

## 曹溪山一帶의 高等 擔子菌類

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### Fleshy Basidiomycetes in Mt. Jogye

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#### ABSTRACT

During a week from 6th August in 1976 to survey the fungal flora on higher fleshy fungi around Mt. Jogye 193 specimens were collected and then examined tentatively. As a result of identification except several troublesome ones it was known that they lie within 66 genera, 110 species, 3 varieties, and 2 forms. Out of them five genera, *Eutypha*, *Sarcosoma* in Ascomycetes, and *Corticium*, *Heimiella*, *Clitopilus* in Basidiomycetes were confirmed as unrecorded genera to Korea. And therefrom 26 species and 1 form corresponding almost to the fourth of sum were identified as unrecorded species to Korea, among which Basidiomycetes are provided with descriptions and figures in this survey report.

#### INTRODUCTION

Through a survey trip around Mt. Jogye in the province of Jeonnam, which is a part of research activity of The Korean Association for Conservation of Nature, the mycological flora in this area was generally investigated. Owing to droughty conditions of forests all over the nation including this district neighbouring to Seonam and Songgwang Temples the authors could not collect much samples as compared with the result of the authors' efforts. In this area, strange to say, there were few kinds of puffballs which are usually common on the roadsides in forests or on sandy woods and also pore fungi which are generally abundant on old trunks, stumps, or on rotten trees were rather infrequently observed except what the authors found several coral fungi on humus of decaying leaves and some commonplace pore fungi from fallen dead branches. But along the rear valley of Seonam Temple and the front valley of Songgwang Temple there were proper habitats of shady

and damp woods, where the authors could find various kinds of mushrooms, especially small cup fungi of broad sense in fleshy Ascomycetes and uncommon species of gill fungi in fleshy Basidiomycetes even if they were small in number.

However 193 specimens were totally collected and above all these were assorted in four groups as Aphyllophorales, Agaricales, Gasteromycetes in Basidiomycetes, and some Ascomycetes. First of all Ascomycetes of small quantity were inspected and then they were within 4 orders, 8 families, 11 genera, and 14 species. Among them two genera *Eutypha* and *Sarcosoma* were confirmed as unrecorded genera and four species, *Eutypha acharii*, *Sarcosoma globosa*, *Geoglossum glabrum*, and *Chlorosplenium versiforme* were identified as unrecorded species to Korea. The survey report on these cup fungi of 14 species will be published in The Report of The Korean Association for Conservation of Nature, Inc., No. 11, in 1976 separately from the present paper.

Secondarily from Basidiomycetes it was known

that there were 5 orders, one in Heterobasidiae, two in Hymenomycetes and two in Gasteromycetes of Homobasidiae, 24 families, 55 genera, 96 species, 3 varieties, and 2 forms. According to the ranks of classification there is only 1 family, 1 genus, and 1 species in Dacryomycetales of Heterobasidiae, and there are 8 families, 19 genera, 24 species, and 2 varieties in Aphyllophorales, 11 families, 31 genera, 66 species, 1 variety, and 2 forms in Agaricales, and 4 families, 4 genera, and 5 species in Gasteromycetes of Homobasidiae. Among these fleshy Basidiomycetes 3 species of Aphyllophorales, *Clavulinopsis fusiformis*, *Corticium chrysocreas*, and *Cotylidia decolorans*, and 19 species and 1 form of Agaricales, *Suillus granulatus*, *Heimiella japonica*, *Hygrophorus pratensis*, *Laccaria laccata* f. *minuta*, *L. proxima*, *L. nigra*, *Mycena fibula*, *Lepiota praetervisa*, *Coprinus lagopus*, *C. radians*, *C. cinereus*, *Cortinarius mucifluus*, *C. hemitrichus*, *Clitopilus lignyotus*, *Rhodophyllus salmoneus*, *R. aeruginosus*, *R. omiensis*, *Russula delica*, *R. laurocerasi*, and *R. lilacea* were confirmed as unrecorded species to Korea. In Korean higher fleshy fungi many taxa remain undiscovered and unknown yet on account of absolute want of collections, inaccessibility of significant foreign literature, and confused conceptions of genera with which the students came in contact from some foreign papers. On these reasons the authors wish vigorous researches to provide elaborated accomplishments on the Korean fungi based upon current classification system would be carried as continuously as possible and in this paper the authors propose above-mentioned unrecorded species as additional ones to Korea.

## LISTS AND DESCRIPTIONS

Class Basidiomycetes 擔子菌綱

Subclass Heterobasidiae 異擔子菌亞綱

Order Dacryomycetales 붉은木耳目

Family Dacryomycetaceae 붉은木耳科

1. *Guepinia spathularia* (Schw.) Fr. 혀버섯

Subclass Homobasidiae 同擔子菌亞綱

Hymenomycetes 菌蕈類

Order Aphyllophorales 平주름목

Family Clavariaceae (싸리버섯科→)국수버섯科 (改稱)

2. *Clavulinopsis miyabeana* (S. Ito) S. Ito 붉은 창싸리버섯

3. *Clavulinopsis fusiformis* (Sow. ex Fr.) Corner 노란창싸리버섯 (新稱)

Receptacle 4—6 cm high, bright yellow, elongato-fusiform, 2—3 mm broad, attenuated at both ends, cylindrical, often compressed with a central furrow; apex acute, becoming brownish; flesh concolorous, paler, somewhat fragile.

Spores subglobose to globose, 6—8×5—7  $\mu$ , hyaline, smooth, minutely apiculate, with a central gutta.

Habitat: caespitose in several on humus

Family Ramariaceae 싸리버섯科

4. *Ramaria apiculata* (Fr.) Donk 바늘싸리버섯

5. *Ramaria botrytis* (Pers.) Ricken 싸리버섯

6. *Ramaria formosa* (Pers. ex Fr.) Quél. 붉은싸리버섯

7. *Ramaria flava* (Schaeff. ex Fr.) Quél. 노란싸리버섯

Family Cantharellaceae 꾀꼬리버섯科

8. *Cantharellus cibarius* Fr. 꾀꼬리버섯

9. *Craterellus cornucopioides* (L. ex Fr.) Pers. 걸경나팔버섯

Family Corticiaceae (꽃송이버섯科→)고약버섯科 (改稱)

10. *Corticium chrysocreas* Berk. et Curt. [*Gloeocystidium chrysocreas* (Berk. et Curt.) T. Ito] 황금고약버섯 (新稱)

Basidiocarp entirely resupinate, confluent from initial islets, vivid yolk-yellow, membranaceous, smooth or so, often finely chinked when dry, turning deep purple on 5% KOH; margin adnate, indeterminate.

