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Notes on Korean Agaricales

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韓國產 주름버섯目에 대한 報告

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Abstract: Three species of Genus *Boletus* are described and illustrated in this paper. They are *Boletus pseudocalopus* Hongo, *B. quercinus* Hongo, and *B. laetissimus* Hongo and are newly recorded for the Korean fungus flora. Also authors designate their Korean names.

Introduction

Some fungi of Genus *Boletus* were collected mainly in oak and pine forests around the Temple Daehung in Haenam, Jeonlanamdo from Aug. to Sep. 1982 and Sangweon in Mt. Odae, Kangweondo, Sep. 1980. In this paper authors newly report three species of Boletus and give the descriptions and diagrams of their morphological characteristics.

The collections examined are deposited in the Herbarium of the Institute of Agricultural Sciences.

Experiment and Result

Boletus pseudocalopus Hongo

Hongo, T.; Notulae Mycologicae, *Mem. Shiga Univ.* 22: 66, Fig. 37(1-3) 1972-Hongo & E. Nagasawa, Notes on some *Boleti* from Tottori, *Rep. Tottori Mycol. Inst.* 12: 31-33, Fig. 1(1-7), 1975.

Pileus 5~13cm broad, convex to subconvex when young, then plane, when young margin somewhat incurved, slightly stick when wet, minutely tomentose, then nearly smooth, reddish brown, cinnamon-sepia at margin, becoming cinnamon to ochreous, buff to honey. Flesh pale yellowish, somewhat slightly turning greenish blue when cut or exporsed. Odor fragrant, Taste mild, Tubes adnate to slightly decurrent and sometimes continuing to the apical reticulation, yellow at first, turning rapidly greenish blue when bruised and cut. Pores concolourous with the pileus, turning greenish blue when injured, subangular to angular, 1 to 2 per mm (2-4 per mm when young). Stipe 4~9cm long, 5~15mm thick above, and (15~30mm thick), thickend or sometimes slightly vulbous at the base, yellow, densely covered with brownish red minute grandular dots, turning dark with age or on handling, reddish brown reticulate at the apex, chrome yellow beneath the surface but flesh pale yellow, worm holes chrome yellow at first, then becoming brownish red.

Spores fusiform, 3~4.5×8~10μ(4~5×10~12.5μ) melleous in KOH, smooth. Pleurocystidia scattered, ventricose-fusoid with a prolonged neck, 40~58×10~15μ, Cheilocystidia abundant mostly sphaerodedunculate, or somewhat clavate, sometimes with papillate like projection, 7.5~10×22.5~42.5μ. Tube trama bilateral of the boletus-type. Pileus surface composed of interwoven hyphae with terminal cells slightly thickened at the top, 7~10×25~57.5μ, dull brownish yellow in KOH. Stipe surface clavate 5~17.5×25~80μ, clamp connections absent.

Edibility: Uncertain

Habitat: Solitary on ground in mixed woods *Quercus* sp. *Castanopsis* sp. and *Pine densiflora*, etc., Tem. Songkwang, Haenam, Aug. 21, 1982 (ASI 82-

VIII-1302). The materials examined have somewhat shortter size of spores, pleuro-and cheilocystidia, pileus and stipe surface hypha, but the other essential features of them well correspond with the original description from Hongo, 1972.

Distribution: Japan, new to Korea. (Haenam, Jeonlanamdo).

Boletus quercinus Hongo

Hongo, T.; Notulae Mycologicae, *Mem. Shiga Univ.* 17, fig. 17 (92-93), 1967 - Hongo, T. and E. Nagasawa.; Notes on some boleti from Tottori, *Rept. Inst.* no 12, 33-35, fig. 2(1-8), 1975.

Pileus 3~12.5cm broad, convex, then plano-convex, surface minutely tomentose, areolate near the disc, margin incurved when young, slightly viscid when moist, buff to honey or somewhat olivaceous. Flesh whitish, faintly turning greenish blue when bruised or cut. Tubes subadnate or sometimes depressed around the stipe, yellowish, quickly turning to greenish blue when cut or bruised, up to 10~12mm deep. Pores subround, very small 2 to 3 per mm, red to reddish scarlet, reddish salmon when young, soonly turning dark blue when touched. Stipe 1~2.5cm thick, 6~10cm long, buff to rosy buff and covered with the minute reddish grandular dots at the upper portion, the lower portion at first concolorous with the pileus, then becoming dark olivaceous.

