

## Notes on the Korean Ascomycetes (I)

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### 韓國産 子囊菌類記 (I)

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#### ABSTRACT

Many Ascomycetes of higher fungi were collected at Mt.Jiri National Park and Mt.Moak Provincial Park from March 1995 to September 1996. They were identified by the keys of Dennis(1981) and Breitenbach and Kranzlin(1984). Of these, *Hypoxyylon multiforme*, *H. rubiginosum*, *H.udum*, *H.rutilum*, *Nectria gallignea*, *N. coccinea*, *N. pallidula*, and *N. fumicola* were recorded as new to Korea.

**Key words** : *Hypoxyylon multiforme*, *H. rubiginosum*, *H. udum*, *H. rutilum*, *Nectria gallignea*,  
*N. coccinea*, *N. pallidula*, *N. fumicola*.

#### Introduction

In Korea, many ascomycetes have been studied from long to present but particularly rotten fungi among small ascomycetes have not been worked. So the study on ascomycetes in Korea remains behind compared with that basidiomycetes.

Eumycota 진균문

Ascomycotina 자낭균아문

Pyrenomycetes 핵균강

Sphaeriales 콩버섯목

Hypocreaceae 육좌균과

*Hypoxyylon multiforme* (Fr.) Fr. 다형방석꼬투리버섯(신칭)(Fig.1-4)

Fries, Summa Veg.Scand.Sect.Post.384, 1849.

Dennis, Brit.Ascomycet.Pl.XXXVI F., 316, 1981.

Breitenbach & Kranzlin, Fung.Switz., vol.1, 270, f.341, 1984.

Perithecia 0.4-0.8mm across, stroma cushion-shaped, extensive, slightly flattened crust, black shining, covered with small pimples formed by the protruding upper parts of the perithecia, ostioles distinctly papillate. Flesh 7 mm thick, black, brittle. Ascospores 9.5-11x4.5-6 m, elliptical with one flattened side, with germ tube, dark brown. Asci 80-90x6-

7 m, eight-spored, spores uniseriate, cylindrical. Paraphyses 1.5-2.0 m wide, filiform, indistinct. Hyphae from tissue 7-14x2-2.5 m, irregularly cylindrical, thick-walled.

Hab.: Cespitose on bark and decorticated wood of branches. Common.

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

Specimen studied : CHO-4324 (1996.4.18) were collected between Chungin-Ri and Suwang-Sa temple of Mt.Moak Provincial Park in Chonlabuk-Do.

*H. rubiginosum* (Pers.: Fr.) Fr. 루비방석꼬투리버섯(신칭)(Fig.5-7)

Fries, Summa Veg.Scand.Sect.Post. 384, 1849.

Dennis, Brit. Ascomycet., Pl.XXXVI B., 316, 1981.

Breitenbach & Kranzlin, Fung.Switz., vol.1, 270, f.342, 1984.

Perithecia 0.3-0.8 mm across, stroma flattened, forming a thin crust on decorticated wood, varying in color from bright brick-red to reddish, purplish-brown, blackening with age, surface smooth, minutely pimply by the ostioles, appeared as white dots under a magnifier. Flesh very thin, black, brittle. Ascospores 9-12x4-6 m, dark brown, with germ tube, elliptical with one flattened side. Asci 135-140x5.5-8 m, eight-spored, cylindrical, spores uniseriate. Paraphyses 1.5-2 m wide, filiform, indistinct.

Hab.: Cespitose on dead wood of all deciduous trees, seldom bark.

Common.

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

Specimen studied: CHO-4334 (1996.4.20) were collected at Mt.Moak Provincial Park in Chonlabuk-Do.

*H. udum* (Pers.: Fr.) Fr. 꺾질방석꼬투리버섯(신칭)(Fig.8-11)

Breitenbach & Kranzlin, Fung.Switz., vol.1, 272, f.344, 1984.