Spores ellipsoid, hyaline, 4.5—6×2.5—3  $\mu$ ; gloeocystidia of a kind present within the trama, globose or pyriform, rusty, 15—30  $\mu$  broad, large and pedicellate.

Habitat: resupinate on fallen dead twigs

11. *Cotylidia decolorans* (Berk. et Curt.) Welden [*Podoscypha burtina* (Pk.) S. Ito] 꽃잎늘버섯

(新稱)

Pileus flabelliform then infundibuliform, 1—2cm high, roundish, 0.5—2 cm across, often once splitting to the stipe, ochraceous then brown on drying, inconspicuously zoned, radiato-striate, silky; margin very often confluent one another, white, laciniate; flesh white, 0.5 mm thick, tough and coriaceous; hymenium smooth, radially ridged, white, yellowish, then brownish. Stipe central or lateral, cylindrical, 5—15×1—2 mm, concolorous

Spores entirely globose, hyaline, 2—4 μ in diameter.

Habitat: gregarious or caespitose on roadside

Family Hydnaceae 겹질버섯科

12. *Steccherinum laeticolor* (Berk. et Curt.)

Banker 털바늘버섯

13. *Hydnum repandum* L. ex Fr. 떡수염버섯

14. *Hydnum repandum* Fr. var. *album* (Quél.)

Rea 흰수염버섯

Family Meruliaceae 아교버섯科

15. *Merulius tremellosus* Schrad. ex Fr. 아교버섯

Family Hymenochaetaceae 비늘버섯科

Members of this family proposed by Donk (*in* Bull. Bot. Gdns. Buitenz. III, 17: 474, 1948; *Persoonia* 3: 274, 1964) are composed of brown tramal hyphae which permanently darken on KOH solution and are mostly bearing various kinds of setae. Then largest part of the Mucronoporaceae proposed by Imazeki and Toki (*in* Bull. Gov. For. Exp. St. 67: 24—25, 1954) including some portion of the past Polyporaceae will be absorbed into the present family or regarded as an equivalent of it.

16. *Coltricia cinnamomea* (Jacq. ex Fr.) Murr.

릅니겨우살이버섯

Family Polyporaceae 구멍쟁이버섯科

17. *Poria versipora* (Pers.) Romell 구멍버섯

18. *Trametes dickinsii* Berk. 송편버섯

19. *Trametes sanguinea* (L. ex Fr.) Lloyd 간버섯

20. *Daedaleopsis styracina* (P. Henn. et Shirai)

Imaz. 도장버섯

21. *Coriolus pargamenus* (Fr.) Pat. (웃술버섯→)

이빨구름버섯(改稱)

22. *Coriolus versicolor* (L. ex Fr.) Quél. 구름버섯

23. *Laetiporus sulphureus* (Bull. ex Fr.) Bond.

et Sing. var. *miniatus* (Jungh.) Imaz. 덕다리버섯

24. *Tyromyces caesius* (Schrad. ex Fr.) Murr.

푸른개떡버섯

25. *Favolus arcularius* (Batsch ex Fr.) Ames

좁쌀집버섯

26. *Microporus affinis* (Blum. et Nees ex Fr.)

Kuntze 메꽃버섯

27. *Ganoderma lucidum* (Leyss. ex Fr.) Karst.

불로초

Order Agaricales 송이목

Family Boletaceae 그물버섯科

At first *Boletus* was erected by Fries in the year 1821 to accommodate these kinds within a genus, but now it has been differentiated into 2 families, 4 subfamilies, and 18 genera by Singer (*in* *Farlowia* 2: 97—141, 2: 223—303, 1945; Key. Deter. Agar. 48—51, 1962) and removed to the Agaricales from the previous Aphyllophorales. In Korea it has been reported that there are 2 families, 12 genera, and 33 species since Uyeki recorded 2 species in 1919 for the first time.

28. *Gyroporus castaneus* (Bull. ex Fr.) Quél. 흰

그물버섯

29. *Suillus granulatus* (L. ex Fr.) Kuntze [*Boletus granulatus* Fr.]

갓그물버섯(新稱)

Pileus convex, 3—6 cm across, chestnut-brown to fuscous ferruginous becoming paler and yellowish when dry, smooth, very glutinous; flesh thick, soft, white then yellowish; tubes adnate, short, sulphureous then brownish yellow; pores at first exuding white juice, roundish, 1—3/mm, complex. Stipe equal, 3—5×1—1.5 cm, ochraceous yellow, with granules upwards.

Spores subfusiform, hyaline, 6.5—8.5×2.5—3.0 μ; cystidia clavate, dull ochre, 45—70×7—10.5 μ, tufted along the edge of gill.

Habitat: gregarious in pine forest

30. *Suillus bovinus* (L. ex Fr.) Kuntze 그물버섯

31. *Phylloporus rhodoxanthus* (Schw.) Bres. 민

그물버섯

32. *Xeroconus chrysenteron* (Bull. ex Fr.) Quél.

마른그물버섯

33. *Pulveroboletus ravenelii* (Berk. et Curt.)

Murr. [*Boletus Ravenelii* Berk. et Curt.] 노란  
갓그물버섯

Pileus convex then applanate, 4—5 cm across, pruinose and finely pubescent in lemon-yellow, centrally ochraceous, glabrescent, somewhat sticky when moist, at margin remarkably appendiculate; flesh whitish yellow, slowly cyanescent on bruising; tubes adnexed, yellowish, later brownish yellow, turning greenish blue on bruising; pores roundish, small. Stipe equal, often crooked, 5—7×0.7—1cm, concolorous, of same surface with pileus; ring superior, commonly fragmented, lemon-yellow, fibrous, erasible.

Spores elliptical fusiform, hyaline, 7—9×4—5 $\mu$ .

