

中国半胶菌属研究小记

秦问敏¹, 李冠华^{1,2}, 戴玉成^{1*}

(1. 中国科学院 沈阳应用生态研究所, 沈阳 110016; 2. 中国科学院 研究生院, 北京 100049)

摘要: 总结了我国半胶菌属的种类。该属在我国共发现三种, 其中类革半胶菌为中国新记录种, 该种与本属其他种的区别是子实体平伏反卷、孔口表面奶油色至浅粉红色、生殖菌丝具简单分隔。根据中国的材料对该种进行了详细描述和显微结构绘图。

关键词: 类革半胶菌; 多孔菌; 分类; 海南

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Gloeoporus (Basidiomycota, Polyporaceae) in China

QIN Wen-Min¹, LI Guan-Hua^{1,2}, DAI Yu-Cheng^{1*}

(1. Institute of Applied Ecology, Chinese Academy of Sciences, Shenyang 110016, China;

2. Graduate University of the Chinese Academy of Sciences, Beijing 100049, China)

Abstract: The knowledge of *Gloeoporus* in China is summarized, and three species in the genus have been found in China. *G. thelephoroides* is newly found in China, it differs from other species in the genus by its effused-reflexed basidiocarps, pinkish cream pores and simple septate generative hyphae. The illustrated description of the species is given based on the Chinese materials.

Key words: *Gloeoporus thelephoroides*; polypore; taxonomy; Hainan

1 Introduction

The genus *Gloeoporus* Mont. was established in 1842 by the type species *Polyporus conchoides* Mont. The most obvious characteristic of this genus is the pore-mouths with continuous hymenium (Quanten, 1997). The species in the genus have a monomitic hyphal system, colored tube-layer and allantoid basidiospores. Many species have been transferred or described in this genus, but only 4 species were accepted by most mycologists (Ryvarden & Johansen, 1980; Núñez & Ryvarden,

2001; Gilbertson & Ryvarden, 1986), and two species were previously recorded in China (Zhao, 1998).

During the study on wood-decaying fungi in China, more specimens in the genus were examined, and *G. thelephoroides* (Hook.) G. Cunn. was found from Hainan Province. Because this species had not been recorded in the Chinese fungal flora (Zhao, 1998), in this paper we provided an illustrated description of the species according to our materials. In addition, two other species in the genus from China were studied, and a key to the Chinese species was supplied.

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作者简介: QIN Wen-Min(1978-), male, Master, Jianping County of Liaoning Province, assistant professor, mainly engaged in research of systematics of macrofungi, (E-mail) wenminqin@sina.com.

* 通讯作者 (Author for correspondence, E-mail: yuchengd@yahoo.com)

2 Materials and Methods

The studied specimens are deposited at the Herbarium of the Institute of Applied Ecology, Chinese Academy of Sciences (IFP). Anatomy was studied, and measurements and drawings were made from slide preparations stained with Cotton Blue. Drawings were made with the aid of a drawing tube (Cui *et al.*, 2007; Huang *et al.*, 2006). The microscopic routine used in the study followed Yuan (2004) and Yuan *et al.* (2006). In presenting the variation in the size of the spores, the 5% of the measurements at each end of the range are shown in parentheses. The following abbreviations are used; IKI = negative in Melzer's reagent, KOH = 5% potassium hydroxide, CB = Cotton Blue, CB+ = cyanophilous, CB- = acyanophilous, 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.

3 Results

Key to species of *Gloeoporus* from China

1. Generative hyphae with clamp connections *G. dichrous*
1. Generative hyphae with simple septa 2
 2. Basidiocarps resupinate, pores reddish brown *G. taxicola*
 2. Basidiocarps effused-reflexed, pores pinkish to pale ochraceous *G. thelephoroides*

Description

Gloeoporus thelephoroides (Hook.) G. Cunn., Bull. New Zealand Dept. Sci. Industr. Res. 164: 111, 1965 (Figs. 1-2)

—*Boletus thelephoroides* Hook., Syn. Pl. 1: 10, 1822

—*Gloeoporus conchoides* Mont., Hist. Phys. Cuba, Bot. Pl. Cell. 2: 385, 1842

—*Microporus thelephoroides* (Hook.) Kuntze,

Revis. Gen. Pl. (Leipzig) 3(2): 497, 1898

—*Polyporus conchoides* (Mont.) Lloyd, Mycol. Writ. 4: 331, 1915

—*Polystictus thelephoroides* (Hook.) Berk., Nova Acta R. Soc. Scient. Upsal. 1: 93, 1851

