韓 國 菌 學 會 誌 第 18 卷 第 2 號
Kor. J. Mycol. Vol. 18, No. 2, 51-57, 1990

The Flora of Higher Fungi in Mt. Jiri Areas (IV)

Seong-Sick Park, Duck-Hyun Cho* and Chun-In Ryoo**

Seonggi Girls High School, Masan 630-150,
**Department of Biology, Chonju Woosuk University, Chonju 565-800 and*
***Department of Biology, Kyunghee University, Seoul 130-701, Korea*

智異山 一帶의 高等菌類 (IV)

朴聖植 · 趙德炫* · 柳天仁**

馬山聖旨女子高等學校 全州又石大學 生物學科*
慶熙大學校 生物學科**

ABSTRACT: Higher fungi were collected in Mt. Jiri National Park areas from May, 1987 to October, 1987. These higher fungi were identified. As a result of identification, *Conocybe rickenii* (Schaeffer) Kuhner, *Coprinus rhizophorus kawam et al.*, *Agaricus comtulus* Fr., *Tricholomopsis decora* (Fr.) Sing., *Gymnopilus penetrans* (Fr. ex Fr.) Murr., *Amanita abrupta* Peck, *A. rufoferruginea* Hongo and *Stropharia semiglobata* (Batsch ex Fr.) Quel. were newly recorded in Korea.

KEYWORDS: ***Conocybe rickenii, Coprinus rhizophorus, Agaricus comtulus, Tricholomopsis decora, Gymnopilus penetrans, Amanita abrupta, A. rufoferruginea, Stropharia semiglobata***

***Conocybe rickenii* (Schaeffer) Kühner** 건초 종버섯(신칭)

Kühner: Le Genre Galera, 115; 1935.
Galera rickenii J. Schaeffer: Zeits Pilzunde 9: 171, 1930.
Watling, R. *et al.*; British Fungus Flora (Agarics and Boleti 3), 73, 1982.

Pileus 1.5-4.0 cm broad, conical to bell-shaped, slightly expending to subconical, often margin striate at first, but almost never striate, cream tinged ochre-brown, buff or pale ochraceous, pale grayish-brown later, slightly rugulose, smooth later. Context thin, grayish-brown in pileus, cream toochre-brown in stipe. Lamellae adnate, slightly ventricose, close, cream then pale ochraceous, finally rust-ochre. Stipe 3-6 cm long, 0.3-0.5 cm thick, whitish hyaline at apex, cream bellow, but becoming rust-ochre with age. Taste and smell not distinctive.

Spores 10.5-15.0 (−16.5)×6.0-8.2 μm, elliptical to oval, thick-walled, with prominent germpore, spore print brown to pale rust brown, basidia 18.0-31.5×9.0-12.0 μm, two-spored, clavate, cheilocystidia (−18.0) 19.5-27.0×7.5-10.5 (−12.0) μm, head 3.0-4.5 μm broad, clamp connection present.

Habitat: compost heaps or dung in nutrient rich grassland. June 18, 1988, July 28, 1989, (no 8818-1*, 8928-2*)

Distribution: Korea (Mt. Jiri, Pia-vally, Jungsanri) and Europe

*The collections cited are all preserved in Seonggi herbarium.

Coprinus rhizophorus Kawam ex Hongo & Yokoyama 헛대 먹물버섯(신칭)

Kawam *et al.*: *Trans. Mycol. Soc. Japan* **17:** 140,143, 1976.

Pileus 3.0-7.0 cm broad, ovoid to conical at first, bell-shaped when expanded with split or rolled-back margin, white with buff center, grey or cream, covered in coarse white granular meal or buff patches. Context thin, whitish soon gray black in pileus, whitish in stipe.

Lamellae adnate, crowded, broad, pale grey-whitish, rapidly turning black, the edge white pruinose, deliquescing.

Stipe 5.0-15.0 cm long, 0.5-0.8 cm thick, white, slightly thickened at base, taproot-like base continuing into blackish brown, sparingly covered with whitish granular scales below half, pruinose above, hollow.

