

Murramarangomyces corymbiae



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Murramarangomycetales Crous, *ord. nov.*

Mycobank MB823433.

Murramarangomycetaceae Crous, *fam. nov.*

Mycobank MB823434.

Classification — *Murramarangomycetaceae*, *Murramarangomycetales*, *Dothideomycetes*.

The diagnosis of the order *Murramarangomycetales* and family *Murramarangomycetaceae* is based on the type genus, *Murramarangomyces*.

Murramarangomyces Crous, *gen. nov.*

Etymology. Name refers to the location where it was collected, Murramarang, Australia.

Mycelium consisting of hyaline, smooth hyphae, irregular, constricted at septa, forming brown, thick-walled cells that become fertile *conidiogenous cells*, aggregated in cauliflower-like

clusters of brown, doliform to globose, brown conidiogenous cells, phialidic, giving rise to solitary conidia. *Conidia* in slimy mass, aseptate, hyaline, smooth, bacilliform.

Type species. *Murramarangomyces corymbiae* Crous.
Mycobank MB823391.

Murramarangomyces corymbiae Crous, *sp. nov.*

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

Leaf spots circular, hypophyllous, dark brown, circular, 3–5 mm diam, but several fungi are associated with these spots, so the occurrence could be secondary. *Mycelium* consisting of hyaline, smooth, 2–5 µm diam hyphae, irregular, constricted at septa, forming brown, thick-walled cells that become fertile *conidiogenous cells*, aggregated in cauliflower-like clusters of doliform to globose, brown conidiogenous cells, 3–5 µm diam, phialidic, giving rise to solitary conidia. *Conidia* in slimy mass, aseptate, hyaline, smooth, bacilliform, 3–5 × 1.5–2 µm.

Culture characteristics — Colonies erumpent, spreading, with sparse aerial mycelium and feathery, lobate margins, reaching 4 mm diam after 1 mo at 25 °C. On MEA, PDA and OA surface and reverse chestnut.

Typus. AUSTRALIA, New South Wales, close to Murramarang, on leaves of *Corymbia maculata* (*Myrtaceae*), 27 Nov. 2016, P.W. Crous (holotype CBS H-23281, culture ex-type CPC 33000 = CBS 143434, ITS and LSU sequences GenBank MG386045 and MG386098, MycoBank MB823392).

Notes — *Murramarangomyces* is related to the hyphomycete genus *Gonatophragmium* (*Dothideomycetes*), but is somewhat reminiscent of *Paramycoleptodiscus* (Crous et al. 2016b). Morphologically it is quite distinct however, in having creeping hyphae that give rise to aggregated brown clusters of phialidic conidiogenous cells (as in *Paramycoleptodiscus*), that form hyaline, smooth, aseptate conidia. When it was first isolated, several black, round hysterothecia was also present on the leaf spots, although the sexual-asexual link could not be confirmed, and further collections would be required to fully resolve its life cycle.

Based on a megablast search using the ITS sequence, only some similarities to the 5.8S nrRNA gene were found and these results were inconclusive. The highest similarities using the LSU sequence were *Lepra violacea* (GenBank MF109224; Identities 582/668 (87 %), 16 gaps (2 %)), *Lepra amara* (GenBank MF109182; Identities 581/669 (87 %), 18 gaps (2 %)) and *Gonatophragmium triuniae* (GenBank KP004479; Identities 626/728 (86 %), 15 gaps (2 %)).

Colour illustrations. *Corymbia* tree in Murramarang; conidiomata sporulating on OA, conidiogenous cells and conidia. Scale bars = 10 µm.

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