Fruitbody—Basidiocarps annual, resupinate to effused-reflexed, sometimes pileate, tough to leathery and without odour and taste when fresh, becoming fairly corky upon drying. Pileus broadly sessile, thin, laterally fused (or imbricate), projecting up to 2.5 cm long, 3.5 cm wide and about 1.5 mm thick, thinning towards the margin; margin acute, wavy, incurved when dry. Upper surface greyish white when fresh, becoming greyish cream upon drying, azonate, adpressed tomentose. Pore surface cream to slightly ochraceous to pinkish when fresh, more or less ochraceous upon drying; pores angular to round, 7–9 per mm. Context cream, gelatinous, around 1 mm thick. Tube layer concolorous with the pore surface, up to 0.5 mm long.

Hyphal structure—Hyphal system monomitic; generative hyphae frequently simple septate, IKI-, CB(+); tissue unchanged in KOH.

Context—Contextual hyphae hyaline, thin- to thick-walled with a wide lumen, moderately branched, interwoven, some collapsed, 2.8–4.6 μm in diam.

Tubes—Tramal hyphal hyaline, thin-walled, frequently branched with wide angles, loosely interwoven, 2.6–4 μm in diam. Cystidia and cystidiolles absent. Basidia clavate, with four sterigmata and a simple septum at the base, 12–16 \times 3–4 μm ; basidioles in shape similar to basidia, but slightly smaller.

Spores—Basidiospores allantoid, hyaline, thin-walled, smooth, IKI-, CB-, (3.7–)4–4.8(–6) \times (0.8–)0.9–1.1 μm , L = 4.45 μm (L₁ = 4.44 μm , L₂ = 4.46 μm), W = 1 μm (W₁ = 0.97 μm , W₂ = 1.02 μm), Q = 4.37–4.58 (Q₁ = 4.58, Q₂ = 4.37, n = 60/2).

Specimens examined—Hainan Province, Chengmai County, on fallen angiosperm trunk 23. V. 2008 Dai 9482; Wuzhishan County, Wuzhishan Nature Reserve, on rotten angiosperm wood, 25. V. 2008 Dai 9622.

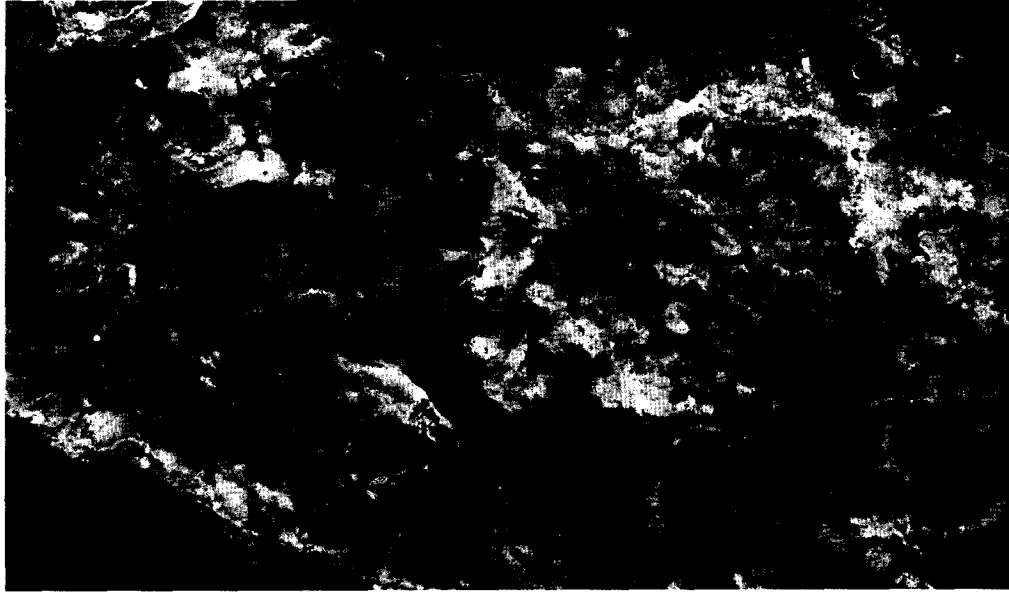


Fig. 1 Basidiocarps of *Gloeoporus theleporoides* (Hook.) G. Cunn.

