

Quixadomyces cearensis



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Quixadomyces Cantillo & Gusmão, *gen. nov.*

Etymology. Named refers to Quixadá, the locality where the fungus was collected.

Classification — *Parapyrenochaetaceae*, *Pleosporales*, *Dothideomycetes*.

On natural substrate: *Mycelium* superficial or somewhat immersed in the substrate, composed of warty, sinuous, criss-crossed or stringing, verrucose or verruculose, brown, septate hyphae. *Stroma* composed of tightly clustered and fused hyphae.

Conidiophores absent. *Conidiogenous cells* absent. *Propagules* rising up directly from interwoven hyphal strands, often globose to subglobose, ovoid to pyriform during development, but may become, ellipsoid-fusoid to obclavate, wall consisting on anastomosed brown to dark olivaceous brown hyphae, *textura epidermoidea similis*, with some peripheral hyphae around propagule body, smooth or warty, approached at the tip.

Type species. *Quixadomyces cearensis* Cantillo & Gusmão.
Mycobank MB824358.

Quixadomyces cearensis Cantillo & Gusmão, *sp. nov.*

Etymology. Name refers to the state (Ceará), where this taxon was collected.

On natural substrate: *Mycelium* superficial or somewhat immersed in substrate, warty, sinuous, criss-crossed or stringing, verrucose or verruculose, brown to dark brown, septate, hyphae 3–5 µm diam. *Conidiophores* absent. *Conidiogenous cells* absent. *Propagules* rising up directly from interwoven hyphal strands, globose at first, ellipsoid to ovoid when mature, 82.5–150 × 45–85 µm, wall consisting of anastomosed brown to dark olivaceous brown hyphae, *textura epidermoidea similis*, with thick-walled peripheral hyphae around the propagule body, 12–18 × 3–5 µm width, smooth or warty, approached at the tip.

Culture characteristics — Colonies on PDA fast-growing, attaining 60 mm in 7 d, immersed mycelium dark olivaceous to black, somatic hyphae verrucose or verruculose, 3–5 µm diam, aerial mycelium coarse due to the abundant sporulation occurring from the third day. In culture, propagules are bigger (85–300 µm long) and frequently fused.

Typus. BRAZIL, Ceará, Quixadá, near of 'Açude do Cedro', S04°58' W39°, on decaying bark, 28 Apr. 2016, T. Cantillo (holotype HUEFS 238438, isotype HUEFS 238439, ex-type culture LAMIC103-16, ITS and LSU sequences GenBank MG970694 and MG970695, MycoBank MB824398).

Notes — This fungus somewhat resembles setose pycnidia common in some species of *Pleosporales*, but no internal structures were observed in any stage of development. In appearance, this fungus also resembles *Akenomyces* (Hornby 1984). *Akenomyces* is characterised by black elliptical-lenticular sclerotia, with pale warty marginal hyphae, brown, consisting of a complex three-layer hyphal structure and, inside the cortex, a tightly interwoven mass of hyaline, thin-walled, much branched hyphae (Voglmayr & Krisai-Greilhuber 1997) a feature that is not present in *Quixadomyces*. Furthermore, the presence of clamp connexions is evidence that *Akenomyces* belongs to the phylum *Basidiomycota* and clearly separates it from *Quixadomyces*, which belongs to *Ascomycota*. Another morphologically similar genus with ovoid to obclavate propagules, *Megacapitula* also has mycelium often being verruculose, forming mycelial cords from which conidia arise; but in this case, integrated or terminal conidiogenous cells are present and the conidia form a beak-like structure at apex from which dense hairy appendages arise, and also its outer wall breaks and starts peeling off after mounting.

ITS. Based on a megablast search of NCBI's GenBank nucleotide database, the closest hits using the ITS sequence are *Parapyrenochaeta acacia* (GenBank NR_155674 from type material, Identities = 546/592 (92 %), 20 gaps = 20/542 (3 %)), *Pyrenochaetopsis microspora* (GenBank HM751085; Identities = 533/574 (93 %), 18 gaps (3 %)) and *Camarosporium aloes* (GenBank NR_137821 from type material; Identities = 566/635 (89 %), 32 gaps (5 %)).

LSU. Using the LSU sequence, the closest hits on a megablast search of NCBI's GenBank nucleotide database are *Pyrenochaeta protearum* (GenBank JQ044453; Identities = 625/629 (99 %), no gaps) and *Leptosphaeria maculans* (GenBank FO905981; Identities = 621/629 (99 %), no gaps).

Colour illustrations. Pedra da Galinha Choca, Quixadá, CE; propagules on natural substrate and on pure culture with different stages of development. Scale bar = 50 µm.