

Outlineoffungi.org - Note 946 *Trapegintarasia*

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Trapegintarasia S. Y. Kondr.

Kondratyuk et al. (2022) introduced this genus to accommodate two species, *Trapelia lilacea* and *T. tristis* that were recovered in a monophyletic clade in the phylogenetic analyses carried out based on ITS, LSU and SSU sequences. *Trapegintarasia* was typified by *T. lilacea* S. Y. Kondr. The authors also combined a third species into the genus, *Trapelia antarctica*, without further discussion, and which is not included in the phylogenetic tree provided in their work. The phylogenetic relationships of this lineage with other groups of the family *Trapeliaceae* were not resolved. The species combined into this new genus are only known from the southern hemisphere. *T. lilacea* is restricted to Tasmania, *T. tristis* is only known from the Falkland Islands, and *T. antarctica* is only known from Dronning Maud Land in Continental Antarctica. Although all species are saxicolous, *T. lilacea* prefers large boulders at mid to high altitudes in forest gaps (Kantvilas & Elix 2007), and *T. tristis* occurs at low altitudes on rocks next to streams, in the intermittently flooded zone (Orange 2018). In addition, *T. antarctica* may grow on sand in addition to rock (Ertz et al. 2014). These species share numerous characters with other *Trapelia* species, such as the angiocarpic ontogeny of the ascomata, the very poorly developed prosoplectenchymatous excipulum, the relatively large and vacuolate ascospores, and the filiform conidia. According to Kondratyuk et al. (2022), they differ from the rest of the group by having hyascic acid or related metabolites, smaller apothecia, the sometimes thickened paraphyses at the apex, and by forming a separate supported clade in their phylogeny. Hyascic acid (in minor amounts) and 5-methylhyascic acid (major) are present in *T. lilacea* (Kantvilas & Elix 2007) and *T. antarctica* (Ertz et al. 2014) but not in *T. tristis*, which contains only gyrophoric acid (Orange 2018). In addition, hiascic acid and derivatives are commonly present in other *Trapelia* species (Orange 2018), so the presence of this secondary metabolite cannot be used as a diagnostic character for the genus. As for the paraphyses, *T. antarctica* and *T. tristis* have widened apices (Ertz et al. 2014; Orange 2018) but not *T. lilacea* (Kantvilas & Elix 2007) so it cannot be considered a synapomorphy either. Thus, only the small size of the apothecia could be considered a shared character, although *T. antarctica* shows apothecia up to 1 mm in diam. However, this trait is known to vary across *Trapelia* (Orange 2018) and *Trapeliaceae* in general (Schneider et al. 2016). In summary, there is currently no evidence to support this genus as a different taxon. The taxonomic placement of *Trapegintarasia* is in *Trapeliaceae*, *Baeomycetales*, *Ostropomycetidae*, *Lecanoromycetes*, *Pezizomycotina* and *Ascomycota*.

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Entry by

Sergio Pérez-Ortega, Departamento de Biología Ambiental, Museo Nacional de Ciencias Naturales (CSIC), C/Serrano 115-dpdo, Madrid, Spain

(Edited by **Vinodhini Thiyagaraja & Kevin D. Hyde & Maryam Tavakol Noorabadi**)

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