



## *Tropicoporus boehmeriae* sp. nov. (Hymenochaetaceae, Basidiomycota) from Thailand, a new member of the *Inonotus linteus* complex

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### Abstract

The genus *Tropicoporus* was recently introduced for accommodating species of the *Inonotus linteus* complex in Hymenochaetaceae. It is characterized by annual to perennial, resupinate, effused-reflexed to pileate basidiocarps with homogeneous to duplex context, a monomitic to dimitic hyphal system in context/subiculum and dimitic in trama, presence of hymenial setae, absence of hyphoid setae, and ellipsoid, broadly ellipsoid to subglobose, colored, slightly thick- to thick-walled basidiospores. *Tropicoporus* is similar to *Sanghuangporus*, which was another newly introduced genus for species of the *Inonotus linteus* complex, but the two genera are in two distinct clades in phylogeny. In addition, the latter accommodates perennial and pileate species only. In this study, two specimens recently collected from Chiang Mai, Thailand were described as *Tropicoporus boehmeriae* sp. nov. based on morphological and phylogenetic evidence. The new species is characterized by annual and exclusively resupinate basidiocarps and the smallest basidiospores ( $2.2\text{--}2.9 \times 2\text{--}2.5 \mu\text{m}$ ) within the *Inonotus linteus* complex. *Tropicoporus boehmeriae* mostly resembles *T. tropicalis*; however, *T. tropicalis* has larger basidiospores ( $3\text{--}4.5 \times 2.5\text{--}4 \mu\text{m}$ ) and was originally described from Brazil. The differences between *Tropicoporus boehmeriae* and other species possibly belonging to *Tropicoporus*, viz. *Fulvifomes cesatii*, *F. glaucescens* and *F. minisporus*, are discussed.

**Key words:** Hymenochaetales, ITS, polypore, taxonomy, wood-decaying fungus

### Introduction

The *Inonotus linteus* (Berk. & M.A. Curtis) Teixeira complex, belonging to Hymenochaetaceae, is an important group of basidiomycetes, because it accommodates species with medicinal functions and pathogenicity (Dai *et al.* 2007, 2009, 2010) and having been subjected to pharmaceutical studies (Jeon *et al.* 2011, Sun *et al.* 2014). Although this complex was considered to belong to *Inonotus* P. Karst. (Wagner & Fischer 2002, Dai 2010), its annual to perennial basidiocarps and dimitic hyphal system at least in trama differentiate it from other members of *Inonotus* with an exclusively annual habit and a monomitic hyphal system (Ryvarden 2005). In last several years, a number of new species and combinations of the *Inonotus linteus* complex have been introduced (Zhou & Qin 2012, Wu *et al.* 2012, Tian *et al.* 2013, Vlasák *et al.* 2013, Zhou *et al.* 2015), which bring the total members in this complex to 17. Recently, Zhou *et al.* (2015) carried out a thorough taxonomic study on the *Inonotus linteus* complex based on global samples, which resulted in two new genera, viz. *Sanghuangporus* Sheng H. Wu *et al.* and *Tropicoporus* L.W. Zhou *et al.*, introduced for the member of this complex. Of the two genera, *Tropicoporus* accommodates the species with annual and exclusively resupinate basidiocarps in addition to those with perennial and pileate basidiocarps (Zhou *et al.* 2015).

During a field trip to Chiang Mai, Thailand in 2014, two specimens of the *Inonotus linteus* complex were collected. After further morphological examinations and phylogenetic analysis, these two specimens are identified as an undescribed species of *Tropicoporus*. The detailed description and illustrations of the new species are provided in the present paper.