

Outlineoffungi.org - Note 1497 Chrysonectriaceae

Web-links: [Index Fungorum](#), [Facesoffungi](#), [MycoBank](#), [GenBank](#)

Chrysonectriaceae L.W. Hou, L. Cai & Crous

Chrysonectriaceae was established to accommodate *Chrysonectria* Lechat & J. Fourn as the type genus based on morphological characteristics and phylogeny using the combined sequence dataset of LSU, ITS and *rpb2* sequences (Hou et al. 2023). In the sexual morph, ascomata develop as superficial, non-stromatic, sub-globose structures that do not collapse upon drying. They present a pale orange color that changes in 3% KOH and lactic acid and are overlain by golden yellow hyphal elements. Asci form as 8-spored, cylindrical to fusoid structures featuring a refractive apical apparatus. Ascospores emerge as subfusoid to narrowly clavate, two-celled, and smooth. In the asexual morph, mycelium consists of branched, septate, hyaline, smooth, thin-walled hyphae. Conidiophores appear solitary or aggregated, (sub-)erect, mostly curved, and irregularly wavy. They arise directly from submerged or superficial hyphae and branch verticillately, bearing 1–3 whorls of 1–3 phialides per node. Some conidiophores rarely remain unbranched and reduce to single phialides, appearing septate at the base and middle, hyaline, thick-, and smooth-walled. Their cell walls usually exceed the thickness of those in vegetative hyphae. Phialides branch laterally or terminally and take on a cylindrical or subulate shape, being straight or curved at the base, hyaline, and thick, with smooth walls. They exhibit conspicuous periclinal thickening and feature a cylindrical collarete at the conidiogenous loci; polyphialides with two conidiogenous loci occasionally appear. Conidia manifest as aseptate, subglobose, broadly ellipsoid, straight, hyaline, thick-, and smooth-walled, eguttulate, and arrange themselves in slimy heads. Abundant yellow crystals present themselves throughout, while chlamydospores are not observed. The family *Climacocystaceae* is classified under *Hypocreales*, *Hypocreomycetidae*, *Sordariomycetes*, *Pezizomycotina*, and *Ascomycota* (Hou et al. 2023). *Neocremoniaceae* formed a sister clade with *Climacocystaceae* based on phylogeny using the combined sequence dataset of LSU, ITS and *rpb2* sequences (Hou et al. 2023). Phylogenetic analysis using combined ITS-LSU sequences along with ITS, LSU, and *rpb2* sequences indicates that species of *Chrysonectria* form a distinct branch separate from all known families. The morphological and phylogenetic differences observed in *Chrysonectria* further verify its uniqueness among the recognized nectriaceous families within *Hypocreales* (Hou et al. 2023).

Reference

Hou LW, Giraldo A, Groenewald JZ, Rämä T, et al. 2023 – Redisposition of acremonium-like fungi in *Hypocreales*. *Studies in Mycology* 105, 23.

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**)

Published online 26 August 2024