes.

Mycelium consisting of hyaline, branched, septate, 1.5–2 mm diam hyphae. Conidiomata sporodochial, 150–300 mm diam, erumpent, round, hyaline, consisting of tightly aggregated conidiophores or conidiophores erect, penicillate with tightly aggregated conidiogenous apparatus; conidiophores 80–150 mm tall, stipe 40–50 × 2.5–3 mm. Conidiophores with penicillate conidiogenous apparatus: branches (3–5) subcylindrical, hyaline, smooth, straight to curved, 5–7 × 2.5–3 mm. Conidiogenous cells terminal and intercalary, hyaline, smooth, subcylindrical, straight to slightly curved, 5–14 × 2–2.5 mm, proliferating sympodially. Conidia solitary, hyaline, smooth, guttulate to granular, subcylindrical, 1–3-septate, curved, rarely straight, tapering to subacutely rounded apex, base truncate, 1–1.5 mm diam, (12–)17–22(–25) × 2–2.5 mm.

Culture characteristics — Colonies erumpent, spreading, with sparse aerial mycelium and smooth, lobate margin, reaching 15 mm diam after 2 wk at 25 °C. On MEA surface luteous, reverse ochreous. On PDA surface and reverse pale luteous. On OA surface pale luteous.

Typus. AUSTRALIA, New South Wales, Richmond Range SF, Paw Paw Skids Road, on juvenile leaves of Eucalyptus tereticornis (Myrtaceae), 19 Apr. 2016, A.J. Carnegie, HPC 2424 (holotype CBS H-23954, culture ex-type CPC 35536 = CBS 145580, ITS and LSU sequences GenBank MK676403.1 and MK676444.1; MycoBank MB830843).

Notes — ITS sequence data of Phlogicylindrium pawpawense is related to species of Cylindrium and Polyscytalum, which were treated by Crous et al. (2014, 2018b). Morphologically however, it is a better fit for Phlogicylindrium, being related to P. dunnii (conidia (32–)35–42(–47) × (2–)2.5(–3) µm; Crous et al. 2019), though distinct in having smaller conidia.

Based on a megablast search of NCBI’s GenBank nucleotide database, the closest hits using the ITS sequence had highest similarity to Polyscytalum chilense (GenBank NR_158958.1; Identities = 523/565 (93 %), 11 gaps (1 %)), Polyscytalum eucalyptigenum (GenBank MH107909.1; Identities = 527/571 (92 %), 14 gaps (2 %)) and Polyscytalum grevilleae (GenBank NR_154719.1; Identities = 520/564 (92 %), 7 gaps (1 %)). Closest hits using the LSU sequence are Phlogicylindrium dunnii (GenBank MK442548.1; Identities = 727/736 (99 %), 1 gap (0 %)), Phlogicylindrium tereticornis (GenBank NG_058510.1; Identities = 726/736 (99 %), 1 gap (0 %)) and Polyscytalum chilense (GenBank MH107954.1; Identities = 724/735 (99 %), no gaps).

Colour illustrations. Eucalyptus tereticornis trees. Sporodochial conidioma; conidiophores, conidiogenous cells and conidia. Scale bars = 10 µm.