Outlineoffungi.org - Note 1410 *Muriformispora*

Web-links: Index Fungorum, Facesoffungi, MycoBank, GenBank

Muriformispora N.I. de Silva, S. Lumyong & K.D. Hyde

De Silva et al. (2022) introduced *Muriformispora* to accommodate *Muriformispora magnoliae* N.I. de Silva, S. Lumyong & K.D. Hyde as a monotypic genus based on morphology and phylogenetic analyses using LSU, SSU, ITS, tef1, and rpb2 sequence data. The asexual structure has not been seen. In the sexual structure, ascomata are black, globose to subglobose, solitary, scattered, uni-loculate, and ostiolate. The ostiole is central. The peridium comprises several layer cells. The hamathecium is constructed of dense, filamentous, and cellular pseudoparaphyses with indistinct septa. Asci are eight-spored, bitunicate, fissitunicate, pyriform, and pedicellate. Ascospores are overlapping, one to three seriate, four to five transverse septate, and two to three longitudinal septate. The type species was isolated from the dead twigs attached to the *Magnolia* sp. (*Magnoliaceae*) in China. *Muriformispora* is classified under *Neohendersoniaceae* (*Pleosporales*, *Dothideomycetes*, *Pleosporomycetidae*, *Pezizomycotina*, *Ascomycota*). The phylogenetic analyses (a combined LSU, SSU, ITS, tef1, and rpb2 sequence data) reveal that *Muriformispora* forms a distinct, monophyletic clade separate from five genera (*Brevicollum*, *Crassiparies*, *Medicopsis*, *Neohendersonia*, and *Neomedicopsis*) in the *Neohendersoniaceae*. *Neohendersonia* and *Neomedicopsis* are known for their characteristics in asexual forms. By examining the morphological traits of sexual forms across species in the *Neohendersoniaceae*, the newly identified genus (*Muriformispora*) stands out from *Brevicollum*, *Crassiparies*, and *Medicopsis* due to its broadly ellipsoidal and muriform ascospores. *Muriformispora* also possesses pyriform, pedicellate asci that are apically rounded with a furcate to obtuse end, which differs from the cylindrical or clavate asci of *Brevicollum*, *Crassiparies*, and *Medicopsis*. Furthermore, the ascomata structures of *Brevicollum*, *Crassiparies*, and *Medicopsis* contrast with those of *Muriformispora*. For instance, *Medicopsis* features stromata with underdeveloped interiors that emerge from the bark with an ostiolar canal, exhibiting circular to irregular shapes housing globose to subglobose, ostiolate perithecia. In contrast, *Brevicollum* showcases scattered, sometimes grouped two to three, immersed ascomata that are erumpent at the ostiolar neck, varying from globose to depressed globose. *Crassiparies* display scattered, immersed ascomata erumpent at the ostiolar neck, as subglobose, ostiolate structures. The novel genus displays black, globose to subglobose, single-chambered, solitary ascomata that are scattered, partially immersed, with ostioles and black spots on the host's surface (De Silva et al. 2022).

Reference

De Silva NI, Hyde KD, Lumyong S, Phillips AJ et al. 2022 – Morphology, phylogeny, host association and geography of fungi associated with plants of *Annonaceae*, *Apocynaceae,* and *Magnoliace*ae. Mycosphere 13(1), 955–1076.

Entry by

Maryam Tavakol Noorabadi, Innovative Institute for Plant Health, Zhongkai University of Agriculture and Engineering, Guangzhou 510225, People's Republic of China

(edited by **Kevin D Hyde**)

Published online 18 June 2024