

中国硬孔菌属研究小记及一新记录种

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摘要: 总结了我国硬孔菌属的种类。目前该属在我国共发现 11 种, 其中叉囊硬孔菌为中国新记录种。文中对该种进行了详细描述和显微结构绘图, 并给出了该属的检索表。

关键词: 叉囊硬孔菌; 木生孔菌; 分类

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One species of *Rigidoporus* new to Chinese fungal flora with notes on the genus

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Abstract: Eleven species of the genus *Rigidoporus* from China have been found and a key to them is given. Among them, *Rigidoporus furcatus* is new to China. Descriptions and illustrations of the new record are also provided.

Key words: *Rigidoporus furcatus*; lignicolous and poroid fungi; taxonomy

1 Introduction

Rigidoporus Murrill was first described by Murrill(1905). It is characterized by pore and concolorous surface, monomitic to pseudodimitic hyphal system, simple-septate generative hyphae, mammillate cystidiolles, and subglobose to globose spores (Ryvarden, 1993). Eleven species in the genus have been reported from China up to now (Dai, 1996, 2009; Cui *et al.*, 2009; Yu *et al.*, 2008).

During our study of the wood-decaying fungi in Changbai Mountain Natural Reserve, we found an interesting species new to China, *Rigidoporus furcatus*. In this paper, an illustrated description of *R. furcatus* according to our material is given, and a key to the Chinese species of *Rigidoporus* is also presented.

2 Materials and Methods

The specimen studied was collected from Changbai Mountain Natural Reserve, and is deposited at the herbarium of Institute of Applied Ecology, Chinese Academy of Science (IFP). The microscopic characters were made from slide preparations stained with Cotton Blue and Melzer's reagent, under Nikon E600 microscope, anatomical details were drawn by the Nikon drawing tube. KOH stands for 5% potassium hydroxide, IKI stands for Melzer's reagent, and CB is the abbreviation of Cotton Blue. CB- = acyanophilous, CB+ = cyanophilous; IKI- = both inamyloid and indextrinoid. In presenting the variation in the size of the spores, 5% of measurements were excluded from each end of the range, and are given in parentheses. In the

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text, the following abbreviations are used: 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 (quotient of the mean spore length, and the mean spore width of each specimen), n = number of spores measured from given number of specimens.

3 Results

Key to species of *Rigidoporus* from China

1. Basidiocarps pileate 2
1. Basidiocarps resupinate 5
2. Encrusted cystidia present *R. lineatus*
2. Encrusted cystidia absent 3
3. Basidiocarps perennial, up to 8 cm thick
..... *R. ulmarius*
3. Basidiocarps annual to biennial, up to 2 cm thick
..... 4
4. Pileus yellowish-reddish brown, glabrous
..... *R. microporus*
4. Pileus grey, fibrillose *R. cinereus*
5. Spores smaller, <2.5 μm wide 6
5. Spores bigger, >3 μm wide 7
6. Pores 8–10 per mm; cystidia absent
..... *R. minutus*
6. Pores 5–8 per mm; cystidia present ... *R. adnatus*
7. Thick-walled cystidia from trama absent; thin-walled
hyphoid cystidia may be present at dissepiment edges
..... 8
7. Thick-walled cystidia from trama present 9
8. Pores cream when fresh, becoming dark when
bruised; cystidia usually forked *R. furcatus*
8. Pores pinkish when fresh, becoming brown when
bruised; cystidia never forked *R. crocatus*
9. Hyphal system monomitic, pore surface cream to
buff *R. eminens*
9. Hyphal system dimitic, pore surface reddish or gray-
ish 10
10. Pore surface reddish *R. vinctus*
10. Pore surface reddish or grayish
..... *R. hypobrunneus*

4 Description

Rigidoporus furcatus Núñez & Ryvarden, *Fungal Diversity*. 6:112, 2001 (Fig. 1).