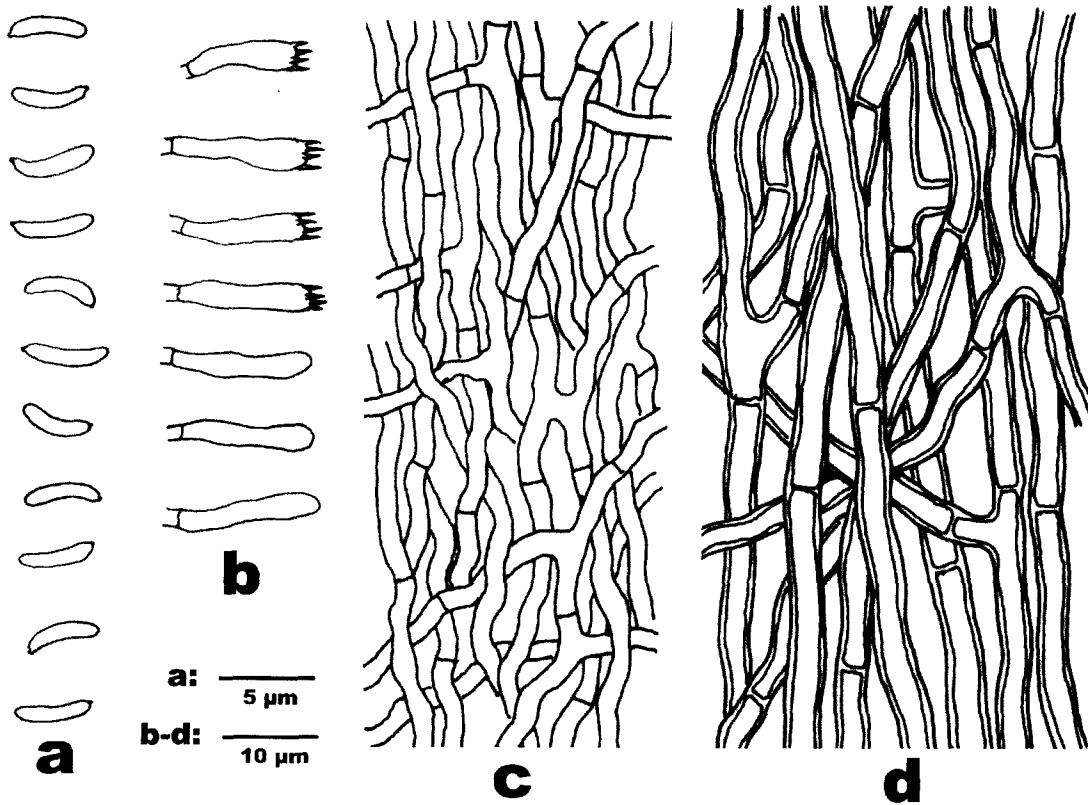


Fig. 2 Microscopic structures of *Gloeoporus theleporoides* (Hook.) G. Cunn. (drawn from Dai 9622).
a: Basidiospores; b: Basidia and basidioles; c: Hyphae from trama; d: Hyphae from context.

4 Discussion

Gloeoporus theleporoides is characterized by its effused-reflexed basidiocarps, slightly ochraceous to pinkish pores, a monomitic hyphal system with simple septate generative hyphae and allantoid basidiospores.

Gloeoporus dichrous also has effused-reflexed basidiocarps, but differs from *G. theleporoides* by the presence of clamp connections on generative hyphae. In addition, *G. dichrous* is a cosmopolitan species, while *G. theleporoides* is a pantropical species, distributed in tropical or subtropical areas. *G. taxicola* has similar microstructure with *G. theleporoides*, but its basidiocarps are resupinate and its pores are reddish brown. *Skeletocutis amorphia* (Fr. : Fr.) Kotl. & Pouzar also has pileate basidiocarps, a gelatinous hymenophore and allantoid basidiospores, but its hyphal structure is dim-

itic with clamped generative hyphae (Núñez, 2001).

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