



Fungal Planet 769 – 13 July 2018

***Nullicamyces* Crous, gen. nov.**

Etymology. Name refers to Nullica State Forest, Australia, where this fungus was collected.

Classification — *Chaetothyriaceae*, *Chaetothyriales*, *Eurotiomycetes*.

Mycelium consisting of pale brown, smooth, branched, septate hyphae. *Conidiophores* reduced to conidiogenous cells on hyphae. Pseudocercospora-like morph: *Conidiogenous cells* inconspicuous on hyphae, not thickened nor darkened. *Conidia* solitary, long flexuous, obclavate, apex obtuse, base obconically

truncate, multiseptate, pale brown, smooth; frequently giving rise to secondary conidia via microcyclic conidiation. Matsushimaea-like morph: *Conidiogenous cells* reduced to loci on hyphae, inconspicuous. *Conidia* solitary, pale brown, smooth, initial cell ellipsoid, aseptate, forming acropetal chains of conidia that bud irregularly; conidia appearing star-shaped with radiating arms of ellipsoid cells all linked to the basal, initial cell.

Type species. *Nullicamyces eucalypti* Crous.
Mycobank MB825417.

***Nullicamyces eucalypti* Crous, sp. nov.**

Etymology. Name refers to *Eucalyptus*, the host genus from which this fungus was collected.

Mycelium consisting of pale brown, smooth, branched, septate, 2–2.5 µm diam hyphae. *Conidiophores* reduced to conidiogenous cells on hyphae. Pseudocercospora-like morph: *Conidiogenous cells* inconspicuous on hyphae, 2–3 µm diam, not thickened nor darkened. *Conidia* solitary, long flexuous, obclavate, apex obtuse, base obconically truncate, multiseptate, pale brown, smooth, 25–150 × 2–3 µm; frequently giving rise to secondary conidia via microcyclic conidiation. Matsushimaea-like morph: *Conidiogenous cells* reduced to loci on hyphae, inconspicuous, 2–3 µm diam. *Conidia* solitary, pale brown, smooth, initial cell ellipsoid, aseptate, forming acropetal chains of conidia that bud irregularly; conidia appearing star-shaped with radiating arms of ellipsoid cells all linked to the basal, initial cell; cells 5–12 × 2.5–5 µm.

Culture characteristics — Colonies erumpent, spreading, with moderate aerial mycelium and feathery margin, reaching 4 mm diam after 2 wk at 25 °C. On MEA, PDA and OA surface grey olivaceous, and reverse olivaceous grey.

Typus. AUSTRALIA, New South Wales, Nullica State Forest, on *Eucalyptus* leaf litter (*Myrtaceae*), 29 Nov. 2016, P.W. Crous (holotype CBS H-23576, culture ex-type CPC 32942 = CBS 144426, ITS and LSU sequences GenBank MH327807.1 and MH327843.1, MycoBank MB825418).

Notes — *Nullicamyces* is a new genus in the *Chaetothyriaceae* that is unique due to the fact that it is dimorphic, forming matsushimaea-like and pseudocercospora-like morphs in culture.

Based on a megablast search of NCBI's GenBank nucleotide database, the closest hits using the ITS sequence had highest similarity to *Chaetothyrium brischoficola* (GenBank NR_132849.1; Identities = 432/496 (87 %), 29 gaps (5 %)), *Aphanophora eugeniae* (GenBank NR_132829; Identities = 523/602 (87 %), 36 gaps (5 %)) and *Ceramothyrium ficus* (GenBank NR_154800.1; Identities = 469/543 (86 %), 28 gaps (5 %)). Closest hits using the LSU sequence are *Ceramothyrium podocarpi* (GenBank NG_042751.1; Identities = 785/818 (96 %), 2 gaps (0 %)), *Ceramothyrium carniolicum* (GenBank KC455251.1; Identities = 783/818 (96 %), 1 gap (0 %)) and *Ceramothyrium thailandicum* (GenBank KP324930.1; Identities = 781/818 (95 %), no gaps).

Colour illustrations. *Eucalyptus* trees at Nullica State Forest; dimorphic conidiophores, with matsushimaea-like conidia at the top, and long, slender pseudocercospora-like conidia at the bottom. Scale bars = 10 µm.

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