

Notes on the Korean Rotten Wood Fungi(I)

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韓國産腐朽菌의 記載(I)

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Abstract

Many rotten wood fungi were collected at Mt.Moak Provincial Park (Chonlabuk-Do), Mt.Manduck(Chonlabuk-Do) and Byunsan Penninsula National Park from April, 1995 to October, 1995.

These higher fungi were identified. According to the results, genera of *Hypoderma*, *Piloderma* and *Cylindrobasidium* are newly to Korea. Following species are newly to Korea : *Polyporus tuberaster*, *Phellinus ferruginosus*, *Corticium bomycinum*, *Phlebia rufa*, *Hyphoderma puberum*, *Piloderma byssinum*, *Cylindrobasidium evolens* and *Peniophora pini*.

Key words : genera, *Hyphoderma*, *Piloderma*, *Cylindrobasidium*, *Polyporus tuberaster*, *Phellinus ferruginosus*, *Corticium bomycinum*, *Phlebia rufa*, *Hyphoderma puberum*, *Piloderma byssinum*, *Cylindrobasidium evolens* and *Peniophora pini*.

Introduction

The higher fungi in Korea have been studied by many mycologists which reported about 1500 species(Cho, 1996). Most of Aphylophorales in basidiomycetes is important in forests, because they have functions to decay wood.

Many higher fungi in Aphylophorales were collected at Mt.Moak Provincial Park and Mt.Manduck near Chonju city in Chonlabuk-Do from April, 1995 to October, 1995 and were identified. In comprehensive scientific survey established by KACN (The Korean Association for Conservation of Nature) and KARE(Korean Association for Research of Ecosystem), they were collected at Byunsan Peninsula National Park from 27, June to 11, July 1995. Among unidentified species in them, they were identified. According to the results, three genera and eight species were newly to Korea and were designed Korean common name.

***Polyporus tuberaster* Pers.:Fr. 결절벌집버섯(신칭)**

Fries, Syst. Myc. 1:347. 1821.

Persoon, Myc. Eur. 2:40. 1825.

Imazeki & Hongo, Coll. Ill. Mush. Jap. vol. II, 133, pl.109, f.749, 1989.

Pileus 4.0-8.0cm broad, 0.5-1.4cm thick, circle, slightly depressed, yellowish brown, deep yellowish brown scale of plane. Context white, elastic, soft. Pores 1.0-2.5mm diameter, decurrent, white, at first circle irregular angle, radiate from disc to margin. Stipe 5.0-6.0 x 0.4-0.8cm, central, yellowish white, dirty yellow, solid.

Spores 11.5(-7.0)-13 x 5.5(-5.0)-6.0 μ m, elliptical, projection, basidia 32.5-62.5 x 5.0-7.5 μ m, clavate, base slender, hyphae 2.5 μ m, wide, wall thick.

Habitate and habitated : Solitary on the fallen trees or on the soils.

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

Specimens studied : CHO-3800(1995.6.10) were collected at Mt.Moak Provincial Park in Chonlabuk-Do.

Remarks: Rarely this species is formed long at base and darkish sclerotium in the soil.

***Phellinus ferruginosus* (Schrad.:Fr.) Pat. 붉은진흙버섯(신칭)**

Pat., Ess. Tax. 97. 1900.

Boletus ferruginosus Schrad., Spic. Fl. Gerum. 172. 1794.

Polyporus ferruginosus Fr. Syst. Myc. 1:378. 1821.

Fruit body fully resupinate, usually patched several centimeters, 1-5mm thick, surface porose, even to tuberculate, with inflated tubercles on vertical substrates, yellow, red to rust-brown, grayish brown when old, pores rounded, 5-6 per mm, tube mouth often overgrown in age, tube length 0.5-8.0mm, corky and tough, hard, and brittle when dry. Margin zonal, tomentose when young, rust-brown, distinctly bounded when old. Cavities in the substrate a brown mycelial feltlike. Mycellium long, white soft-rots.

Spores 3.5-5.0 x 3.0-4.0 μ m, subglobose, seldom with punctate, 50-65 x 2.5-3.8 μ m, clamp connection present, wall thick.

Habitate and habitated : On dead wood of broadleaved trees, usually on the underside of trunks and branches lying on the ground.

Distribution: Korea (Mt.Moak), Europe, North America and Asia. Widespread.

Specimens studied : 3839(1995.6.20) were collected at Mt.Moak Provincial Park in Chonlabuk-Do.

***Corticium bombycinum* (Som.) Bres. 누에고약버섯(신칭)**

Lincoff, G.H., The Audubon Society Field Guide to North American Mushrooms, 419, fig.516. 1881.

