

Notes on the Korean Ascomycetes (VII)

Duck-Hyun Cho

Department of Biology, Natural Science College, Woosuk University Chonju 565-701, Republic of Korea

ABSTRACT

Many ascomycetes were collected at Mt.Unjang, Pyonsan peninsula national park, Mt.Moak Chonbuk provincial park, Daea-ri herbarium and Mt.Whaam from August 1996 to October 1999. They were identified. According to the resulting, *Lanzia echinophila*, *Discina parma*, *Hypomyces auranticus*, *Helotium versicolor*, *Cordyceps militaris* f. *albino*, *Isaria sinclairii* are newly to Korea. They were designed Korean common names by author.

Key Words : *Lanzia echinophila*, *Discina parma*, *Hypomyces auranticus*, *Helotium versicolor*, *Cordyceps militaris* f. *albino* *Isaria sinclairii*

INTRODUCTION

Work of ascomycotina has no been completed in contrast basidiomycotina in Korea. Really ascomycotina roled decomposer and controlled balance of ecology system. Mt.Unjang, Pyonsan peninsula national park, Mt.Moak Chollabuk-do provincial park and Daea-ri herbarium have good condition for fungi development. Mt.Moak is provincial park of Collabuk-do, Mt.Unjang located a part of Noryong mountain veins. Daea-ri herbarium were manged by Institution of Chonbuk Forest Environment and Mt.Wham is located in Wanju-kun in Chollabuk-do.

This study is continued as a series of Notes on the Korean Ascomycetes of Cho(1996ab, 1997abc, 1998).

The mushroom is fluorescent and a young and small one looks very delicious.

Lanzia echinophila (Bull.:Fr.)Korf 털밤껍질버섯 (신칭)

Imazeki,R. and T.Hongo, Col.III.Mush.Jap.vol.II. 253, f.948. 1989. Apothecium 4-8mm broad, plane, purplish with reddish, especially small convex at center, surface smooth, teeth at margin. Stipe short, the concolorlus with the apothecium. Ascospore 16-19x5-6 μ m, narrowly elliptical or sosage, with windings, with two or three septa, rarely with icomplete oil drop, rarely with appendage at end. Asci 97-110x10-12 μ m, clavate or cylidrical, 8-spored, uniseriate or irregularly biseriate, with two walls. Paraphyses 67-90x1 μ m, with dots, seldom surface with dots, with septum branch at base, upper bulbose.

Habit.: On the hymenium or rotting polypores,acc.lit. also on Panus. Spring to summer.

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

Specimens studied : CHO-6143(29 July 1999) collected at Mt.Moak provincial park of Chollabuk-do.

***Discina parma* Breiten.et Mass Geest.** 큰쟁반버섯 (신칭)

Imazeki, R. and T. Hongo, Col. III. Mush. Jap. vol. II. 198, f. 866. 1989.

Apothecium 2-6cm broad, plane, undulate at margin, often surface winding, hymenium curved or striate wall, depressed at center. yellowish brown to darkish reddish brown, darkish when dry. Outer surface brown to whitish. Stipe 2.5-5cm long, 1.5-2cm thick, hollow striate of logitudinal. Ascospore 16-21x7.5-8 μ m, elliptical, white, roughly with net, with many needles both ends. Asci 275-325x10-14 μ m, cylindrical, operculum, slightly upper round. downwards slender, 8-spored, uniseriate. Paraphyses 5-6 μ m wide per septum, slender-clavate, upper bulbous.

Habit.: Solitary or clustered on rotten wood. Spring.

Distr.: Korea (Pyonsan peninsula national park), Japan and Europe.

Specimens studied : CHO-5894 (17 April 1999) and CHO-5899 (May 5, 1999) collected at between Gaeam temple and Ugum castle of Pyonsan peninsula national park.

***Hypomyces auranticus* (Pers.:Fr.) Tul.** 황금속버섯 (신칭)

Breitenbach & Kranzlin, Fung. Switz. 258, fig. 323, 1984.

Fruiting body 0.3-0.4mm, spherical with broad rounded papilla, surface smooth, orange-yellow. Fruiting bodies more or less regularly cespitose and embedded in a gold-yellow hyphal feltwork. Ascospores 23-29x5-6 μ m, fusiform-navicular, sometimes curved, with one septum, with warts, both ends with appendage, stained dark with Melzer fluid. Asci 120-150x4.5-6 μ m, eight-spored, uniseriate.

Habit.: On the hymenium or rotting polypores, acc. lit. also on *Panus*. Spring to summer.

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

Specimens studied : CHO-6143 (29 July 1999)

collected at Mt. Moak provincial park of Chollabuk-do.

***Helotium versicolor* (Quel.) Boud.** 다색압정버섯 (신칭)

Breitenbach & Kranzlin, Fung. Switz. 174, fig. 198, 1984.

