

BOLETES OF TAIWAN (V)—TWO NEW SPECIES

Kai-Wun Yeh* and Zuei-Ching Chen**

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[Abstract] Two species of boletes, i.e., *Boletellus lignicolus* and *Porphyrellus formosanus*, founded from the central high land of Taiwan, the Pa-Tong-Kuang area are reported as the new species.

[Key words] Boletes, *Boletellus lignicolus*, *Porphyrellus formosanus*, Fungal Flora of Taiwan.

臺灣之網孔蕈類(五)—二種世界新種

葉開溫* 陳瑞青**

〔摘要〕從台灣中部八通關地區之網孔蕈相調查中，發現二種世界新種分別定名為材生條孢牛肝菌 (*Boletellus lignicolus* Yeh & Chen) 及台灣紅牛肝菌 (*Porphyrellus formosanus* Yeh & Chen)。前者採自八通關附近針葉樹倒木上，而後者採自觀高附近雲杉天然林地上。

〔關鍵語〕：網孔菌 (牛肝菌)，材生條孢牛肝菌，台灣紅牛肝菌，台灣菌類誌。

INTRODUCTION

During a series of expedition of Formosan boletes,⁽⁴⁻⁸⁾ about 53 species have been recorded from the various parts of Taiwan. Among them, two species of *Boletellus*, viz., *B. ananas* (Curtis) Murr.,⁽⁶⁾ *B. mirabilis* (Murr.)⁽⁸⁾ Sing., and two species of *Porphyrellus*, viz., *P. fuisporus* (Kawamura) Imaz. & Hongo,⁽⁶⁾ *P. gracilis* (Peck) Sing.,⁽⁶⁾ have been recorded from this land. Since 1981, several collection trips to the central mountain area, the Pa-Tung-Kuang area, altitude ranged from 2,600 to 3,00 m, have been conducted. The two doubtful species now have been identified as the new species of boletes fungi in the world. All specimens reported

* Department of Applied Microbiology, Ta-Tung Institute of Technology, Taipei, Taiwan, Republic of China.
私立大同工學院應用微生物系。

** Department of Botany, National Taiwan University, Taipei, Taiwan, Republic of China.

國立台灣大學植物系。



in this paper are deposited in the Mycological Herbarium of Department of Botany, National Taiwan University, Taipei, Taiwan, ROC. The color nomenclature is followed Korneup and Wanscher's.⁽²⁾ We express our sincere thanks to the Director and his staffs of the Forest Bureau of Taiwan Provincial Government, particularly to the Ran-Dai District Forest Management Station for their generous assistance offering to us during the field survey.

DESCRIPTION OF SPECIES

1. *Boletellus lignicolus* Yeh and Chen, *sp. nov.* Figs. 1, 3, & 5.

Pileus 3-6 cm latus, convexo-planes, siccus, pallide rubo-roseus, aetate subcervinus, carneus in pileo cyanescenti. Tubi 4-10 mm, adnati v. subsinuati. Stipes 5-12 cm longus, 1-2 cm crassus, cylindricus, apice roseo-aurantiacis, basi albivilloso. Sporae 14-20 x 6-8 μm , longitudinaliter costatae. Solitarius. Typus ad lignum cariosum arboris coniferae, NYU-YB-200.

Pileus 3-6 cm dia., hemispherical when young, becoming convex-plane in age; Surface dry, glabrous, pinkish to pink, becoming light brown and rimose when mature. Margin whitish tinged pink, exceeding to the stipe, enveloping the hymenophore and stipe apex as a thick veil, when mature it splitting out, deposits remains at margin. Context whitish, about 1 cm thick, turning blue when cutting, tube 1-1.5 cm long, yellow green, adnate to slightly decurrent, turning blue as context; Pores round, boletoid, concolorous with tube, 0.5-1.0 mm dia., turning blue when touched, Stipe 5-12 cm long, 1-2 cm thick, slightly taper upward or equal, without ring, solid, glabrous, smooth when young, becoming fibrous in age, surface of the apex pink, the lower portion tinged white, base with yellow mycelium, the context color ochraceous, turning blue at apex when cut, the lower portion becoming brownish slowly. Spore print brownish orange, spore ellipsoid, oblong-ellipsoid, surface longitudinally costate, 0.3-0.8 μm deep, finely striate, but often smooth with young spores, 14-20 (21) x 6-8 (8.5) μm , apicule 0.5-1.0 μm . Basidia pyriform, clavate, containing vesicles and tiny particles, with 2 sterigmata, 40-85 x 8-13 μm , sterigma 4-6 μm long, 1-2 μm wide; pleuro-Cystidia hyaline or brownish color, some having thicker wall, clavate, ventricose-rostrate, 46-60 x 8-12 μm , with vesicles contents. Hymenophoral trama bilateral type. Cutis thin, cuticle fibrous.

