Alanphillipsia aloes
Fungal Planet 158 – 26 November 2013

Alanphillipsia Crous & M.J. Wingf., gen. nov.

Etymology. Named after Dr Alan J.L. Phillips, in acknowledgement for the tremendous contribution that he has made to elucidate the taxonomy of members of the Botryosphaeriaceae.

Conidiomata immersed, globose with central ostiole, dark brown; wall of several layers of brown textura angularis. Paraphyses intermingled among conidiophores, lining the inner cavity, hyaline, smooth, subcylindrical, branched at base or not, aseptate or transversely septate, with obtuse to subobtuse apices. Conidiophores hyaline, smooth, subcylindrical, flexuous or straight, 1–3-septate, 20–40 × 3–7 µm. Macroconidigenous cells terminal, integrated, hyaline, smooth, subcylindrical to lageniform, proliferating inconspicuously percurrently near apex. Macroconidia solitary, hyaline when young, becoming brown-golden to medium brown, verruculose, granular to guttulate, surrounded by a persistent, hyaline outer layer (absent in some species, or reduced to a basal frill or basal and apical appendage), ellipsoid to obclavate or subcylindrical with truncate scar on hyaline layer. Microconidigenous cells in the same conidioma, hyaline, smooth, subcylindrical, proliferating inconspicuously percurrently at apex. Microconidia hyaline, smooth, granular, subcylindrical to ellipsoid, apex obtuse, base truncate, with minute marginal frill.

Type species. Alanphillipsia aloes. MycoBank MB805816.

Alanphillipsia aloes Crous & M.J. Wingf., sp. nov.

Etymology. Named after the host genus on which it occurs, Aloe.

Colonies sporulating on MEA: Conidiomata immersed, globose with central ostiole, dark brown, up to 300 µm diam; wall of several layers of brown textura angularis. Paraphyses intermingled among conidiophores, lining the inner cavity, hyaline, smooth, subcylindrical, branched at base or not, up to 80 µm long, 2–4 µm wide at base, transversely septate, with obtuse to subobtuse apices. Conidiophores hyaline, smooth, subcylindrical, flexuous or straight, 1–3-septate, 20–40 × 3–7 µm. Macroconidigenous cells terminal, integrated, hyaline, smooth, subcylindrical to lageniform, 10–20 × 3–4 µm; proliferating inconspicuously 1–3 times percurrently near apex. Macroconidia solitary, hyaline when young, becoming golden-brown to medium brown, verruculose, granular to guttulate, surrounded by a persistent, hyaline outer layer (absent in some species, or reduced to a basal frill or basal and apical appendage), ellipsoid to obclavate or subcylindrical with truncate scar on hyaline layer. Microconidigenous cells in the same conidioma, hyaline, smooth, subcylindrical, proliferating inconspicuously percurrently at apex. Microconidia hyaline, smooth, granular, subcylindrical to ellipsoid, apex obtuse, base truncate, with minute marginal frill. Culture characteristics — Colonies on MEA, PDA and OA covering the dish within 2 wk, surface olivaceous-grey, reverse iron-grey, with moderate pale olivaceous-grey aerial mycelium.

Typus. SOUTH AFRICA, Western Cape Province, Clanwilliam, on dark lesions of dying Aloe dichotoma (Xanthorrhoeaceae), Sept. 2012, M.J. Wingfield (holotype CBS H-21418, cultures ex-type CPC 21298 = CBS 136410, ITS sequence GenBank KF777138, LSU sequence GenBank KF777194, MycoBank MB805817).

Notes — Alanphillipsia is reminiscent of Aplosporella (verruculose conidia, presence of paraphyses) (Damm et al. 2007, Slippers et al. 2013), but distinct in that it has a hyaline outer layer. In this regard it also resembles Cytosphaera, though the latter has eustromatic, irregularly pulvinate, erumpent to superficial conidiomata, phialides with periclinal thickening, and hyaline conidia (Sutton 1980).

Based on a megablast search of NCBI's GenBank nucleotide database, the closest hits using the LSU sequence are Botryosphaeria sumachi (GenBank DQ377865; Identities = 919/926 (99 %), no gaps), Diplodia corticola (GenBank DQ377848; Identities = 921/929 (99 %), no gaps) and Phaeobotryosphaeria porosa (GenBank DQ377895; Identities = 918/926 (99 %), no gaps). Closest hits using the ITS sequence had highest similarity to Diplodia pseudoseriata (GenBank EU860383; Identities = 522/558 (94 %), Gaps = 11/558 (1 %)), Phaeobotryosphaeria eucalypti (GenBank JX646803; Identities = 511/532 (96 %), Gaps = 6/532 (1 %)) and P. citrigena (GenBank EU673329; Identities = 524/546 (96 %), Gaps = 5/546 (0 %)).

Colour illustrations. Aloe dichotoma in Clanwilliam, South Africa. Colony on MEA, conidiogenous cells, paraphyses, macro- and microconidia. Scale bars = 10 µm.