Trichomerium eucalypti
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Trichomerium eucalypti Crous, sp. nov.

Etymology. Name refers to Eucalyptus, the host genus from which this fungus was collected.

Classification — Trichomeriaceae, Chaetothyriales, Eurotiomycetes.

Mycelium consisting of smooth, branched, septate, 4–5 µm diam, brown hyphae. Conidiophores reduced to conidiogenous loci on hyphae, inconspicuous, 1–5 × 2 µm, not thickened nor darkened. Conidia solitary, medium brown, smooth, guttulate, star-shaped, with two globose central cells giving rise to four irregular radiating arms of 4–5(–7) cells, tapering from point of attachment to subobtuse apices, constricted at septa, 30–80 × 8–10 µm; conidia also have a fifth branch of 1–2 cells tapering to a subobtuse apex, 15–30 × 7–8 µm, which is the branch that attaches to the conidiogenous locus on hyphae. Microconidiogenous cells on hyphae solitary, ampulliform, medium brown, smooth, phialidic, 10–17 × 3–4 µm. Microconidia bacilliform, hyaline, smooth, aseptate, ends rounded, 2–3 × 2 µm.

Culture characteristics — Colonies erumpent, spreading, with moderate aerial mycelium and even, lobate margins, reaching 10–20 mm diam after 2 wk at 25 °C. On MEA, PDA and OA surface olivaceous grey, reverse iron-grey.


Notes — Species of Trichomerium are usually encountered as sooty molds that grow on honey dew excrements from insects on living plant leaves and stems. The genus Trichomerium has Tripospermum asexual morphs (Crous et al. 2014b).

Based on a megablast search using the ITS sequence, the closest matches in NCBI's GenBank nucleotide database were 'Trimmatostroma cordae' (GenBank AJ244263; Identities 591/607 (97 %), 9 gaps (1 %)), Trichomerium foliicola (GenBank JX313653; Identities 611/659 (93 %), 13 gaps (1 %)) and T. gleosporum (GenBank JX313656; Identities 610/659 (93 %), 13 gaps (1 %)). The highest similarities using the LSU sequence were T. foliicola (GenBank JX313659; Identities 830/846 (98 %), no gaps), T. gleosporum (GenBank KY381953; Identities 823/839 (98 %), no gaps) and T. dioscoreae (GenBank KP004496; Identities 834/851 (98 %), no gaps).

Colour illustrations. Symptomatic leaves of Eucalyptus tereticornis; Trichomerium conidia, microconidiogenous cells and microconidia. Scale bars = 10 µm.