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Notes on the Korean Higher Fungi(XV)

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ABSTRACT

Many higher fungi were collected at Pyonsan penisula Mt.Odae, Korean Highway Cororation Arboretum, Mt.Moak, Yaksan island from 1996 to 1998. They were identified and according to the results, *Hygrocybe coccineocrenata, Collybia neofusipes, Marasmius wettsteinii, Amanita esculenta, Lepiota fuscipes, Leucocoprinus subglobisporus, Cystoderma japonicum* and *Coprinus narcoticus* are newly to Korea. They were designed Korean common name by author.

Keywords : *Hygrocybe coccineocrenata, Collybia neofusipes, Marasmius wettsteinii, Amanita esculenta, Lepiota fuscipes, Leucocoprinus subglobisporus, Cystoderma japonicum* and *Coprinus narcoticus.*

Pyonsan penisula is national park which is located near west sea in Chollabuk-do and Korean Highway Cororation Arboretum is located in Chonju near high way. Mt.Moak is provincial park of Chollabuk-do, Yaksando(island) is located at Wando-kun(island) in Chollanamdo, especially where has a lot of pharmacial plant. They have good conditions for fungi developing. The purpose of this study was made to confirm mycodiversity of higher fungi. They are added to the list of the Korean fungi.

Hygrocybe coccineocrenata(P.D.Orton) Moser 진빨간꽃버섯아재비(신칭)

Imaz. & Hongo, Col. Ⅲ.Mush.Jap.vol.Ⅰ, 52-53, pl.8, f.53, 1987.

Pileus 0.5-1.5cm broad, plane convex to plane, seldom with papillate, brightly reddish or deeply reddish, minutely densely reddish with darkish scale at center. Lamellae adnate-decurrent, decuurrent, white cream color, more or less reddish, sparse. Stipe 2-4cm long, 1.5-2.5mm thick, bright reddish or deeply reddish, cylindrical to plane.

Spores 7.5-11.5×4.5-6μm, elliptical, prominant at end, basidia 29-36×5-6μm, clavate, four-spored.

Hab. : Clustered on soils or on with mosses of forests. Summer to autumn.

Distr. : Korea(Pyonsa penisula) and Japan.

Specimens studied : CHO-5575(July 21, 1998) collected between Naebyonsanbunso(Administration office) and Kamaso.

Collybia neofusipes Hongo 신암갈색애기버섯(신칭)

Hongo, Shiga Univ., vol.19, 75, f.23, 1 & 2, 1969.

Pileus 5-10cm broad, convex to plane, small convex at center, surface smooth, reddish brown, margin

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incurved when young, then upcurved in age. Context tough, thick, white, more or less brown, taste none, seldom bitter. Lamellae adnexed, 4-8mm wide, more or less crowded, white to spot of reddish brown. Stipe 4-8cm long, 1.5-2mm thick, downwards slender, pale color than the pileus, longitude-striate, furrow, tough, hollw.

Spores 4.5-6.5×2.5-3μm, seed-shaped, cystidia 13-19×4-5.5μm, fusiform, clamp connection at base, hymenium 16.3x3.8μm, clavate with minutely warts.

Hab: Clustered on fallen leaves of bamboo forests. Autumn.

Distr. : Korea(Korean Hihgway Corotation Arboretum of Chonju) and Japan.

Specimens studied : CHO-5881(October 14,1998) collected at Korean Highway Cororation Chonju Arboretum of Chonju.

Remarks : A large, fleshy, somewhat trichomatid species, recognizable by the reddish brown, umbonate cap and the longitudinally furrowed stem with somewhat rooting base. Very close to *C.fucipes*(Fr.) Quel., from which it differs chiefly in growing on conifers and on the rather close gills.

Marasmius wettsteinii Sacc.& Syd. 물낙엽버섯(신칭)

Moser & Julich, Col.Atl.Basidiomycet. III Marasmius 9, 1986.

Pileus 2-3mm broad, 2-5mm high, conic shaped when young, depressed in age, cream yellowish, margin whitish yellow, striate-furrow from margin to disc. Lamellae concolorous with the pileus, sparse, decurrent. Stipe 1.5-2.3mm long, 0.1-0.2mm thick, yellow, downwards slender, darkish yellow in age.

