

Outlineoffungi.org - Note 1369 *Melanascomaceae*

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Melanascomaceae Fryar & D.E.A. Catches.

Melanascomaceae was erected as a new family, *incertae sedis*, in *Diaporthomycetidae* by Fryar & Catcheside (2023) based on combined ITS, LSU, and *tef1-α* sequences. This new family includes the type genus *Melanascoma*, in addition to *Proliferophorum* and *Paraproliferophorum*. *Melanascoma* is known only from its sexual morph while *Proliferophorum* and *Paraproliferophorum* are known only from asexual morphs which are hyphomycetous (Crous et al. 2022, Fryar & Catcheside 2023, Phookamsak et al. 2019). Conidiophores in this family are macronematous, mononematous, sub-cylindrical to cylindrical, unbranched or branched, erect, olivaceous brown to dark brown, light brown at the apex, septate, and smooth or ornamented. The conidiogenous cells are holoblastic, polyblastic, terminal, and subhyaline to brown while the conidia are fusiform to cylindrical, subhyaline to brown, 0–3-septate when mature, guttulate, and smooth. The only known sexual morph of *Melanascomaceae*, *Melanascoma panespora*, has perithecial ascomata that are non-stromatic, and subglobose with a straight neck. The ascomatal wall is *textura angularis* and dark brown. Paraphyses are persistent, cylindrical, septate, and unbranched. The asci are unitunicate, eight-spored, apex with a non-amyloid apical ring. The ascospores ellipsoid, septate, ornamented, without appendages or sheath (Fryar & Catcheside 2023). Hyde et al. (2021) revealed that, *Proliferophorum* diverged from *Platyrrhynchium* around 76 MYA, which falls within the family range (50–130 MYA). Analyses by Fryar & Catcheside (2023) further demonstrated that the clade including *Melanascoma*, *Proliferophorum* and *Paraproliferophorum* is sister to *Platyrrhynchium* and forms a distinct lineage, the new family *Melanascomaceae*.

References

- Crous PW, Boers J, Holdom D, Steinrücken TV et al. 2022–. Fungal Planet description sheets: 1383–1435. *Persoonia* 48, 261–371.
- Fryar SC, Catcheside DEA. 2023 – Freshwater ascomycetes from southern Australia: *Melanascomaceae* fam. nov., *Melanascoma panespora* gen. et. sp. nov., and *Pleurothecium brunius* sp. nov. *Fungal Systematics and Evolution* 11:85–93.
- Hyde KD, Bao DF, Hongnan S, Chethana KT et al. 2021 – Evolution of freshwater *Diaporthomycetidae* (*Sordariomycetes*) provides evidence for five new orders and six new families. *Fungal Diversity* 107, 71–105.
- Phookamsak R, Hyde KD, Jeewon R, Bhat DJ et al. 2019 – Fungal Diversity Notes 929–1035: taxonomic and phylogenetic contributions on genera and species of fungi. *Fungal Diversity* 95, 1–273.

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