Perithecia 0.5-1 mm across, half embedded in the wood, solitary, a few in a group sharply bounded by a black line, the color of the wood remaining unchanged, the part projecting above the wood mounded, covered with a thin gray-brown crust, ends at the summit blackish, papilliform, perithecial beak. Ascospores 24-29x8-10 m, narrowly elliptical, smooth, brown, seldom with a one drop, with germ tube appearing as an elliptical pore. Asci 125-200x7.5-10 m, spores uniseriate, pores blue by Melzer's reagent. Paraphyses 100-200 x 2.5-5 m, filiform, indistinct. Hyphae from tissue 35-50x2.5-3.5 m, filiform.

Hab.: Clustered on barkless dead branches of oak, individual groups sometimes fusing together. Spring. Rare.

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

Specimen studied: CHO-4320(1996.4.13) were collected between Chungin-Ri and Suwang-Sa temple of Mt.Moak Provincial Park in Chonlabuk-Do.

*H. rutilum* Tul. 광방석꼬투리버섯(신칭)(Fig.12-13)

Tulasne, Fungorum Carpologia 2:38, 1863.

Dennis, Brit.Ascomycet., Pl.XXXVI A., 315, 1981.

Stroma cushion-shaped, forming an extensive, flattened crust, black shining, covered with small pimples formed by

the protruding upper parts of the perithecia, ostioles distinctly papillate, protruding. Flesh 7mm thick, black, brittle. Ascospores 7-9.5x3.5-4 m, elliptical, with germ tube, with one flattened side, dark. Hyphae from tissue 17.5-75x3.8-5 m, cylindrical, thick-walled.

Hab.: Gregarious on fallen branches.

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

Specimen studied : CHO-4409 (1996.5.10) were collected around Hwaom-Sa temple of Mt.Jiri National Park.

*Nectria galligena* Bresadola, apud Straaer 벼슬알보리수버섯(신칭)(Fig.14-15)

Bresadola apud Straaer, Verh.K.K.Zool.Bot.Ges.Wien 51:413.

Dennis, Brit. Ascomycet., Pl.XXXIII A, 271, 1981.

Breitenbach & Kranzlin, Fung. Switz., vol.1, 262, f.329, 1984.

Perithecia 0.2-0.3 mm across, ovoid, bright red, smooth, very finely verrucose. Ascospores 15-20x5.5-7.5 m, elliptical, hyaline, uniseptate at in the center, thick-walled. Asci 74-90x19.5-12.5 m, eight-spored, spores biseriate toward the tips. Paraphyses not observed.

Hab.: Scattered or clustered on bark of deciduous trees. Year-round. Common.

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

Specimen studied:CHO-4356(1996.5.5) were collected between

Chungin-Ri and Suwang-Sa in Mt.Moak Provincial Park of Chonlabuk-Do.

*N. coccinea* (Pers.:Fr.) Fr.원추알보리수버섯(신칭)(Fig.16-17)

Fr., op.cit.:388, 1849.

Dennis, Brit. Ascomycet., 270, 1981.

Breitenbach & Kranzlin, Fung. Switz., vol.1, 260, f.325, 1984.

Perithecia 0.1-0.3 mm across, scattered over a tuberculate stroma developing in bark or scattered over bare wood without a stroma, ovoid, bright red, with a darker apical papilla, smooth-walled. Ascospores 12-15x5-6 m, hyaline to very pale brown, uniseptate at the center, slightly constricted at the septum, thick-walled. Asci 77.5-97.5 x6.7-8.8 m, eight-spored, cylindrical, spores uniseriate. Hab.: Cespitose on twigs of deciduous trees.March to June. Rare. Distr.: Korea(Mt.Jiri) and Europe.

Specimens studied:CHO-4373(1996.5.10) were collected around

Hwoum-Sa of Mt.Jiri National Park.

*N. pallidula* Cooke 담황색알보리수버섯(신칭)(Fig.18-20)

Cooke, Grevillea 17:3, 1888.

Dennis, Brit.Ascomycet., Pl.XXXIV C, 270, 1981.

Perithecia 0.3-0.4 mm across, yellow stroma erumpent from bark, globose, with minutely verrucose wall, straw yellow with an apical brown papilla. Ascospores 9.5-15x3.5-5 m, light brown, with finely wart, relatively thick-walled. Asci 55-80x7-12 m, clavate, spores irregularly biseriate. Hairs 30-55x3-5 m, knife-shaped, thick-walled, uniseptate.