Spores 7.0-9.0×4.5-6.0 μm, ellipsoid to ovoid, smooth, double-walled, germ-pore apical, spore print brownish, basidia 18.0-25.5×7.5-9.0 μm, clavate, cheilocystidia 45.0-67.5×15.0-26.0 μm, clavate to fusoid-ventricose, hyaline, thin-walled, pleurocystidia 90-120×30-40 μm, inflated subcylindric, apex broadly rounded, hyaline, thin-walled.

Habitat: caespitose, stumps of deciduous trees. June 25, 1988, July 2, 1989, (no 8825-1*, 8902-2*)

Distribution: Korea (Mt. Jiti, Pia-vally, Jungsanri, Mt. Muhack) and Japan.

***Agaricus comtulus* Fr.** 볼록 들버섯 (신칭)

Fries; Epicrisis Systematics Myclogici, 215, 1836.

Psaliota comtula (Fries) Quél.: Champ. Jura et Vosages, 97, 1872.

Pratella comtula (Fries) Gillet; Champ. Fr., 132, 1874.

Pileus 2.0-3.5 cm broad, convex becoming broadly convex, white to ochraceous-cream, tinted lilac gray to brown. Context white but yellowish slightly in the stem base. Taste and smell not distinctive. Lamellae adnexed, crowded, broad, flesh at first, darkening with age. Stipe 2.5-4.0 cm long, 0.3-0.5 cm thick, whitish to slightly creamy, not bruising yellow, ring thin, single, white and membraneous.

Spores 5.2-6.0×3.7-4.5 μm, elliptic oval, spore print brown, basidia 15.0-24.0×4.5-6.0 μm, clavate.

Habitat: solitary to scattered in woods, in pasture and grassland. July 23, 1989, August 18, 1989, (no. 8923-1*, 8918-2*), Edibility.

Distribution: Korea (Mt. Jiri, Pia-vally, Gurea) Japan, America and Europe.

***Tricholomopsis decora* (Fr.) Sing.** 장식 솔버섯(신칭)

Singer, R.; The Agricales in modern taxonomy, 196, 1949-Heim, Champ. Eur. 2: 309, 1957.

Agaricus decorus Fr. Syst. Myc. 1: 108, 1821.

Agaricus galbanus Lasch, Linnaea 4: 529, 1829.

Agaricus multipunctus Pk. Ann. Rep. N.Y. State Mus. 25: 73 (277), 1873.

Clitocybe decora (Fr.) Gillet, Hymenomyc. 171, 1874.

Cortinellus decorus (Fr.) Karst, Hattsvamp. 1: 25, 1879.

Gyrophila decora (Fr.) Qu'elet, Enchir. Fung. 11, 1886.

Pleurotus decorus (Fr.) Sace. Syll. Fung. 5: 342, 1887. *Tricholoma decora* (Fr.) Quélet, Champ. Jura et Vosges Suppl. 11: 389 (reprint, p.3). 1882.

Pileus 3.0-5.0 cm, broad, broadly convex, expanded, with depressed center and often wavy, golden yellow or ochre brown, covered with tiny brownish-black fibrillose scales especially at the center, dark brownish-ochre later. Context deep yellow. Lamellae slightly sinuate to adnate, crowded, broad, bright yellow or tinged. Stipe 3-6 cm, long, 0.4-0.6 cm thick, yellow to yellowish-ochre glabrous to slightly fibrillose.

Spores 6.0-7.5×4.5-5.2 μm, subellipsoid to ellipsoid, smooth, spore print white, basidia 22.5-33.0×6.0-7.5 μm, clavate, cheilocystidia 30.0-59.5×10.5-15.0 μm, clavate, clamp connection present.

Habitat: scattered to gregarious on conifer logs. August 20, 1989, (no, 8920*) Edibility

Distribution: Korea (Mt. Jiri, Pia-vally), Japan, America and Europe.

***Gymnopilus penetrans* (Fr. ex Fr.) Murr.** 침투 미치광이 버섯(신칭)

Murrill, Mycologia, 4: 254, 1912.

Agaricus penetrans Fr. Obs. Myc., p.23. 1815.

Agaricus sapineus f. penetrans Fr., Syst. Myc. 1: 239, 1821.