Habitat: Solitary, lignicolous on rotten coniferous wood.



Formosan *Boletus*

Specimens Examined: NANTOU: Pa-Tong-Kuan, alt. 2,800 m, July, 1981 (NTU-YB-200, Holotype); July, 1982 (NTU-YB-201).

Notes: This species comes close to *B. ananas* and *B. dissiliens* described by Corner (1). Its' spores are smaller than the former but larger than the latter. Then, the costae of spores is longitudinal, no anastomosis to be found, depth range wide (from 0.2-0.8 μ) (3), growing on rotten wood, not on humus as *B. dissiliens*.

On the other hand, it differs with *B. mirabilis* Murr. by striate spore, exceeding margin enveloping the hymenophore as thick veil, smooth stipe surface and the blue discoloration of context.

2. *Porphyrellus formosanus* Yeh and Chen, *sp. nov.* Figs. 2, 4, & 6.

Pileus 2-5 cm lactus, convexus, umbonatus, arido-squamuloso castaneu, centro obscuriori. Velatan margine fragmens in stellatis. Caro pilei et stipitis grisea. Stipes 4-7 cm longus, 0.5-1.0 cm crassus. Sporae 14-25 x 5-5.6 μ m. Typus: NTU-BY-236.

Pileus 2-5 cm dia., umbonate, convex, surface powdery-scally brown color. Margin obtuse, with exceeding veil covering the hymenophore, always crack into stellate then diminishing when mature, depositing veil remains at margin. Context 0.5-1.0 cm thick, delicate, white, turning reddish when cut, tube pallid, adnate or slightly depressed around the stipe, about 1 cm long, pore round, about 0.5 mm, snow white when young, becoming pinkish to reddish in age. Stipe 4-7 cm long, 0.5-1.0 cm thick, subbulbous, solid, surface smooth and velutinous, the apex concolorous with hymenophore, sometimes tinge greyish orange, light brown at lower portion, the context white, turning reddish slowly when cut, base with white mycelium. Spore print dull reddish, spore 14-25 x 5-6.5 μ m, smooth, ellipsoid, subfusiform, fusiform-elliptical, or paramecium-shaped, apicule 0.4-0.6 μ m. Basidia 35-45 x 8-11 μ m, 4 sterigma, clavate; cystidia 35-48 x 7-12 μ m, clavate, ventricose. Hymenophoral trama bilateral. Cuticle filamentous, hyphal 3.5-7.5 μ m wide.

Habitat: Scattered under the coniferous forest (spruce, hemlock and sasa bamboo.)

Specimens Examined: NANTOU: Kuang-Kao, alt. 2,300 m, July, 1982, (NTU-YB-236, Holotype; NTU-YB-237.)



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Formosan *Boletus*

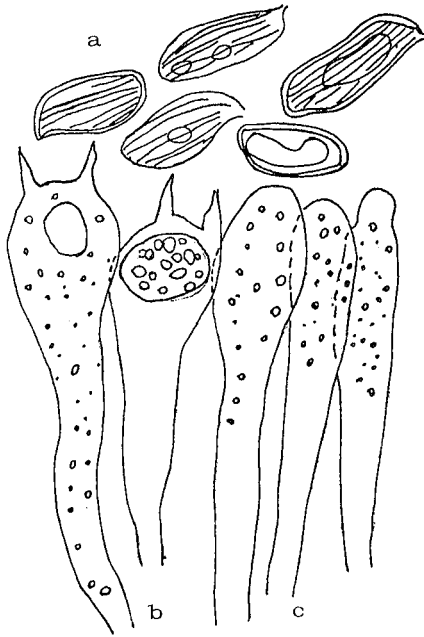


Fig. 1. *Boletellus lignicolus*
a. basidiospore b. basidia
c. pleurocystidia.

