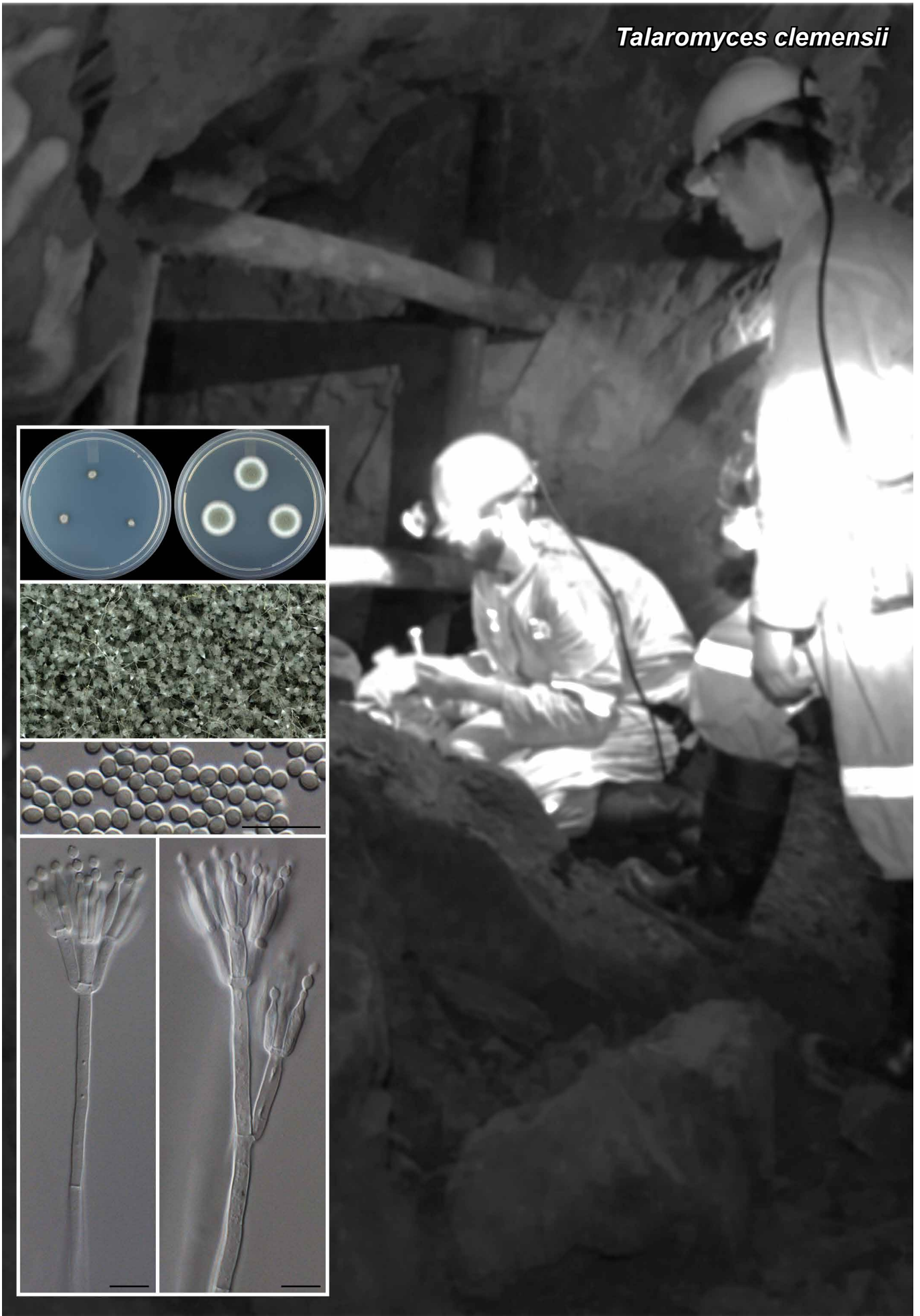


Talaromyces clemensii



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Talaromyces clemensii Visagie & Yilmaz, *sp. nov.*

Etymology. Latin, *clemensii*, named after Clemens Kiessig of Barberton Mines who assisted with sample collections inside goldmine shaft.

Classification — *Trichocomaceae*, *Eurotiales*, *Eurotiomycetes*.