Spores 5-6×3-4μm, elliptical, basidia 9-11×3.5-4μm, clavate, cheilocystidia 25-43.8×12.3-16.3μm, fusiform, seldom clavate, seldom with prominant and oil drops, dermatocystidia 100-117.5×12.5-15μm, long clavate, hymeniform from pelipelis 6-10×4-5μm, clavate with prominant.

Hab. : Clustered on deciduous of broadleaved trees. Summer

Distr. : Korea(Mt.Odae and Pyonsan penisula) and Europe.

Specimens studied : CHO-5580(July 21,1998) and 5225(August 12,1997) collected at Mt.Odae and Pyonsan penisula

Amanita esculenta Hongo & Matsuda 맛광대버섯(신칭)

Imaz. & Hongo, Col. Ⅲ.Mush.Jap.vol.Ⅰ, 122, pl.29, f.209, 1987.

Pileus 7-13cm broad, convex to plane, smooth, grayish brown or darkish brown, often large scale of volva, radially furrow at margin. Context white. Lamellae free, white, more or less crowded, edge grayish farinaceous. Stipe 8-12cm long, 5-12mm thick, densely minute floccose-scale of grayish, spot-shaped, annulus at apex, grayish, membraneous, volva white, large.

Spores 10.5-14×7-8μm, broad elliptical, nonamyloid. basidia 43-55×8-11μm, clavate, cystidia 37.5-45×15-20μm, clavate, hymenium 15-22×5-5μm, slender-form.

Hab. : Solitary or clustered on soils of pine forests. Summer to autumn. Excellently edible.

Distr. : Korea(Yaksan-island) and Japan.

Specimens studied : CHO-5587(July 24, 1998) collected at Yaksan-do(island) of Wando-kun(island) in Chollanamdo.

Lepiota fuscipes Hongo 암갈색갓버섯(신칭)

Imaz. & Hongo, Col. Ⅲ.Mush.Jap.vol.Ⅰ, 157, pl.41, f.277, 1987.

Hongo, Mem.Shiga Univ., vol.23, 38, f.39,5-8, 1973.

Pileus 2-3cm broad, convex to plane, umbonate, surface dry, densely and minutely squamulose, fuscous on the disc, paler toward the margin, the marginal part often radially cracked. Context thin, white, fragile, taste and odor none. Lamellae free, white, then cremeous,

close. Stipe 2-3.5cm long, 2-3mm thick, equal or somewhat thickened at the base, white, silky, sometimes minutely fribrillose-squamulose, below the ring often curved. Annulus distant white, thin, narrow, erect, fuscose at the margin.

Spores 5-7 × 3-3.5μm, elliptical, seldom with oil drop, smooth, wall-thicked, pseudoamyloid, hyaline, basidia 16.3-20 × 5-7.5μm, clavate, cheilocystidida 37.5-57.5 × 10-12.5μm, clavate or fusiform, epicute of pileus 20-60 × 7.5-12.5μm, cylindrical, seldom punctate.

Hab : Clustered on soils in forests. Spring to autumn.

Distr. : Korea(Mt.Moak) and Japan.

Specimens studied : CHO-4418(June 12, 1996) collected at Mt.Moak provincial park of Chollanbuk-do.

Remarks : Distinguished from *L. atrosquamulosa* Hongo by the somewhat smaller spores. From *L. praetervisa* Hongo it differs chiefly in the darker pileus cuticle.

Leucocoprinus subglobisporus Hongo 둥근포자각시버섯아재비(신칭)

Hongo, Kinogo, 90, 1994.

Imaz. & Hongo, Col. Ⅲ .Mush.Jap.vol. Ⅰ, 159, 1987.

Pileus 2-5cm broad, convex to plane, obtuse depressed at center, pale brown, furrow at margin, minutely scales of darkish purple brown distributed on surface. Context thin, white. Lamellae white, sinuate. Stipe 4-7cm long, 0.5-1cm thick, white, downwards darkish brown, minutely floccose. Annulus vehicular, easily vanished.

