



Bambusicola loculata sp. nov. (*Bambusicolaceae*) from bamboo

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Abstract

A new ascomycete species, *Bambusicola loculata*, inhabiting decaying bamboo, is introduced based on morpho-molecular studies. *Bambusicola loculata* is characterized by immersed, dark, stromatic and loculate ascostromata, bitunicate, cylindrical-clavate asci and 1-septate, hyaline, narrowly fusiform ascospores, surrounded by an inconspicuous mucilaginous sheath. Maximum likelihood and Bayesian analyses of combined LSU, SSU, RPB2 and TEF1 gene sequence data as well as morphological characters show that our new taxon belongs to *Bambusicola*, *Bambusicolaceae*. The new species is compared with other morphologically and phylogenetically similar species.

Key words: *Dothideomycetes*, multi-gene, phylogeny, taxonomy

Introduction

Dai *et al.* (2012) introduced the genus *Bambusicola* D.Q. Dai & K.D. Hyde with four new species, typified by *B. massarinia* D.Q. Dai & K.D. Hyde. The genus is known from both its asexual and sexual morphs; one species (*B. bambusae*) having the sexual morph only and two species (*B. irregulispora* Hyde and *B. splendida*) known from its asexual morph only. *Bambusicola* was provisionally placed in family *Trematosphaeriaceae* based on Maximum parsimony analyses of a single LSU gene data set (Dai *et al.* 2012). Hyde *et al.* (2013) provided a combined phylogenetic analysis of a LSU, SSU, RPB2 and TEF1 dataset for families of Dothideomycetes. Species of *Bambusicola* aggregated into a separate clade from other families in the sub-order *Massarineae* for which Hyde *et al.* (2013) introduced the new family *Bambusicolaceae* to accommodate the genus *Bambusicola*. However, only LSU and SSU genes of *Bambusicola* species are available in that paper. Liu *et al.* (2015) isolated a fungus from dead frond of palm, and introduced a new genus *Palmiascoma* Phookamsak & K.D. Hyde in this family based on morphology and phylogenetic analysis.

From our on-going studies on the diversity and taxonomy of microfungi inhabiting bamboo (*Poaceae*, *Bambusoideae*) in Thailand and China, some new taxa have already been described (Dai *et al.* 2012, 2014a–c, Liu *et al.* 2011, 2012, 2014, 2015, Wijayawardene *et al.* 2014). In this paper, we introduce a new ascomycetous species which belongs to the genus *Bambusicola* by natural classification, and re-sequenced protein coding genes (RPB2 and TEF1) of the four species of *Bambusicola*.