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Mensularia rhododendri (Hymenochaetaceae, Basidiomycota) from southwestern China

FANG WU[1]*, JIAO YANG[1] & LI-WEI ZHOU[2]*

[1]*Institute of Microbiology & Beijing Key Laboratory for Forest Pest Control, PO Box 61, Beijing Forestry University, Beijing 100083, China.*

[2]*Institute of Applied Ecology, Chinese Academy of Sciences, Shenyang 110164, China.*

** Corresponding authors' e-mails: fangwubjfu2014@yahoo.com (FW), liwei_zhou1982@163.com (LWZ)*

Abstract

A new species *Mensularia rhododendri* is described from southwestern China on the basis of both morphological characters and molecular evidence. Phylogenetic analysis based on nuclear large subunit (nLSU) ribosomal RNA gene shows that the new species belongs to *Mensularia*. Morphologically, the new species is mostly similar to *Mensularia hastifera* by sharing similar hymenial setae and basidiospores in shape and size. However, *M. rhododendri* differs in smaller pores (5–6 per mm), thinner fruit body (up to 2.5 mm), shorter and unbranched hyphoid setae (up to 110 µm long) present in trama only, basidiospores not collapsed, and growth on *Rhododendron* in nearly the timber line of southwest China, while *M. hastifera* has relatively larger pores (3–4 per mm), thicker fruit body (up to 10 mm), longer and sometimes branched hyphoid setae (up to 300 µm long) frequently present in both trama and dissepiments, and mostly collapsed basidiospores, and occurs mostly on *Fagus* in the temperate area of Central Europe. The morphological differences between *M. rhododendri* and other similar species of *Mensularia* are also compared.

Key words: Hymenochaetales, nLSU, phylogeny, polypore, taxonomy

Introduction

Mensularia Lázaro Ibiza (Hymenochaetaceae, Hymenochaetales), typified by *Mensularia radiata* (Sowerby) Lázaro Ibiza (Ryvarden 1991), is characterized by annual basidiocarps on angiosperms, a monomitic hyphal system, presence of hymenial setae and strongly cyanophilous basidiospores (Ghobad-Nejhad & Kotiranta 2008, Dai 2010). Wagner & Fischer (2001) confirmed *Mensularia* as an independent genus through their nuclear large subunit (nLSU) ribosomal RNA-based phylogeny, and added two additional species, *M. hastifera* (Pouzar 1981: 25) T. Wagner & M. Fisch. (2001: 781) and *M. nodulosa* (Fries 1838: 474) T. Wagner & M. Fisch. (2001: 781). Later, *M. crocitincta* (Berk. & M.A. Curtis 1868: 311) T. Wagner & M. Fisch. (2002: 1013) was included in *Mensularia* based on morphological characters and phylogenetic evidence (Wagner & Fischer 2002). Recently, *M. lithocarpi* L.W. Zhou (2014: 105) was described from southwestern China based on morphological characters and phylogenetic evidence inferred from nLSU region (Zhou 2014).

Among the five known species of *Mensularia*, *M. lithocarpi* and *M. radiata* have distributions in China (Dai 2012, 2014). During repeated field surveys for poroid Hymenochaetaceae in 2014, an unknown specimen was collected in Guizhou Province, southwestern China. This specimen is both morphologically and phylogenetically supported as a new *Mensularia* species. The illustrated description of the new species is given in the present paper.

Materials and methods

Morphological studies:—The studied specimens are deposited in the herbaria of the Institute of Microbiology, Beijing Forestry University (BJFC), and the Institute of Applied Ecology, Chinese Academy of Sciences (IFP). The microscopic procedure follows Zhou (2013). Sections were studied at magnifications up to × 1000 using a Nikon Eclipse 80i

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