

Talaromyces annesophieae



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***Talaromyces annesophieae* Houbraken, sp. nov.**

Etymology. *annesophieae*, refers to the name of the collector of the ex-type strain, Anne-Sophie den Boer. 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 — *Talaromyces* section *Talaromyces*, *Trichocomaceae*, *Eurotiales*, *Eurotiomycetes*.

Conidiophores biverticillate, occasionally with an additional branch. **Stipes** smooth-walled, 100–150 × 2–3 µm, non-vesiculate. **Metulae** 4–6, 10–13 × 2–3 µm. **Phialides** 4–7 per stipe, lanceolate, 9–12 × 2–3 µm. **Conidia** smooth-walled, broadly ellipsoidal, 2–3 × 2–2.5 µm. **Ascomata** or **sclerotia** not observed.

Culture characteristics — **CYA**, 25 °C, 7 d: Colonies raised in centre, weakly radially sulcate; margins irregular, lobate; mycelium white to pale yellow; texture velvety, velvety to granular in centre; sporulation weak; conidial colour *en masse* indeterminate; exudates droplets present, large, clear; soluble pigment absent; reverse pinkish brown. **MEA**, 25 °C, 7 d: Colonies plane, slightly raised in centre, non-sulcate; margins entire; mycelium white with yellow mycelium covering the colony; texture velvety, floccose in centre; sporulation strong; conidial colour *en masse* dull green; exudates absent; soluble pigment absent; reverse brown. **YES**, 25 °C, 7 d: Colonies raised in centre, non-sulcate; margins entire; mycelium pale yellow; sporulation absent, conidia *en masse* indeterminate; exudate absent; soluble pigment absent; reverse orange-brown in centre, yellow-brown near colony edge. **DG18**, 25 °C, 7 d: Colonies plane, non-sulcate; margins entire; mycelium white to pale yellow; texture velvety; sporulation moderate; conidial colour *en masse* dull to grey green; exudate absent; soluble pigment absent; reverse pale yellow. **OA**, 25 °C, 7 d: Colonies plane, non-sulcate; margins entire; mycelium yellow; texture velvety, slightly floccose in centre; sporulation strong; conidial colour *en masse* dark green; exudate present as clear droplets; soluble pigment absent; reverse indeterminate. **CREA**, 25 °C, 7 d: poor growth, acid and base compounds not produced. Ehrlich reaction negative.

The phylogenetic tree based on partial β -tubulin sequences was inferred using a maximum likelihood analysis in the MEGA 6 v. 6.06 software package. The Hasegawa-Kishino-Yano model with gamma distributed (+G) and invariant sites (+I) was the most suitable and therefore selected. Bootstrap support values are indicated at the nodes (1 000 bootstraps) and values below 70 % are not shown. The scale bar indicates the expected number of changes per site.

Colour illustrations. Background, collection site (backyard) and collector (Anne-Sophie den Boer); detail of colony on MEA showing yellow mycelium covering colony; conidia and conidiophores. Scale bars = 10 µm.

Typus. THE NETHERLANDS, Gelderland, ex soil, Mar. 2017, A.-S. den Boer (holotype CBS H-23216, culture ex-type = CBS 142939 = DTO 377-F3 = JW9011; ITS, *BenA* and *CaM* sequences GenBank MF574592, MF590098 and MF590104, MycoBank MB823027).

Notes — *Talaromyces annesophieae* is phylogenetically most closely related to *T. pinophilus*. *Talaromyces pinophilus* grows faster than *T. annesophieae* on the agar media MEA, CYAS and YES. The most striking difference is the ability of *T. pinophilus* to grow on CYA incubated at 37 °C (25–40 mm) (Yilmaz et al. 2014), while *T. annesophieae* is unable to grow at this temperature.

