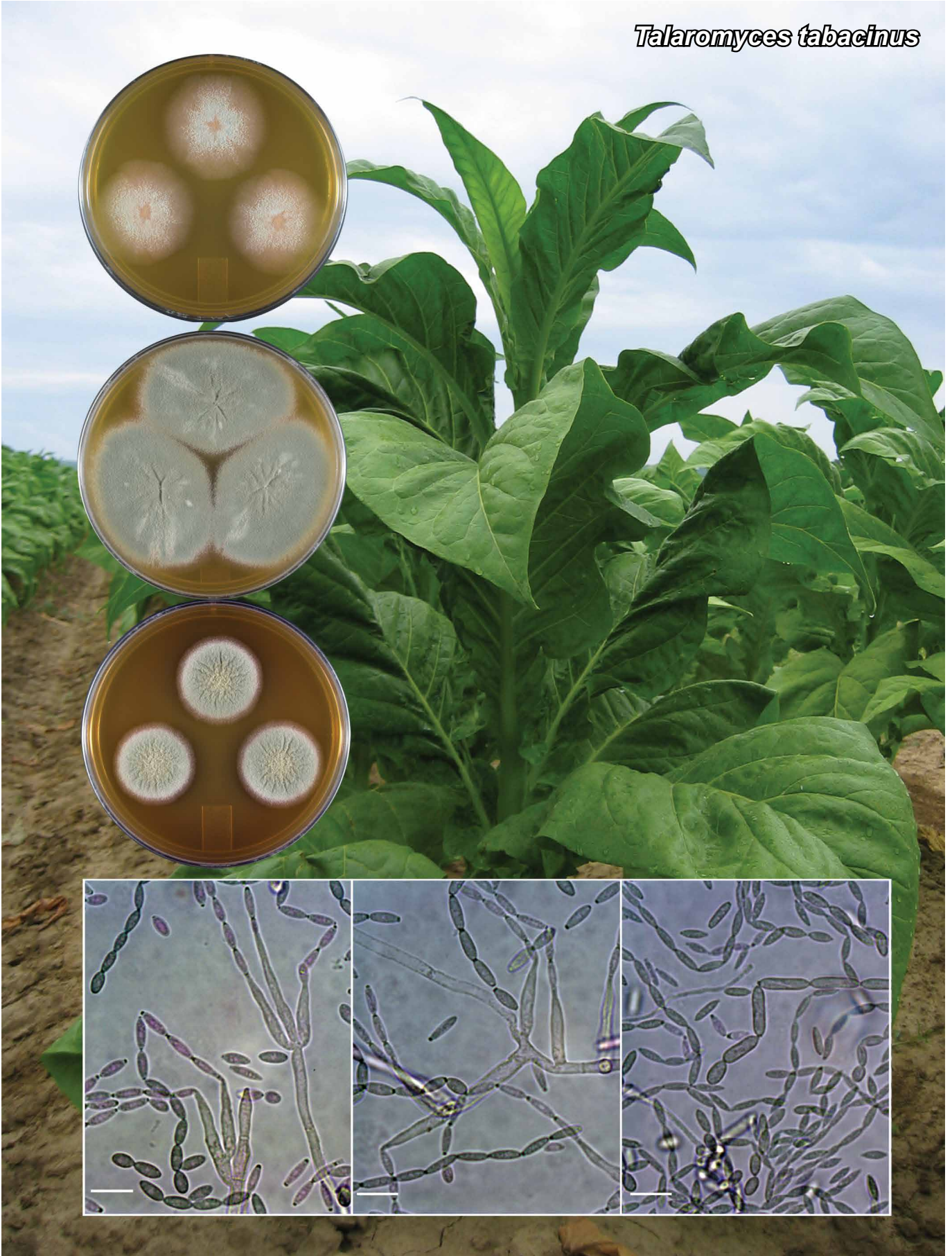


Talaromyces tabacinus

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Talaromyces tabacinus Jurjević, S.W. Peterson & G. Perrone, *sp. nov.*

Etymology. Named for tobacco, the host from which it was isolated.

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

On MEA: *Conidiophores* with solitary phialides, 15–45(–65) × 3–4(–5.5) µm diam, or monoverticillate, occasionally biverticillate, rarely with subterminal branches; stipes smooth, (3–)10–40(–70) × 2.5–4 µm diam; metulae 2–3, 12–21 × 3–4 µm diam; phialides 2–5, acerose, (9–)14–20(–26) × 3–3.5(–5) µm diam, with gradually tapering collula, occasionally minutely roughened; conidia ellipsoidal to fusiform, rarely small and nearly subglobose, smooth, (4.5–)6–10(–19) × (2.5–)3–3.5(–4.5) µm diam. Borne in long disordered chains. No sexual morph observed.

