

Outlineoffungi.org - Note 840 *Brahmaculus*

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Brahmaculus P.R. Johnst

Brahmaculus was introduced by Johnst et al. (2021) to accommodate *B. moonlighticus* P.R. Johnst. as the type species. This genus was assigned to *Chlorociboriaceae* based on phylogenetic analysis of combined LSU, ITS, MCM7, RPB1 and RPB2 sequence data. *Brahmaculus* is characterized by stipitate apothecia; stipe is apically branched, each branch giving rise to a apothecial cup, with yellow rhizomorphs at the base; receptacle and stipe densely covered by short hairs; hairs septate, straight, cylindrical, thin-walled, with light brown intracellular pigment, externally densely packed with yellowish substance, encrusting material dissolved in KOH+ Melzer's reagent. The hymenium is typically divided into smaller segments, with areas comprising asci and paraphyses separated by clumps of hair-like elements. The excipulum comprises cylindrical cells arranged parallel to the surface, cells mostly long-cylindrical, but sometimes with outermost 1-2 layers of cells short and broad-cylindrical, cell walls slightly thickened, hyaline, cells near base of hairs with pale brown vacuolar pigment. Asci are apically thickened, amyloid pore extending through the wall, fading near the inside and especially towards the outside of the wall, 8-spored, with croziers at base. Paraphyses are simple or tapering to apex, with similar length as asci. Ascospores are oblong-elliptic, aseptate, and hyaline. The asexual morphs are not reported. Four species of *Brahmaculus* form a well-supported clade which sister to *Chlorociboria aeruginella* and *C. halonata*, making the latter genus paraphyletic. Ecologically, *Brahmaculus* is distinguished from *Chlorociboria* in having the rhizomorphs which appear to be associated with soil of *Nothofagaceae* as possible endophytes or parasites. Morphologically, the majority of *Chlorociboria* species develop green pigment on their substrates, while this characteristic has not observed in species of *Brahmaculus* (Johnston et al. 2021). The taxonomic placement of *Brahmaculus* is in *Chlorociboriaceae*, *Helotiales*, *Leotiomycetidae*, *Leotiomyces*, *Pezizomycotina*, and *Ascomycota*.

Reference

Johnston PR, Park D, Smith ME, Mujic AB, May TW. 2021 – *Brahmaculus* gen. nov. (*Leotiomyces*, *Chlorociboriaceae*). *MycKeys* 80, 19. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8121775/>

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