Cephalotrichiella penicillata
Fungal Planet 268 – 10 June 2014

**Cephalotrichiella Crous, gen. nov.**

**Etymology.** Named after its morphological similarity to the genus *Cephalotrichum*.

*Mycelium* consisting of pale brown, smooth, branched, septate hyphae. *Conidiophores* erect, olivaceous-brown, synnematous, consisting of up to 20 hyphae, olivaceous-brown, smooth; conidiophore base with rhizoids, stem straight, erect to flexuous, with penicillate conidiogenous apparatus. Primary branches olivaceous-brown, smooth, subcylindrical, giving rise to secondary and tertiary branches. *Conidia* in a dry mass, solitary, olivaceous-brown, smooth to verruculose, guttulate, ellipsoid but with inequilateral sides, subacute apex, truncate base, not thickened nor darkened, with minute marginal frill.

*Type species.* *Cephalotrichiella penicillata.* MycoBank MB808954.

**Cephalotrichiella penicillata Crous, sp. nov.**

**Etymology.** Named after its penicillate conidiophores.

*Mycelium* consisting of pale brown, smooth, branched, septate, 2–2.5 µm diam hyphae. *Conidiophores* erect, olivaceous-brown, synnematous, consisting of up to 20 hyphae, 2–2.5 µm diam, olivaceous-brown, smooth, septa 25–35 µm apart; conidiophore base with rhizoids, stem straight, erect to flexuous, 150–400 x 7–15 µm with penicillate conidiogenous apparatus. Primary branches olivaceous-brown, smooth, subcylindrical, 12–15 x 2.5–3.5 µm, giving rise to 1–2 secondary and tertiary branches, 5–7 x 3–4 µm; tertiary branches give rise to 2–4 conidiogenous cells. *Conidigenous cells* ampulliform, smooth, pale olivaceous, 6–8 x 2.5–3.5 µm, with inconspicuous percurrent proliferation at the apex. *Conidia* in a dry mass, solitary, olivaceous-brown, smooth to verruculose, guttulate, ellipsoid but with inequilateral sides, subacute apex, truncate base, 1.5–2 µm diam, with minute marginal frill, (5–)6–7(–8) x (3.5–)4(–4.5) µm.

**Culture characteristics —** Colonies reaching 12 mm diam after 2 wk at 22 °C, spreading with sparse aerial mycelium and lobed, feathery margins. On MEA surface pale olivaceous-grey, reverse olivaceous-grey. On OA and PDA surface olivaceous-grey.


Notes — Morphologically, *Cephalotrichiella* resembles the genus *Graphium* in having pigmented, synnematous conidiophores and pigmented conidia. It is somewhat different in that the conidiophores are much taller, more similar to *Leptographium*, and conidia are inequilateral. The conidiophores of *Ceratocladiella* have dry conidial masses, resembling those of *Cephalotrichum* (incl. *Doratomyces*; Seifert et al. 2011). It is distinct from *Cephalotrichum*, however, in that it has a well-defined penicillate head of conidiogenous cells, in contrast to *Cephalotrichum*, which also has lateral conidiogenous cells. Phylogenetically, *Cephalotrichiella* is allied to the genera in the Microascales, but still clusters distant, hence we introduce a new genus to accommodate it.

**ITS.** Based on a megablast search of NCBI’s GenBank nucleotide database, the closest hits using the ITS sequence are *Scedosporium prolificans* (GenBank AY228124; Identities = 370/418 (89 %), Gaps = 15/418 (3 %)), *Kernia pachypleura* (GenBank DQ318208; Identities = 580/694 (84 %), Gaps = 52/694 (7 %)) and *Pseudallescheria boydii* (GenBank GU566282; Identities = 544/653 (83 %), Gaps = 45/653 (6 %)).

**LSU.** Based on a megablast search of NCBI’s GenBank nucleotide database, the closest hits using the LSU sequence are *Graphium eumorphum* (GenBank JF746156; Identities = 843/873 (97 %), Gaps = 5/873 (0 %)) and *Scedosporium apiospermum* (GenBank FJ345358; Identities = 848/879 (96 %), Gaps = 5/879 (0 %)).