

Outlineoffungi.org - Note 614 *Luteomyces*

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Luteomyces Q.V. Montoya & A. Rodrigues

The monotypic genus *Luteomyces* which typified by *L. trichodermoides* (M. Cabello et al.) Q.V. Montoya & A. Rodrigues was introduced based on *Escovopsis trichodermoides* ([Montoya et al. 2021](#)). *Luteomyces* is morphologically distinct from species in *Escovopsis* by its slower growth, different colony colour (mainly yellow), conidiophores without vesicles and large number of chlamydospores, while *Escovopsis* produces brown, fast-growing colonies with rarely observed chlamydospores ([Masiulionis et al. 2015](#)). [Montoya et al. \(2021\)](#) showed that *Luteomyces* is genetically close, but genetically distinct from *Escovopsis* forming a well-supported sister clade in combined ITS, LSU, *tef1*, *rpb1* and *rpb2* gene analysis. Therefore, morphology and phylogeny are well-supported for the generic establishment of *Luteomyces*.

Luteomyces trichodermoides was initially isolated from the upper part of a fungus garden of *Mycocepurus goeldii* in Brazil ([Yek et al. 2012](#)). This species forms a mutualistic association with fungus-growing ants ([Vasse et al. 2017](#)). Fungus-growing ants provide their nests for *Luteomyces* species as a substrate to grow. In this symbiosis, plants produce the aromatic acids when ants chew their tissues and release them to ant nests and ants also secrete numerous organic compounds from exocrine glands ([Hölldobler & Wilson 1990](#)). *Luteomyces* species are able to metabolize those organic compounds and aromatic acids and utilize them as the nutrient sources ([Yek et al. 2012](#)). Later, these fungus-growing ants use fungal mycelia as a food ([Montoya et al. 2021](#)). Fungus-growing ants are only reported in the Western Hemisphere especially in North and South America ([Weber 1996](#); [Branstetter et al. 2017](#)). It is assumed that distribution of *Luteomyces* species may be restricted to the Western Hemisphere.

References

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