Agaricus penetrans (Fr.) Fr., Epicr. Myc.,

p.189, 1838.
Flammula penetrans (Fr. ex. Fr.) Quél., Champ. Jura Vosg., p. 233, 1872.
Dryophila (Flammula) penetrans (Fr. ex. Fr.) Quél., Enchir. Fung. p.71. 1886.
Fulvidula penetrans (Fr. ex Fr.) Sing., Rev. Myc. 11. 2: 239. 1937.

Pileus 2.0-4.5 cm broad, bell-shaped to convex or nearly flat, often wavy at the margin, bright rusty-orange to golden-yellow or tawny, fading with age, surface not viscid, plabrous, margin even.

Taste bitter and smell not distinctive. Contex white to yellowish tawny in stipe. Lamellae adnexed to adnate, close, moderately broad, golden-yellow, becoming spotted tawny with age. Stipe 3-5 cm long, 0.3-0.5 cm thick, yellow above, brownish, whitish fibers, base with white hairy, veil white, fibrilose.

Spores 7.5-9.0 (−9.7)×5.2-6.0 μm, almond-shaped or elliptical, with wart, spore print brownish-rust, basidia 7.5-9.0×18.0-22.5 μm clavate, dextrinoid, pleurocystidia 25.0-35.0×4.0-6.7 μm, ventricose, cheilocystidia 25.0-38.0×4.0-7.5 μm, ventricose, clamp connection present, caulocystidia 30.0-50.0×6.0-9.0 μm, clavate.

Habitat: densely clustered at the foot of beech trees or stumps. August 23, 1988, August 30, 1989, (no, 8823-1*, 8930-2*).
Distribution: Korea (Mt. Jiri, Pia-vally, Mt. Muhack), Japan and North America.

***Amanita abrupta* Peck** 비탈 광대버섯(신칭)
Peck; Rull. Torr. Rot. Club, 24: 138, 1897.
Bas, C.; Morphology and Subdivision of Amanita and A monograph of its section Lepidella 342, fig. 164-166, 1969.
Jenkins D.T.; Amanita of North America, 77, f.49, 1986.

Pileus 6.0-10.0 cm broad, obtuse to convex, planeconvex to plane, white, often slightly yellowish, with numerous conic warts often in concentric rows, glabrous and shiny later, appendiculate margin, becoming flocculence at margin, non striate. Context white. Lamellae free, crowded rather narrow, moderately broad, white. Stipe 6.0-12.0 cm long, 0.6-1.5 cm thick, white tapering toward apex, sloid to stuffed, fibrillose to glabrous, ring superior, submembranous, white, abrupt, oval bulb 1.5-3.0 cm thick, volva remanted as a few small warts or ridges.

Spores 9.0-10.5×7.5-9.0 μm, globose to elliptical, thin walled, smooth, spore print white, amyloid, basidia 37.5-49.5×7.5-12.0 μm, clavate.

Habitat: scattered under hardwoods and mixed coniferous. August 20, 1989, September 15, 1989, (no, 8920-1*, 8915-2*), Edibility unkown.
Distribution: Korea (Mt. Jiri, Pia-vally, Jungsanri), Japan and North America.

***A. rufoferruginea* Hongo** 암적색 광대버섯(신칭)
Mon. Shiga Univ. vol. 17, 89, 1967.

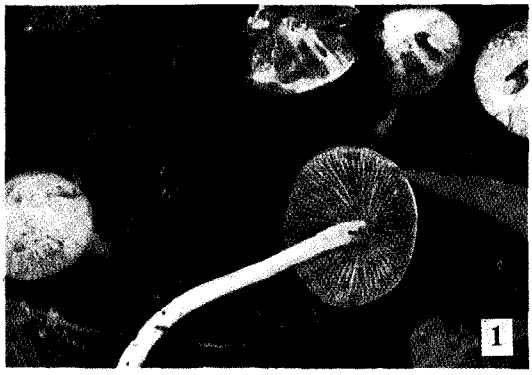
Pileus 4.0-8.0 cm broad, obtuse to convex then broadly convex, expanded umbonate, reddish-brown with cinnamon tints, bright brownish-orange or apricot with granular coating appendiculate margin, slightly lined at margin. Context white. Lamellae free, crowded, rather narrow, white. Stipe 6-12 cm long, 0.5-1.0 cm thick, tapering upwards, brownish-orange or ochraceous-brown, covered with small brownish scales or meal, white above the striate memberanous ring, occasionally scattered scaly patches of volva at the base.