Pileus 3.0-6.0cm broad, 2.0-3.0cm wide, fan-haped, white, becoming pinkish or cream-buff, margin cottony, white to hairy, smooth or cracking into pieces, becoming uneven to rough. Context spongy-soft, thick, white.

Spores 6.0-9.5 x 4.5-6.5 μ m, elliptical, projection, rarely with punctate, wall thick, basidia 42.5-55 x 3.8-5.0 μ m, long clavate, hypahe 17.5-70 x 2.5-5.0 μ m, clamp connection present, wall thick.

Habitate and habitated : On bark of living and dead willow and alder, birch, maple, linden, poplar and pine.

Distribution : Korea (Mt.Moak) and North America

Specimens studied : CHO-3802(1995.6.10) were collected at Mt.Moak Provincial Park in Chonlabuk-Do.

***Phlebia rufa* (Fr.) Christ. 붉은가는주름버섯(신칭)**

Breitenbach & Kranzlin, 1986, Fungi of Switzerland, vol.II, Nongilled Fungi, 166, fig.177.

Fruit body fully resupinate, attached firmly to the substrate, rarely lifted at the margin, initial plane rounded spots, one to several centimeters in extent, formed expanses of several centimeters, surface undulating, wrinkled(merulioid) to irregularly poroid, never radially wrinkled, light ocher to reddish brown. Margin zonal, white, fringed

fibrous when young, more distinctly bounded when older. Context gelatinous and soft when moist, *corneous* and tough when dry.

Spores 4.0-6.0 x 2.0-3.0 μ m, elliptical, bean-shaped, basidia 32.5-45 x 7.5-8.8 μ m, base clamp connection present, hyphae 5.0 μ m, wide, clamp connection present.

Habitat and habitation : On dead wood of broadleaved trees, especially common on *Quercus*(oak). Fall to spring.

Distribution : Korea (Mt.Moak), Europe, North America and Asia. Widespread

Specimens studied : CHO-3799(1995.6.10) were collected at Mt.Moak Provincial Park in Chonlabuk-Do.

***Hypoderma puberum* (Fr.) Waller 털속껍질버섯(신칭)**

Breitenbach & Kranzlin, 1986, Fungi of Switzerland, vol.II, Nongilled Fungi, 134, fig.127.

Fruit body fully resupinate, attached tightly to the substrate, thin, membranous patches, several centimeters in extent, surface smooth, dull, white to cream ochraceous, margin diffuse, membranous, waxlike, soft.

Spores 6.0(-5.)-7.0 x 3.0-4.0 μ m, elliptical, subglobose, basidia 25-37.5 x 7.5-12.5 μ m, hyphae 30-75 x 2.5-3.8 μ m, clamp connection, wall thick.

Habitat and habitation : On dead wood of broadleaved trees and rarely on conifer wood. Summer to fall.

Distribution: Korea (Mt.Moak) and Europe.

Specimens studied : CHO-3811(1995.6.16) were collected at Mt.Moak Provincial in Chonlabuk-Do.

***Piloderma byssinum* (Karst.) Jul.삼베탈모껍질버섯(신칭)**

Breitenbach & Kranzlin, 1986, Fungi of Switzerland, vol.II, Nongilled Fungi, 168, fig.180.

Fruit body fully resupinate, attached very loosely to the substrate, thin, membranous patches several centimeters in extent, surface smooth, cottony, soft. Margin white, irregularly fringed with fine white rhizomorphs. Rhizomorphs penetrating the substrate white, poorly developed.

Spores 3.0-5.0 x 2.0-3.0 μ m, basidia 25-32.5 x 5.0-6.3 μ m, hyphae 42.5-50 x 5.0-6.3 μ m, clamp connection present.

Habitat and habitation : On rotten wood of conifers and broadleaved trees on the ground. Summer to fall.

Distribution : Korea (Mt.Moak), Europe, North America and Asia.

Specimens studied : CHO-3807(1995.6.14) were collected at Mt.Moak Provincial Park in Chonlabuk-Do.

***Cylindrobasidium evolens* (Fr.) Jul.날원통담자버섯(신칭)**

Breitenbach & Kranzlin, 1986, Fungi of Switzerland, vol.II, Nongilled Fungi, 110, fig.93.

Fruit body resupinate, more rarely semipileate, attached loosely to the substrate, isolated, whitish spots when young, become confluent, large expanses, 0.5-1.0mm thick, on vertical substrates with pileuslike edges, pileoli projecting up to 10mm, upper surface of pileus finely tomentose, whitish, at times zoned, colored greenish by algae, surface of the hymenophore uneven to tuberculate, cream-colored to brown-beige or reddish-ocher. Margin white, finely fringed, soft, membranous, easily torn, fissured when dry.