Spores 5.5-6.5 × 3.8-4μm, elliptical, seldom subglobose, prominant at end, basidia 7.5-20 × 7.5-8.8μm, clavate.

Hab. : Solitary or clustered on soils of broadleaved forests. Summer. Edible unknown.

Distr. : Korea(Pyonsan penisula) and Japan.

Specimens studied : CHO-5868(October 10, 1998) Collected at Gaeam-sa(temple) of Pyonsan penisula national park.

ystoderma japonicum Thoen & Hongo 일본낭피버섯(신칭)

Hongo, Kinogo, 96, 1994.

Pileus 3-8cm broad, minutely scales of brownish-orchre, more or less lusterous, minutely granulose of brownish-ochre. Lamellae adnexed, white, more or less crowded. Stipe 3-12cm long, 5-2cm thick, minutely granulose of brownish-ochre, pale ochre, upwards of annulus ochre, downwards of annulus membranous, irregularly, easily vanished.

Spores 4-4.5 × 2.5-3μm, elliptical, nonamyloid, basidia 25-30 × 4-5μm, clavate, clamp connection at base, hyphae from lamellae trama 7.5-12.5μm wide, cylindrical.

Hab. : Clustered on fallen leaves of bamboo forests. Autumn.

Distr. : Korea(Korean Hihgway Corotation Arboretum of Chonju) and Japan.

Specimens studied : CHO-5880(October 14,1998) collected at Korean Highway Cororation Arboretum of Chonju.

Remarks : This specis is similar to *Cystoderma anianthium*, this species is larger than *C. anianthium*, stipe is annulus membarnous, spores are nonamyloid.

Coprinus narcoticus(Batsch.:Fr.) Fr. 마취먹물버섯(신칭)

Imaz. & Hongo, Col. Ⅲ .Mush.Jap.vol.Ⅰ, 168, pl.43, f.298, 1987.

Pileus 2-2.5cm broad, oval when young, then campnulate to plane, densely minutely farinaceous of white or grayish, margin radilly furrow-striate, upcurved. Context thin, coltar odor. Lamellae free, white to reddish brown with darkish, finally darkish. Stipe 2-6cm long, 1-3.5cm thick, white to pale grayish, farinaceous or minutely floccose.

Spores 7-11 × 4-9μm(10-11.5 × 7-9μm ; contained crust), fusiform, elliptical with thick-transluescent membrane, irregulary surface, with germ pore, cystidia 50-87 × 30-45μm, flask-shaped, crust of pileus 33-97μm

wide, globose with minutely warts.

Hab. : Solitary on dung of cow. Spring to autumn.

Distr. : Korea(Yaksando), Japan, Europe and north America.

Specimens studied : CHO-5588(July 24, 1998) collected at Yaksan-do(island) of Wando-kun(island) in Chollanam-do.