Spores subfusoid, smooth, 4~5×11.5-14μ, greyish yellow in KOH. Pleurocystidia scattered, ventricose-fusoid with a prolong neck, 8~12×30~50μ, Cheilocystidia numerous, similar to pleurocystidia in shape, but more or less smaller in size. Tube trama bilateral of the boletus type 3~6μ thick, hyaline to yellowish in KOH. Pileus surface irregularly interwoven of hyphae, element hyphae cylindrical with round to subacute apex, 3~5μ in diam. Stipe surface composed with sterile cells, clavate or oblong, fusoid to ventricose-fusoid sometimes with long narrow neck. 12.5~85×3.5~7.5μ. Clamp connections abscent.

Edibility: Uncertain.

Habitat: Solitary on the ground in mixed woods of *Quercus* sp., *Castanopsis* sp. and *Pine densiflora*, etc., Haenam, Jeonlanamdo, Sep. 18, 1982 (ASI-82-IX-1317)

Distribution: Japan, new to Korea. (Haenam, Jeonlanamdo)

Boletus laetissimus Hongo

Hongo. T: Notulae Mycologicae, *Mem. Shiga Univ.* 18, 49, fig. 20(1-3), 1968.

Pileus 3~10cm broad, convex to hemispherical, then plane, surface dry but slightly viscid when moist, subglabrous to subtomentose, at first bright golden or orange (cadmium orange to orange), pale yellow orange in age, turning blue when touched, margin incured when young. Flesh thick, somewhat firm, orange-yellow, turning blue when brocken, Odor pleasant, Taste mild, Tubes adnate or depressed around the stipe, orange-yellow, turning slightly blue when touched, 2~6.5mm long. Pores round to subangular, very small, 2~3 per mm, orange-chrome, becoming dark when touched. Stipe 4~8cm long, 8~15mm thick, somewhat subequal to slightly swollen at the base, especially velvety at the base, concolorous with the pileus, firm. Spores subfusoid to fusoid, boletoid, smooth, 4.2~5×12.5~15μ, Basidia tetraspores. Cheilocystidia scattered 28~57.5×6.5~10μ fusoid-clavoid thin walled. Tube trama bilateral tubular. Pileus surface composed suberect hyphal ends, loosely interwoven, element hyphae cylindrical with round to subacute apex, 2.5~5.0μ in diam. Stipe surface clavate, continuous to disrupted, more or less subparallel, 10~17×35~55μ.

Edibility: Uncertain

Habitat: Gregarious on the ground oak forest, Mt. Odae, Kwangweon Province, Sep. 11. 1980 (ASI-80-IX-1101)

Distribution: Japan, new to Korea. (Mt. Cdae, Kwangweon Propince)

This species is easily recognizable by the brilliant orange color and blue staining of all parts when bruised or touched. Very close to *B. flavissimus* (Murr.)Murr., differing chiefly in the color of all

fruit body.

摘 要

韓國에 自生하는 그물버섯屬을 '80, '82年에 採集한 結果 '80年에는 *Boletus laetissimus* Hongo를 江原道 五臺山, '82年에는 *B. quercinus* Hongo와 *B. pseudocalopus* Hongo를 全南 大興寺에서 各各 採集하였으며 이들은 韓國 未記錄種으로 判明되었기에 韓國名을 新稱하여 이를 報告하는 바이다.

上記種에 對한 標本들은 當硏究所에 保管되어 있다.

References

Hongo, T. (1967): Notulae Mycologicae, *Mem. Shiga Univ.* no. 17. 92, fig. 17(6-8).

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Explanation of the Plates

Plate 1: *Boletus quercinus* Hongo

a. Carpophore b. Spores×1,500 c. Pleuro-and cheilocystidia×600 d. Pileus surface×600 e. Stipe surface at the upper portion×600 f. Stipe surface at the lower portion×600

Plate 2: *B. pseudocalopus* Hongo

a. Carpophore b. Spores×1,500 c. Cheilocystidia ×600 d. Pleurocystidia×450 e. Pileus surface× 600 f. Stipe surface×600

Plate 3: *B. laetissimus* Hongo

a. Carpophore b. Spores×1,500 c. Cystidia× 600 d. Pileus surface×600 e. Stipe surface×600

Fig. 1. *Boletus quercinus* Hongo.