Spores 9.0-13 x 4.0-7.0 μ m, elliptical, projection, hyaline, rarely punctate, wall thick, rarely with two oil drops, basidia 50-87.5 x 6.3-10 μ m, cystidia 35-50 x 7.5-12.5 μ m, hyphae 100-125 x 2.5 μ m, clamp connection present, wall thick.

Habitat and habitation : On dead hardwood, bark and rarely conifer wood.

Distribution : Korea (Mt.Manduck), Europe, North America and Asia.

Specimens studied : CHO-3817(1995.6.19) were collected at Mt.Manduck near Chonju city.

***Peniophora pini* (Fr.) Boid. 솔흰구멍버섯(신칭)**

Breitenbach & Kranzlin, 1986, Fungi of Switzerland, vol.II, Nongilled Fungi, 148, fig.150.

Fruit body fully resupinate on the underside of the branches, rounded, crustose spots 10-50mm diameter, 0.5mm thick, often confluent, forming small patches several centimeters in extent, surface wrinkled, tuberculate, glabrous, dull, slightly pruinose. Context lilac reddish, grayish reddish to gray in the center, soft. Margin appressed, lifted, whitish to light reddish, bounded, waxlike, crustose and brittle when dry.

Spores 6.0-8.0 x 1.5-2.0 μ m, sosome-shaped, basidia 12.5-25.0 x 5.0-7.5 μ m, cylindrical, cystidia 40-75 x 10-15 μ m, clavate, ornate, wall thick, hyphae 13.8-25 x 2.5-3.8 μ m, clamp connection present.

Habitate and inhabited : On dead branches of *Pinus* spp. still attached and with bark.

Distribution : Korea (Mt.Manduck), Europe and Asia.

Specimens studied : CHO-3818(1995.6.19) were collected at Mt.Manduck near Chonju city.

摘 要

많은 고등균류를 1995년 4월부터 10월까지 모악산 도립공원, 만덕산(전라북도)과 변산반도 국립공원에서 채집하여 동정하였다. 그 결과 속껍질버섯속(*Hyphoderma*), 탈속껍질버섯속(*Piloderma*), 날원통담자버섯속(*Cylindrobasidium*)은 한국 미기록 속

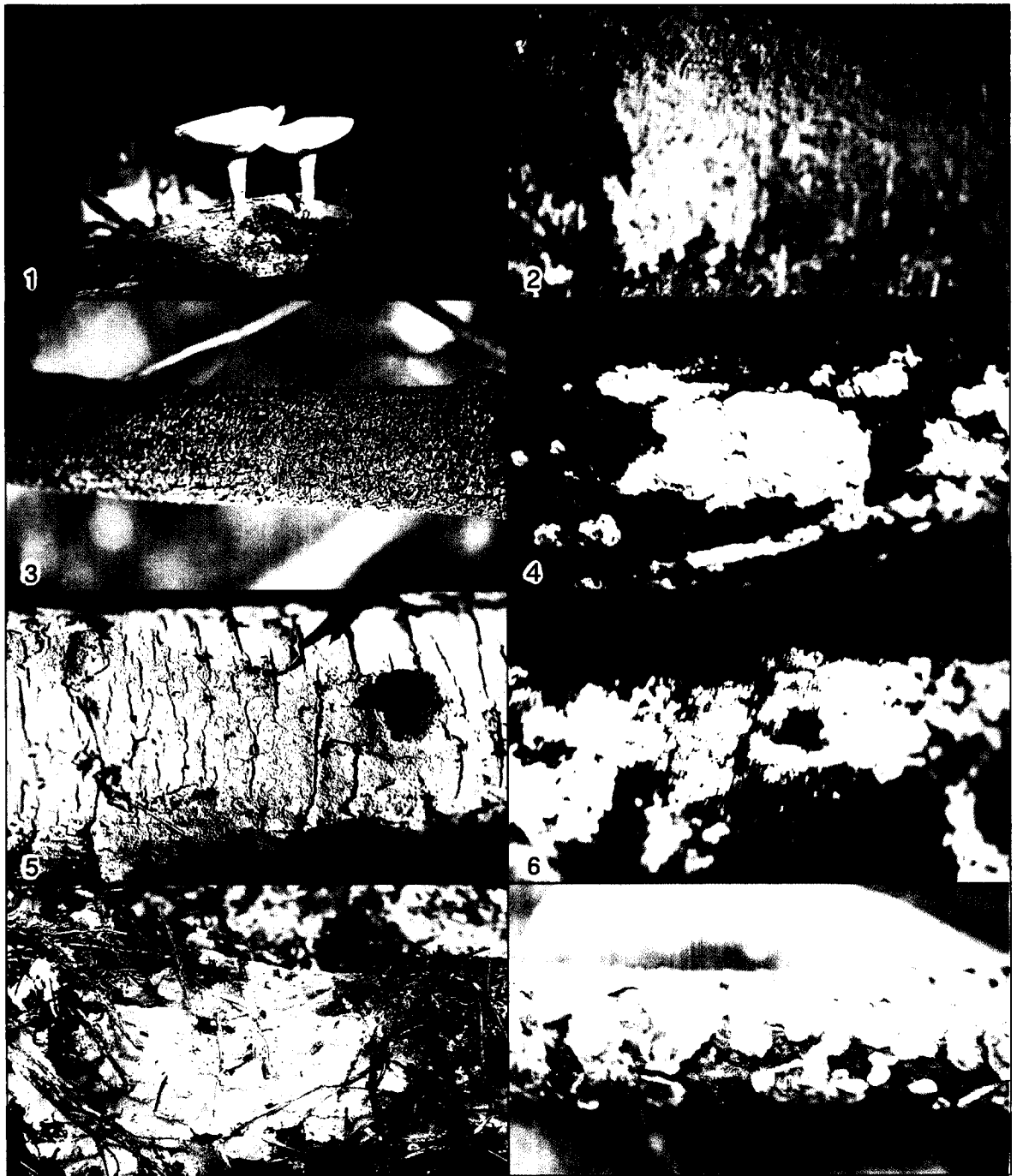
이었고, 결절벌집버섯(*Polyporus tuberaster*), 붉은진흙버섯(*Phellinus ferruginosus*), 누에고약버섯(*Corticium bombycinum*), 붉은가는주름버섯(*Phlebia rufa*), 털속껍질버섯(*Hyphoderma puberum*), 삼베탈모껍질버섯(*Piloderma byssinum*), 날원통담자버섯(*Cylindrobasidium evolens*) 그리고 솔흰구멍버섯(*Peniophora pini*)은 한국산 미기록 종으로 확인되었다.

