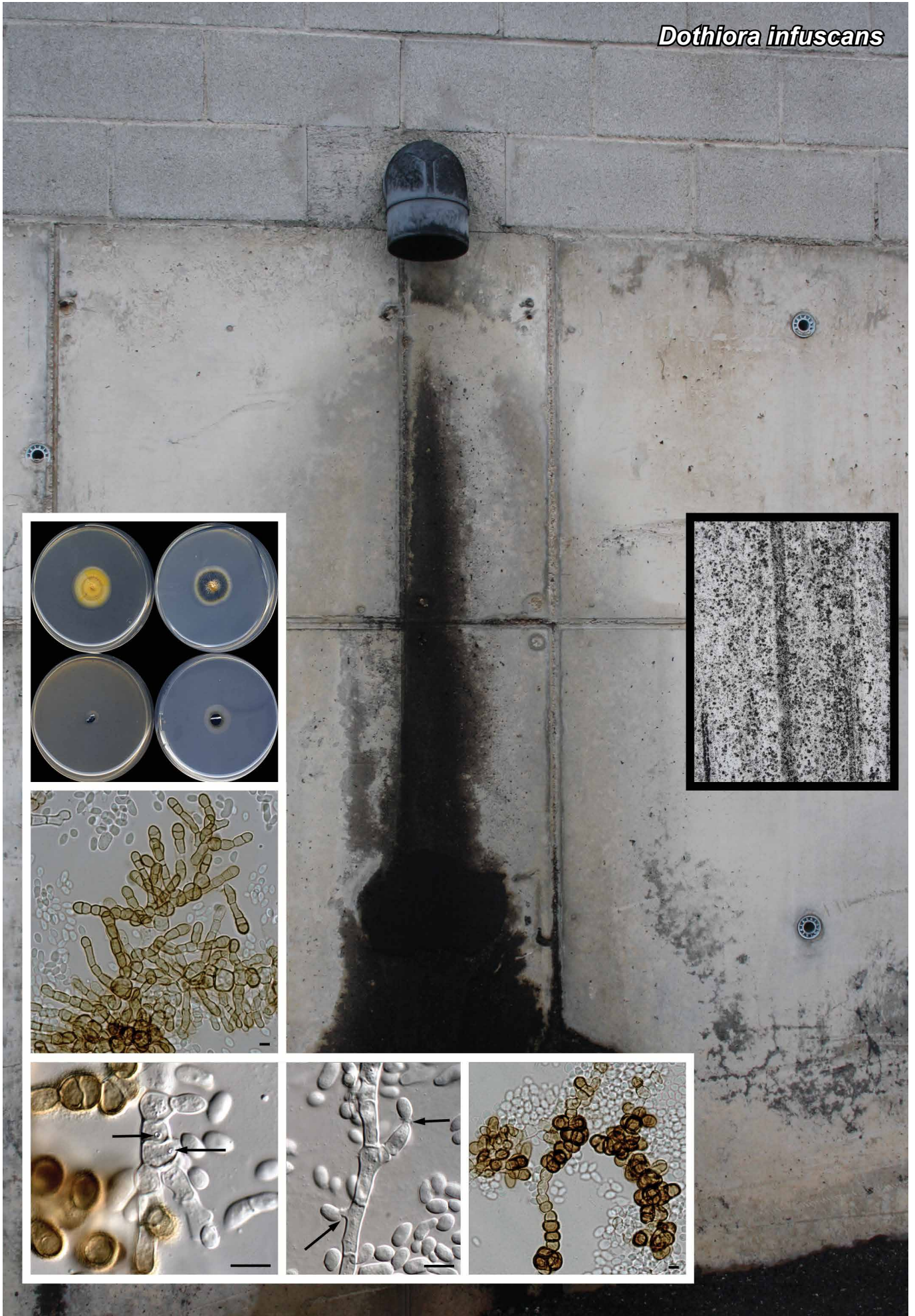


Dothiora infuscans



Fungal Planet 727 – 13 July 2018

***Dothiora infuscans* Rodr.-Andrade, Stchigel, Guarro & Cano, sp. nov.**

Etymology. From Latin *infusco*, to make dark, referring to the black fungal growth on the substrate it was isolated from.

Classification — *Dothioraceae*, *Dothideales*, *Dothideomycetes*.

Mycelium composed of subhyaline, smooth-, thin-walled, septate hyphae, 5–7 µm wide, later becoming thick-walled, increasing the number of septa and the volume of their cells to give them a moniliform appearance, and finally the hyphae turn dark brown and produce chains of holothallic (chlamyospore-like) conidia of up to 20 µm diam, which also develop longitudinal/oblique secondary septa over time, giving consequently a 'muriform' aspect to these propagules. *Conidiophores* micronematous, reduced to conidiogenous cells, mostly intercalary, producing conidia on lateral, short to long conic-truncate denticles, with 1–3 per conidiogenous cell. *Conidia* holoblastic, solitary, but attached to one another by a mucilaginous substance; mostly aseptate, smooth- and thin- to thick-walled, hyaline, becoming dark brown, thick-walled, roughened and mostly 1-septate, occasionally 2–3-septate, globose, ellipsoid or irregularly-shaped, prominently constricted at septa when old; unicellular conidia 8–9 × 4–5 µm; 2-celled conidia 10–13 × 6–7 µm; multi-celled conidia 18–19 × 5–7 µm. *Microcyclic conidia* produced by budding of the hyaline or pigmented conidia, solitary or in chains of up to 5 elements on inconspicuous denticles when the conidiogenous cell is young, but on protruding conical-truncate denticles when old, at one or both ends but also laterally, being smaller than the primary conidia. *Endoconidia*, *conidiomata* and *sexual morph* not observed.

