

*Didymella acaciae*



Fungal Planet 687 – 20 December 2017

## *Didymella acaciae* Crous, sp. nov.

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

*Classification* — *Didymellaceae*, *Pleosporales*, *Dothideomycetes*.

*Conidiomata* pycnidial, solitary, globose, 80–150 µm diam on SNA, up to 350 µm diam on OA with 1–2 ostioles, ostiole papillate, 40–50 µm diam; wall of 3–4 layers of pale to medium brown *textura angularis*. *Conidiophores* reduced to conidiogenous cells lining the inner cavity, hyaline, smooth, ampulliform to globose, 4–6 × 4–6 µm, proliferating percurrently at apex. *Conidia* solitary, hyaline, smooth, guttulate to granular, straight, medianly 1-septate, cylindrical, apex obtuse, base truncate, 1.5–3 µm diam, (16–)18–21(–25) × (3–)3.5(–4) µm.

*Culture characteristics* — Colonies flat, spreading, with moderate aerial mycelium and smooth, lobate margins, reaching 50 mm diam after 2 wk at 25 °C. On MEA, PDA and OA surface and reverse brown vinaceous.

*Typus.* AUSTRALIA, New South Wales, Merimbula, on leaves of *Acacia melanoxylo* (*Fabaceae*), 28 Nov. 2016, P.W. Crous (holotype CBS H-23295, culture ex-type CPC 32504 = CBS 143404, ITS, LSU, *rpb2*, *tef1* and *tub2* sequences GenBank MG386056, MG386109, MG386144, MG386154 and MG386167, MycoBank MB823425).

*Notes* — *Didymella acaciae* is closely related to several genera, including *Verrucoconiothyrium*, *Didymella*, *Paraboeremia* and *Peyronellaea* (Chen et al. 2015). *Didymella acaciae* is phoma-like in morphology, suggesting that it would be better suited in *Didymella* for the present. However, additional taxa, and more informative genes are required to fully resolve its placement within this generic complex.

Based on a megablast search using the ITS sequence, the closest matches in NCBI's GenBank nucleotide database were *Verrucoconiothyrium nitidae* (GenBank KX306774; Identities 523/535 (98 %), 2 gaps (0 %)), *V. prosopidis* (GenBank NR\_137604; Identities 523/536 (98 %), 3 gaps (0 %)) and *V. eucalyptigenum* (GenBank KY979771; Identities 520/536 (97 %), 3 gaps (0 %)). The highest similarities using the LSU sequence were 99 % to species from numerous genera in *Didymellaceae*, e.g., *Didymella sinensis* (GenBank KY742239; Identities 853/854 (99 %), no gaps), *Paraboeremia oligotrophica* (GenBank KX829040; Identities 853/854 (99 %), no gaps) and *Peyronellaea combreti* (GenBank KJ869191; Identities 853/854 (99 %), no gaps). The highest similarities using the *rpb2* sequence were *V. eucalyptigenum* (GenBank KY979852; Identities 685/729 (94 %), no gaps), *Nothophoma infossa* (GenBank KT389659; Identities 545/592 (92 %), no gaps) and *N. arachidis-hypogaeae* (GenBank KT389656; Identities 547/595 (92 %), no gaps). The highest similarities using the *tef1* sequence were *V. eucalyptigenum* (GenBank KY979904; Identities 202/221 (91 %), 8 gaps (3 %)), *N. quercina* (as *Phoma fungicola*; GenBank KC357259; Identities 199/222 (90 %), 10 gaps (4 %)) and *Ascochyta pisi* (GenBank DQ386494; Identities 189/211 (90 %), 5 gaps (2 %)). The highest similarities using the *tub2* sequence were *V. eucalyptigenum* (GenBank KY979935; Identities 176/187 (94 %), no gaps), *N. quercina* (GenBank KU973706; Identities 173/184 (94 %), no gaps) and *Allophoma zantedeschiae* (GenBank KX033401; Identities 175/187 (94 %), no gaps).

*Colour illustrations.* Symptomatic leaves of *Acacia melanoxylo*; conidiomata sporulating on PNA, 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