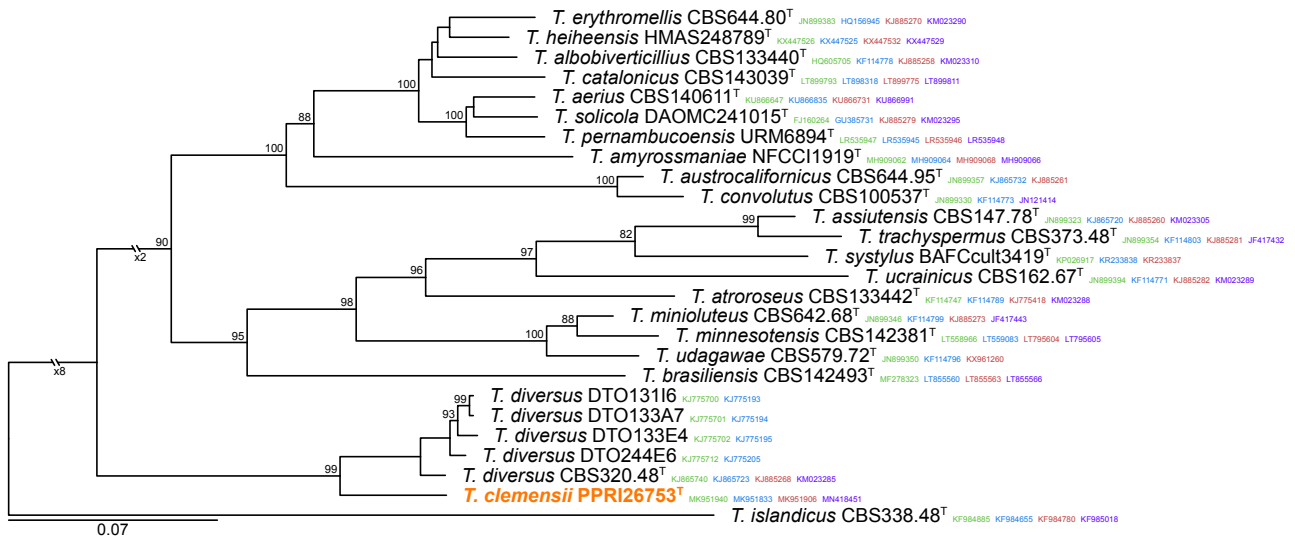
Conidiophores biverticillate, sometimes subterminal branched; *stipes* smooth walled, 150–520 × 3–4 µm; *branches* 12–35 µm; *metulae* 4–8 per stipe, 10.5–13(–16) × 3–4 µm; *phialides* acerose, 4–6 per metula, 10–12(–13) × 2.5–3 µm (11.4 ± 0.8 × 2.8 ± 0.2); average length metula/phialide 1.1; *conidia* smooth walled, broadly ellipsoid to ellipsoid, 2–3(–5) × 2–2.5(–3.5) µm (2.6 ± 0.1 × 2.2 ± 0.1), av. width/length = 0.8, n = 70.

Culture characteristics (25 °C, 7 d) — On Czapek yeast autolysate agar (CYA): Colonies low, plain, raised centrally, having an olive (2F5; colour code based on Kornerup & Wanschler (1967)) to olive grey (2E2) colour; margins low, narrow (1 mm), entire; mycelia white; texture floccose; sporulation very sparse, conidia *en masse* not determined; soluble pigments absent; exudates absent; reverse black to olive brown (4F3–6). On malt extract agar (MEA): Colonies low, plain, raised centrally; margins low, wide (3 mm), entire; mycelia white; texture velutinous and floccose; sporulation moderately dense, conidia *en masse* greyish green (25D5–E5), dull green (27E4); soluble pigments absent; exudates absent; reverse greyish yellow (2B4), greyish green (30C3–4), yellowish white (2A2). On yeast extract sucrose agar (YES): Colonies moderately deep, plain, slightly sunken centrally, having a greyish colour; margins low, narrow (1 mm), entire; mycelia

white; texture velutinous; sporulation sparse, conidia *en masse* turquoise grey (24E2); soluble pigments absent; exudates absent; reverse brownish grey (5F2–6F2), brownish orange (5C3). On dichloran 18 % glycerol agar (DG18): Colonies low to moderately deep, plain, raised centrally; margins low, narrow (1 mm), entire; mycelia white; texture floccose; sporulation absent, conidia *en masse* not determined; soluble pigments absent; exudates absent; reverse yellowish white (3A2). On creatine sucrose agar (CREA): Colonies weak growth, no acid production. *Colony diam (in mm)*: CYA 5–8; CYA 30 °C 3–5; CYA 37 °C no growth; CYA with 5 % NaCl 4–5; MEAbI 30–31; DG18 6–8; YES 6–7; oatmeal agar (OA) 10–11; CREA 6–7.

Typus. SOUTH AFRICA, Mpumalanga, Barberton, from rotting wood in goldmine, Nov. 2018, coll. C.M. Visagie & C. Kiessig, isol. C.M. Visagie (holotype PREM 62301, cultures ex-type PPRI 26753 = CMV016A4, LSU, ITS, *BenA*, *CaM* and *RPB2* sequences GenBank MN388753, MK951940, MK951833, MK951906 and MN418451; MycoBank MB832488).

Notes — A BLAST search against an ex-type reference sequence dataset placed the new species in *Talaromyces* sect. *Trachyspermi* (Yilmaz et al. 2014). A multigene phylogeny based on ITS, *BenA*, *CaM* and *RPB2* resolves *T. clemensii* as sister to *T. diversus*. All four genes distinguish between these species. Morphologically, both species are distinguished by poor growth on CYA. *Talaromyces clemensii* is distinguished from *T. diversus* by its inability of growth on CYA at 37 °C, and more restricted growth on OA (10–11 vs 25–40 mm).



Colour illustrations. Collecting rotting wood in goldmine shaft. Colonies on CYA and MEA; colony texture on MEA; conidiophores; conidia. Scale bars = 10 µm.

Combined phylogeny of *Talaromyces* sect. *Trachyspermi* based on ITS, *BenA*, *CaM* and *RPB2*. Aligned datasets were analysed in IQ-tree v. 1.6.8. Bootstrap support values (≥ 80 %) are given above branches. The new species is indicated by **bold orange text**, ^T = ex-type strain. GenBank accession numbers are shown in a smaller font next to the culture accession number (ITS = green, *BenA* = blue, *CaM* = red, *RPB2* = purple). The tree is rooted to *T. islandicus*.

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