

*Polynema podocarpi*





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***Polynema podocarpi*** Crous & Thangavel, *sp. nov.*

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

*Classification* — *Chaetosphaeriaceae*, *Chaetosphaeriales*, *Sordariomycetes*.

*Conidiomata* stromatic, acervuloid, separate, superficial on agar, globose in outline, 200–350 µm diam, brown with creamy conidial mass in centre, surrounded by setae. *Setae* arising from basal stroma, straight to slightly curved, with basal septum, medium brown, smooth, thick-walled, unbranched, 90–200 µm long, apex acute, 3–4 µm diam at the base. *Conidiophores* lining the basal stroma, cylindrical, hyaline, smooth, branched, 1–3-septate, 20–65 × 2–2.5 µm. *Conidiogenous cells* phialidic, cylindrical, hyaline, smooth, 12–20 × 2–2.5 µm. *Conidia* fusoid to subcylindrical, subobtuse at apex, with single central appendage, truncate at base, (1–)3-septate, not constricted at septa, hyaline, smooth, (12–)14–15(–16) × 2.5(–3) µm, bearing appendages at each end; three basal appendages (10–)15–16 µm long, apical appendage central, 6–8 µm long.

*Culture characteristics* — Colonies flat, spreading, with moderate aerial mycelium and folded surface with smooth, lobate margin, reaching 35 mm diam after 2 wk at 25 °C. On MEA surface dirty white, reverse sienna. On PDA surface pale luteous to dirty white, reverse umber in centre, luteous in outer region. On OA surface pale luteous with diffuse luteous pigment in agar.

*Typus.* NEW ZEALAND, Auckland, Princes Street, on *Podocarpus totara* (*Podocarpaceae*), 7 July 2016, R. Thangavel, T16\_02618G (holotype CBS H-23587, culture ex-type CPC 32761 = CBS 144415 = ICMP 22363, ITS and LSU sequences GenBank MH327797.1 and MH327833.1, MycoBank MB825403).

*Notes* — Based on morphology this fungus is best accommodated in the genus *Polynema* as defined by Nag Raj (1993), being allied to *Pseudolachnea*, and clustering in *Chaetosphaeriaceae* (Crous et al. 2012). Morphologically, *Polynema podocarpi* is quite distinct from the presently known species, having 3-septate conidia (Nag Raj 1993). *Polynema podocarpi* is the first species of the genus that has been subjected to DNA sequencing, and thus adds a new lineage to the *Chaetosphaeriaceae*.

Based on a megablast search of NCBI's GenBank nucleotide database, the closest hits using the ITS sequence had highest similarity to *Pseudolachnea fraxini* (GenBank NR\_155628.1; Identities = 484/536 (90 %), 29 gaps (5 %)), *Pseudolachnea hispidula* (GenBank AB934071.1; Identities = 477/528 (90 %), 28 gaps (5 %)) and *Pseudolachnella longiciliata* (GenBank AB934081.1; Identities = 469/528 (89 %), 29 gaps (5 %)). Closest hits using the LSU sequence are *Pseudolachnella fusiformis* (GenBank AB934056.1; Identities = 817/835 (98 %), no gaps), *Pseudolachnella botulispora* (GenBank AB934050.1; Identities = 811/830 (98 %), no gaps) and *Pseudolachnea hispidula* (GenBank AB934048.1; Identities = 811/830 (98 %), no gaps).

*Colour illustrations.* *Podocarpus totara* tree in New Zealand; conidioma sporulating on SNA (scale bar = 300 µm), setae, conidiophores, conidiogenous cells and conidia (scale bars = 10 µm).