

Diaporthe musigena



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***Diaporthe musigena* Crous & R.G. Shivas, sp. nov.**

Phomopsis longicollae similis, sed conidiis majoribus, (7–)8–10(–12) × (2–)2.5(–3) µm, discernitur.

Etymology. Named after the host from which it was isolated, *Musa* sp.

Pycnidia associated with necrotic leaf tissue; pycnidia in culture on pine needle agar subglobose, up to 250 µm diam, somewhat erumpent, with elongated black necks, mostly submerged into tissue; yellow conidial droplets exuding from ostioles; walls consisting of 3–6 layers of medium brown *textura angularis*. *Conidiophores* hyaline, smooth, 1–3-septate, branched, densely aggregated, cylindrical, straight to sinuous, 15–40 × 1.5–2.5 µm. *Conidiogenous cells* phialidic, cylindrical, terminal and lateral, with slight taper towards apex, 0.5–1 µm, with visible periclinal thickening; collarette not flared, 2–5 µm long. *Paraphyses* hyaline, smooth, cylindrical, septate, extending above conidiophores, straight, flexuous, unbranched, or branched below, up to 80 µm long, 2–2.5 µm wide at base. *Alpha conidia* aseptate, hyaline, smooth, fusiform, tapering towards both ends, straight to slightly curved, acutely rounded, and base subtruncate, (7–)8–10(–12) × (2–)2.5(–3) µm. *Gamma conidia* aseptate, hyaline, smooth, ellipsoid-fusoid, apex acutely rounded, base subtruncate to acutely rounded, 7–9 × 4–5 µm. *Beta conidia* developing in older cultures, conidia aseptate, hyaline, smooth, spindle-shaped, apex acutely rounded, base truncate, tapering more prominently in upper third, straight to curved, (14–)19–22(–25) × (1.5–)2 µm.

Culture characteristics — (in the dark, 25 °C, after 2 wk): Colonies on potato-dextrose agar, oatmeal agar and malt extract agar fast growing, with abundant dirty white to cream, fluffy aerial mycelium, and small patches of grey olivaceous due to pycnidial formation.

Typus. AUSTRALIA, Queensland, Brisbane, S 27°28'34.8" E 152°58'40.8" on leaves of *Musa* sp., 14 July 2009, P.W. Crous & R.G. Shivas, holotype CBS H-20579, cultures ex-type CPC 17026, 17025 = CBS 129519, ITS sequence GenBank JF951138 and LSU sequence GenBank JF951158, MycoBank MB560160.

Notes — Two *Phomopsis* (teleomorph: *Diaporthe*) species are known from *Musa*, but they have smaller conidia than *D. musigena*, namely *Phomopsis musae* (alpha conidia 5–9 × 1.5–2.5 µm, beta conidia 17–23 × 1 µm, on stems and fruits, France), and *P. musicola* (alpha conidia 5–9 × 2–2.5 µm, Honolulu, Hawaii). *Diaporthe musae*, described from *Musa* in Argentina (Uecker 1988), has no known *Phomopsis* state, and thus cannot be compared to the present collection. Based on a megablast search of NCBI's GenBank nucleotide database, the closest hits using the ITS sequence of *D. musigena* are *Phomopsis longicolla* (FJ755236; Identities = 519/525 (99 %), Gaps = 1/525 (0 %)) and *Diaporthe phaseolorum* (EF488422; Identities = 541/550 (98 %), Gaps = 1/550 (0 %)). The association with *Phomopsis/Diaporthe* was confirmed by the LSU sequence.

Colour illustrations. *Musa* sp. in Brisbane Botanical Garden; symptomatic leaf; sporulation on potato-dextrose agar; conidiophores giving rise to alpha and beta conidia. Scale bar = 10 µm.

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