Hab.: Clustered on rotten twigs throughout the year. Common.

Distribution : Korea(Mt.Jiri) and Europe.

Specimen studied:CHO-4398(1996.5.10) were collected around Hwoum-Sa of Mt.Jiri National Park.

*H. fumicola* (Berk.& Br.) Berk. 연기알보리수버섯(신칭)(Fig.21-23)

Berkeley, Outlines of British Fungology, 393, 1860

Dennis, Brit.Ascomycet., Pl.XXXIV H, 276-277, 1981.

Perithecia scattered, pyriform, 0.2-0.3mm across, yellow to orange, colored with downy white hairs 40-55x4 m. Ascospores 15.5-21x6.5-9.5 m, broad elliptical, hyaline, with winded one-septum, thick-walled. Asci 70-95x12-17 m, spores uniseriate, cylindrical. Hyphae from tissue 20-142.5x2.5-5 m, seldom with finely warts.

Hab.: Clustered on fallen twigs. Spring to autumn. Common.

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

Specimen studied : Cho-4406(1996.5.10) collected around Whaom-Sa temple.

## 摘 要

많은 자낭균류 버섯을 1995년 3월부터 1996년 9월까지 지리산국립공원, 모악산도립공원, 전주근교의 위봉사 계곡과 만덕산에서 채집하였다.

이들은 Dennis(1981)와 Breitenbach & Kranzlin(1984)의 분류 검색표를 이용하여 동정하였다. 그 결과 한국 미기록종은 대형방석꼬투리버섯(*Hypoxyton multiforme*), 루비방석꼬투리버섯(*H. rubiginosum*), 곱질방석꼬투리버섯 (*H. udum*), 광방석꼬투리버섯(*H. rutilum*), 벚솔알보리수버섯(*Nectria galligena*), 원추알보리수버섯(*N. coccinea*), 담황색알보리수버섯(*N. pallidula*), 그리고 연기알보리수버섯(*N. fumicola*)이었다.

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**The Explanation of Plate**

1. *Hypoxylon multiforme* 10 x  
 3. *H. udum* 10 x  
 5. *Nectria gallignea* 10 x  
 7. *N. pallidula* 10 x

2. *H. rubiginosum* 10 x  
 4. *H. rutilum* 10 x  
 6. *N. coccinea* 10 x  
 8. *N. fumicola* 10 x

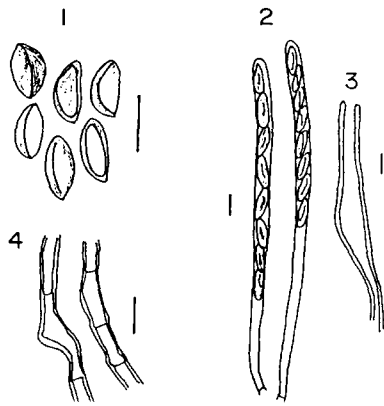


Fig.1-4. *Hypoxylon multiforme*  
 1. Ascospores 2. Asci 3. Paraphyses  
 4. Hyphae from tissue (bar=10 $\mu$ m)

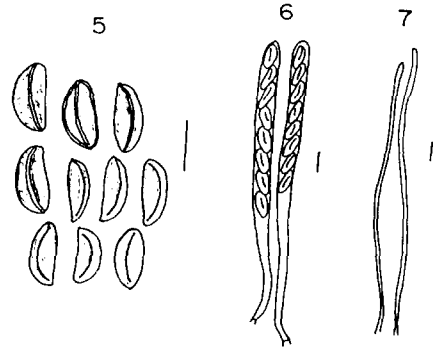


Fig.5-7. *H. rubiginosum*  
 5. Ascospores 6. Asci  
 7. Paraphyses (bar=10 $\mu$ m)