Habitat: solitary in pine forest

34. *Boletus edulis* Bull. ex Fr. 두메그물버섯35. *Boletus regius* Krombh. 큰 두메그물버섯36. *Boletus erythropus* Fr. ex Fr. 붉은대그물버섯

Pileus convex, 2—4cm across, chestnut-brown to tawny rufous, finely pubescent, dry, at margin thick and rather obtuse; flesh thick, yellow, cyanescent on exposure to air; tubes free to adnexed, long, yellow, turning bluish green later; pores roundish, red to blood red, verging upon black on bruising, small, 2/mm. Stipe often somewhat enlarged or crooked downwards, 5—6×1 cm, densely pruinose in dull red upon yellow base.

Spores large, ellipsoid to subfusiform, 14—18.5×6—8.5 $\mu$ , olivaceous ochre; cystidia clavato-fusiform, bowling pin-shaped, 45—68×10—17 $\mu$ , with ochraceous contents.

Habitat: occurring in pine forest

The present specimens are small in size and seem to be young samples, but the microscopic structures were well-developed in every respect.

37. *Boletus pulverulentus* Opat. 밤빛두메그물버섯38. *Boletus rubellus* Krombh. 붉은두메그물버섯39. *Leccinum rugosiceps* (Peck) Sing. [*Boletus impolitus* Fr. sensu Kawamura] 왕두메그물버섯

Family Strobilomycetaceae 귀신그물버섯과

Superficially this family resembles the former family, but in this family according to the genera, contrary to the smooth spores of the Boletaceae,

the spores have characteristic ornamentations, that is verrucose reticulum, double-walled structure with short cylindric spines imbedded in the episporium, or longitudinal wings.

40. *Strobilomyces floccopus* (Vahl ex Fr.) Karst.

귀신그물버섯

41. *Heimiella japonica* Hongo [*Boletellus retisp-orus* (Pat. et Baker) Sing.] 연지그물버섯 (新稱)

Pileus convex, 7.5cm across, sanguineus, velvety, dry; flesh thick, yellowish; tubes adnexed, 8 mm long, olivaceous yellow; pores round, yellow, medium, 1—2/mm. Stipe bulbous, 9×1.5cm, reticulato-rugose, concolorous, upwards with yellow tint.

Spores ellipsoid, double-walled, with verrucose reticulum imbedded in the episporium, 10.5—13×7—8 $\mu$ , olivaceous cinnamon; cystidia clavate, 18—33×7—12 $\mu$ , hyaline.

Habitat: solitary in woods

Family Paxillaceae 우단버섯과

42. *Paxillus panuoides* (Fr. ex Fr.) Fr. 은행알버섯

Family Hygrophoraceae 뱀꽃버섯과

43. *Hygrophorus pratensis* (Fr.) Fr. [*Camarophyllus pratensis* (Pers. ex Fr.) Karst.] 살색뱀꽃버섯

Pileus broadly umbonate, 2cm across, tawny buff, smooth; flesh thick at disc, thin near margin, fleshy, pale ochre; gills decurrent, nearly concolorous, medium, sparse, often connected by veins. Stipe somewhat equal, 2.5×0.4cm, pale concolorous, smooth.

Spores ellipsoid to oval, 6.5—7.5×4—5 $\mu$ , hyaline.

Habitat: solitary in woods

The present specimen seems to be young and has pleasant odour.

Family Tricholomataceae 송이버섯과

44. *Laccaria laccata* (Scop. ex Fr.) Berk. et Br. 예기출각버섯45. *Laccaria laccata* (Scop. ex Fr.) Berk. et Br. f. *minuta* Imai 꼬마출각버섯 (新稱)

Pileus plane, 1.1cm across, creamy flesh-colored, often covered with fine scurfy squamules; flesh thin, concolorous; gills adnexed, flesh-colored, 1mm

broad, sparse. Stipe equal, 1.5×0.3cm, concolorous, finely striate.

Spores globose, echinulate, 7.5–10.5μ in diameter, hyaline.

Habitat: solitary in woods

This form resembles exactly to *L. laccata* in every respect, but the size is generally smaller.

46. *Laccaria proxima* (Boud.) Pat. [*Laccaria laccata* (Scop. ex Fr.) Berk. et Br. var. *proxima* (Boud.) Maire] 큰졸각버섯 (新稱)

Pileus convex, centrally umbilicato-depressed, then expanded, 3.5cm across, creamy buff, covered with fine scurfy squamules, hygrophanous, radiato-sulcate; margin often undulato-split; flesh very thin, pale concolorous; gills adnate, creamy pink, 7mm broad, very sparse. Stipe upwards slightly widened, 5×0.5cm, concolorous, finely fibrillose-striate, at base white, villose.

Spores broadly ellipsoid to globose, echinulate, 7–9×6–8 μ, hyaline.

Habitat: solitary in wet woods

47. *Laccaria nigra* Hongo 절경졸각버섯 (新稱)

Pileus conical, somewhat obtuse, then expanded, 1–1.5cm across, dull smoky, near disc darkened, fibrillose radiato-striate; flesh very thin, concolorous; gills adnexed, ash-gray, 2–3mm broad, sparse. Stipe equal, slender, 3.5–4cm×1–2mm, concolorous, finely fibrillose-striate, fistulose.

Spores globose, echinate, 12–14μ in diameter, hyaline.

Habitat: caespitose in woods

48. *Laccaria amethystea* (Bull. ex S.F. Gray) Murr. 졸각버섯

49. *Clitocybe infundibuliformis* (Schaeff. ex Fr.) Qué. 갈매기버섯

50. *Lepista nuda* (Bull. ex Fr.) W.G. Smith 차주방망이버섯

51. *Schizophyllum commune* Fr. 치마버섯

52. *Panus rudis* Fr. 참부채버섯

53. *Oudemansiella radicata* (Relh. ex Fr.) Sing. 간뿌리버섯

54. *Marasmius graminum* (Lib.) Berk. et Br. 흰풀잎버섯

55. *Marasmius siccus* (Schw.) Fr. 분홍갓(애기)버섯

56. *Marasmius maximus* Hongo 큰낙엽버섯

57. *Marasmius androsaceus* (L. ex Fr.) Fr. 낙엽버섯

58. *Mycena fibula* (Fr.) Kühn. [*Marasmiellus fibula* (Fr.) Sing.] 이끼애주름버섯 (新稱)

Pileus campanulate, umbilicate, finally expanded, 2–4mm across, cream-yellow, centrally orange-yellow, smooth, radially striate; margin entire to finely crenate; flesh membranaceous, concolorous; gills broadly adnate to decurrent, whitish to yellowish, broad, sparse. Stipe equal, capillary, elastic, 1.5cm×0.5mm, concolorous, pubescent under lens, often fistulose.

