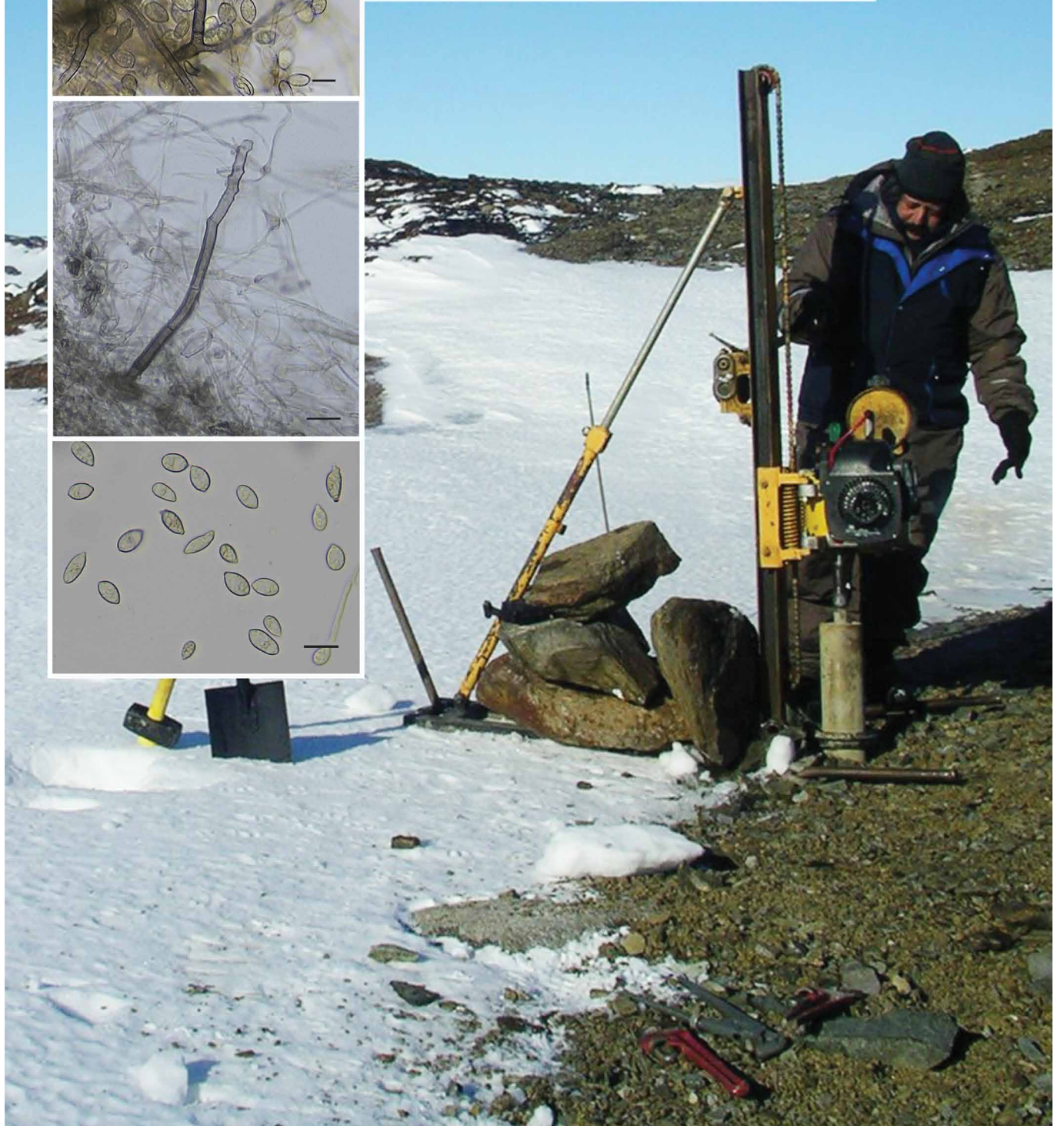


Apenidiella antarctica



Fungal Planet 1041 – 18 December 2019

Apenidiella antarctica Ivanushkina, Kochkina, Vasilenko & Ozerskaya, *sp. nov.*

Etymology. Named after Antarctica, where the fungus was collected.

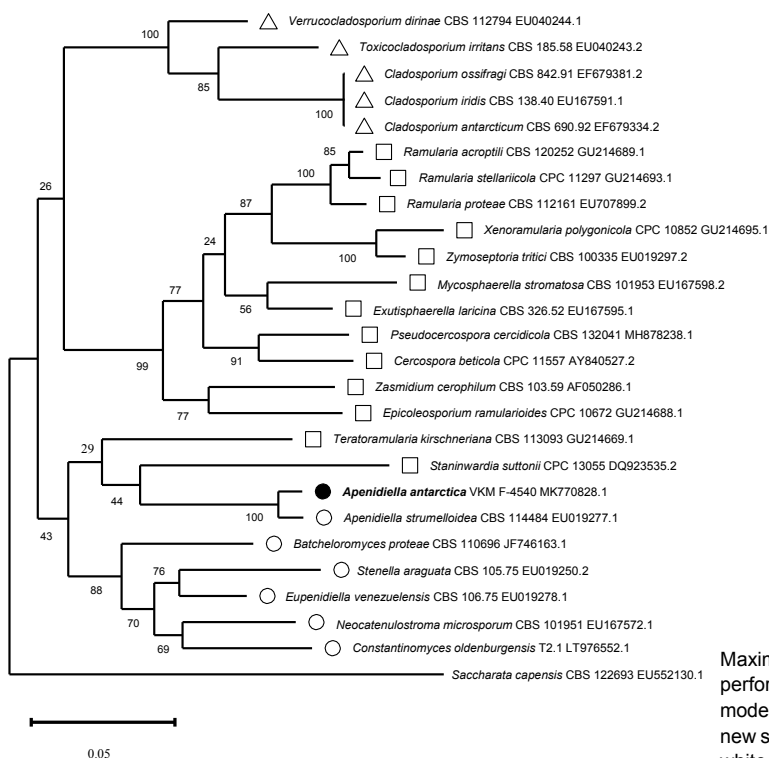
Classification — *Teratosphaeriaceae*, *Capnodiales*, *Dothideomycetidae*, *Dothideomycetes*.

