Quixadomyces cearensis
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.

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 connections is evidence that Akenomyces belongs to the phylum Ascomycota and clearly separates it from Quixadomyces, which belongs to Basidiomycota. 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 %)), Pyrenocheatopsis 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 Pyrenocheata protearum (GenBank JQ044453; Identities = 625/629 (99 %), no gaps) and Leptosphaeria maculans (GenBank FO905981; Identities = 621/629 (99 %), no gaps).

Quixadomyces cearensis Cantillo & Gusmão, sp. nov.

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

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 connections is evidence that Akenomyces belongs to the phylum Ascomycota and clearly separates it from Quixadomyces, which belongs to Basidiomycota. 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.

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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.