

*Phyllosticta encephalarticola*



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## *Phyllosticta encephalarticola* Crous, sp. nov.

*Etymology.* Name refers to the host genus *Encephalartos* from which it was isolated.

*Classification* — *Phyllostictaceae*, *Botryosphaerales*, *Dothideomycetes*.

*Conidiomata* pycnidial, solitary, black, erumpent, globose, exuding colourless to opaque conidial masses; pycnidia up to 200 µm diam; pycnidial wall of several layers of *textura angularis*, up to 20 µm thick. *Ostiole* central, 20 µm diam. *Conidiophores* subcylindrical to ampulliform, reduced to conidiogenous cells, hyaline, smooth, coated in mucoid layer, 5–20 × 3–6 µm, proliferating percurrently at apex. *Conidia* 12–13(–17) × (7–)8(–9) µm, solitary, hyaline, aseptate, thin- and smooth-walled, coarsely guttulate, ellipsoid to obovoid, tapering towards base, 3–4 µm diam, enclosed in mucoid sheath, 1.5–2.5 µm diam, bearing a hyaline apical mucoid appendage that can be up to 100 µm long.

*Culture characteristics* — Colonies flat, spreading, with sparse aerial mycelium and feathery margin, reaching 60 mm diam after 2 wk at 25 °C. On MEA, PDA and OA surface and reverse olivaceous grey.

*Typus.* SOUTH AFRICA, Limpopo Province, Tzaneen, on leaves of *Encephalartos* sp. (*Zamiaceae*), 2010, P.W. Crous, HPC 2487 (holotype CBS H-24160, culture ex-type CPC 35970 = CBS 146014, ITS, LSU, *actA* and *tef1* sequences GenBank MN562101.1, MN567609.1, MN556783.1 and MN556818.1, MycoBank MB832860).

*Notes* — Although phylogenetically distinct from species of *Phyllosticta* known from DNA sequence data (Marin-Felix et al. 2017, Crous et al. 2018b), *P. encephalarticola* should be compared to *P. encephalarti* (on leaves of *Encephalartos laurentiana*, Indonesia, conidia 10–15 × 3.5–6 µm, apical appendage 6–10 µm long; Van der Aa 1973), from which it is morphologically distinct.

Based on a megablast search of NCBI's GenBank nucleotide database, the closest hits using the **ITS** sequence had highest similarity to *Phyllosticta owaniana* (GenBank AF312011.1; Identities = 534/569 (94 %), 8 gaps (1 %)), *Phyllosticta pseudotsugae* (strain CBS 111649, GenBank KF154277.1; Identities = 543/580 (94 %), 14 gaps (2 %)), and *Phyllosticta podocarp*i (strain CBS 111647, GenBank KF766217.1; Identities = 567/609 (93 %), 14 gaps (2 %)). Closest hits using the **LSU** sequence are *Phyllosticta hagahagaensis* (strain CBS 144592, GenBank MK442550.1; Identities = 876/884 (99 %), no gaps), *Phyllosticta austroafricana* (strain CBS 144593, GenBank MK442549.1; Identities = 872/882 (99 %), no gaps), and *Phyllosticta carissicola* (strain CPC 25665, GenBank KT950863.1; Identities = 848/858 (99 %), no gaps). Closest hits using the **actA** sequence had highest similarity to *Phyllosticta hagahagaensis* (strain CBS 144592, GenBank MK442641.1; Identities = 606/619 (98 %), 1 gap (0 %)), *Phyllosticta austroafricana* (strain CBS 144593, GenBank MK442640.1; Identities = 605/621 (97 %), 1 gap (0 %)), and *Phyllosticta lauridiae* (strain CBS 145559, GenBank MK876460.1; Identities = 583/623 (94 %), 4 gaps (0 %)). Closest hits using the **tef1** sequence had highest similarity to *Phyllosticta hagahagaensis* (strain CBS 144592, GenBank MK442705.1; Identities = 381/387 (98 %), no gaps), *Phyllosticta podocarp*i (strain CBS 111647, GenBank KF766434.1; Identities = 255/260 (98 %), no gaps), and *Phyllosticta carissicola* (strain CPC 25665, GenBank KT950879.1; Identities = 389/399 (97 %), 2 gaps (0 %)).

*Colour illustrations.* *Encephalartos* sp. Colony on oatmeal agar; conidiogenous cells; conidia. Scale bars = 10 µm.

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