Spores oblong to ellipsoid, small, 3.5–6×2–3μ, hyaline, cystidia bowling pin-shaped, capitulate, 50–65×13–18μ, hyaline.

Habitat: gregarious on mossy ground

59. *Xeromphalina campanella* (Batsch ex Fr.) Kühn. et Maire 잇기살이애기버섯

Family Amanitaceae 광대버섯과

60. *Amanita caesaria* (Scop. ex Fr.) Pers. ex Schw. 달걀버섯

61. *Amanita inaurata* Secr. 결락이우산버섯

62. *Amanita vaginata* (Bull. ex Fr.) Qué. 우산버섯

63. *Amanita vaginata* (Bull. ex Fr.) Qué. var. *fulva* (Fr.) Gill. [*Amanita fulva* (Schaeff.) Pers. ex Sing.] 여우우산버섯 (新稱)

This variety differs with *A. vaginata* in color of pilei, that is the present variety tawny but the species mouse-gray. On the other hand both have globose spores which measure 9–13μ across nearly alike in size.

64. *Amanita farinosa* Schw. 결락이우산버섯

65. *Amanita phalloides* (Vaill. ex Fr.) Secr. 알광대버섯

Family Agaricaceae(주름버섯과→)들버섯과

66. *Lepiota praetervisa* Hongo 애기갓버섯 (新稱)

Pileus conico-convex, obtuse, then expanded, 1.2 cm across, spotted with dull brown fibrillose squamules dispersed on white base, near disc dense; flesh white; gills free, whitish, 2mm broad, very dense. Stipe equal, 3cm×1.5mm, white, with membranaceous median ring.

Spores oval to ellipsoid,  $5-6 \times 3-3.5 \mu$ , hyaline.

Habitat: on fallen leaves of humus

Family Coprinaceae 먹물버섯과

67. *Coprinus lagopus* (Fr.) Fr. 소녀먹물버섯(新稱)

Pileus oval, campanulate, then expanded, 2.5cm across, white, whitish, then grayish, centrally smoky, covered with white, fugacious fibrils, later naked and radiato-striate; margin revolute, largely radiato-split, finally liquefying; flesh membranaceous, whitish, very tender and fragile; gills free, gray, soon black, lanceolate, somewhat dense. Stipe attenuated upwards,  $11 \times 0.4$ cm, white, woolly, fistulose, fragile.

Spores ellipsoid, two types mixed; one smaller,  $8-10.5 \times 5-7 \mu$ , cinnamon, the other larger,  $10-12 \times 6.5-7.5 \mu$ , rusty.

Habitat: occurring on manure heap of straw

68. *Coprinus micaceus* (Bull. ex Fr.) Fr. 갈색먹물버섯

69. *Coprinus radians* (Desm.) Fr. 비듬먹물버섯(新稱)

Pileus campanulate, gradually expanded, 1-1.5 cm across, tawny yellow, covered with scurfy scales, centrally dense, finely radiato-sulcate; flesh thin, white; gills adnexed, white, then violaceous black, linear, 2 mm broad, dense. Stipe equal,  $2-2.5 \times 0.2-0.3$  cm, whitish, at base composed of dense mat of tawny mycelium, the ozonium.

Spores elliptical reniform,  $6-7 \times 3.5-4 \mu$ , sooty, with germination pore.

Habitat: gregarious or caespitose on fallen rotten wood.

70. *Coprinus plicatilis* (W. Curt. ex Fr.) Fr. 줄밀먹물버섯

71. *Coprinus cinereus* (Fr.) S.F. Gray [*Coprinus macrorhizus* (Pers. ex Fr.) Rea] 재먹물버섯(新稱)

Pileus oval, then campanulate,  $2-3 \times 1.5-2.5$  cm, ash-gray, near disc smoky, covered with white fugacious flocci, later naked and radiato-striate; margin irregularly crenate as if gnawed, revolute at length, radially split when liquefying; flesh membranaceous, whitish; gills free, white, soon blackened, lanceolate, very dense. Stipe somewhat

attenuated upwards,  $5.5-10 \times 0.5-0.8$ cm, white, flocculose and fugacious, fistulose, radicating, basally imbedded in substratum.

Spores ellipsoid,  $11-14 \times 6.5-8 \mu$ , dull rufous, with germination pore.

Habitat: gregarious on manure heap of straw

72. *Coprinus disseminatus* (Fr.) S.F. Gray [*Pseudocoprinus disseminatus* (Pers. ex Fr.) Kühn.] 애기코갈버섯

73. *Psathyrella candolleana* (Fr.) A.H. Smith 죽제비버섯

Family Cortinariaceae 끈적버섯과

74. *Inocybe praetervisa* Quél. 팅버섯아재비

Pileus conico-campanulate, then expanded, umbonate, 3 cm across, tawny buff, darker near margin, fibrillose squarrose, at disc glabrous, somewhat viscid, radiato-sulcate; margin deflexed, finely or largely splitting with age; flesh whitish; gills adnexed to almost free, olivaceous cinnamon, narrow, rather dense. Stipe equal, bulbous,  $3.5 \times 0.4$  cm, pale straw-colored, finely striate, upwards pruinose, fibrous.

Spores tuberculate and angular,  $8-11.5 \times 6-8 \mu$ , cinnamon, guttulate; cystidia fusiform with round ends, capitate-incrusted,  $55-80 \times 15-18 \mu$ , thick-walled.

