

Collariella hilkhuijsenii



Fungal Planet 715 – 20 December 2017

***Collariella hilkhuijsenii* X. Wei Wang, sp. nov.**

Etymology. Named for Joost Hilkhuijsen, who collected this specimen. This species was discovered during a Citizen Science project in the Netherlands, 'Wereldfaam, een schimmel met je eigen naam', describing novel fungal species isolated from Dutch soils.

Classification — *Chaetomiaceae*, *Sordariales*, *Sordariomycetes*.

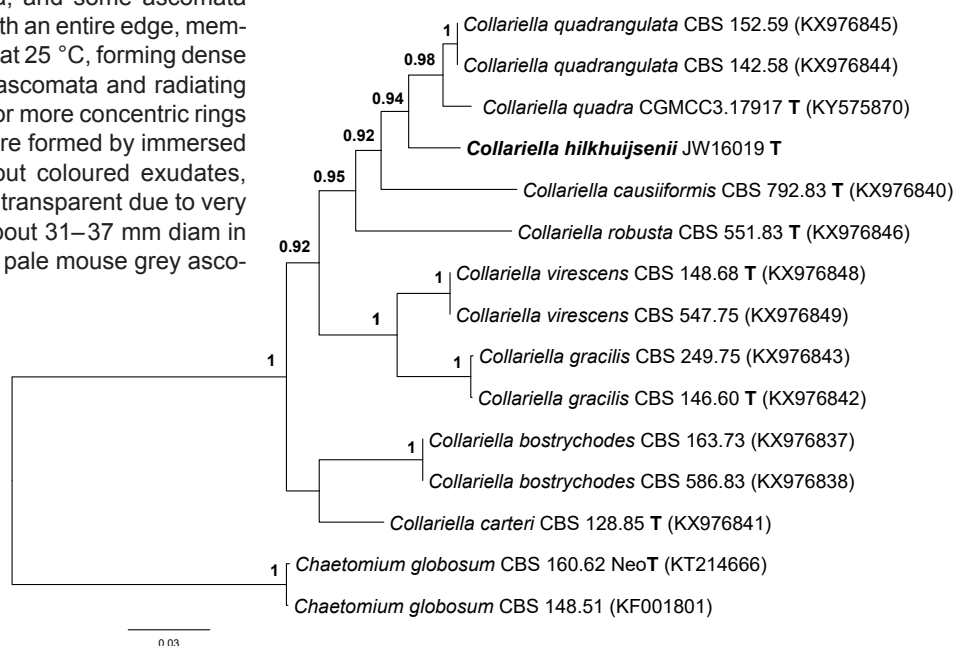
Ascomata superficial, pale mouse grey in reflected light owing to ascomatal hairs, obovate to turbinate or ellipsoidal, 250–350 µm high (including the collar), 190–300 µm diam, with a wide ostiole around a darkened collar, 25–50 µm high and 110–180 µm wide. **Ascomatal wall** brown, *textura globulosa* to *angularis* in surface view, and often with cells arranged in a petaloid pattern around the bases of lateral hairs. **Terminal hairs** arising from the apical collar, conspicuously rough, dark brown, septate, erect in the lower part, 3–5.5 µm near the base, spirally coiled in the upper part. **Lateral hairs** seta-like, tapering and fading towards the tips. **Asci** fasciculate, clavate or fusiform, spore-bearing part 20–29 × 7–10.5 µm, stalks 12–25 µm long, with 8 irregularly-arranged ascospores, evanescent. **Ascospores** olivaceous when mature, limoniform, bilaterally flattened, (5.5–)6–6.5(–7) × 5–6 × 4–4.5(–5) µm, with an apical germ pore. **Asexual morph** unknown.

Culture characteristics — Colonies on OA with an entire edge, about 32–38 mm diam in 7 d at 25 °C, forming pale mouse grey ascomata, without aerial hypha, without coloured exudates, reverse uncoloured. Colonies on CMA similar to those on OA, but forming denser ascomata, and some ascomata developed slower. Colonies on MEA with an entire edge, membranous, about 35–41 mm diam in 7 d at 25 °C, forming dense and pale mouse grey to mouse grey ascomata and radiating furrows in the central part, with seven or more concentric rings around the mass of ascomata which are formed by immersed hyphae, without aerial hyphae; without coloured exudates, reverse uncoloured. Colonies on PCA transparent due to very sparse mycelia, with an entire edge, about 31–37 mm diam in 7 d at 25 °C, forming relatively sparse pale mouse grey asco-

mata, without aerial hypha, without coloured exudates, reverse uncoloured.

Typus. THE NETHERLANDS, Reeuwijk, from garden soil, Feb. 2017, *J. Hilkhuijsen* (holotype CBS H-23232, culture ex-type CBS 143305 = JW16019; ITS, LSU, *tub2* and *rpb2* sequences GenBank MG432011, MG432012, MF716586 and MF716587, MycoBank MB823460).

Notes — This species appears morphologically similar to *Collariella bostrychodes*, but can be distinguished by smaller ascospores and thinner terminal ascomatal hairs compared to the ascospores (6–7 × 5.5–6.5 × 4.5–5.5 µm) and the terminal hairs (4–7 µm near the base) of *C. bostrychodes*. Phylogenetically, this species is close to *C. quadrangulata* that has quadrangular ascospores.



Colour illustrations. Background, collection site (backyard) and collector (Joost Hilkhuijsen); ascomata with spirally coiled ascomatal hairs (scale bar = 100 µm), ascomatal wall, asci, part of a terminal ascomatal hair and ascospores (scale bars = 10 µm).

Consensus phylogram resulting from a Bayesian analysis of partial sequences of *rpb2* region from representative strains of *Collariella* species. The sequences were aligned using MAFFT v. 7 (Katoch & Standley 2013) and included 852 nucleotides. GTR+I+G was used as the best nucleotide substitution model and the phylogenetic tree was generated under MrBayes v. 3.2.1 (Ronquist & Huelsenbeck 2003). *Chaetomium globosum* (*Chaetomiaceae*, *Sordariales*) was used as the outgroup taxon.