

## Outlineoffungi.org - Note 1432 *Pseudodiplosporaceae*

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### *Pseudodiplosporaceae*

Sun et al. (2023) established *Pseudodiplosporaceae* under *Hypocreales* (*Sordariomycetes*, *Peizizomycotina*, *Ascomycota*) to accommodate *Pseudodiploospora* Jing Z. Sun, X.Z. Liu & H.W. Liu. according to morphology and phylogeny using a combined SSU, ITS, LSU, TEF, and RPB2 sequence data. The type genus is *Pseudodiploospora* Jing Z. Sun, X.Z. Liu & H.W. Liu. In the asexual morph, colonies on the natural surface appear diffuse and whitish. The mycelia are either superficial or submerged. The hyphae are characterized by their branching structure, septate, and hyaline appearance. Conidiophores are micronematous, mononematous, erect, simple, straight or slightly flexuous, smooth, aseptate to septate, and hyaline. Conidiogenous cells are holoblastic, polyblastic, sympodial, loci conspicuous, terminal, and intercalary in conidiophores, and hyaline, with denticles. Ramoconidia and secondary ramoconidia are often generated, cylindrical or fusiform, aseptate or septate, truncate at the base, with terminal scars. Conidia are subcylindrical-ellipsoidal, slightly pointed at both ends, and smooth-walled. The asexual morph has not been identified (Sun et al. 2023; Yu et al. 2024). Sun et al. (2023) introduced *Pseudodiplosporaceae* within *Hypocreales* to include two new genera, *Pseudodiploospora* and *Zelopaecilomyces*. Initially described as having various types of conidiophores by Sun et al. (2023), the research using phylogenetic analyses (Yu et al. 2024) raises doubts about *Zelopaecilomyces*. Sun et al. (2023) revealed that *Zelopaecilomyces* may have formed accidentally through the combination of genetic material from *Pseudodiploospora longispora* and a *Penicillium* species, based on SSU, ITS, LSU, TEF, and RPB2 sequence data. As a result, Yu et al. (2024) proposed that *Zelopaecilomyces* should be discarded and its name no longer used. This revision means that the *Pseudodiplosporaceae* now contains only the genus *Pseudodiploospora*, with updated defining characteristics. *Pseudodiploospora* includes four species: *Pseudodiploospora cubensis*, *Pseudodiploospora fungicola*, *Pseudodiploospora longispora*, and *Pseudodiploospora zinnia* (Yu et al. 2024). These species are found on organic matter, plant surfaces, and the fruiting bodies of other fungi in Canada, China, Cuba, and Japan. (Yu et al. 2024).

### References

- Sun J, Yu S, Lu Y, Liu H et al. 2023 – Proposal of a new family *Pseudodiploösporeaceae* fam. nov. (*Hypocreales*) based on phylogeny of *Diploöspora longispora* and *Paecilomyces penicillatus*. *Mycology* 14(1), 60–73.
- Yu FM, Jayawardena RS, Luangharn T, Zeng XY et al. 2024 – Species diversity of fungal pathogens on cultivated mushrooms: a case study on morels (*Morchella*, *Pezizales*). *Fungal Diversity* 125(1), 157–220.

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