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Explanation of Plate

1. <i>Polyporus tuberaster</i> x 1/3	2. <i>Phellinus ferruginosus</i> x 1/3
3. <i>Corticium bombycinum</i> x 1/3	4. <i>Phlebia rufa</i> x 1/3
5. <i>Hyphoderma puberum</i> x 1/3	6. <i>Piloderma byssinum</i> x 1/3
7. <i>Cyllindrobasidium evolens</i> x 1/3	8. <i>Peniophora pini</i> x 1/3

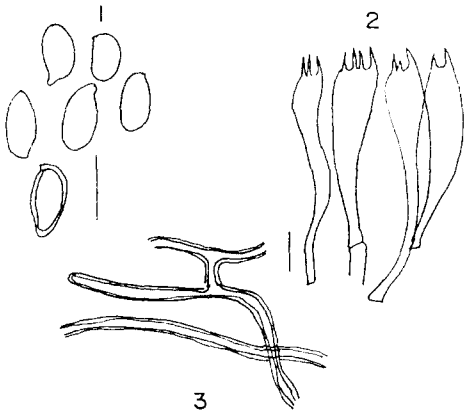


Fig. 1-3. *Polyporus tuberaster*
1. spores 2. basidia 3. hyphae (bar:10 μ m)

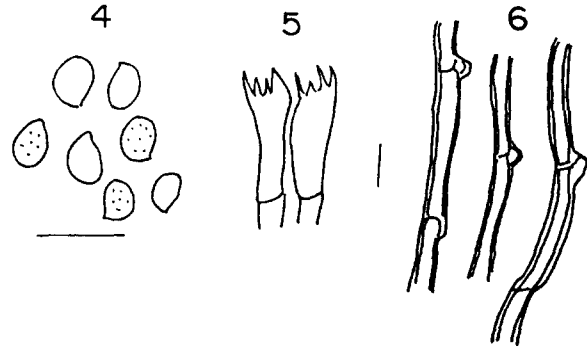


Fig. 4-6. *Phellinus ferruginosus*
4. spores 5. basidia 6. hyphae (bar:10 μ m)