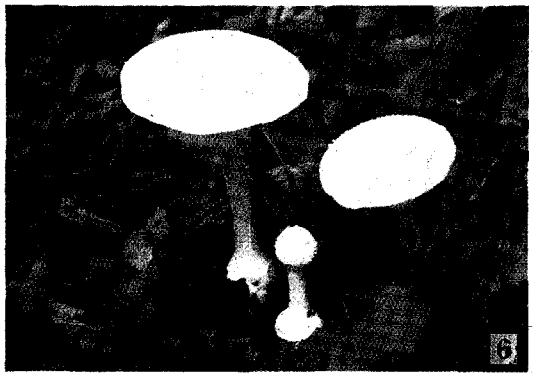
Spores 7.5-9.0×6.0-8.2 μm, ellipsoid to globose, smooth, thin-walled, spore print white, nonamyloid, basidia 33.0-48.0×9.0-12.0 μm, clavate, marginal cells globose, elliptic or somewhat piriform, mostly 15.0-25.0 μm, thinwalled, powders on cap consisting of irregularly arranged short chains of globose, 15.0-45.0 μm cell.

Habitat: Solitary to scattered, on the grounds of broadleaved and conifer forests. August 22, 1989. (No, 8922*) Edibility unknown.
Distribution: Korea (Mt. Jiri, Hansin-vally) and Japan.

***Stropharia semiglobata* (Batsch ex Fr.) Quél.** 반구 독청버섯(신칭)
Quélt: Memoires de la Société d' Emulation de Montbeliard ser. II, 5: 112 (143),

The Plate I





1872.

Pileus 1.0-2.5 cm broad, convex to bell-shaped then flattened or hemispherical, whitish at first, becoming pale yellow to light yellow, viscid. Context thin, yellowish. Lamellae adnate, close to subdistant, broad, pale grayish, becoming grayish to purple-brown. Stipe 5-12 cm long, 0.3-0.6 cm thick, whitish to pale yellow, becoming brownish when old, viscid, ring incomlete, often represented by zone of blackish fibrils.

Spores (-13.5) 15.0-18.0 (-19.5)×8.2-9.0 (-10.5)μm, elliptical, smooth with germ pore at tip, spore print purple-brown, basidia 12.0-15.0×29.0-40.0μm, clavate.

Habitat: solitary to scattered on horse dung. August 10, 1989, (no, 8910*).

Distribution: Korea (Mt. Jiri Jungsanri), Japan, North America and Europe.

