Mycosphaerella alistairii Crous, sp. nov.

MycoBank: MB501005.

Anamorph: Batcheloromyces sp.

Etymology: Named after Alistair Smith of Kentucky Farms, Elgin, South Africa, who took me mountain-biking on his birthday, and patiently waited on top of the mountain while I collected this fungus.

Latin diagnosis: Mycosphaerellae bellulae similis, sed ascosporis majoribus, (9–)10–12(–13) × (2.5–)3–4 μm, differens.

Description: Leaf spots amphigenous, sub-circular to circular, 2–5 mm diam, pale to medium brown with a thin, raised, dark brown border. Ascomata pseudothecial, amphigenous, black, subepidermal, substomatal, erumpent to superficial, globose, up to 200 μm diam; apical ostiole 5 μm wide; wall consisting of 2–3 layers of medium brown textura angularis. Asci aparaphysate, fasciculate, bitunicate, subsessile, obovoid to broadly ellipsoid, straight to slightly curved, 8-spored, 35–50 × 6–8 μm. Ascospores bi- to tri-seriate, overlapping, hyaline, guttulate, thin-walled, straight, fusoid-ellipsoidal with obtuse ends, widest in middle of apical cell, medianly 1-septate, constricted at the septum, tapering towards both ends, but more prominently towards the lower end, (9–)10–12(–13) × (2.5–)3–4 μm in lactic acid; ascospores frequently becoming pale brown and slightly verruculose in older asci. Ascospores primarily gerninating from polar ends with germ tubes parallel to the long axis of the spore; spores distorting, becoming brown and verruculose, up to 7 μm wide, with lateral branches growing out from the original ascospore. Conidiophores formed on brown, verruculose hyphae. Conidia brown, verruculose, subcylindrical to ellipsoid, with a marginal frill present at one or both ends; when aseptate, 7–10 × 4–6 μm; when 1-septate, 9–15 × 5–6 μm; when 2–3-septate, 15–25 × 5–7 μm.

Cultural characteristics: Colonies on 2 % potato-dextrose agar1 (PDA; Difco) erumpent, spreading, reaching 40 mm diam after 5 weeks at 25 °C; surface olivaceous-black with moderate olivaceous-grey aerial mycelium; margins smooth, regular; reverse iron-grey; colonies fertile.

Typus: South Africa, Western Cape Province, Hermanus, Rotary Road, close to the Vodacom tower, on leaves of Protea repens, 31 Dec. 2005, collected by P.W. Crous & A. Smith, CBS-H 19765, holotyypus; cultures ex-type CPC 12730 = CBS 120035, CPC 12731–12732.

Notes: Disease symptoms of M. alistairii resemble those of M. jonkershoekensis P.S. van Wyk, Marasas & Knox-Dav. and M. bellula Crous & M.J. Wingf., which also occur on this host. Ascospores of M. alistairii are smaller than those of M. jonkershoekensis, but larger than those of M. bellula. BLASTn results of the ITS sequence of M. alistairii (GenBank DQ885901) had an E-value of 0.0 (99 % identical) with the ITS sequence of Batcheloromyces leucadendri P.S. van Wyk, Marasas & Knox-Dav. (AY260100, AY260101), and B. proteae Marasas, P.S. van Wyk & Knox-Dav. (AY260099).

Colour illustrations: Protea repens bush growing along the Rotary road at the top of the mountain in Hermanus (P.W. Crous); colony on PDA; asci with ascospores; germinating ascospores on 2 % malt extract agar (Oxoid); conidia formed in vitro (P.W. Crous). Scale bar = 10 μm.

Mycosphaerella alistairii