1-a Carpophore
1-b Spores×1,500
1-c Pleuro-and cheilocystidia×600
1-d Pileus surface×600
1-e Stipe surface at the upper portion×600
1-f Stipe surface at the lower portion×600

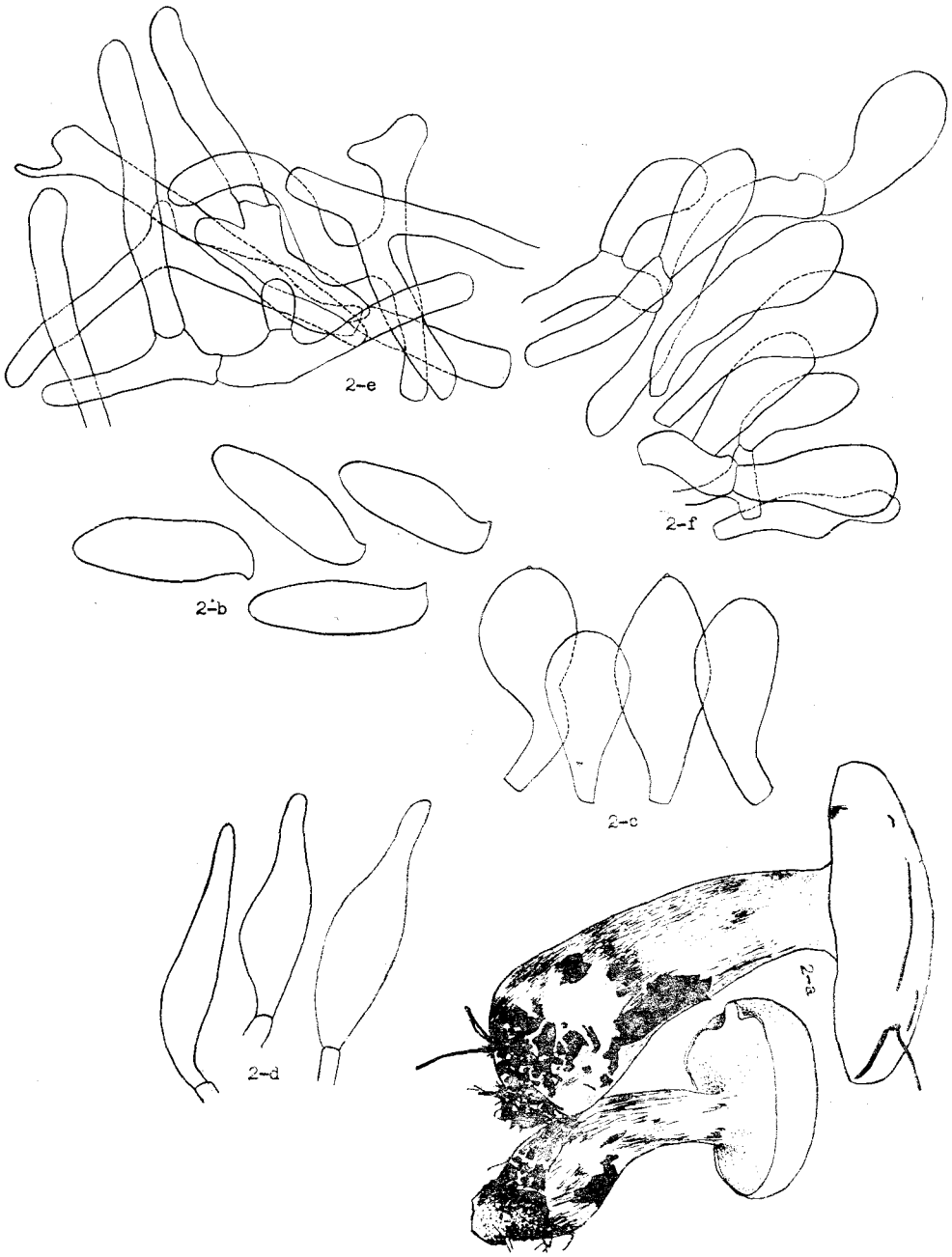

Fig. 2. *B. pseudocalopus* Hongo.

