Camarosporium mamanes Crous, sp. nov.

MycoBank: MB501006.

Etymology: Named after its host plant, Sophora.

Latin diagnosis: Camarosporio sophorae-sinensis simile, sed conidiis majoribus, (10–)12–13(–14) × (6–)7–8(–9) µm, differens.

Description: Conidiomata pycnidial, up to 500 µm diam in culture, immersed, singular, uninucleate with a single, visible ostiole, up to 15 µm wide, lined with hyaline, cylindrical periphyses; wall consisting of 2–3 layers of dark brown textura angularis. Conidiogenous cells ampulliform, hyaline, lining the inner layer of the conidioma, phialidic with periclinal thickening, but also proliferating percurrently, 5–7 × 4–6 µm. Conidia ellipsoidal, smooth, initially hyaline, becoming red-brown and muriformly septate, with 1–4 horizontal, and 1–3 oblique or vertical septa, (10–)12–13(–14) × (6–)7–8(–9) µm in vitro, (12–)17–18(–19) × 8–9 µm in vivo. After 2 weeks on PDA fertile pycnidia are observed at the point of inoculation, while spermatogonia occur in the outer region of the culture, imbedded in the agar, up to 100 µm diam, with spermatogenous cells hyaline, ampulliform, 5–7 × 5–6 µm, and spermatia hyaline, bacilliform, with bluntly rounded to subtruncate ends, 4–7 × 2–2.5 µm.

Cultural characteristics: Colonies on 2 % potato-dextrose agar (Difco) fast-growing, reaching 60 mm diam after 2 weeks at 25 °C; colonies spreading, with sparse aerial mycelium, imbedded in agar, margins smooth, regular, submerged; centre grey-olivaceous, becoming olivaceous-buff towards the margin; reverse grey-olivaceous; colonies fertile.


Notes: The distinction between Dichomera Cooke (stromatic, multilocular conidiomata, and percurrently proliferating conidiogenous cells) and Camarosporium Schulzer (separate pycnidia, phialidic proliferating conidiogenous cells with periclinal thickening) is tenuous at best. Based on DNA phylogeny, C. mamanes clustered separate from isolates identified as C. quaternatum (Hazsl.) Sacc.2, which is the type species of the genus Camarosporium. Morphologically, however, C. mamanes is a typical species of Camarosporium. BLASTn results of the ITS sequence of C. mamanes (GenBank DQ885900) had an E-value of 0.0 with ITS sequences of members of the Pleosporales, for example a Paraphaeosphaeria sp. (AB096264; 95 % identical), Paraconiothyrium brasiliense Verkley (AY642531; 95 % identical) and Paraconiothyrium estuarium Verkley & M. da Silva AY642530 (95 % identical). Similarities were also found with unclassified fungal endophytes. Because we could not find a more suitable genus in which to place this fungus, it is described as a species of Camarosporium, though the generic concept is in need of revision.

Numerous names have been introduced in Camarosporium, but little is known about the host specificity of this genus. A similar species to C. mamanes is C. sophorae-sinensis Gonz.Frag., described from S. sinensis collected in the Botanical Garden in Madrid, Spain. The latter species has conidia smaller (9–12 × 3.5µm) than those of C. mamanes2.

Colour illustrations: Sophora chrysophylla trees in Hawaii showing typical witch’s brooms. Camarosporium mamanes was isolated from these branches (Y. Degawa); conidiomata in culture; conidia and conidiogenous cell (P.W. Crous). Scale bars = 300, 10 & 10 µm.


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