



***Truncospora macrospora* sp. nov. (Polyporales) from Southwest China based on morphological and molecular data**

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Abstract

A new polypore, *Truncospora macrospora*, is described from Southwest China on the basis of morphological and molecular characters. *T. macrospora* is characterized by an annual habit, pileate basidiocarps with a distinct crust, dimitic hyphal system with dextrinoid skeletal hyphae, and large ellipsoid, truncate, strongly dextrinoid basidiospores (16.5–19.5 × 8.0–9.5 µm). Molecular study based on sequence data from the nuclear ribosomal ITS and LSU regions supported the position of the new species in *Truncospora*, forming monophyletic lineage with strong support (100% BP, 1.00 BPP). *Truncospora* and *Perenniporiella* were proved to be sister-genera and grouped with other genera of *Perenniporia sensu lato* within the core polyporoid clade. An identification key to the species of *Truncospora* worldwide is provided.

Key words: Molecular phylogeny, *Perenniporia*, polypore, taxonomy, wood-inhabiting fungi

Introduction

Truncospora Pilát was established by Pilát (1953), and it is typified by *T. ochroleuca* (Berk.) Pilát. The genus is characterized by relatively small, pileate basidiocarps (about 1.5–3 cm long, 2.5–3.5 cm wide, and 1–4 cm thick), indextrinoid to dextrinoid skeletal hyphae, and truncate, strongly dextrinoid basidiospores (Decock 2011, Zhao *et al.* 2013). During the investigations on wood-inhabiting fungi in Southwest China, an undescribed species matching the concepts of *Truncospora* was found. To confirm the affinity of the new taxon to *Truncospora*, phylogenetic analysis was carried out based on ITS and nLSU sequences.

Materials and methods

Morphological studies.—The studied specimens were deposited at the herbarium of the Institute of Microbiology, Beijing Forestry University (BJFC). The microscopic routine followed Dai *et al.* (2010). Sections were studied at magnification up to × 1000 using a Nikon E80i microscope and phase contrast illumination. Drawings were made with the aid of a drawing tube. Microscopic features, measurements and drawings were made from slide preparations stained with Cotton Blue and Melzer's reagent. Spores were measured from sections cut from the tubes. Presenting the variation in the size of the spores, 5% of measurements were excluded from each end of the range, and were given in parentheses. In the text the following abbreviations were used: IKI = Melzer's reagent, KOH = 5% potassium hydroxide, CB = Cotton Blue, CB+ = cyanophilous, L = mean spore length (arithmetic average of all spores), W = mean spore width (arithmetic average of all spores), Q = variation in the L/W ratios between the specimens studied, n = number of spores measured from given number of specimens. Special color terms followed Petersen (1996).