



Morphological and molecular identification of two new species of *Phlebiella* (Polyporales, Basidiomycota) from southern China

Tong-Kai Zong^{1, 2}, Chang-Lin Zhao^{1, 2*}

¹ Key Laboratory for Forest Resources Conservation and Utilization in the Southwest Mountains of China, Ministry of Education, Southwest Forestry University, Kunming 650224, P.R. China

² College of Biodiversity Conservation, Southwest Forestry University, Kunming 650224, P.R. China

* Corresponding author: fungichanglinz@163.com

With 5 figures and 1 table

Abstract: Two new wood-inhabiting fungal species, *Phlebiella gossypina* and *P. wuliangshanensis* spp. nov., are proposed based on a combination of morphological features and molecular characters. *Phlebiella gossypina* is characterized by annual, resupinate, gossypine to byssaceous basidiomata, a monomitic hyphal system with clamped generative hyphae, heavily encrusted with large crystal among hyphae and subglobose to globose, thin-walled, warted basidiospores measuring $3.3\text{--}4.4 \times 2.8\text{--}4 \mu\text{m}$. *Phlebiella wuliangshanensis* is characterized by annual, resupinate basidiomata with pruinose to farinaceous to grandinoid hymenial surface, a monomitic hyphal system with clamped generative hyphae and subglobose, thin-walled, warted basidiospores ($2.8\text{--}3.5 \times 2.5\text{--}3 \mu\text{m}$). Sequences of ITS gene regions of the studied samples were generated. The phylogenetic analysis based on molecular data of ITS sequences revealed that these two species are nested in the *Phlebiella* clade and supported the novelty of them.

Keywords: corticioid fungi; taxonomy; wood-rotting fungi; Yunnan province

Introduction

Phlebiella P. Karst. was typified by *P. vaga* (Fr.) P. Karst. (Karsten 1890), which is a genus characterized by a combination of resupinate to effused basidiomata with a ceraceous to subgelatinous consistency, hymenophore smooth to porulose to reciculate to grandinoid, a monomitic hyphal structure with clamped generative hyphae, basidia pleural and basidiospores hyaline, thin to thick-walled, warted, subglobose to ellipsoid to cylindrical (Karsten 1890, Bernicchia & Gorjón 2010). So far about 10 species have been accepted