Fruitbody—Basidiocarps annual, resupinate, adnate, leathery and without odor or taste when fresh, hard and fragile upon drying, up to 8 cm long, 3 cm wide and less than 1 mm thick; sterile margin indistinct. Pore surface cream when fresh, black when dry; pores angular to irregular, 5–7 per mm, dissepiments thin, entire to more or less lacerate. Subiculum hard to be found, dark gray, woody, less than 0.1 mm; tubes gray, fragile when dry, about 0.8 mm long.

Hyphal structure—Hyphal system monomitic; generative hyphae with simple septa; IKI–, CB+; tissue unchanged in KOH.

Subiculum—Subicular hyaline, thin to slightly thick-walled, rarely branched, interwoven, 4.0–6.1 μm in diam.

Tubes—Tramal hyphae similar to the subicular hyphae, hyaline, thin-walled, occasional branched, subparallel along the tubes, 4.1–5.1 μm in diam. Two types of cystidia present, tramal cystidia abundant, clavate to hyphoid, thin-walled, apex tapering, commonly forked and encrusted, about 28.2–40.1 \times 5.0–6.8 μm , IKI–, CB+. Hymenial cystidia occasional, tubular, thin-walled, often colloid, about 26.0–35.3 \times 5.1–6.9 μm , IKI–, CB+. Basidia clavate, with four sterigmata and a simple septum at the base, 14.1–19.5 \times 6.2–8.9 μm ; basidioles in shape similar to basidia, but slightly smaller.

Spores—Basidiospores ovoid to subglobose, thin-walled, smooth, bearing a big guttule, IKI–, CB+, (5.6–)5.8–6.6(–6.9) \times (4.7–)4.9–5.2(–5.5) μm , L=6.2 μm , W=5.0 μm , Q=1.37 (n=30/1).

Specimen examined—China. Jilin Province, Antu County, Changbai Mountain Natural Reserve, on fallen trunk of *Acer*, 10. IX. 2009 Wei 4285.

Remarks—*Rigidoporus furcatus* was firstly founded by Ryvarden, known only in East Russia previously (Ryvarden *et al.*, 2001). *R. furcatus* is closely related to *R. crocatus* by having dry black

colour on the pore surface upon drying and ovoid to subglobose basidiospores(4–5.3 μm long). How-

ever, *Rigidoporus furcatus* has forked and encrusted tramal cystidia.

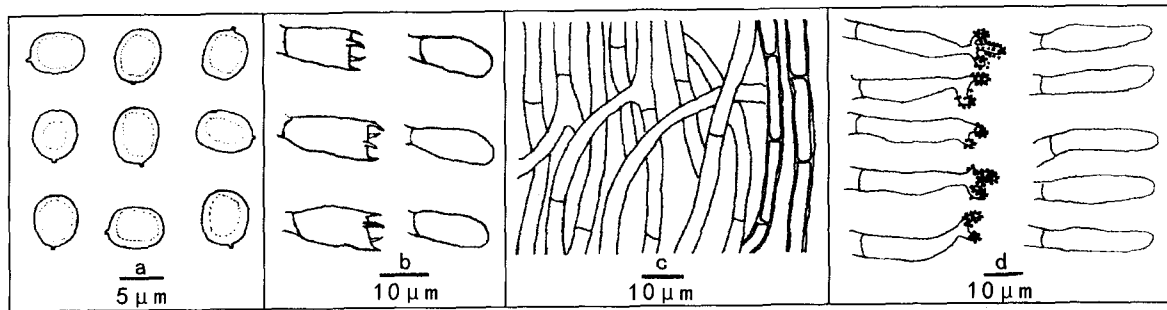


Fig. 1 Microscopic structures of *Rigidoporus furcatus* Núñez & Ryvardeen (drawn from Wei 4285)

a; Basidiospores; b; Basidia and basidioles; c; Hyphae from trama; d; Cystidia and gloeocystidia.

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