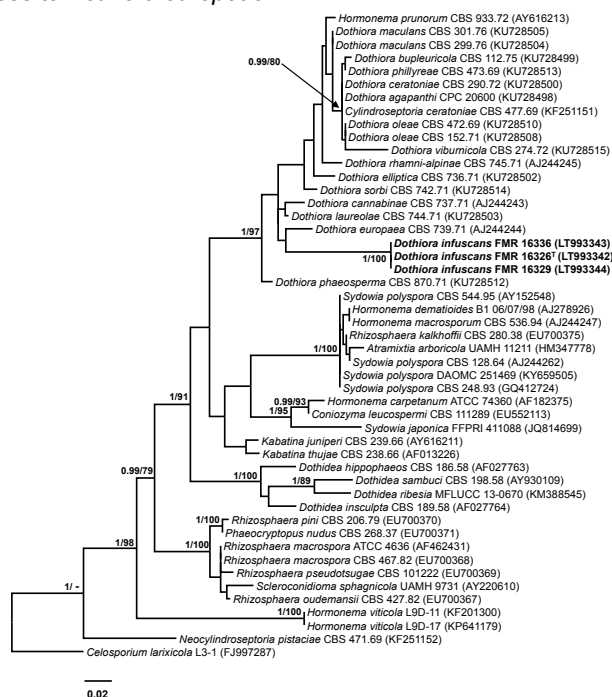
Culture characteristics — Colonies on MEA reaching 27–29 mm diam after 3 wk at 25 °C, flattened, light yellow (4A5; Kornerup & Wanscher 1978) at centre, and successively greyish yellow (4B5), pale yellow (4A3) and reddish yellow (4A7) towards the edge, exudates absent, sporulation sparse; reverse light yellow (4A4), diffusible pigment absent. Colonies on PDA reaching 28–29 mm diam after 3 wk at 25 °C, flat and slimy at centre and sulcate at edge, yellowish brown (5D8) at centre, brownish black (6H8) at edge and light yellow (3A5) at the margins, exudates absent, sporulation abundant; reverse light orange (5A4) at centre, brownish grey (5E2) at the edge, and a pale yellow (4A3) margin, diffusible pigment absent. Colonies on OA 6–7 mm diam after 3 wk of incubation at 25 °C, slightly elevated, compact, margins irregular, blackish blue (20F8), exudates absent, abundant yeast-like conidia; reverse blackish brown (6G8) at centre and brownish orange (5C3) at edge, diffusible pigment absent. Colonies on PCA reaching 18–19 mm diam after 3 wk at 25 °C, flat and slimy at centre and filamentous (because of the submerged mycelium) at edge, black (18G2) at centre and olive brown (4E6) at edge, exudates absent, yeast-like conidia abundant; reverse orange white (5A2) at centre, brownish grey (6D2) at the edge, and

Colour illustrations. Wall with chromatic alteration in Els Pallaresos village, Tarragona province, Spain (background picture); colonies growing on different culture media (MEA, PDA, OA and PCA at 25 °C; upper picture); conidia, conidiogenous cells and denticles (black arrows), and 'muriform' propagules (inner pictures); detail of the wall with chromatic alterations (picture inside the black box). Scale bars = 10 µm.

yellowish white (4A2) at the margins, diffusible pigment absent. Minimum, optimal and maximum temperature of growth: 15 °C, 25 °C and 30 °C, respectively.

Typus. SPAIN, Tarragona province, Els Pallaresos village, isolated from the blackened wall of an industrial warehouse, 10 July 2017, *J. Cano* & *A.M. Stchigel* (holotype CBS H-23480, cultures ex-type FMR 16326 = CBS 144317; ITS and LSU sequences GenBank LT993342 and LT993345; MycoBank MB824999).

Notes — *Dothiora infuscans* was recovered by a wall surface swab taken in Els Pallaresos village, Tarragona province, Catalonia, Spain. Species of *Dothiora* produce a dothichiza-like asexual morph, as well as a hormonema-like synasexual morph (Crous & Groenewald 2016, 2017). *Dothiora infuscans* can be distinguished from other *Dothiora* spp. with a hormonema-like sexual morph by the production of 'muriform' thalloconidia. Based on a megablast search of NCBI's GenBank nucleotide database, the closest hit using the ITS sequence is with the ex-type strain of *Dothiora europeae* CBS 739.71 (GenBank NR_145339; Identities = 445/470 (95 %), Gaps 5/470 (1 %)); and using the LSU sequence it is with *Dothiora oleaea* (GenBank KU728549; Identities = 834/842 (99 %), no gaps). Our ITS phylogenetic tree corroborated the placement of our isolate as a new species of the genus *Dothiora*, being phylogenetically close to *Dothiora europeae*.



Maximum likelihood tree obtained from the ITS alignment of our isolate and sequences retrieved from GenBank. The tree was built by using RAXML CIPRES (http://www.phylo.org/sub_sections/portal/) and the analysis of probability was run in MrBayes v. 3.2.1 (Huelsenbeck & Ronquist 2001). Bootstrap support values ≥ 70 % and Bayesian posterior probability values ≥ 0.95 are presented at the nodes. *Neocylindroseptoria pistaiciae* CBS 471.69 and *Celosporium larixicola* L3-1 were used as outgroups. The new species proposed in this study is indicated in **bold**. † represents the ex-type strain of the novel species.