

Leptosphaeria proteicola



Fungal Planet 106 – 6 December 2011

Leptosphaeria proteicola Crous, sp. nov.

Microsphaeropsis proteae similis, sed conidiis majoribus, (3.5–)4.5–5(–7) × (2.5–)3(–4) µm, discernitur.

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

Leaf spots absent, sporulating on dead tissue under moist conditions. On synthetic nutrient poor agar. **Conidiomata** pycnidial, dark brown to black, aggregated in clusters, pycnidia up to 400 µm diam, opening by means of central ostiole, up to 50 µm diam; wall of 2–3 layers of dark brown *textura angularis*. **Conidiophores** hyaline, smooth, subcylindrical, reduced to conidigenous cells or 1–2-septate, 7–17 × 3–6 µm. **Conidigenous cells** hyaline, smooth, ampulliform to subcylindrical, phialidic, 5–10 × 3–6 µm; locus 1.5–2 µm diam, with inconspicuous collarette. **Conidia** solitary, initially hyaline, smooth, aseptate, becoming red-brown, thin-walled, ellipsoid to obovoid, apex obtuse, base truncate, (3.5–)4.5–5(–7) × (2.5–)3(–4) µm; hilum truncate or bluntly rounded, unthickened, 2–3 µm diam.

Culture characteristics — (in the dark, 25 °C, after 2 wk): Colonies spreading, with fluffy aerial mycelium, and even, smooth margins; reaching 40 mm diam after 2 wk. On potato-dextrose agar surface olivaceous grey, reverse iron-grey with sectors of olivaceous grey. On malt extract agar surface olivaceous grey with patches of smoke-grey; margin honey, frequently sectored; iron-grey underneath, with patches of olivaceous grey and honey at margin. On oatmeal agar smoke-grey with margins concolorous with agar medium.

Typus. SOUTH AFRICA, Western Cape Province, Hermanus, Fernkloof Nature Reserve, on leaves of *Protea repens* (*Proteaceae*), 4 May 2010, P.W. Crous, holotype CBS H-20776, cultures ex-type CPC 18357 = CBS 131319, ITS sequence GenBank JQ044438 and LSU sequence GenBank JQ044457, MycoBank MB560710; Western Cape Province, Hermanus, Fernkloof Nature Reserve, on leaves of *P. mundii*, 4 May 2010, P.W. Crous, cultures CPC 18290, 18289, ITS sequence GenBank JQ044439 and LSU sequence GenBank JQ044458.

Notes — *Leptosphaeria proteicola* was initially considered to represent a species of *Coniothyrium* or *Microsphaeropsis*, similar to *M. proteae* (Swart et al. 1998), based on the fact that conidia become brown at maturity. Phylogenetically, however, it clusters with species of *Leptosphaeria*, and is thus described in this genus. A megablast search of the NCBI's GenBank nucleotide sequence database using the ITS sequence of *P. proteicola* retrieves little hits with high similarity to identified sequences. A megablast search of the NCBI's GenBank nucleotide sequence database using the LSU sequence of *L. proteicola* retrieves as closest hits *Leptosphaeria biglobosa* (GenBank GU237980; Identities = 869/878 (99 %), Gaps = 0/878 (0 %)), *Phoma violicola* (GenBank GU238156; Identities = 869/879 (99 %), Gaps = 2/879 (0 %)) and *Phoma dimorphospora* (GenBank GU238069; Identities = 869/880 (99 %), Gaps = 3/880 (0 %)), amongst others. Comparing the ITS and LSU sequences of *L. proteicola* with that of *M. proteae* strain CPC 1423 yielded an identity value of 88 % (GenBank JN712495; Identities = 422/479 (88 %), Gaps = 18/479 (4 %)) and 97 % (GenBank JN712561; Identities = 830/855 (97 %), Gaps = 6/855 (1 %)) for ITS and LSU respectively.

Colour illustrations. *Protea repens* growing in the Fernkloof Nature Reserve, Hermanus, South Africa; colonies sporulating on oatmeal agar; conidigenous cells; conidia. Scale bars = 10 µm.