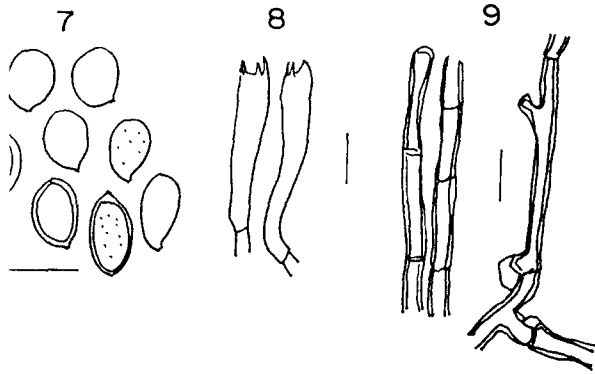


Fig. 7-9. *Corticium bombycinum*
7. spores 8. basidia 9. hyphae (bar:10 μ m)

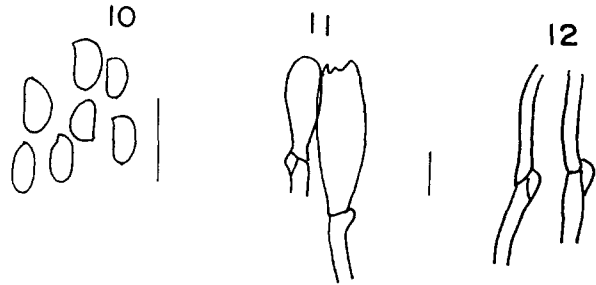


Fig. 10-12. *Phlebia rufa*
10. basidia 11. basidia 12. hyphae (bar:10 μ m)

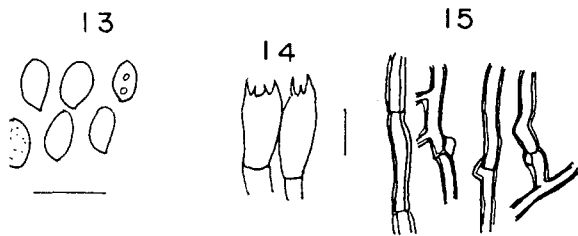


Fig. 13-15. *Hypoderma puberum*
13. basidia 14. basidium 15. hyphae (bar:10 μ m)

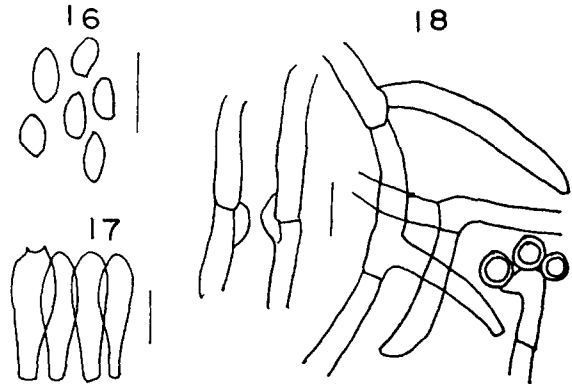


Fig. 16-18. *Piloderma byssinum*
16. spores 17. basidium 18. hyphae

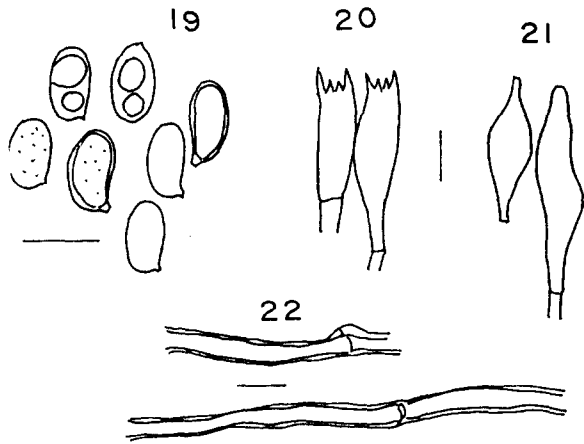


Fig. 19-22. *Cyindrobasidium evolens*
 19. spores 20. basidia 21. cystidia
 22. hyphae (bar:10 μ m)

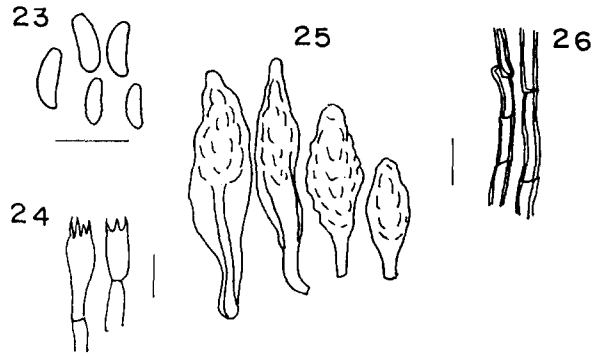


Fig. 23-26. *Peniophora pini*
 23. spores 24. basidia 25. cystidia
 26. hyphae (bar:10 μ m)