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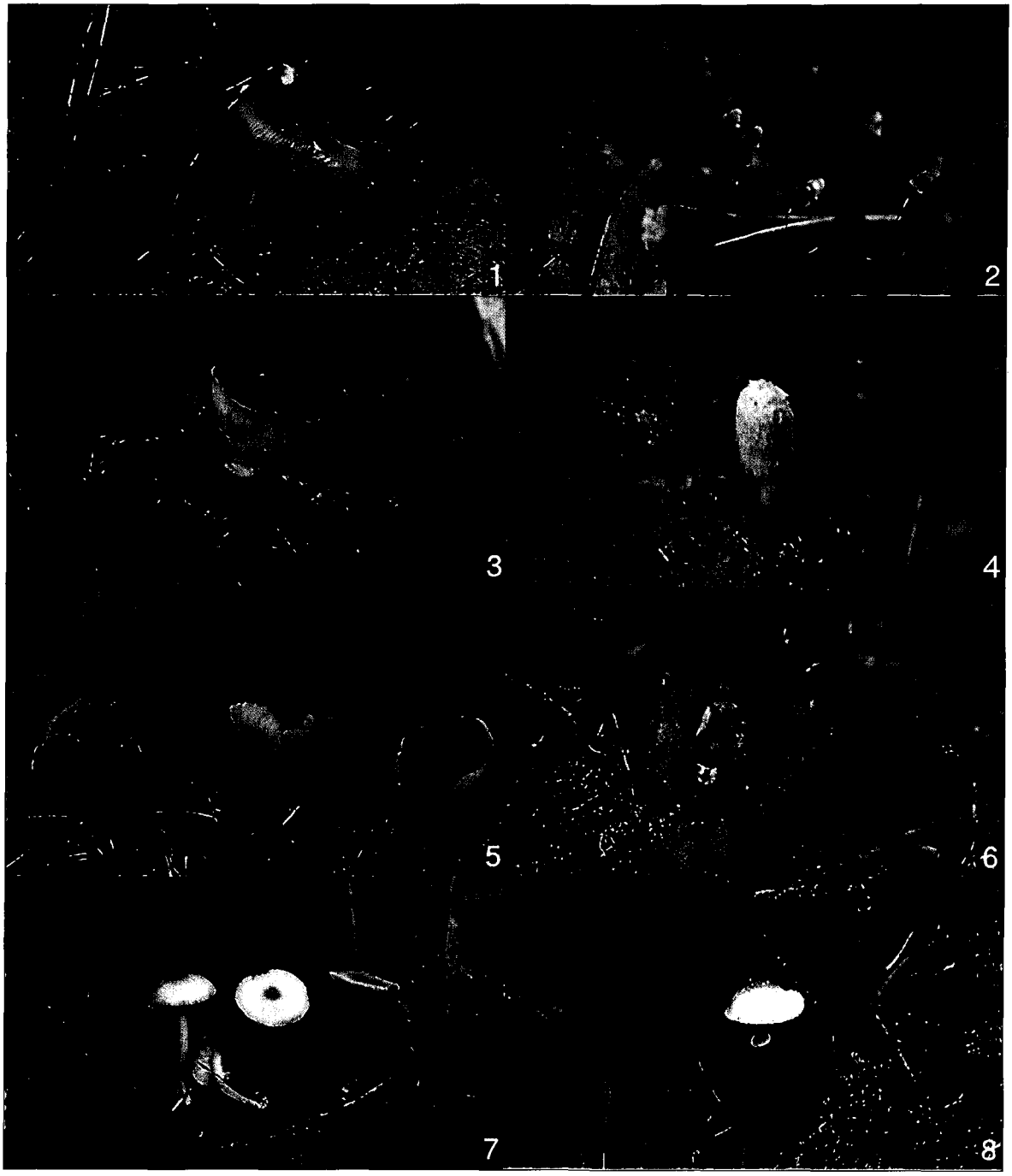

The Explanation of Plate

1. *Hygrocybe coccineocrenata* (P.D.Orton) Moser × 1/3
2. *Collybia neofusipes* Hongo × 1/3
3. *Marasmius wettsteinii* Sacc.& Syd. × 1/3
4. *Amanita esculenta* Hongo & Matsuda × 1/3
5. *Lepiota fuscipes* Hongo × 1/3
6. *Leucocoprinus subglobisporus* Hongo × 1/3
7. *Cystoderma japonicum* Thoen & Hongo × 1/3
8. *Coprinus narcoticus* (Batsch.:Fr.) Fr. × 1/3

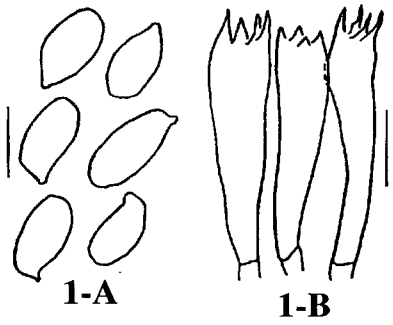

Fig.1. *Hygrocybe coccineocrenata*(P.D.Orton) Moser
1-A,spores. 1-B,basidia(Bars:10μm)

