Colletotrichum euphorbiae & Alanphillipsia euphorbiae
Colletotrichum euphorbiae Damm & Crous, sp. nov.

Etymology. Named after the host genus from which it was collected, Euphorbia.

Sexual morph not observed. Asexual morph on SNA. Conidiomata poorly developed and conidiophores formed directly on hyphae or globose, closed conidiomata, apparently opening by rupture, wall cells medium brown, angular. Setae not observed. Conidiophores pale brown, smooth-walled, septate, branched, to 50 µm long. Conidiogenous cells pale brown, smooth-walled, cylindrical, percurrently proliferating often observed, 13.5–23 × 5.5–7 µm, opening 1.5–2.5 µm diam, collarate 0.5 µm long, periclinal thickening sometimes observed. Conidia hyaline to pale orange, smooth-walled, aseptate, straight, sometimes slightly curved, cylindrical to clavate, with one end round and one end truncate, gullet (17–)23–28(–28.5) × (6–)6.5–7 µm, mean ± SD = 25.6 ± 2.6 × 6.7 ± 0.2 µm, L/W ratio = 3.8. Appressoria formed in SNA slide culture after 20 d, single, medium to dark brown, smooth-walled, roundish to clavate, the edge lobate to undulate, (6.5–)8.5–14.5(–20.5) × (5.5–)6–10.5(–16) µm, mean ± SD = 11.5 ± 3.4 × 8.2 ± 2.2 µm, L/W ratio = 1.4. For description on Anthriscus stem and OA, see MycoBank.

Typos. SOUTH AFRICA, Western Cape Province, Kirstenbosch Botanical Garden, on leaves of Euphorbia sp. (Euphorbiaceae), Sept. 2012, M.J. Wingfield (holotype CBS H-21409, culture ex-type CBS 134725 = CPC 21823, ITS sequence GenBank KF777146, GAPDH sequence GenBank KF777131, TUB2 sequence GenBank KF777247, ACT sequence GenBank KF777125, CHS-1 sequence GenBank KF777128, HIS3 sequence GenBank KF777134, LSU sequence GenBank KF777202, MycoBank MB805820). For additional specimens, see MycoBank.

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

Etymology. Named after the host genus from which it was collected, Euphorbia.

Conidiomata erumpent, pycnidial, globose with central ostiole up to 300 µm diam; wall of 3–6 layers of dark brown texture angularis. Conidiogenous cells cylindrical to conidiomata cells. Conidiogenous cells lining the inner cavity, hyaline, smooth, subcylindrical to ampulliform, 10–15 × 4–6 µm; proliferating several times percurrently near apex. Paraphyses intermingled among conidiogenous cells, hyaline, smooth, 0–2-septate, subcylindrical, 35–50 × 3–5 µm. Conidia solitary, brown, gulletae, finely roughened, ellipsoid to somewhat clavate, aseptate, apex obtuse, base truncate, 3–5 µm diam, (18–)20–23(–26) × (12–)13–14(–16) µm.

Culture characteristics — Colonies covering dish in 2 wk, with abundant, fluffy aerial mycelium. On PDA surface and reverse iron-grey. On MEA surface olivaceous-grey, reverse iron-grey. On OA surface iron-grey with patches of dirty white.

Typus. SOUTH AFRICA, Western Cape Province, Kirstenbosch Botanical Garden, on leaves of Euphorbia sp. (Euphorbiaceae), Sept. 2012, M.J. Wingfield (holotype CBS H-21421, culture ex-type CPC 21629, 21628 = CBS 136411, ITS sequence GenBank KF777140, LSU sequence GenBank KF777196, MycoBank MB805820).

Notes. — Based on a megablast search of NCBIs GenBank nucleotide database, the closest hits using the LSU sequence are Diplodia corticola (GenBank DQ377848; Identities = 870/875 (99 %), no gaps), Botryosphaeria sumachi (GenBank DQ377865; Identities = 888/894 (99 %), no gaps) and Phaeobotryosphaeria porosa (GenBank DQ377895; Identities = 887/894 (99 %), no gaps).

Notes — The genus Colletotrichum is currently under review; major species complexes such as C. acutatum, C. boninense and C. gloeosporioides were treated recently (Damm et al. 2012a, b, Weir et al. 2012). Colletotrichum euphorbiae forms cylindrical to clavate conidia with one end round and one end truncate, often in closed fruit bodies. Conidia with similar shapes were formed by other Colletotrichum species as well, especially by C. sansevieriae (Nakamura et al. 2006) and the species of the C. orbicular complex (Damm et al. 2013). However, only conidia of C. euphorbiae exceed 20 µm on average in length. Closest matches in blastn searches with the ITS sequence were C. sansevieriae strains from Sansevieria spp. in Korea, Florida and Australia (KC847065, Park et al. 2013; JF911349, JF911350, Palmeateer et al. 2012 and HQ433226, Alidou et al. 2011), with 96–97 % identity. The ITS sequence of the ex-holotype strain of C. sansevieriae in GenBank (AB212991, Nakamura et al. 2006) only comprised 159 bp (ITS2) and was therefore not included in the ITS phylogeny of Cannon et al. (2012).

Reports of Colletotrichum species on Euphorbia include C. capsici, C. dematium, C. eucrohim (conidia 12–20 × 4–5 µm; Sydow & Sydow 1913), C. lineola and C. gloeosporioides (Damm et al. 2009, Farr & Rossman 2013). Only C. gloeosporioides (s.lat.) was previously reported from Euphorbia in Africa (Doidge 1950, Crous et al. 2000). All these taxa form either shorter or curved conidia or are not closely related to C. euphorbiae.

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