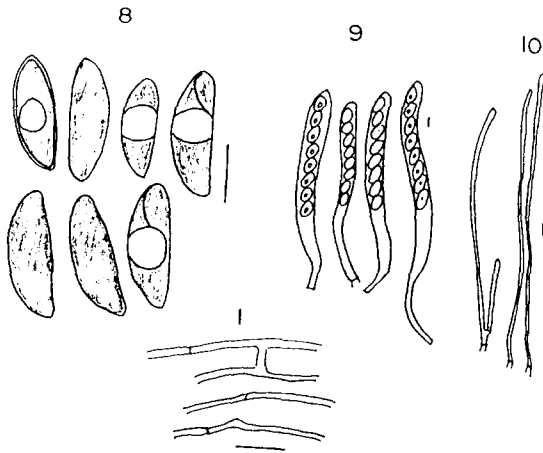


Fig.8-11. *H. udum*  
 8. Ascospores 9. Asci 10. Paraphyses  
 11. Hyphae from tissue (bar=10 $\mu$ m)

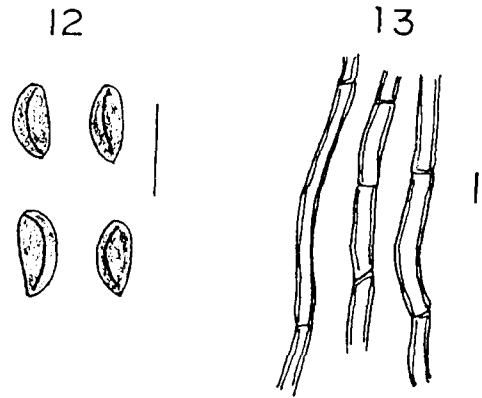


Fig.12-13. *H. rutilum*  
 12. Ascospores  
 13. Hyphae from tissue (bar=10 $\mu$ m)

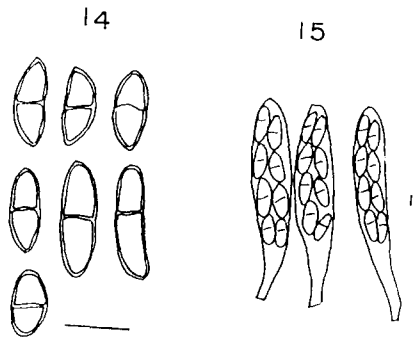


Fig.14-15. *Nectria galligena*  
 14. Ascospores 15. Asci (bar=10 $\mu$ m)

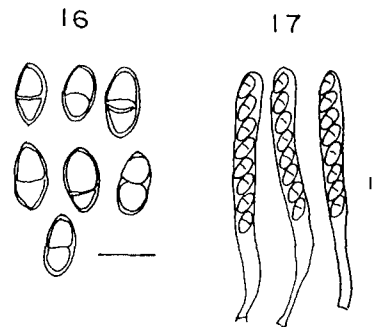


Fig.16-17. *N. coccinea*  
 16. Ascospores 17. Asci (bar=10 $\mu$ m)

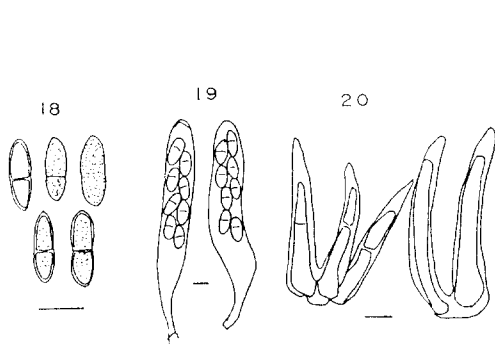


Fig.18-20. *N. pallidula*  
 18. Ascospores 19. Asci  
 20 hairs (bar=10 $\mu$ m)

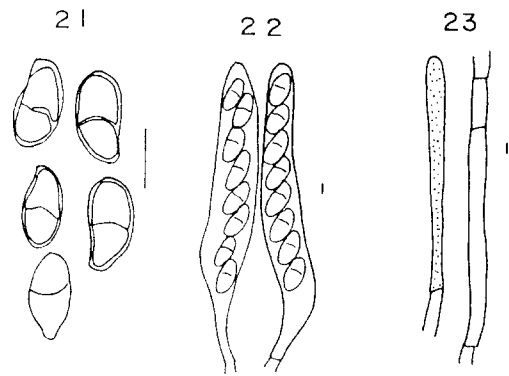


Fig.21-23. *N. fumicola*  
 21. Ascospores 22. Asci  
 23. Hyphae from tissus (bar=10 $\mu$ m)