

Xyladictyochaeta tristaniopsidis

Fungal Planet 1121 – 19 December 2020

***Xyladictyochaeta tristaniopsidis* Crous, sp. nov.**

Etymology. Name refers to the host genus *Tristaniopsis* from which it was isolated.

Classification — *Xyladictyochaetaceae*, *Xylariales*, *Sordariomycetes*.

Mycelium consisting of pale brown, smooth, septate, branched, 2–3 µm diam hyphae. *Conidiophores* erect, brown, smooth, subcylindrical, flexuous, multiseptate, 30–100 × 5–6 µm. *Conidiogenous cells* terminal and intercalary, polyphialidic, 5–17 × 4–5 µm, phialidic opening 1 µm diam, lacking flared collarettes. *Conidia* solitary, aggregating in mucoid mass, hyaline, smooth, fusoid-ellipsoid, slightly curved, apex subobtuse, base truncate, 1 µm diam, medianly 1-septate, (16–)17–18(–20) × 2.5(–3) µm; each end with flexuous, unbranched appendage, apex central, base eccentric, 3–5 µm diam.

Culture characteristics — Colonies flat, spreading, with sparse aerial mycelium and smooth, lobate margin, reaching 40 mm diam after 2 wk at 25 °C. On MEA surface vinaceous buff, reverse isabelline; on PDA surface and reverse dark mouse grey; on OA surface dark mouse grey.

Typus. AUSTRALIA, New South Wales, Limpinwood Nature Reserve, on leaves of *Tristaniopsis collina* (*Myrtaceae*), 25 May 2015, B.A. Summerell, HPC 2948 (holotype CBS H-24410, culture ex-type CPC 38240 = CBS 146793, ITS, LSU, *tef1* and *tub2* sequences GenBank MW175343.1, MW175383.1, MW173122.1 and MW173135.1, MycoBank MB837835).

Notes — The monotypic genus *Xyladictyochaeta* was established by Hernández-Restrepo et al. (2017) to accommodate dictyochaeta-like taxa with terminal and intercalary, polyphialidic conidiogenous cells. *Xyladictyochaeta tristaniopsidis* has slightly larger conidia than *X. lusitanica* (11–16 × 2–2.5 µm in Hernández-Restrepo et al. (2017); (10–)11–12(–13) × (2.5–)3 µm in Crous et al. (2018b)).

Based on a megablast search of NCBI's GenBank nucleotide database, the closest hits using the **ITS** sequence had highest similarity to *Xyladictyochaeta lusitanica* (strain CBS 142290, GenBank NR_154542.1; Identities = 561/575 (98 %), no gaps), *Castanediella eucalyptigena* (strain CBS 143178, GenBank NR_156384.1; Identities = 536/578 (93 %), 12 gaps (2 %)), and *Tristatiperidium microsporium* (strain MFLUCC 15-0413, GenBank NR_164238.1; Identities = 527/585 (90 %), nine gaps (1 %)). Closest hits using the **LSU** sequence are *Xyladictyochaeta lusitanica* (strain CPC 32526, GenBank MH107973.1; Identities = 784/791 (99 %), no gaps), *Castanediella eucalyptigena* (strain CBS 143178, GenBank NG_067332.1; Identities = 763/784 (97 %), one gap (0 %)), and *Phlogicylindrium eucalypti* (strain CBS 120080, GenBank DQ923534.1; Identities = 768/791 (97 %), no gaps). Closest hits using the **tef1** sequence had highest similarity to *Xyladictyochaeta lusitanica* (strain CBS 143502, GenBank MH108033.1; Identities = 467/563 (83 %), 20 gaps (3 %)). Closest hits using the **tub2** sequence had highest similarity to *Xyladictyochaeta lusitanica* (strain CPC 32526, GenBank MH108054.1; Identities = 416/477 (87 %), 15 gaps (3 %)), and *Cylindrium aeruginosum* (strain CBS 693.83, GenBank KM232124.1; Identities = 295/345 (86 %), 20 gaps (5 %)).

Colour illustrations. Rainforest at Limpinwood Nature Reserve (photo B. Summerell). Conidiophores, conidiogenous cells and conidia. Scale bars = 10 µm.