Habitat: solitary in coniferous woods

75. *Rozites caeperata* (Pers. ex Fr.) Karst. 노란머버섯

76. *Cortinarius mucifluus* (Fr.) Fr. 유리끈적버섯(新稱)

Pileus campanulate, hemispherical, then convex, finally expanded, 1.5-4.5cm across, tawny buff to buff brown, smooth, covered with pellucid, persistent, heavy gluten, radially striate; margin inflexed, often incised; flesh firm, fleshy, whitish, later brownish; gills emarginate, yellowish then grayish buff, 5mm broad, somewhat dense. Stipe cylindrical, somewhat attenuated at both ends,  $3-4 \times 1$ cm, whitish, straw-yellow, often with violaceous tint, covered with glutinous veil, with fugacious ring mark near apex.

Spores pip-shaped,  $10-12 \times 7-8 \mu$ , cinnamon, warted.

Habitat: caespitose or gregarious in forest

77. *Cortinarius largus* Fr. 가지색끈적버섯

78. *Cortinarius hemitrichus* (Fr.) Fr. 실끈적버섯 (新稱)

Pileus convexo-plane, broadly obtuse, 2.5cm across, tan smoky, radially fibrillose-scaly, glabrescent; flesh rather thick at disc, concolorous; gills emarginate, creamy clay-colored, 4mm broad, somewhat sparse. Stipe equal, 3.5cm×3.5mm, concolorous, finely striate, leaving traces of fibrillose-scales, with imperfect, median, membranaceous ring mark.

Spores elliptical, 7.5–9×5 μ, cinnamon, finely warted.

Habitat: solitary on wet humus

Family Rhodophyllaceae 외대버섯과

79. *Clitopilus lignyotus* Hongo 그늘버섯 (新稱)

Pileus plane, centrally somewhat depressed, generally obconical, 2cm across, dull smoky, marginally paler, finely velvety under lens; flesh soft, white; gills strongly decurrent, white then creamy, 2mm broad, dense. Stipe equal, 3cm×2.5mm, whitish smooth, fistulose.

Spores fusiform, longitudinally 6-ridged, hexagonal in sectioned view, 9.5–13 (rarely 16)×4.5–6.5μ, pale ochraceous, guttulate.

Habitat: solitary in woods

80. *Rhodophyllus murraini* (Berk. et Curt.) Sing.

노란꼭지버섯

81. *Rhodophyllus murraini* (Berk. et Curt.) Sing.

f. *albus* (Hiroe) Hongo (노란꼭지버섯이재비→)

흰꼭지버섯 (改稱)

82. *Rhodophyllus salmoneus* (Peck) Sing. 붉은꼭

지버섯 (新稱)

Pileus conical, with prominent umbo, 0.5–1cm across, vivid red to scarlet, smooth, wettish in appearance; flesh very thin, pale concolorous; gills adnexed, vivid scarlet, comparatively broad, somewhat dense. Stipe equal, often crooked, 2.5–5.5×0.2cm, concolorous, finely striate, rather cartilaginous, fistulose.

Spores angular, apiculate, 11–13×9–11 μ, cinnamon.

Habitat: gregarious on humus

83. *Rhodophyllus aeruginosus* (Hiroe) Hongo ㅎ-

늘꼭지버섯 (新稱)

Pileus conical then expanded, with broad umbo, 2.5cm across, sky-blue, turning yellow on bruising, finely fibrillose-scaly; margin split largely one or two times and missed each other; flesh very thin; gills adnexed, concolorous, later with creamy tint, 4mm broad, rather sparse. Stipe equal, often crooked, 4cm×3.5mm, concolorous, fibrillosely striate, fistulose.

Spores generally tetragonal, apiculate, 11–13μ diagonally, ochre.

Habitat: solitary in wet woods

84. *Rhodophyllus omiensis* Hongo 민꼭지버섯 (新稱)

Pileus conical, often with umbo, 2–2.5cm across, creamy buff, centrally dull, radially fibrillose-glabrous; flesh very thin, whitish; gills free, white then pinkish, 4mm broad, somewhat dense. Stipe equal, often crooked, 6–7×0.3cm, pale concolorous, fibrillosely striate and somewhat twining, fistulose.

Spores globosely angular, apiculate, 9.5–13×8–11 μ, ochre; cystidia elliptical fusiform, with papilliform tip, 40–65×9–16 μ, deep ochre.

Habitat: gregarious on fallen leaves of humus in deciduous woods

Family Russulaceae 무당버섯과

Species included in this family are mostly fleshy and composed of rather firm tissue of the stipe and pileus where usually globular cells are filled. The spores commonly hyaline, varying from globose to broad ellipsoid, and having amyloid ornamentations, whose spines or warts are entirely or partially reticulated. There are two genera, one of which is *Lactarius* with latex when received a wound and the other *Russula* without latex. Both are large genera; there are more than 75 species within the former and also two hundred odd species within the latter throughout the world. In Korea according to recent records 24 species, 1 variety, and 1 form are reported in *Russula* and 11 species, 1 variety, and 1 form in *Lactarius*.

85. *Russula delicata* Fr. 흰질구버섯 (新稱)

Pileus convex, plane, then depressed, up to infundibuliform, 5–7cm across, white, later ochr-

aceous, often spotted fuscous in old age, pubescent, glabrescent; margin somewhat involute, soon expanded; flesh firm, white; gills adnate to decurrent, whitish, broad, somewhat dense. Stipe equal, 2-4.5×2.5-3cm, white then concolorous.

Spores globose, echinulato-reticulate, 7.5-9.5×6.5-8 μ, hyaline; cystidia clavate, 45-60×7-8μ, rare.

Habitat: solitary in woods

86. *Russula pseudodelica* Lange 흰젓버섯아재리

87. *Russula nigricans* (Bull.) Fr. 검구버섯

88. *Russula metachroa* Hongo 색갈이무당버섯

89. *Russula foetens* Pers. ex Fr. 애기짚대기버섯

90. *Russula laurocerasi* Melzer 버찌무당버섯(新稱)

Pileus hemispherical, soon convex, later expanded, often somewhat depressed, 7cm across or more, tawny buff, viscid when moist, near margin radially striate; flesh white, then pale ochre; gills free to adnexed, white, later with brownish tint, medium, rather dense. Stipe equal, 5-7×1.5cm, becoming pallid ochre near base, fistulose.