Fruiting body 0.4-0.8mm, cup-to saucer-shaped, attached to the substrate with a short stalk, hymenium dull, whitish to cream-colored, outer surface and margin with the concolorous with the fruiting body, finely downy, margin sometimes sinuous and slightly turned up. When touched with the tip of a needle, the whole fruiting body changed color within a few seconds from sulfur-yellow to become orange-yellow. Ascospores 4-5x1.5-2 μ m, elliptical, smooth, with two oil drops. Asci 32.5-40x4-4.5 μ m, clavate, eight-spored, irregularly spores biseriata. Paraphyses 2 μ m wide, cylindrical, slightly slender-clavate, upper bulbous.

Habit.: Clustered on the bases of dead leafstalks of rotten wood. Spring to summer.

Distr.: Korea (Dae-a-ri herbarium) and Europe.

Specimens studied : CHO-5949 (25 June, 1999) collected Dae-a-ri herbarium of Institute of Environmental Forest of Chollabuk-do.

***Cordyceps militaris* f. *albino* Kobayasi et Shimizu** 흰 동충하초 (신칭)

Shimizu, D., Col. Iconograph. Vegeta. Was. and Pl. Worm, 203-204, pl. 34, 1994.

Fruit body 2.8-5.2cm high, more or less hard, head 7-14mm high, 3-5mm diameter, fusiform or broad elliptical, white. Ascocarp heminude, projection of conic ostioli, stipe irregularly cylindrical. Head and stipe indistinctly boundary, gray whitish at base. Secondary spores 1.8-3x1 μ m, rod-shaped. Asci 7-14x2.5-3 μ m, cylindrical, upper convex. Perithecium 12-13x5.5-9 μ m, elliptical, projection at end. Hyphae of perithecium 8-16x1.5-2 μ m wide, septa present.

Habit.: Clustered on pupa of *Dictyoploca japonica*.

Summer.

Distr.: Korea(Mt.Whaamsan, Mt.Manduck and Mt.Kangcheonsan) and Japan.

Specimens studied : CHO-6715 (2 July 2000) collected at Mt.Whamam-sa valley of Wanju-kun in Chollabuk-do.

Isaria sinclairii (Berk.)Lloyd 흰가루꽃동충하초 (신칭)

Fruit body 2-4cm high, farinaceous white at head. Stipe cylindrical, plane, brown with yellowish, white at base. *Isaria* type of imperfect stage. Spores 4-9x1.5-3 μm oval, elliptical, fusiform. Secondary spores 6-10x2.5-4 μm , rod-shaped, head of asci 2-3x1 μm , round, asci cylindrical. Perithecium 17.5-20x15 μm , hyphae 2.5 μm wide.

Habit.: Clustered on head of larva of *Meimuna opalifera*.

Distr. : Korea(Mt.Unjang and Hanla), Japan, China, South America, Ceylon, Madagacascar, Newzeland and Austrailia.

Specimens studied : CHO-6591(6 Oct. 1999) collected were at Mt.Unjang of Jian-kun in Chollabuk-do.

References

- Cho,D.H. 1996a, Notes on the Korean Ascomycetes(I), Korean J.Plant.Res. 9(3):291-297
- Cho,D.H. 1996b, Notes on the Korean Ascomycetes(II), Woosuk University. Vol.18:111-121.
- Cho,D.H. 1997a, Notes on the Korean Ascomycetes(III), Korean J.Plant.Res.10(3):265-270
- Cho,D.H. 1997b, Notes on the Korean Ascomycetes(IV),WoosukUniversity, Vol.19:241-250.
- Cho,D.H. 1997c, Notes on the Korean Ascomycetes(V), Korean J.Plant.Res.10(4):369-374.
- Cho,D.H. 1998, Notes on the Korean Ascomycetes(VI), Plant.Res. I(2):126-131.111-121.
- Imazeki,R. and T.Hongo, 1989, Colored Illustration of Mushrooms of Japan, vol.II. Japan.
- Shimizu,D., 1994, Color Iconography of Vegetable Wasps and Plant Worms, Japan. Breitenbach & Kranzlin, 1984, Fungi of Switzerland, Switzerland.

