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[Luteonectria](#) Sand.-Den., L. Lombard, Schroers & Rossman

[Crous et al. \(2021\)](#) introduced [Luteonectria](#) to accommodate *Nectria albida* and *Fusarium nematophilum*. Combined *rpb2* and *acl* gene analysis by Schroers et al. (2011) also showed that *Nectria albida* clustered within fusarioid taxa, but were distantly related to *Fusarium sensu stricto*. The placement of the new genus in *Nectriaceae* is supported by the combined analysis of ITS, LSU, *rpb1*, *rpb2* and *tef1* sequence data ([Crous et al. 2021](#)). The genus is characterized by off-white to pale luteous, KOH negative perithecia, 3-septate, finely striate ascospores and robust multi-septate conidia ([Crous et al. 2021](#)). Buff-coloured perithecia are unique to [Luteonectria](#) ([Crous et al. 2021](#)). [Luteonectria](#) is distinct from *Fusarium* in its luteous, thin-walled perithecia and 3-septate, finely striate ascospores, while *Fusarium* has dark blue-violet to black, thick-walled perithecia and 1–3-septate, smooth-walled ascospores ([Crous et al. 2021](#)). [Luteonectria](#) species inhabit woody substrates, plant roots and soil, in terrestrial habitats ([Crous et al. 2021](#)). *Luteonectria nematophila* is a clinically important plant endophytic species producing anti-tumor compounds and enzymes such as cellulase, glutenase, amylase and protease ([Katoch et al. 2017](#); [Qin et al. 2022](#)).

[O'Donnell et al. \(2022\)](#) believed that [Luteonectria](#) should belong in *Fusarium*. The fusarioid taxa in *Nectriaceae* formed two large groups in phylogenetic analyses ([Lombard et al. 2015](#); [Gräfenhan et al. 2011](#); [Crous et al. 2021](#); [Wang et al. 2022](#)). Based on phylogenetic analyses and sexual and macroconidial characters, fusarium-like taxa were divided into several genera ([Lombard et al. 2015](#); [Crous et al. 2021](#); [Gräfenhan et al. 2011](#)). The presence of fusarium-like macroconidia within *Nectriaceae* and also outside the family supports the narrow *Fusarium* concept ([Crous et al. 2021](#)). Combined *rpb1*, *rpb2* and *tef1* regions were effectively used for delineation of fusarioid taxa in *Nectriaceae* ([Gräfenhan et al. 2011](#); [Crous et al. 2021](#), [Wang et al. 2022](#)). Therefore, I consider [Luteonectria](#) as a distinct genus.

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