Spores globose, echinulato-subreticulate, often crested with some large warts, 10-12 μ in diameter, hyaline; cystidia clavate, often with pointed head, 32-52×7.5-10 μ, gregarious.

Habitat: gregarious in woods

91. *Russula vesca* Fr. 조각무당버섯

Pileus convex, then plano-depressed, 5-6cm across, brownish flesh-colored, viscid when moist, at margin faintly radiato-striate; flesh firm, white, often exposed by peeling of pellicle from margin in old age; gills adnate to somewhat decurrent, white, 5mm broad, connected by veins, dense. Stipe equal, 4-5×1.5cm, white or with creamy tint, often foxed with age, striate.

Spores globose, echinulate, 6-7.5×5-5.5μ, hyaline; cystidia clavate, 45-60×7.5-10 μ.

Habitat: solitary in woods

92. *Russula flavida* Frost et Peck 노랑무당버섯

Pileus convex, then plane, or plano-depressed, 3.5-5cm across, yellow, centrally yolk-yellow, viscid, velvety and pruinose, marginally radiato-striate; flesh white; gills free to adnexed, white, later soiled, 5mm broad, connected by veins, rather

sparse. Stipe equal, 5×1.5cm, concolorous, striate, inside spongy.

Spores globose, echinulato-reticulate, 6.5-8 μ in diameter, hyaline; cystidia fusiform, often with papilliform tip, 30-70×8.5-10 μ.

Habitat: solitary in pine forest

93. *Russula lilacea* Quél. 연보라무당버섯(新稱)

Pileus convex, plane, then umbilicato-depressed, 4.5-6cm across, creamy flesh-colored, often with violaceous tint, centrally dark, viscid when moist, rather velvety when dry; at margin radiato-striate, split occasionally to the stipe; flesh soft, fragile, white, later ochraceous or grayish; gills free, white, then grayish, somewhat narrow, dense. Stipe equal, 4.5×1cm, pinkish on white base, upwards pruinose, fistulose.

Spores ellipsoid to globose, echinulate, almost without veins, 8-10×6.5-8 μ, hyaline; cystidia fusiform or clavate, with acute or papilliform tip, 45-60×9.5-14 μ.

Habitat: somewhat gregarious in woods

94. *Russula emetica* (Schaeff. ex Fr.) Pers. ex S.F. Gray 무당버섯

95. *Lactarius volemus* (Fr.) Fr. 젓버섯

96. *Lactarius piperatus* (L. ex Fr.) S.F. Gray 굴털이

#### Gasteromycetes 腹菌類

##### Order Sclerodermatales 어리알버섯목

##### Family Sclerodermataceae 어리알버섯과

97. *Scleroderma cepa* Pers. 양파버섯

98. *Scleroderma lycoperdoides* Schw. 절박이 어리알버섯

##### Family Calostomataceae 연지버섯과

99. *Calostoma japonicum* P. Henn. 연지버섯

##### Family Astraeaceae 먼지버섯과

100. *Astraeus hygrometricus* (Pers.) Morg. 먼지버섯

##### Order Lycoperdales 말뚝버섯목

##### Family Lycoperdaceae 말뚝버섯과

101. *Lycoperdon pyriforme* Schaeff. ex Pers. 줌말뚝버섯

#### 摘 要

韓國自然保存協會의 研究事業의 일환으로 1976年 8



月 6일부터 1週日間に 걸친 仙岩 曹溪山을 중심으  
 린 仙岩寺와 松廣寺 일대의 生物相 調査를 통하여 採  
 集된 버섯類의 全般을 檢討 整理하였다. 이 地域은 그  
 간의 全體的인 가을으로 인하여 登山路 附近과 숲속은  
 건조한 편이어서 기대한 만큼의 成果는 볼수 없었으나  
 주로 仙岩寺의 嶺 溪谷과 松廣寺 앞을 흐르는 溪谷의  
 上流를 따라 올라 가면서 부러는 몇몇 冬草夏草를 미  
 루한 特記할 만한 小形 cup fungi類의 子囊菌類와 擔  
 子菌類중에서는 송이目に 속하는 종류가 例年보다 비  
 록 個體數는 적으나 매우 多樣한 種數의 標本들을 採  
 集할 수 있었다. 本 調査에서는 同定이 難易했던 小數  
 의 標本을 제외하고는 皆들이 檢討한 總 193點의 標  
 本중에서 確認된 種數는 66屬 110種 3變種 2屬種에  
 달하고 있다. 이들을 分類의 階級別로 나누어 보면 子  
 囊菌類가 8科 11屬 14種, 擔子菌類에서는 붉은목이  
 이 1科 1屬 1種, 민주름목이 8科 19屬 24種 2變  
 種, 송이목이 11科 31屬 66種 1變種 2屬種, 그리고  
 腹菌類가 4科 5屬 5種임을 알수 있었으며, 그중 5  
 개屬, *Eutypa*, *Sarcosoma*, *Corticium*, *Heimiella*, 및  
*Clitopilus*는 國內 未記錄屬으로 判明되었고, 同定한  
 種數의 約 1/4에 해당하는 26種 1品種이 國內 未記錄  
 種으로 確認되었다. 이들 未記錄種을 종류別로 나누어  
 보면 子囊菌類에서 *Eutypa acharii*(마른버짐버섯),  
*Sarcosoma globosa*(고무술잔버섯), *Geoglossum gla  
 brum*(민둥나물버섯) 및 *Chlorosplenium versiforme*  
 (주걱늑정균), 擔子菌類의 민주름목에서 *Clavulinopsis  
 fusiformis*(노란창싸리버섯), *Corticium chrysocreas*  
 (황금고약버섯) 및 *Cotylidia decolorans*(꽃니늘버섯)  
 그리고 송이목에서는 *Suillus granulatus*(갓그늘버섯)  
*Heimiella japonica*(연지그늘버섯), *Hygrophorus  
 ratensis*(살색뿔꽃버섯), *Laccaria laccata* f. *minuta*  
 (꼬마줄과버섯), *L. proxima*(큰줄과버섯), *L. nigra*  
 (검정줄과버섯), *Mycena fibula*(이끼에주름버섯),  
*Lepiota praetervisiva*(애기갓버섯), *Coprinus lagopus*  
 (소녀머물버섯), *C. radians*(리듬머물버섯), *C. cin  
 ereus*(재머물버섯), *Corinarius mucifluus*(유리곤적  
 버섯), *C. hemitrichus*(실곤적버섯), *Clitopilus lign  
 yotus*(그늘버섯), *Rhodophyllus salmonaeus*(붉은꼭지  
 버섯), *R. aeruginosus*(하늘꼭지버섯), *R. omiensis*  
 (민꼭지버섯), *Russula delicata*(흰절구버섯), *R.  
 laurocerasi*(버찌부당버섯), *R. lilacea*(연보라쿠당버  
 섯)로 나눌 수 있었다. 그중 순서적으로 먼저 檢討된  
 子囊菌類는 上記 4개 未記錄種의 예도 既知種, *Dald  
 inia concentrica*(몽버섯), *Cordyceps militaris*(번데  
 기버섯), *C. nutans*(노린재등흥하초), *Leptopodia elas*

