

Outlineoffungi.org – Note 1433 *Neolophiotrema*

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Neolophiotrema G.C. Ren & K.D. Hyde

The monotypic genus *Neolophiotrema* was erected to accommodate *Neolophiotrema xiaokongense* G.C. Ren & K.D. Hyde according to morphology and phylogeny (a combined SSU, LSU, ITS, *tefl-a*, and *rpb2* sequences). The type species was found on dead wood of undetermined species in China. The genus is classified under *Anteagloniaceae*, *Pleosporales*, *Pleosporomycetidae*, *Dothideomycetes*, *Pezizomycotina*, *Ascomycota* (Ren et al. 2021). The asexual morph has been observed. In the sexual morph, ascomata are scattered, immersed, coriaceous, and globose to subglobose with a central ostiole. Ostioles are short papillate and produce pink pigment in the inner layer of the ostioles. The peridium is thin to thick-walled and its outer wall comprises several layers. The hamathecium involves numerous, anastomosing, hyaline, filiform, branched and septate, cellular pseudoparaphyses. Asci are eight-spored, bitunicate, fissitunicate, cylindrical clavate, and pedicellate. Ascospores are overlapping uni to bi-seriate, two-celled, one(–three)-septate, hyaline, smooth-walled, and enclosed by a wide gelatinous sheath (Ren et al. 2021). Based on phylogenetic analysis using a concatenated sequence of SSU, LSU, ITS, *tefl-a*, and *rpb2*, *Anteaglonium* formed a sister clade with *Neolophiotrema*. *Neolophiotrema xiaokongense* shares similar ascospore characteristics with *Angustimassarina*, *Fissuroma*, *Keissleriella*, *Lophiotrema*, *Pseudocoleophoma*, *Sarimanas*, *Stagonospora*. Phylogenetically, they are distinct. In terms of morphology, *Anteaglonium* can be distinguished from *Neolophiotrema* by its hysterothecial ascomata, carbonaceous peridium, and obovoid two-celled ascospores that have obtuse or fusiform ends, some with acuminate apices, while *Neolophiotrema* has coriaceous ascomata and broadly fusiform ascospores with rounded ends. *Neolophiotrema* also differs from *Flammeascoa*, which has trabeculate pseudoparaphyses and carbonaceous ascomata, by having coriaceous ascomata and narrow cellular pseudoparaphyses. Additionally, *Neolophiotrema* differs from *Purpureofaciens*, which has olivaceous ellipsoidal ascospores, by having hyaline overlapping, bi-seriate, broadly fusiform ascospores. *Neolophiotrema xiaokongense* is similar to *Anteaglonium rubescens* and *Purpureofaciens aquatica* based on its ability to produce purple pigments in media (Ren et al. 2021).

Reference

Ren GC, Wanasinghe DN, Monkai J, Hyde KD et al. 2021 – Introduction of *Neolophiotrema xiaokongense* gen. et sp. nov. to the poorly represented *Anteagloniaceae* (*Pleosporales*, *Dothideomycetes*). *Phytotaxa* 482(1), 25–35.

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