Culture characteristics — Cultured in darkness at 25 °C for 7 d unless otherwise noted. Colonies on malt extract agar (MEA) 27–40 mm diam, floccose to funiculose, low, plane, occasional shallow radial sulci, mycelium white, subsurface hyphae extending c. 4–12 mm from margin, sporulation moderate to very good, conidia *en masse* pale green-blue grey to deep green-blue, grey-blue (R48; Ridgway 1912), no exudate or soluble pigments, reverse cream-buff to deep colonial buff to primrose yellow (R30). Colonies on Czapek yeast autolysate agar (CYA) 14–24 mm diam, floccose to funiculose, rising c. 3–4 mm, mycelium white to yellow ochre (R15), subsurface hyphae extending c. 2–3 mm from margin, sporulation moderate, conidia *en masse* pale Medici blue to deep green-blue grey (R48), no exudate or soluble pigments, reverse cream-buff to chamois to light yellowish olive (R30). Colonies on potato dextrose agar 28–39 mm diam, floccose to funiculose, plane, light to deep radial sulci, mycelium white to deep colonial buff (R30), subsurface hyphae extending c. 3–12 mm from margin, sporulation moderate to heavy, conidia *en masse* pale green-blue, grey to deep green-blue, grey-blue (R48), to Artemisia green (R47), no exudate or soluble pigments, reverse colonial buff to olive-ochre to light olive yellow to dark greenish olive (R30). No growth on Czapek yeast agar with 20 % sucrose. Dichloran 18 % glycerol agar, 2–4 mm diam, no sporulation, mycelium white, largely submerged, reverse uncoloured to pale buff. No growth on CYA with 5 % NaCl. Colonies on oatmeal agar 38–43 mm diam, floccose to funiculose, low, plane, mycelium white, occasionally with Naples yellow shades (R16), heavy sporulation, conidia *en masse* pale green-blue, grey to

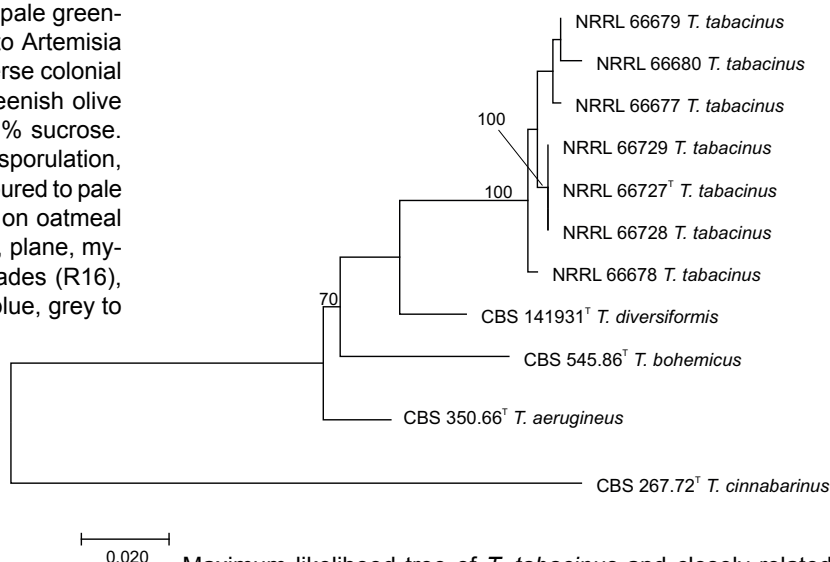
deep green-blue, grey (R48), exudate when present clear, small droplets, soluble pigments absent. Colonies on creatine sucrose agar up to 4 mm diam, very poor growth. On CYA/MEA (colony diam in mm) at 30 °C 20–30/43–67; 35 °C 22–36/40–67; 37 °C 23–30/30–67; 41 °C 13–30/18–48; no growth at 45 °C.

Typus. USA, North Carolina, Durham, leaves of *Nicotiana tabacum* (*Solanaceae*) from a greenhouse, 17 Sept. 2013, Ž. Jurjević (holotype BPI 910533, cultures ex-type NRRL 66727 = EMSL 2174; barcode: ITS, *benA*, *CaM* and *rpb2* sequences GenBank MG182613, MG182627, MG182606 and MG182620, MycoBank MB823318).

Additional material examined. USA, North Carolina, Durham, tobacco leaves from a greenhouse, Ž. Jurjević, 17 Sept. 2013, NRRL 66728 = EMSL 2175, NRRL 66729 = EMSL 2176; 19 July 2016, NRRL 66677; 9 Aug. 2016, NRRL 66678, NRRL 66679. Sequences deposited as GenBank MG182602–MG182629.

Notes — BLAST searches of the sequences of *T. tabacinus* showed β-tubulin similarity to *T. aeruginus*, *T. bohemicus* and *T. diversiformis*; calmodulin similarities were to *T. bohemicus* and *T. diversiformis*. The ITS barcode was 98–99 % similar to *Talaromyces ryukyensis*, *T. aeruginus*, *T. bohemicus* and *T. diversiformis*.

Talaromyces tabacinus is distinguished by the production of (4.5–)6–10(–19) × (2.5–)3–3.5(–4.5) µm diam ellipsoidal or fusiform conidia, and growth on CYA at 37 °C of 23–30 mm diam. The closely related *T. diversiformis* produces 4–6(–8) × 2–4 µm diam ellipsoidal or fusiform conidia, and growth at 37 °C is 17–19 mm diam. *Talaromyces bohemicus* has 7–9 × 2.5–3 µm fusiform conidia with encrusted cell walls, while *T. aeruginus* has 3–8.5 × 2.5–5 µm smooth conidia, in various shapes, subglobose to ellipsoidal to fusiform. *Talaromyces tabacinus* causes no disease symptoms on tobacco.



Colour illustrations. Tobacco plant; 7-d-old cultures of *Talaromyces tabacinus* on MEA (top: 25 °C, middle: 37 °C, bottom: 41 °C), conidia and conidiophores on MEA. Scale bars = 10 µm.

Maximum likelihood tree of *T. tabacinus* and closely related species based on a concatenated *benA*, *CaM* and *rpb2* DNA sequence alignment was calculated using MEGA (Kumar et al. 2016). Support values at branches were obtained from 1000 bootstrap replicates. Bootstrap values greater than 70 % are shown; ex-type strains are indicated by †.

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