*tica*(가는대안장버섯), *L. ephippium*(진대안장버섯),  
*Cyathipodia macropus*(진대주발버섯), *Scutellina  
 scutellata*(주홍점시버섯), *Leotia lubrica*(콩나물버  
 섯), *Leotia chlorocephala*(유리버섯 또는 연두콩나  
 물버섯), 및 *Cudonia japonica*(노란콩나물버섯)을 포  
 함한 14種에 대한 報告는 記載와 함께 1976年度 韓國  
 自然保存協會 調查報告 第11號에 빌드르 掲載될 예정이  
 며, 이어서 分類群別로 실시된 擔子菌類의 檢討에서  
 확인된 上記 23개 未記錄種들에 대한 報告는 本 논문  
 을 통하여 새로운 國內 追加種으로 발표하는 바이다.

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(1977년 1월 15월 접수)

## Explanation of plates

## Plate 1.

- Fig. 1. *Suillus granulatus* (A. fruit-bodies, B. spores, C. cystidia)  
 Fig. 2. *Pulveroboletus ravenelii* (A. fruit-bodies, B. spores)  
 Fig. 3. *Boletus erythropus* (A. fruit-bodies, B. spores, C. cystidia)  
 Fig. 4. *Heimiella japonica* (A. fruit-body, B. spores, C. cystidia)

## Plate 2.

- Fig. 1. *Clavulinopsis fusiformis* (A. fruit-bodies, B. spores)  
 Fig. 2. *Corticium chrysocreas* (A. fruit-bodies, B. spores, C. gloecystidia of a kind)  
 Fig. 3. *Cotylidia decolorans* (A. fruit-bodies, B. spores)  
 Fig. 4. *Hygrophorus pratensis* (A. fruit-body, B. spores)  
 Fig. 5. *Laccaria laccata* f. *minuta* (A. fruit-body, B. spores)  
 Fig. 6. *Laccaria proxima* (A. fruit-body, B. spores)  
 Fig. 7. *Laccaria nigra* (A. fruit-bodies, B. spores)  
 Fig. 8. *Lepiota praetervis* (A. fruit-body, B. spores)

## Plate 3.

- Fig. 1. *Mycena fibula* (A. fruit-bodies, B. spores,

C. cystidia)

- Fig. 2. *Coprinus lagopus* (A. fruit-bodies, B. spores)  
 Fig. 3. *Coprinus radiatus* (A. fruit-bodies, B. spores)  
 Fig. 4. *Coprinus cinereus* (A. fruit-bodies, B. spores)  
 Fig. 5. *Inocybe praetervis* (A. fruit-body, B. spores, C. cystidia)

## Plate 4.

- Fig. 1. *Cortinarius mucifluus* (A. fruit-bodies, B. spores)  
 Fig. 2. *Cortinarius hemitrichus* (A. fruit-body, B. spores)  
 Fig. 3. *Clitopilus lignyotus* (A. fruit-body, B. spores)  
 Fig. 4. *Rhodophyllus salmonens* (A. fruit-bodies, B. spores)  
 Fig. 5. *Rhodophyllus aeruginosus* (A. fruit-body, B. spores)  
 Fig. 6. *Rhodophyllus omiensis* (A. fruit-bodies, B. spores, C. cystidia)

## Plate 5.

- Fig. 1. *Russula delicata* (A. spores, B. cystidia)  
 Fig. 2. *Russula laurocerasi* (A. spores, B. cystidia)  
 Fig. 3. *Russula vesca* (A. spores, B. cystidia)  
 Fig. 4. *Russula lilacea* (A. spores, B. cystidia)  
 Fig. 5. *Russula flavida* (A. spores, B. cystidia)

