

Diaporthe passiflorae



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***Diaporthe passiflorae* Crous & L. Lombard, sp. nov.**

Etymology. Named after the host genus on which it occurs, *Passiflora edulis*.

Sporulating on the surface of an old granadilla fruit (endophyte?). *Pycnidia* in culture on oatmeal agar sporulating poorly, globose, up to 300 µm diam, black, erumpent; cream conidial droplets exuding from central ostioles; walls consisting of 3–6 layers of medium brown *textura angularis*. *Conidiophores* hyaline, smooth, 2–3-septate, branched, densely aggregated, cylindrical, straight to sinuous, 20–30 × 2.5–4 µm. *Conidigenous cells* 7–15 × 1.5–2.5 µm, phialidic, cylindrical, terminal and lateral, with slight taper towards apex, 1–1.5 µm diam, with visible periclinal thickening; collarete not flared, up to 2 µm long when present. *Paraphyses* not observed. *Alpha conidia* aseptate, hyaline, smooth, guttulate, fusoid to ellipsoid, tapering towards both ends, straight, apex subobtuse, base subtruncate, (5.5–)6–7(–8) × (2–)2.5–3(–3.5) µm. *Gamma conidia* aseptate, hyaline, smooth, ellipsoid-fusoid, apex acutely rounded, base subtruncate, 10–12 × 2–2.5 µm. *Beta conidia* spindle-shaped, aseptate, smooth, hyaline, apex acutely rounded, base truncate, tapering from lower third towards apex, curved, (14–)16–18(–20) × 1.5(–2) µm.

Culture characteristics — (in the dark, 25 °C, after 2 wk): Colonies fluffy, with abundant aerial mycelium, covering the dish within 2 wk; on oatmeal agar, malt extract agar, and potato-dextrose agar, surface dirty white, with patches of pale olivaceous grey.

Typus. SOUTH AMERICA, imported into the Netherlands, on fruit of *Passiflora edulis* (*Passifloraceae*), Apr. 2011, P.W. Crous, holotype CBS H-20956, cultures ex-type CPC 19184, 19183 = CBS 132527, ITS sequence GenBank JX069860 and LSU sequence GenBank JX069844, MycoBank MB800372.

Notes — *Phomopsis* rot of *Passiflora edulis* (granadilla) has traditionally been linked to infections of *P. tersa*, which damages the leaves, fruit and twigs, causing losses of up to 40 % (Lutchmeah 1992). *Phomopsis tersa* has been confirmed from countries such as Portugal, Malta, Mauritius, Sarawak, Sri Lanka, and Fiji (Sutton 1980, Lutchmeah 1992). Two to three days following harvest, the stalk collapses, and turns brown. Within 10 d, the whole fruit is affected, and black conidiomata are observed on the fruit surface (Lutchmeah 1992). Conidia of *D. passiflorae* are much larger (14–20 × 1.5–2 µm) than those of *P. tersa* (6.5–7.5 × 2.5 µm) (Sutton 1980).

Based on a megablast search of NCBI's GenBank nucleotide database, the closest hit using the ITS sequence is *Diaporthe phaseolorum* (GenBank EU272513; Identities = 597/612 (98 %), Gaps = 7/612 (1 %)), followed by *Phaeocytostroma ambiguum* (GenBank FR748042; Identities = 597/634 (94 %), Gaps = 18/634 (3 %)), and *Diaporthe phaseolorum* var. *caulivora* (GenBank AF000567; Identities = 579/609 (95 %), Gaps = 12/609 (2 %)). Closest hits using the LSU sequence yielded highest similarity to *Diaporthe leucospermi* (GenBank JN712524; Identities = 920/928 (99 %), Gaps = 0/928 (0 %)), followed by *Diaporthe cynaroidis* (GenBank EU552122; Identities = 910/921 (99 %), Gaps = 2/921 (0 %)), and *Diaporthe rhusicola* (GenBank JF951166; Identities = 915/932 (98 %), Gaps = 2/932 (0 %)).

Colour illustrations. *Passiflora edulis* in Brazil (Photo by A.C. Alfenas); diseased granadilla with pycnidia; pycnidium sporulating in culture; conidigenous cells, beta and alpha conidia. Scale bar = 10 µm.