

Vermiculariopsiella pini
& *Neotracylla pini*



Fungal Planet 975 & 976 – 18 December 2019

Vermiculariopsiella pini Crous, *sp. nov.*

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

Classification — *Vermiculariopsiaceae*, *Vermiculariopsiales*, *Sordariomycetes*.

Conidiomata sporodochial, 200–600 µm diam, with slimy, creamy conidial mass; base of brown pseudoparenchymatal cells giving rise to densely aggregated conidiophores. *Setae* dispersed throughout sporodochium, thick-walled, brown, smooth, unbranched, flexuous, subcylindrical, with taper to subacute apex, multiseptate, 140–300(–550) µm long, base bulbous, (4–)8–10 µm. *Conidiophores* subcylindrical, pale brown, smooth, 0–2-septate, 20–40 × 3–4 µm, branched, giving rise to 1–4 conidiogenous cells. *Conidiogenous cells* terminal, cymbiform to ampulliform, pale brown, smooth, phialidic, apex twisted to the side, periclinal thickening and collarette present, 10–20 × 2.5–3.5 µm. *Conidia* solitary, septate, hyaline, smooth, guttulate, fusoid, integrated, inner plane straight, outer plane convex,

base truncate, hilum excentric, 0.5–1 µm, (17–)19–21(–22) × 2.5(–3) µm; ends with mucoid caps, which appears to be unique for the genus.

Culture characteristics — Colonies flat, spreading, with moderate aerial mycelium and smooth, lobate margin, reaching 50 mm diam after 2 wk at 25 °C. On MEA, PDA and OA surface buff, reverse cinnamon.

Typus. MALAYSIA, on needles of *Pinus tecunumanii* (*Pinaceae*), 1 Oct. 2018, M.J. Wingfield, HPC 2657 (holotype CBS H-24174, culture ex-type CPC 36727 = CBS 146009, ITS and LSU sequences GenBank MN562128.1 and MN567635.1, MycoBank MB832885).

Note — *Vermiculariopsiella* is characterised by sporodochia with brown, erect setae (branched or not), subhyaline conidiophores, phialidic conidiogenous cells, and hyaline, aseptate conidia (Crous et al. 2014, Hernández-Restrepo et al. 2017). *Vermiculariopsiella pini* is phylogenetically closely related to *V. dichapetali* (on *Dichapetalum rhodesicum*, Botswana; setae 100–300 × 6–10 µm, conidia (10–)17–22(–24) × 2.5(–3) µm). The two species are best separated based on their DNA data.

Tracyllales Crous, *ord. nov.*

Etymology. Name based on the genus *Tracylla*.

Classification — *Tracyllaceae*, *Tracyllales*, *Sordariomycetes*.

Pycnothyria superficial on leaves, round, brown, with central column of cells; ostiole lacking, margin of catenate, darker brown cells. *Conidiophores* reduced to conidiogenous cells arising

from a central columella, doliiform to ellipsoid, hyaline, smooth, with a single conidiogenous locus, phialidic. *Conidia* solitary, hyaline, aseptate, smooth, guttulate, falcate to naviculate or ellipsoid to subcylindrical, apex subobtusely rounded, base truncate; with or without unbranched polar appendages, not delimited by septa.

Type family. *Tracyllaceae* Crous.
MycoBank MB832986.

Neotracylla Crous, *gen. nov.*

Etymology. Name reflects its morphological similarity to *Tracylla*.

Conidiomata pycnothyrial, brown, round, scutellum consisting of a radiating mass of brown cells, verruculose, bifurcating into two additional radial rows; margin smooth, lobate or with pointed terminal cells; surface of pycnothyrium cells with dark brown circular striations, at times conidiomata consisting of smaller

circular scutella that overlap like roof tiles. *Conidiophores* reduced to conidiogenous cells, subcylindrical to doliiform, pale brown, smooth, phialidic. *Conidia* aseptate, formed singly, hyaline, smooth, subcylindrical, apex obtuse, slightly curved, inner plane flat, outer plane convex, base pointed, curved towards inner plane.

Type species. *Neotracylla pini* Crous.
MycoBank MB832886.

Neotracylla pini Crous, *sp. nov.*

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

Conidiomata pycnothyrial, brown, round, scutellum 80–150 µm diam, consisting of a radiating mass of brown cells, verruculose, bifurcating into two additional radial rows; margin smooth, lobate or with pointed terminal cells, 2–4 µm long; surface of pycnothyrium cells with dark brown circular striations, at times conidiomata consisting of smaller circular scutella that overlap like roof tiles. *Conidiophores* reduced to conidiogenous

cells, subcylindrical to doliiform, pale brown, smooth, 7–10 × 3–4 µm, phialidic, occurring under scutellum (although hard to discern). *Conidia* aseptate, formed singly, hyaline, smooth, subcylindrical, apex obtuse, slightly curved, inner plane flat, outer plane convex, base pointed, curved towards inner plane, (8–)9–10(–11) × 3(–3.5) µm.

Typus. MALAYSIA, on needles of *Pinus tecunumanii* (*Pinaceae*), 1 Oct. 2018, M.J. Wingfield, HPC 2657 (holotype CBS H-24175, culture ex-type CPC 36731 = CBS 146010, ITS and LSU sequences GenBank MN562129.1 and MN567636.1, MycoBank MB832887).

Notes — *Tracylla* is characterised by having brown, superficial pycnothyria, with hyaline, aseptate conidia with or without polar appendages (Crous et al. 2018c). Three species are presently recognised in the genus, which can all be distinguished from *T. pini* based on their conidium morphology.

Colour illustrations. Canopy of *Pinus tecunumanii* trees seen from below. Left column *Vermiculariopsiella pini*: Setae; conidiogenous cells; conidia. Right column *Tracylla pini*: Conidiomata on oatmeal agar; overlapping pycnothyrial conidiomata; conidiogenous cells and 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