



Fungal Planet 88 – 31 May 2011

***Catenulostroma eucalyptorum* Crous & Carnegie, sp. nov.**

Catenulostromatis excentrici simile, sed conidiis minoribus; cellulis primariis $7\text{--}9 \times 2\text{--}4 \mu\text{m}$, cellulis secundariis $4\text{--}5 \times 2\text{--}2.5 \mu\text{m}$, discernitur.

Etymology. Named after the host genus on which it occurs, *Eucalyptus*.

Leaf spots amphigenous (intermingled among those of *Aulographina eucalypti*), subcircular with concentric rings, medium brown to somewhat reddish brown, with a raised margin, 5–10 mm diam. *Mycelium* internal and external; internal hyphae subcuticular, pale brown, branched, septate, 2–3.5 μm diam, emerging through stomata or cracks, anastomosing to form sporodochia that give rise to conidiophores forming chains of conidia. *Conidiomata* amphigenous, concentrically arranged, dark brown, dry and powdery, discrete, up to 300 μm diam. *Conidiophores* micronematous, branched, pale to medium brown, smooth, aggregated, $7\text{--}20 \times 3\text{--}4 \mu\text{m}$. *Conidiogenous cells* holothallic, integrated, terminal, subcylindrical to somewhat doliiform, conidial chains fragmenting into separate conidia, $6\text{--}8 \times 2\text{--}3 \mu\text{m}$. *Conidia* catenulate, smooth, pale brown, 4-celled, upper two primary cells $7\text{--}9 \times 2\text{--}4 \mu\text{m}$, with truncate ends where attached, 1.5–2 μm diam, cells separated from each other by a broad, dark brown area; each primary cell giving rise to a smaller basal cell that is globose, thin-walled, pale brown, $4\text{--}5 \times 2\text{--}2.5 \mu\text{m}$.

Culture characteristics — (in the dark, 25 °C, after 2 wk): Colonies slow growing, erumpent, with even margins, reaching 3 mm diam after 2 wk; on MEA surface olivaceous grey, and iron-grey in reverse; on OA surface olivaceous grey; on PDA surface grey olivaceous, reverse iron-grey.

Typus. AUSTRALIA, New South Wales, Ebor, S 30°14'21" E 152°31'55", on leaves of *Eucalyptus laevopinea*, 28 July 2009, A.J. Carnegie, holotype CBS H-20592, culture ex-type CPC 17586 = CBS 129578, ITS sequence GenBank JF951151 and LSU sequence GenBank JF951174, MycoBank MB560177.

Notes — *Catenulostroma eucalyptorum* is most similar to *C. excentricum* (formerly *Trimmatostroma*, see Crous et al. 2007a), which has larger conidia (primary cells $9\text{--}11 \times 3\text{--}4 \mu\text{m}$, secondary cells 2.5–4.5 μm diam; Sutton & Ganapathi 1978). Based on a megablast search of NCBI's GenBank nucleotide database, the closest hits using the ITS sequence are *Teratosphaeria suberosa* (GQ852831; Identities = 625/648 (96 %), Gaps = 9/648 (1 %)), *Phaeothecoidea intermedia* (GQ852754; Identities = 616/639 (96 %), Gaps = 1/639 (0 %)) and *Phaeothecoidea eucalypti* (EF394857; Identities = 622/646 (96 %), Gaps = 5/646 (1 %)). The megablast search using the LSU sequence had as highest identity sequences of *Phaeothecoidea intermedia* (GQ852628; Identities = 864/871 (99 %), Gaps = 1/871 (0 %)) and *Phaeothecoidea eucalypti* (EU019280; Identities = 51/858 (99 %), Gaps = 0/858 (0 %)).

Colour illustrations. Mature *Eucalyptus grandis* plantation in northern NSW; leaf spot; aggregated conidiophores with conidiogenous cells giving rise to conidia. Scale bars = 10 μm .

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