

Vermiculariopsiella eucalypticola



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***Vermiculariopsiella eucalypticola* Crous, sp. nov.**

Etymology. Named after the host genus from which it was isolated, *Eucalyptus*.

Classification — *Vermiculariopsiaceae*, *Vermiculariopsiales*, *Sordariomycetes*.

Conidiomata sporodochial, 200–500 µm diam, with slimy creamy conidial mass, base of pale brown pseudoparenchymatal cells, giving rise to densely aggregated conidiophores. *Setae* dispersed throughout sporodochia, thick-walled, brown, verruculose, branched at apex, initially dichotomously branched, appearing heart-shaped, with additional branches developing with age, 150–400 × 6–11 µm. *Conidiophores* subcylindrical, pale brown, verruculose, 0–1-septate, branched at first septum, 14–20 × 4–5 µm. *Conidiogenous cells* terminal and intercalary, ampulliform, pale brown, verruculose, phialidic, apex twisted to the side, periclinal thickening and collarette present, 10–15 × 3–3.5 µm. *Conidia* solitary, aseptate, hyaline, smooth, guttulate, subcylindrical to fusoid, inequilateral, inner plane straight, outer plane convex, apex subobtuse, but constricted towards inner plane, base truncate, hilum excentric, 0.5–1 µm diam, (9–)12–14(–16) × (2–)2.5 µm.

Culture characteristics — Colonies flat, spreading, with sparse aerial mycelium and feathery, lobate margins, reaching 40–50 mm diam after 2 wk at 25 °C. On MEA surface hazel, reverse amber. On PDA surface and reverse rosy buff. On OA surface hazel.

Typus. AUSTRALIA, New South Wales, South East Forests National Park, on leaves of *Eucalyptus dalrympleana* (*Myrtaceae*), 28 Nov. 2016, P.W. Crous (holotype CBS H-23313, culture ex-type CPC 32506 = CBS 143442, ITS and LSU sequences GenBank MG386070 and MG386123, MycoBank MB823419).

Notes — *Vermiculariopsiella* has sporodochia with brown, erect setae dispersed throughout, and subhyaline conidiophores that give rise to phialidic conidiogenous cells with prominently curved apices, and hyaline, aseptate conidia. *Vermiculariopsiella eucalypticola* is phylogenetically related to *V. dichapetali* (conidia (10–)17–22(–24) × 2.5(–3) µm, setae erect, straight to flexuous; Crous et al. 2014a), but is morphologically clearly distinct. A unique feature of *V. eucalypticola* are its setae, being dichotomously branched, and therefore more reminiscent of the genus *Gyrothrix* (although the conidiogenesis and conidia are typical of *Vermiculariopsiella*, suggesting that setae are not that informative at the generic level).

Based on a megablast search using the ITS sequence, the closest matches in NCBI's GenBank nucleotide database were *V. dichapetali* (GenBank KX306771; Identities 520/538 (97%), 5 gaps (0%)), *V. immersa* (GenBank KY853476; Identities 511/534 (96%), 1 gaps (0%)) and *V. acaciae* (GenBank NR_145253; Identities 513/540 (95%), 12 gaps (2%)). The highest similarities using the LSU sequence were *V. acaciae* (GenBank KX228314; Identities 840/842 (99%), no gaps), *V. dichapetali* (GenBank KX306796; Identities 714/716 (99%), no gaps) and *V. immersa* (GenBank KJ476961; Identities 817/823 (99%), 3 gaps (0%)).

Colour illustrations. South East Forests National Park; conidioma sporulating on PNA, setae, 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
 Brett A. Summerell, Royal Botanic Gardens and Domain Trust, Mrs. Macquaries Road, Sydney, NSW 2000, Australia; e-mail: brett.summerell@rbgsyd.nsw.gov.au
 Angus J. Carnegie, Forest Health & Biosecurity, NSW Department of Primary Industries, Level 12, 10 Valentine Ave, Parramatta, NSW 2150, Locked Bag 5123, Parramatta, NSW 2124, Australia; e-mail: angus.carnegie@dpi.nsw.gov.au