2-a Carpophore
2-b Spores × 1,500
2-c Cheilocystidia × 600
2-d Pleurocystidia × 450
2-e Pileus surface × 600
2-f Stipe surface × 600

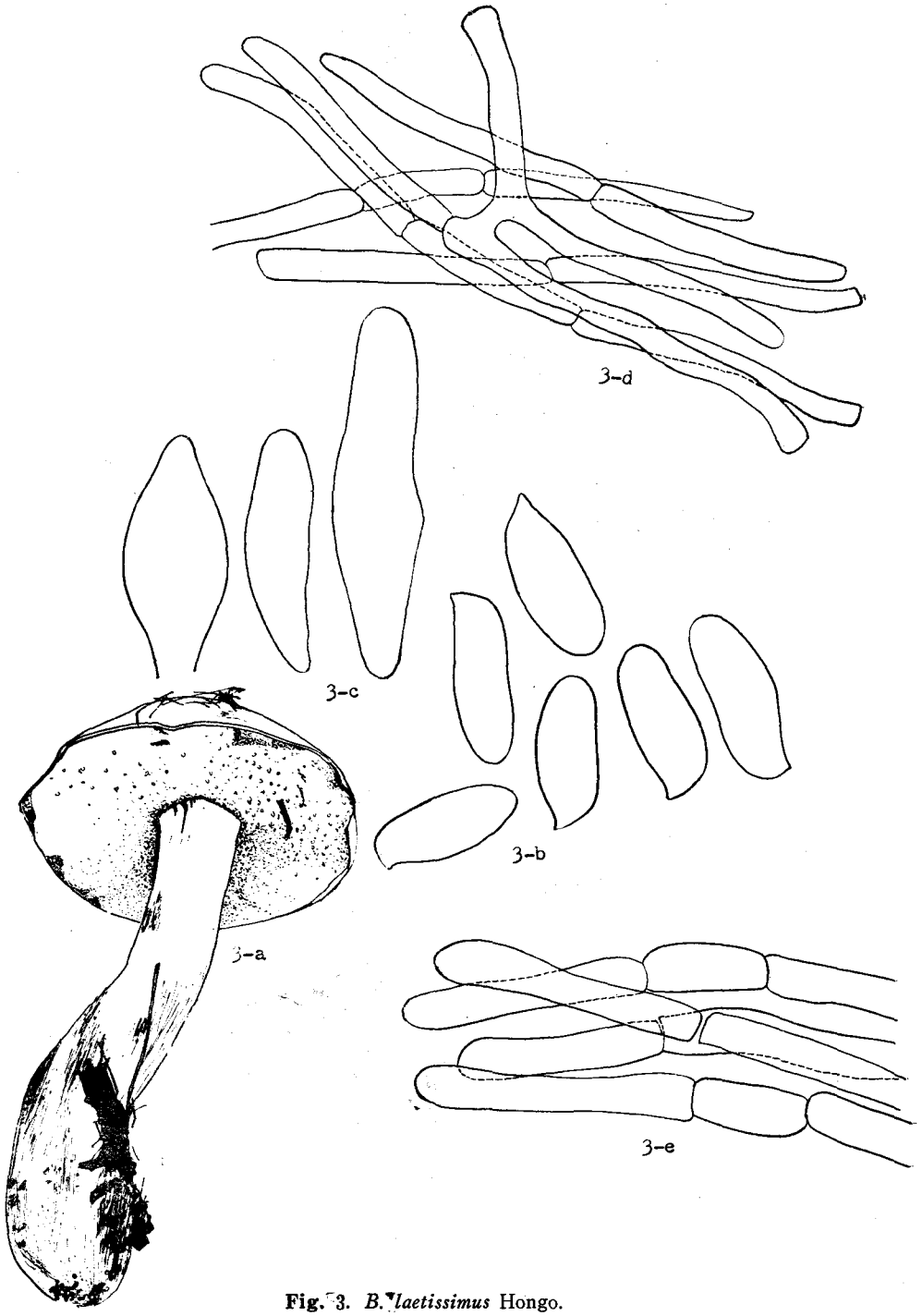

Fig. 3. *B. laetissimus* Hongo.

3-a Carpophore
3-b Spores × 1,500
3-c Cystidia × 600
3-d Pileus surface × 600
3-e Stipe surface × 600