Mycelium consisting of branched, septate, smooth to warty, hyaline to pale olivaceous, 1–4 µm wide hyphae. *Conidiophores* solitary, erect, arising from superficial mycelium, macronematous, subcylindrical, straight to slightly curved, subcylindrical throughout, 30–100 × 2.5–4.5 µm, 0–6-septate, medium to dark brown, paler towards the apex, smooth, wall ≤ 0.75 µm diam, penicillate apex formed by a terminal conidiogenous cell giving rise to a single set of ramoconidia. *Conidiogenous cells* terminal, rarely intercalary integrated, subcylindrical, straight to curved, 8–30 × 2.5–4.5 µm, pale brown, thin-walled, smooth, with several (–10) terminal and intercalary conidiogenous loci, thickened and darkened, scars protuberant, 1–1.5 µm diam. *Conidia* in short (–5), dense penicillate, acropetal chains, ramoconidia subcylindrical, with 1–3 terminal loci, olivaceous brown, smooth, 11–12.5 × 3.5–4.5 (–5) µm; secondary conidia ellipsoid to obovoid, (7–)8.5–10 (–11) × (3.5–)4–5.5 (–6) µm, hila not thickened or almost so to somewhat thickened and darkened, not refractive, 1 µm diam.

Culture characteristics — (in the dark, PDA, 25 °C after 1 mo). Colonies olivaceous grey, dense, aerial mycelium abundant, felty to woolly, growth regular, low convex with an elevated colony centre, sometimes forming few large prominent exudates, reverse iron-grey, margin almost colourless, regular, colonies fertile; colonies reaching 20–22 mm diam (at 25 °C), 26–29 mm diam (at 20 °C), 20–21 mm diam (at 15 °C), 2–3 mm diam (at 5 °C), no growth (at 30 °C).

Typus. ANTARCTICA, Russkaya Station (S74°45'48" W136°47'47", altitude 76 m), hole A8/08, depth 1.3–1.4 m, isolated from permafrost, *N. Ivanushkina* (holotype VKM H-0001, ex-type culture VKM F-4540, SSU/ITS/LSU sequence GenBank MK770828.1, MycoBank MB830584).

Notes — *Apenidiella antarctica* is the second member of the genus *Apenidiella* (Crous et al. 2007a, Quaedvlieg et al. 2014). Based on a megablast search of NCBI's GenBank nucleotide database, the closest hits using the ITS sequence are *Apenidiella strumelloidea* (GenBank NR_145090.1; Identities = 547/564 (97 %), 2 gaps (0 %)), *Cercospora dolichandrae* (GenBank NR_156282.1; Identities = 489/574 (85 %), 32 gaps (5 %)), *Hortaea thailandica* (GenBank GU214637.1; Identities = 491/578 (85 %), 26 gaps (4 %)). Closest hits using the partial LSU sequence are *Apenidiella strumelloidea* (GenBank EU019277.1; Identities = 800/805 (99 %), no gaps), *Microcyclospora tardicrescens* (GenBank MH875507.1; Identities = 778/806 (97 %), 2 gaps (0 %)), *M. pomicola* (GenBank MH875506.1 with the same statistics), and *Microcyclospora malicola* (GenBank MH875503.1; Identities = 775/806 (96 %), 2 gaps (0 %)). Closest hits using the contiguous tandem ITS plus LSU (including D1–D3 domains) sequence are *Apenidiella strumelloidea* (GenBank EU019277.1; Identities = 1345/1367 (98 %), 2 gaps (0 %)), *Eupeniidiella venezuelensis* (GenBank EU019277.1; Identities = 1228/1351 (91 %), 29 gaps (2 %)), *Teratoramularia kirschneriana* (GenBank GU214669.1; Identities = 1210/1343 (90 %), 26 gaps (1 %)). *Apenidiella antarctica* differs morphologically from *A. strumelloidea* VKM F-2534^T (= CBS 114484^T) in having numerous loci aggregated or spread over the whole conidiogenous cell, short and little branched conidial chains, and wider, not curved conidia.



Colour illustrations. David Gilichinsky at the Russkaya Station in Marie Byrd Land, Antarctica, busy sampling via the dry drilling technique. Colonies on PDA; conidiophores and conidiogenous cells; conidia. Scale bars = 10 µm.

Nataliya E. Ivanushkina, Galina A. Kochkina, Oleg V. Vasilenko & Svetlana M. Ozerskaya, All-Russian collection of microorganisms (VKM), IBPM RAS, prospect Nauki, 5, Pushchino, Moscow Region, Russia; e-mail: nei@dol.ru, gak@dol.ru, ovvasilenko@gmail.com & smovkm@gmail.com