

Pseudopenicillium podocarpi



Fungal Planet 986 – 18 December 2019

Pseudopenidiella podocarp Crous, *sp. nov.*

Etymology. Name refers to the host genus *Podocarpus* from which it was isolated.

Classification — *Microthyriaceae*, *Microthyriales*, *Dothideomycetes*.

Mycelium consisting of pale brown, verruculose, branched, septate, 1.5–2 µm diam hyphae. *Conidiophores* solitary, erect, medium brown, smooth but verruculose in upper cell, subcylindrical, unbranched, 1–6-septate, 10–110 × 3–4 µm; base swollen, 4–7 µm diam. *Conidiogenous cells* integrated, terminal, subcylindrical, pale to medium brown, verruculose, 10–15 × 3–3.5 µm, proliferating sympodially with one to several flat-tipped apical loci, 1 µm diam. *Conidia* pale brown, verruculose, aseptate, guttulate, ends obtuse, hila truncate, 0.5–1 µm diam, not thickened nor darkened. Secondary ramoconidia (9–)12–13 × (2.5–)3–3.5 µm; conidia in unbranched chains (–30), (9–)11–12(–15) × 2.5(–3) µm; hila not thickened nor darkened.

Culture characteristics — Colonies erumpent, spreading, with moderate aerial mycelium and smooth, lobate margin, reaching 8 mm diam after 2 wk at 25 °C. On MEA, PDA and OA surface and reverse umber.

Typus. SOUTH AFRICA, Western Cape Province, Knysna, Knysna area, on leaves of *Podocarpus latifolius* (*Podocarpaceae*), 22 Nov. 2018, *F. Roets*, HPC 2710 (holotype CBS H-24187, culture ex-type CPC 37092 = CBS 146067, ITS and LSU sequences GenBank MN562140.1 and MN567647.1, MycoBank MB832899).

Additional material examined. SOUTH AFRICA, Western Cape Province, Knysna, Knysna area, on leaves of *Podocarpus latifolius* (*Podocarpaceae*), 22 Nov. 2018, *F. Roets*, HPC 2710, culture CPC 37094, ITS and LSU sequences GenBank MN562141.1 and MN567648.1.

Notes — *Pseudopenidiella* is characterised by having erect, brown conidiophores, sympodial conidiogenesis, and aseptate conidia with somewhat thickened scars and hila (Bensch et al. 2012, Crous et al. 2012b). *Pseudopenidiella podocarp* is related to *P. piceae* (ramoconidia 8–12 × 2–3 µm, conidia (6–)7–9(–10) × (2.5–)3 µm; Crous et al. 2012b), but distinct in having larger conidia.

Based on a megablast search of NCBI's GenBank nucleotide database, the closest hits using the **ITS** sequence of CPC 37092 had highest similarity to *Pseudopenidiella piceae* (strain CBS 131453, GenBank NR_111761.1; Identities = 443/484 (92 %), 9 gaps (1 %)), *Morenoina calamicola* (strain MFLUCC 14-1162, GenBank NR_154210.1; Identities = 327/394 (83 %), 20 gaps (5 %)), and *Leptomelanconium allescheri* (strain LA_kult_01, GenBank MF573935.1; Identities = 314/376 (84 %), 21 gaps (5 %)). The ITS sequence of CPC 37092 differs with a single nucleotide from that of CPC 37094 (554/555 bases similar). Closest hits using the **LSU** sequence of CPC 37092 are *Pseudopenidiella piceae* (strain CBS 131453, GenBank NG_042681.1; Identities = 802/824 (97 %), no gaps), *Heliocephala gracilis* (strain MUCL 41200, GenBank HQ333479.1; Identities = 741/829 (89 %), 10 gaps (1 %)), and *Heliocephala zimbabweensis* (strain MUCL 40019, GenBank HQ333481.1; Identities = 738/826 (89 %), 4 gaps (0 %)). The LSU sequences of CPC 37092 and CPC 37094 are identical (824/824 bases).

Colour illustrations. *Podocarpus latifolius* trees in Knysna forest. Conidiophores with conidiogenous cells; conidia. Scale bars = 10 µm.

Pedro W. Crous & Johannes Z. Groenewald, Westerdijk Fungal Biodiversity Institute, P.O. Box 85167, 3508 AD Utrecht, The Netherlands; e-mail: p.crous@wi.knaw.nl & e.groenewald@wi.knaw.nl

Michael J. Wingfield, Department of Biochemistry, Genetics and Microbiology, Forestry and Agricultural Biotechnology Institute (FABI), Faculty of Natural and Agricultural Sciences, University of Pretoria, Private Bag X20, Hatfield 0028, Pretoria, South Africa; e-mail: mike.wingfield@fabi.up.ac.za

Francois Roets, Department of Conservation Ecology and Entomology, Stellenbosch University, Stellenbosch 7600, South Africa; e-mail: fr@sun.ac.za

Wijnand J. Swart, Department of Plant Sciences (Division of Plant Pathology), University of the Free State, P.O. Box 339, Bloemfontein 9300, South Africa; e-mail: Swartwj@ufs.ac.za