

Alfaria dandenongensis



Fungal Planet 693 – 20 December 2017

Alfaria dandenongensis Crous, *sp. nov.*

Etymology. Name refers to the Dandenong Ranges, Australia, where this fungus was collected.

Classification — *Stachybotryaceae*, *Hypocreales*, *Sordariomycetes*.

Conidiomata sporodochial, black with slimy conidial masses, surrounded by dark brown setae; conidiomata up to 300 µm diam, basal stroma of hyaline *textura epidermoidea*, giving rise to a dense complex of conidiophores and setae. *Setae* flexuous, surrounding sporodochium, unbranched, thick-walled, apex obtuse, dark brown, verruculose to warty, multiseptate, 100–200 × 6–9 µm. *Conidiophores* densely aggregated, arising from hyaline basal stroma, becoming pigmented and verruculose towards conidiogenous region, subcylindrical, 2–5-septate, branched, 25–60 × 3–4 µm. *Conidiogenous cells* integrated, terminal and lateral, subcylindrical, becoming pigmented and verruculose at upper region, proliferating percurrently, 10–17 × 3–4 µm. *Conidia* solitary, cylindrical, straight, apex subobtuse, base truncate, 1–1.5 µm diam, aseptate, guttulate, granular, verruculose, olivaceous brown, (8–)9–11(–12) × (2–)2.5–3 µm.

Culture characteristics — Colonies erumpent, spreading, with moderate aerial mycelium and smooth, lobate margins, reaching 40 mm diam after 2 wk at 25 °C. On MEA surface dirty white, reverse amber. On PDA surface and reverse pale luteous. On OA surface pale luteous.

Typus. AUSTRALIA, Victoria, Melbourne, Dandenong Ranges, Silvan Reservoir Park, leaf litter of *Cyperaceae*, 1 Dec. 2016, *P.W. Crous* (holotype CBS H-23301, culture ex-type CPC 32450 = CBS 143399, ITS, LSU, *cmdA* and *rpb2* sequences GenBank MG386063, MG386116, MG386135 and MG386146, MycoBank MB823410).

Notes — *Alfaria* was originally established for a genus of ascomycetes causing a disease on *Cyperus esculentus* in Spain (Crous et al. 2014a). In a subsequent study, Lombard et al. (2016) added several species which are phylogenetically related to *A. dandenongensis* (conidia (8–)9–11(–12) × (2–)2.5–3 µm), namely *A. ossiformis* (conidia 5–7 × 2–3 µm) and *A. putrefolia* (cultures sterile; Lombard et al. 2016). Phylogenetically, however, *A. dandenongensis* is also distinct from other taxa in the genus.

Based on a megablast search using the ITS sequence, the closest matches in NCBI's GenBank nucleotide database were *A. putrefolia* (GenBank KU845985; Identities 562/568 (99 %), 1 gap (0 %)), *Xepiculopsis graminea* (as *Myrothecium gramineum*; GenBank JX406554; Identities 496/504 (98 %), 2 gaps (0 %)) and *A. ossiformis* (GenBank NR_145068; Identities 561/572 (98 %), 4 gaps (0 %)). The highest similarities using the LSU sequence were *A. ossiformis* (GenBank KU845993; Identities 822/822 (100 %), no gaps), *A. terrestris* (GenBank KU845996; Identities 821/822 (99 %), no gaps) and *A. putrefolia* (GenBank KU845995; Identities 817/822 (99 %), 1 gap (0 %)). The highest similarities using the *cmdA* sequence were with *A. ossiformis* (GenBank KU845977; Identities 443/503 (88 %), 9 gaps (1 %)), *A. terrestris* (GenBank KU845978; Identities 401/443 (91 %), 6 gaps (1 %)) and *A. thymi* (GenBank KU845981; Identities 386/430 (90 %), 8 gaps (1 %)). The highest similarities using the *rpb2* sequence were *A. putrefolia* (GenBank KU846003; Identities 688/724 (95 %), no gaps), *A. ossiformis* (GenBank KU846002; Identities 667/724 (92 %), no gaps) and *A. terrestris* (GenBank KU846005; Identities 643/720 (89 %), 2 gaps (0 %)).

Colour illustrations. Silvan Reservoir Park; conidiomata sporulating on OA, setae, conidiophores, conidiogenous cells and conidia. Scale bars = 10 µm.

Pedro W. Crous & Johannes Z. Groenewald, Westerdijk Fungal Biodiversity Institute, P.O. Box 85167, 3508 AD Utrecht, The Netherlands; e-mail: p.crous@westerdijkinstituut.nl & e.groenewald@westerdijkinstituut.nl
Michael J. Wingfield, Forestry and Agricultural Biotechnology Institute (FABI), University of Pretoria, Pretoria 0002, South Africa; e-mail: mike.wingfield@fabi.up.ac.za

David Smith, Agriculture, Energy & Resources, Agriculture and Rural Division, Department of Economic Development, Jobs, Transport and Resources, Unit 3, 2 Codrington St, Cranbourne Victoria 3977, Australia; e-mail: david.smith@ecodev.vic.gov.au