Outlineoffungi.org - Note 1487 *Stromatonectriaceae*

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

The monotypic genus *Stromatonectriaceae* was introduced by Perera et al. (2023) to accommodate *Stromatonectria* Jaklitsch & Voglmayr as the type genus based on morphology and phylogeny using the concatenated sequence dataset of ITS, LSU, *rpb2, tef1* and *tub2* of *Hypocreales*. Members of this family thrive as saprobic organisms and act as plant pathogens on woody substrates. They produce pulvinate stromata that erupt from the bark, displaying variability in shape and color, ranging from yellow to orange, red, or purple, and they do not respond to KOH. In their sexual morph, ascomata form perithecial structures, either immersed or superficial, densely crowding atop the stroma's surface. These spheroid, soft-textured ascomata are resistant to KOH. The hamathecium features periphyses, while paraphyses accompany the structure. Asci generate eight spores, with a unitunicate structure, often clavate or fusoid, and they lack an apical ring. Ascospores arrange themselves in bi-seriate fashion, presenting as ellipsoid, oblong, or fusoid shapes; they are 1-septate, hyaline, and may appear yellowish or rosy, exhibiting smooth walls. In the asexual morph, conidiomata assume a gyrostromalike form, pycnidial in nature, appearing on the stroma's surface as semiglobose or pulvinate with multiple locules. Short hairs often cover their surface. Conidiogenous cells produce conidia using a phyalidic process, with phyalides adopting subulate or narrowly lageniform shapes. The conidia themselves remain aseptate, exhibiting cylindrical or allantoid forms, hyaline coloration, and smooth walls. The family *Stromatonectriaceae* is classified under *Hypocreales*, *Sordariomycetes*, *Pezizomycotina*, and *Ascomycota* (Perera et al. 2023). *Stromatonectriaceae* forms a monophyletic clade that is closely related to *Tilachlidiaceae* and is supported by moderate statistical evidence. The centrum characteristics, as well as the asci and ascospores of *Stromatonectria*, are typical of both *Bionectriaceae* and *Nectriaceae*. The KOH-negative stromata and ascomata of *Stromatonectria* resemble those found in *Bionectriaceae*. However, a distinct feature of *Stromatonectria* is its production of gyrostroma-like, pycnidial conidiomata, which is not seen in *Bionectriaceae* taxa (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.

Entry by

Maryam Tavakol Noorabadi, Innovative Institute for Plant Health, Zhongkai University of Agriculture and Engineering, Guangzhou 510225, People's Republic of China

(Edited by **Kevin D Hyde**)

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