

Outlineoffungi.org - Note 1391 *Polydomus*

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Polydomus S. Ashrafi & W. Maier

Ashrafi et al. (2023) established the monotypic genus *Polydomus* to accommodate *P. karssenii* Ashrafi, Maciá-Vicente & W. Maier based on morphology and phylogenetic analysis using ITS, LSU, SSU, *rpb2*, and *tef1-α* sequence data. The type species was isolated from surface-disinfected eggs of the nematode *Heterodera flipjevi* in Turkey or surface-disinfected roots of the Brassicaceae species (*Microthlaspi perfoliatum*) in Germany and Bulgaria. Also, the type species did not form any fruiting bodies or spores under various cultural conditions. In this genus, the sexual spores and conidia have not been observed. The colonies exhibited a range of colors, from olivaceous to pale creamy green, with radial striations. *Equiseticola* and *Ophiosphaerella* formed sister clades to *Polydomus* based on molecular analyses of the multi-locus dataset (ITS, LSU, SSU, and *tefA* sequence data). The sexual morph of *Polydomus karssenii* has not been identified, and no asexual form has been reported for the species *Ophiosphaerella* or *Equiseticola*, except for *O. agrostidis* with conidiomata and conidia production. However, these structures were not seen in *P. karssenii*, making it challenging to compare morphologically with closely related genera or species. *Polydomus karssenii* is distinguished by its production of chlamydospore-like and vesicle-like structures, hyphal coils and anastomoses, and absence of conidia formation, characteristics not observed in its close relatives. Ecologically, *P. karssenii* can be differentiated from other discussed fungi by its host range and lifestyle. *Polydomus karssenii* was found living with plant parasitic nematodes as a fungus that parasitizes their eggs, or living inside plant roots as endophytes (Ashrafi et al. 2023).

Reference

Ashrafi S, Wennrich JP, Becker Y, Maciá-Vicente JG et al. 2023 – *Polydomus karssenii* gen. nov. sp. nov. is a dark septate endophyte with a bifunctional lifestyle parasitising eggs of plant parasitic cyst nematodes (*Heterodera* spp.). IMA fungus 14(1), 6.

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