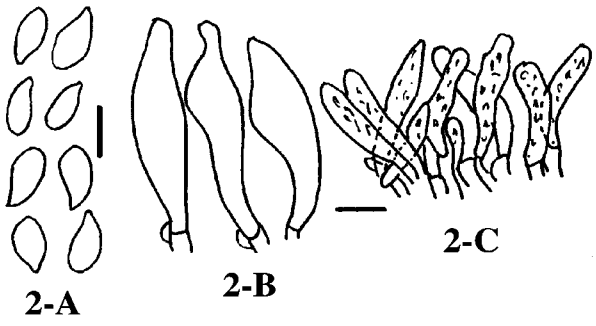

Fig.2. *Collybia neofusipes* Hongo
2-A,spores. 2-B,cystiida. 2-C,hymenium(Bars:10μm)

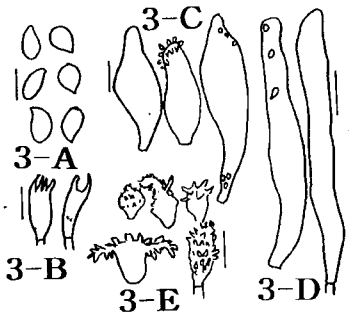

Fig.3. *Marasmius wettsteinii* Sacc.& Syd.
3-A,spores. 3-B,basidia. 3-C,cheilocystidia.
3-D,drmatocystidia, 3-E,hymenium from pelipelis(Bars:10μm)

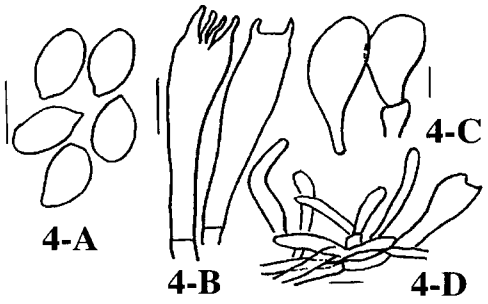

Fig.4. *Amanita esculenta* Hongo & Matsuda
4-A,spores. 4-B,basidia. 4-C,cheiliocystidia. 4-D,hyphae from lamellae trama(Bars:10μm)

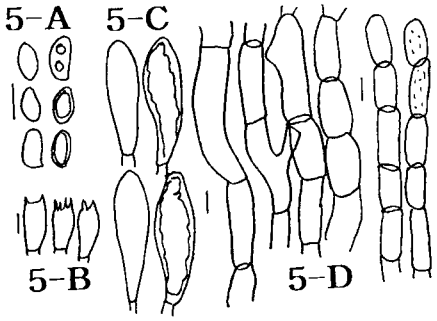

Fig.5. *Lepiota fuscipes* Hongo
5-A,spores. 5-B,basidia. 5-C,cheilocystidia. 5-D,epicutis (Bars:10μm)

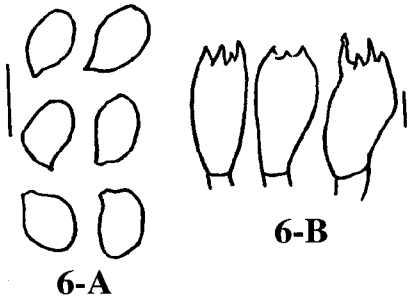

Fig.6. *Leucocoprinus subglobisporus* Hongo
6-A,spores. 6-B,basidia.(Bars:10μm)

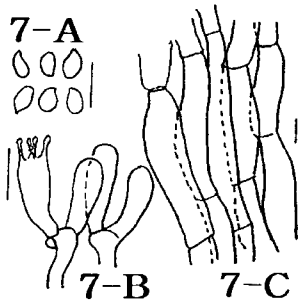

Fig.7. *Cystoderma japonicum* Thoen & Hongo
7-A,spores. 7-B,basdia. 7-C,hyphae from lamellae trama (Bars:10μm)

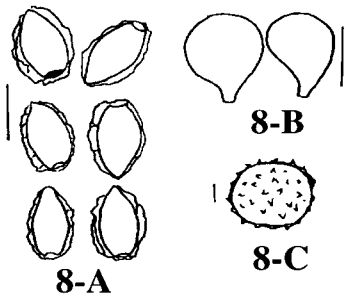

Fig.8. *Coprinus narcoticus* (Batsch.:Fr.) Fr.
8-A,spores. 8-B,cystiida. 8-C,crust of pileus(Bars:10μm)