

*Fusicladium peltigericola*



Fungal Planet 54 – 23 December 2010

## *Fusicladium peltigericola* Crous & Diederich, *sp. nov.*

Conidiophora solitaria, erecta, subcylindrica, recta vel geniculata-sinuosa, non ramosa, 1–4(–7)-septata, 10–40(–90) × 3–4 µm, brunnea, laevia. Cellulae conidiogenae terminales, brunneae, laeviae, sympodialiter proliferantes, subcylindricae, 10–30 × 3–4 µm; cicatrices conidiales applanatae, inconspicuae vel leniter fuscatae, sed non refractivae et non incrassatae, 2–2.5 µm diam. Ramoconidia in 1–3 seriebus, subcylindrica, in medio unieuseptata, (27–)33–40(–65) × 4(–5) µm; conidia intercalaria et terminalia, subcylindrica, mediobrunnea, subtile verruculosa, 0–1-euseptata, (18–)25–33(–40) × (3.5–)4(–5) µm.

*Etymology.* Named after the lichen host from which it was collected, *Peltigera rufescens*.

*Mycelium* consisting of smooth, branched, septate, brown, 2–3 µm diam hyphae. *Conidiophores* solitary, erect, subcylindrical, straight to geniculous-sinuuous, unbranched, 1–4(–7)-septate, 10–40(–90) × 3–4 µm, brown, smooth. *Conidiogenous cells* terminal, brown, smooth, proliferating sympodially, subcylindrical, rarely straight, mostly geniculate-sinuuous, 10–30 × 3–4 µm; scars flattened, inconspicuous to somewhat darkened, but not refractive, not appearing thickened, 2–2.5 µm wide. *Ramoconidia* in 1–3 series, subcylindrical, medianly 1-euseptate, relatively thick-walled, medium brown, finely verruculose, basal hilum flattened, somewhat darkened, 2–2.5 µm wide, with one to several sympodial, apical loci; frequently with lateral branch up to 10 µm long, 3–4 µm wide, (27–)33–40(–65) × 4(–5) µm; older ramoconidia at times developing up to 3 septa; *intercalary* and *terminal conidia* subcylindrical, medium brown, finely verruculose, apex obtusely rounded or flattened, proliferating in sympodial fashion to form short chains of conidia, 0–1-euseptate; septum mostly in upper third of conidium, (18–)25–33(–40) × (3.5–)4(–5) µm; hila flattened, 2–2.5 µm wide, somewhat darkened, not thickened.

*Culture characteristics* — (in the dark, 25 °C): Colonies on oatmeal agar spreading, with moderate aerial mycelium; surface smooth, fuscous-black, margin lobate, smooth; reaching

15 mm diam after 1 mo. Colonies on cornmeal agar erumpent, spreading with dense, moderate aerial mycelium and lobate, smooth to feathery margins; colonies reaching 15 mm diam after 1 mo; surface olivaceous-grey to fuscous-black.

*Typus.* LUXEMBOURG, Lamadelaine, in a disused quarry, on terricolous *Peltigera rufescens*, over galls induced by *Hawksworthiana peltigericola*, May 2008, P. Diederich, CBS-H 20487 holotype, culture ex-type CPC 15252 = CBS 128206, ITS sequence GenBank HQ599579, MycoBank MB517532.

*Notes* — The genus *Fusicladium* is recognised as anamorph of *Venturia*<sup>1–3</sup>. Presently no *Fusicladium* species are known from lichens, nor are there any DNA sequence data of similar species currently deposited in GenBank. The closest sister taxa in GenBank based on the ITS sequence are *Fusicladium betulae* (GenBank FJ839641; Identities = 459/464 (99 %), Gaps = 2/464 (0 %)), *Venturia tremulae* var. *tremulae* (GenBank EU035475; Identities = 704/712 (99 %), Gaps = 4/712 (0 %)) and *Venturia ditricha* (GenBank EU035456; Identities = 704/712 (99 %), Gaps = 4/712 (0 %)). Morphologically *F. peltigericola* is distinct from all taxa treated in the recent monograph by Schubert et al.<sup>2</sup> based on the combination of characters, namely its large, subcylindrical ramoconidia that become up to 3-septate, and its terminal conidia that become 1-septate in the upper third of the conidium. Although *F. peltigericola* was isolated from a *Peltigera* thallus colonised with *Hawksworthiana peltigericola* (which could not be cultivated), there was no conclusive macroscopic proof that *F. peltigericola* is lichenicolous. However, conidia isolated from the thallus took up to 2 wk to germinate, and grew extremely slowly for the first few months, suggesting that there may be an association with *P. rufescens*. Further collections would be required, however, to clarify its ecology.

**Acknowledgement** The authors acknowledge G. Marson for the background photograph.

*Colour illustrations.* *Peltigera rufescens*; conidiophores with conidiogenous cells giving rise to conidia. Scale bars = 10 µm.

*References.* <sup>1</sup>Beck A, Ritschel A, Schubert K, Braun U, Triebel D. 2005. Phylogenetic relationships of the anamorphic genus *Fusicladium* s. lat. as inferred by ITS nrDNA data. *Mycological Progress* 4: 111–116. <sup>2</sup>Schubert K, Ritschel A, Braun U. 2003. A monograph of *Fusicladium* s. lat. (hyphomycetes). *Schlechtendalia* 9: 1–132. <sup>3</sup>Crous PW, Schubert K, Braun U, Hoog GS de, Hocking AD, Shin H-D, Groenewald JZ. 2007. Opportunistic, human-pathogenic species in the Herpotrichiellaceae are phenotypically similar to saprobic or phytopathogenic species in the Venturiaceae. *Studies in Mycology* 58: 185–217.