Recived 2000. 1. 20
Accepted 2000. 3. 20

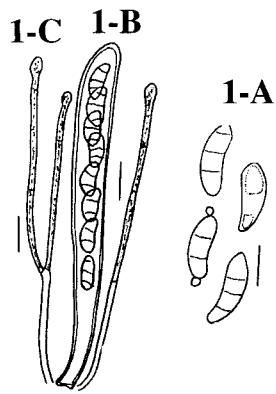


Fig 1. *Lanzia echinophila*
1-A.Spores, 1-B.Ascus, 1-C.Paraphyses(bars:10 μ m)

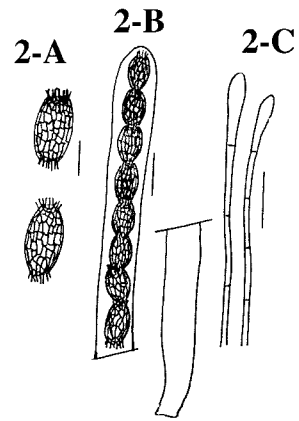


Fig 2. *Discina parma*
2-A.Spores, 2-B.Ascus, 2-C.Paraphyses(bars:10 μ m)

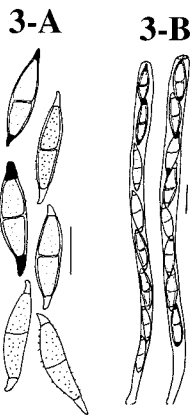


Fig 3. *Hypomyces auranticus*
3-A.Spores, 3-B.Asci(bars:10 μ m)

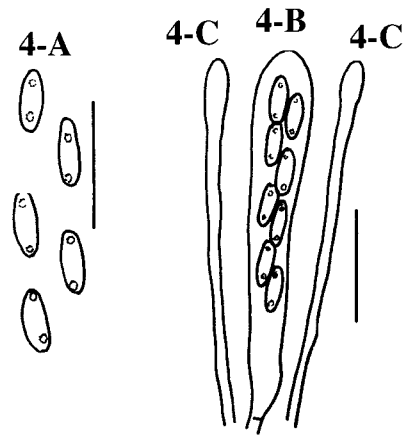


Fig 4. *Helotium versicolor*
4-A.Spores, 4-B.Ascus, 4-C.Paraphyses(bars:10 μ m)

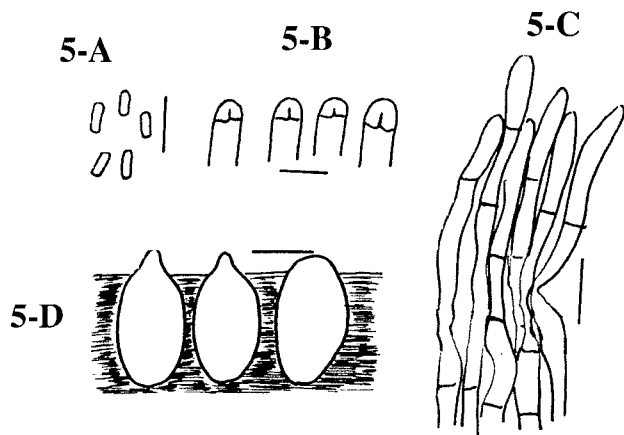


Fig 5. *Cordyceps militaris f. albino*
5-A.Secondary spores, 5-B.Head of asci, 5-C.Hyphae,
5-D.Perithecium(bars:10 μ m)

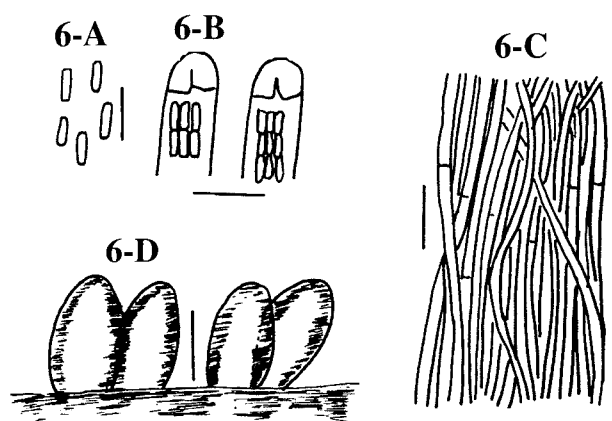


Fig 6. *Isaria sinclairii*
6-A.Secondary spores, 6-B.Head of asci, 6-C.Hyphae,
6-D.Perithecium(bars:10 μ m)

Plate I

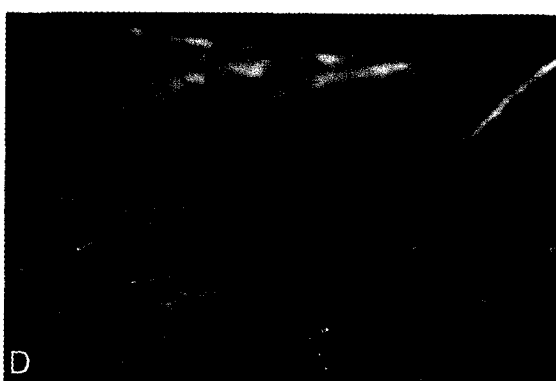


Plate Explanation plate

A. *Lanzia echinophila*

C. *Hypomyces auranticus*

E. *Cordyceps militaris* f. *albino*

B. *Discina parva*

D. *Helotium versicolor*

F. *Isaria sinclarii*