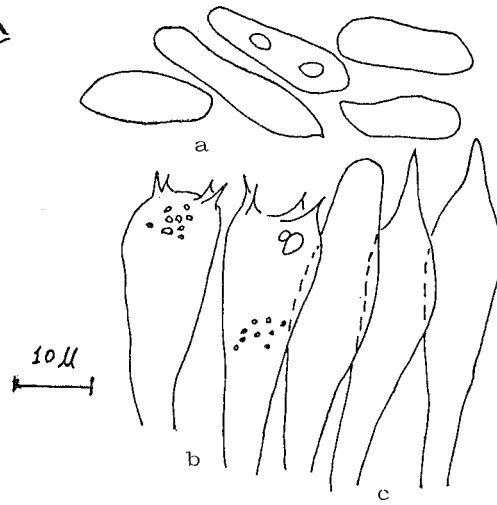


Fig. 2. *Porphyrellus formosanus*
a. basidiospore b. basidia
c. pleurocystidia.

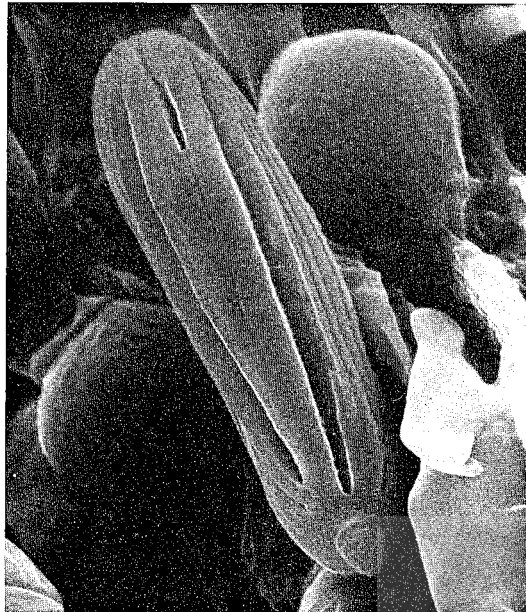


Fig. 3. *Boletellus lignicolus*



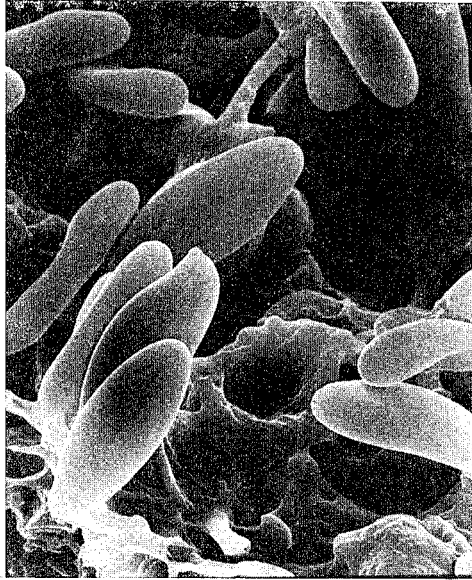


Fig. 4. *Porphyrellus formosanus*

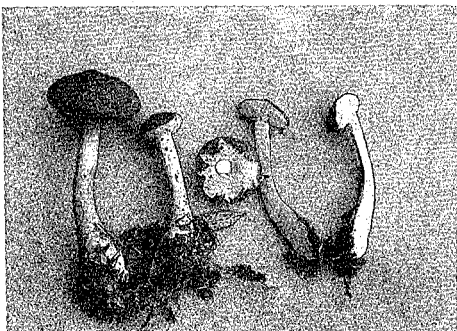


Fig. 5. *Boletellus lignicolus*



Fig. 6. *Porphyrellus formosanus*