

Outlineoffungi.org - Note 1483 *Xanthonectriaceae*

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Xanthonectriaceae R.H. Perera, E.B.G. Jones, Maharachch. & K.D. Hyde

Xanthonectriaceae was established by Perera et al. (2023) to accommodate *Xanthonectria* J. Fourn. & P.-A. Moreau. as the type genus according to morphology and phylogeny using the combined sequence dataset of ITS, LSU, *rpb2*, *tefl* and *tub2* of *Hypocreales*. Another species is *Bullanockia* Crous. The member of this family thrives saprobically on dead plant material in terrestrial or freshwater habitats, functioning as a plant pathogen. In its sexual form, it produces ascomata that appear perithecial and superficial, either solitary or grouped, sometimes fused. These structures display a globose shape and exhibit colors ranging from pale yellow to bright yellow or bright orange, remaining KOH- and LA-, with a glabrous surface. Paraphyses present filamentous forms, containing orange, oily droplets. Asci develop with eight spores, are unitunicate, and assume fusiform to clavate shapes, lacking an apical ring. Ascospores emerge as long fusiform, 3–9 septate, hyaline, and spinulose. In its asexual phase, the organism adopts a hyphomycetous form, resembling *Acremonium*. Here, simple conidiophores arise from hyphae or sporodochia. These conidiophores emerge as macronematous, mononematous, unbranched, and straight or flexuous, presenting as hyaline and smooth-walled. Conidiogenous cells remain monophialidic and terminal, featuring an unfared collarette, also hyaline and smooth-walled. The conidia appear aseptate, ranging from narrowly ellipsoidal to subcylindrical, and are held in small, slimy drops at the tips of phialides or form dry chains. Sporodochial conidiophores cluster together, arising from hyphae. Their conidiogenous cells lack a collarette, while conidia remain aseptate, hyaline, and smooth-walled, often held in large slimy drops. The taxonomic position of *Xanthonectriaceae* is *Hypocreales*, *Sordariomycetes*, *Pezizomycotina*, and *Ascomycota* (Perera et al. 2023).

Reference

Perera RH, Hyde KD, Jones EBG, Maharachchikumbura SSN, et al. 2023 – Profile of *Bionectriaceae*, *Calcarisporiaceae*, *Hypocreaceae*, *Nectriaceae*, *Tilachlidiaceae*, *Ijuhyaceae* fam. nov., *Stromatonectriaceae* fam. nov. and *Xanthonectriaceae* fam. nov. *Fungal Diversity* 118, 95–271.

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