Plate III

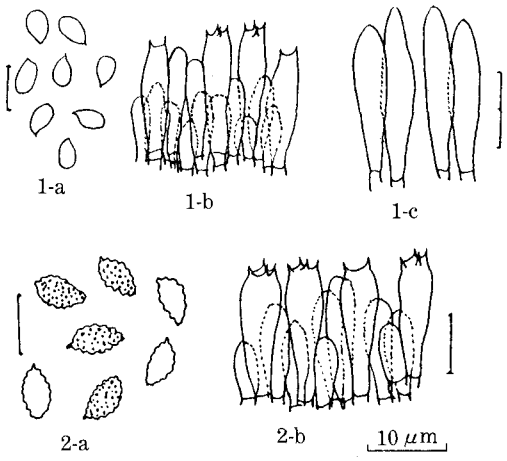


Plate II

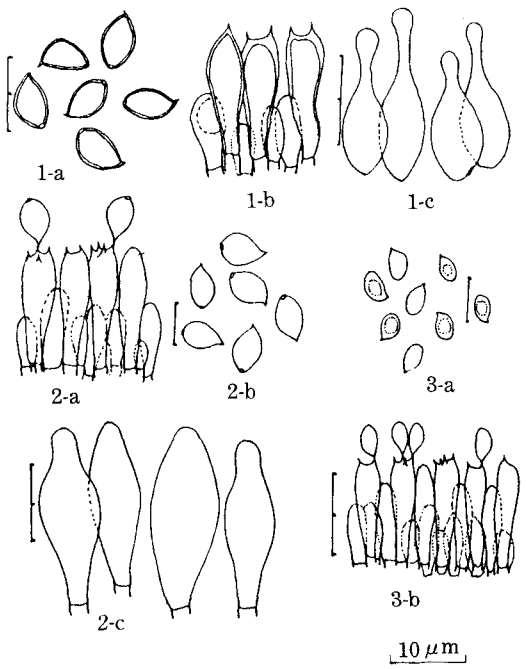
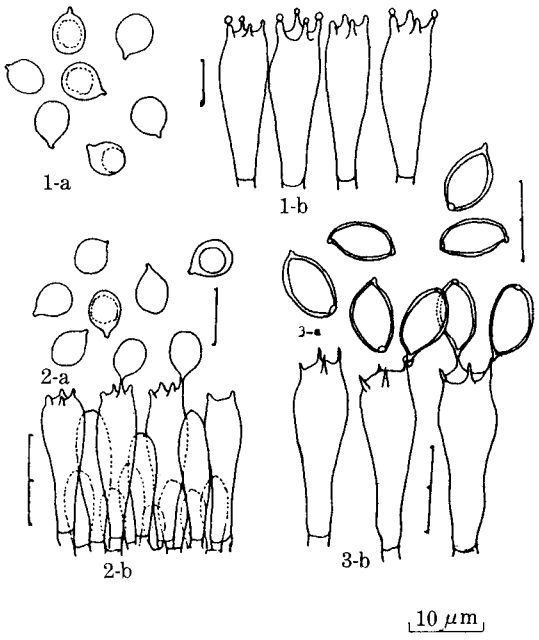


Plate IV



The Explanation of Plate I

1. *Conocybe rickenii* (Schaeffer) Kühner×1/3
2. *Coprinus rhizophorus* Kawam. *et al.*×1/3
3. *Agaricus comtulus* Fr.×1/2
4. *Tricholomopsis decora* (Fr.) Sing.×1/3
5. *Gymnopilus penetrans* (Fr. ex Fr.) Murr.×1/3
6. *Amanita abrupta* Peck×1/3
7. *A. rufoferruginea* Hong×1/3
8. *Stropharia semiglobata* (Batsch ex Fr.) Qu'el×1/2

The Explanation of Plate II

1. *Conocybe rickenii* (Schaeffer) Kühner 1-a, spores 1-b, basidia 1-c, cheilocystidia
2. *Coprinus rhizophorus* Kawam. *et al.* 2-a, spores 2-b, basidia 2-c, cheilocystidia
3. *Agaricus comtulus* Fr. 3-a, spores 3-b, basidia

The Explanation of Plate III

1. *Tricholomopsis decora* (Fr.) Sing. 1-a, spores 1-b, basidia 1-c, cheilocystidia
2. *Gymnopilus penetrans* (Fr. ex Fr.) Murr. 2-a, spores 2-b, basidia

The Explanation of Plate IV

1. *Amanita abrupta* Peck 1-a, spores 1-b, basidia
2. *A. rufoferruginea* Hongo 2-a, spores 2-b, basidia
3. *Stropharia semiglobata* (Batsch ex Fr.) Quél 3-a, spores 3-b, basidia

摘 要

1987년 5월부터 1989년 10월까지 지리산 일대의 국립공원에서 자생하는 한국산 고등균류를 60여종을 채집하여 동정한 결과 미기록종으로 확인한 것은 다음과 같으며 이들에 대하여 보통명을 신칭하였다.

Conocybe rickenii(Schaeffer) Kühner(건초 종버섯)

Coprinus rhizophorus Kawam *et al.*(헛대 먹물버섯)

Agaricus comtulus Fr.(볼록 들버섯)

Tricholomopsis decora(Fr.) Sing.(장식 솔버섯)

Gymnopilus penetrans(Fr. ex Fr.) Murr.(침투 미치광이 버섯)

Amanita abrupta Peck(비탈 광대버섯)

A. rufoferruginea Hongo(암적색 광대버섯)

Stropharia semiglobata(Batsch ex Fr.) Quél.(반구 독청버섯)

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and Boleti 3), 139p., Royal Botanic Garden, Edinburgh.
Watling, R. (1987): British Fungus Flora, (Strophariaceae & Coprinaceae 5), 121p., Royal Botanic Garden, Edinburgh.

Accepted for Publication 20 May 1990