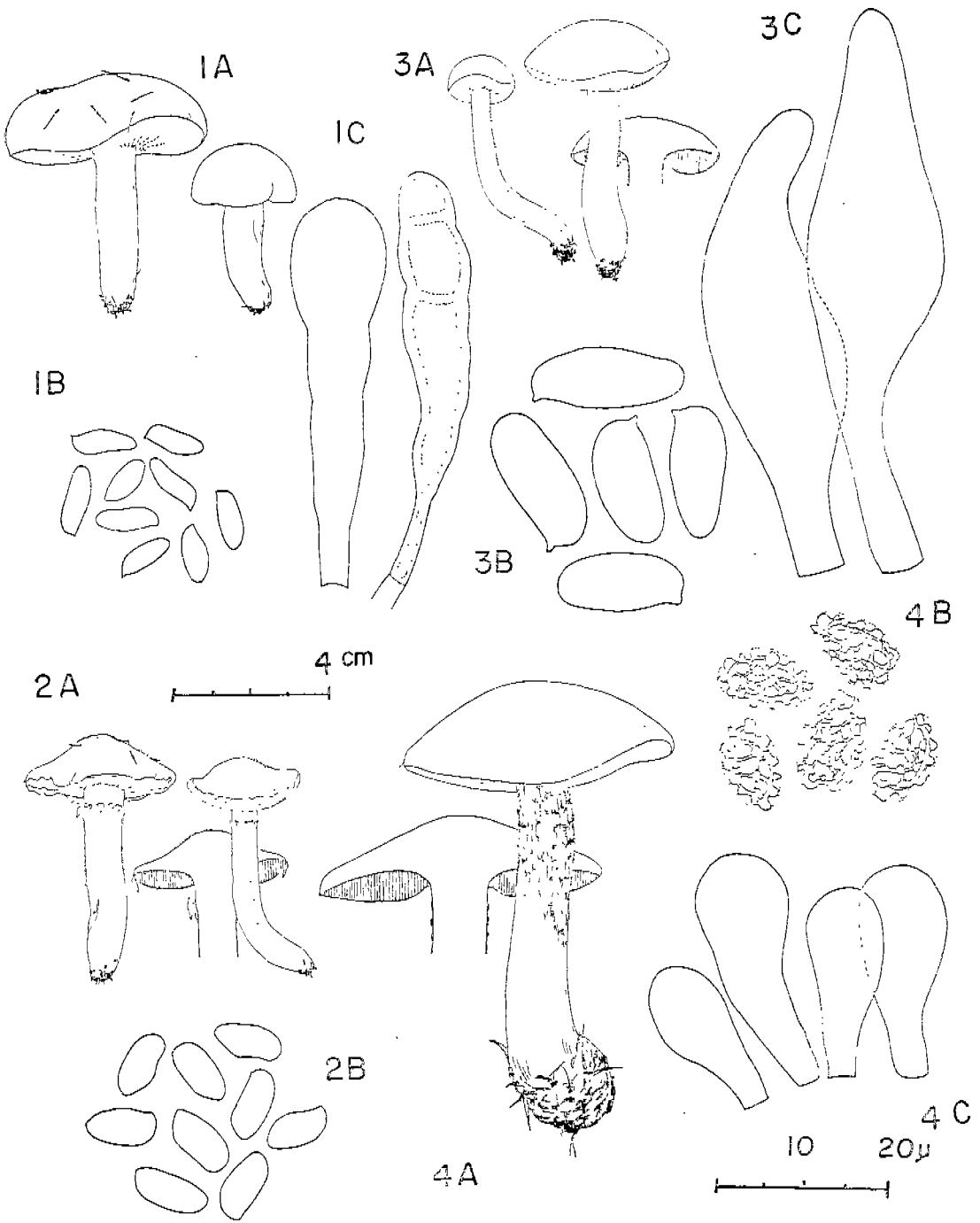


Plate 1

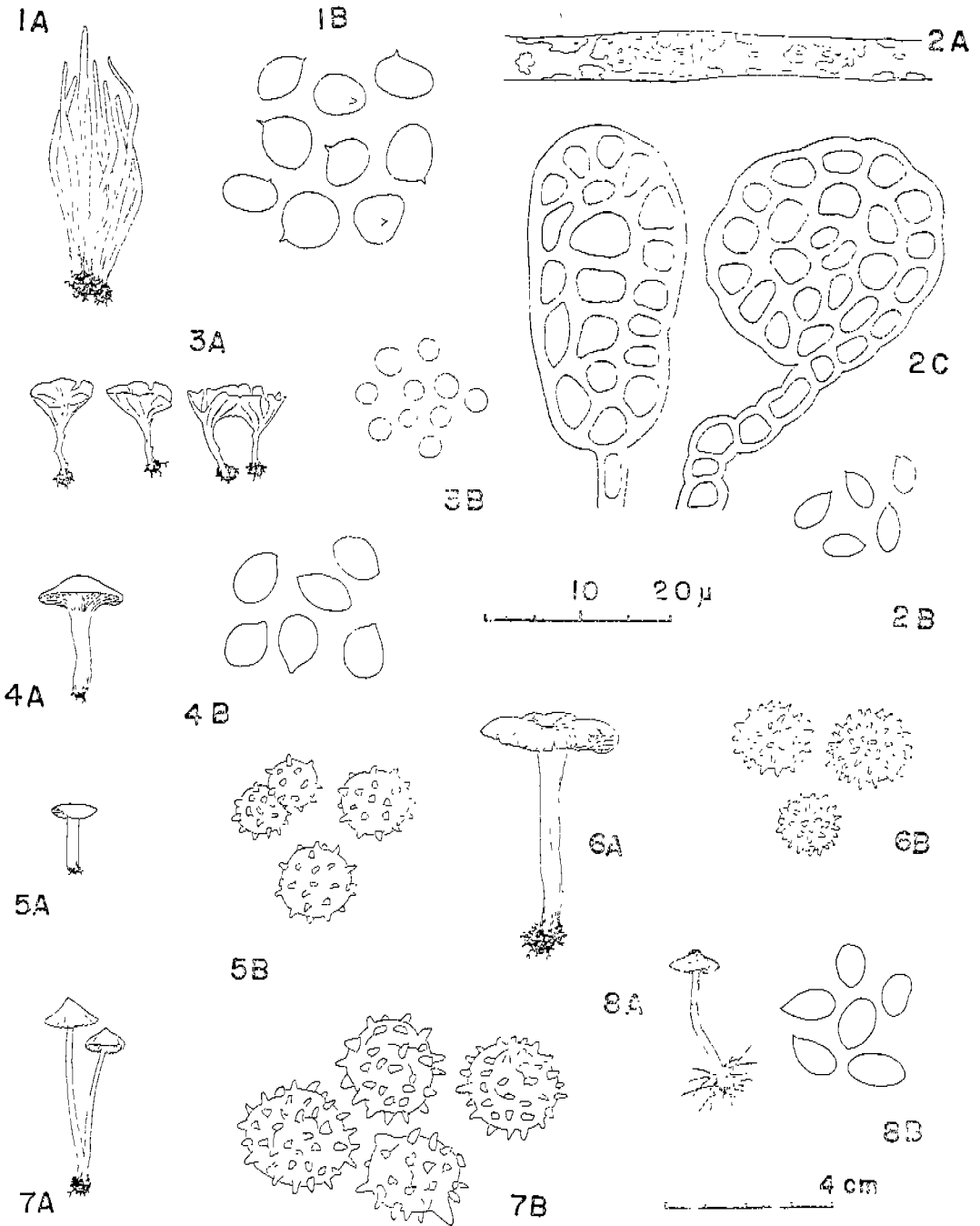


Plate 2

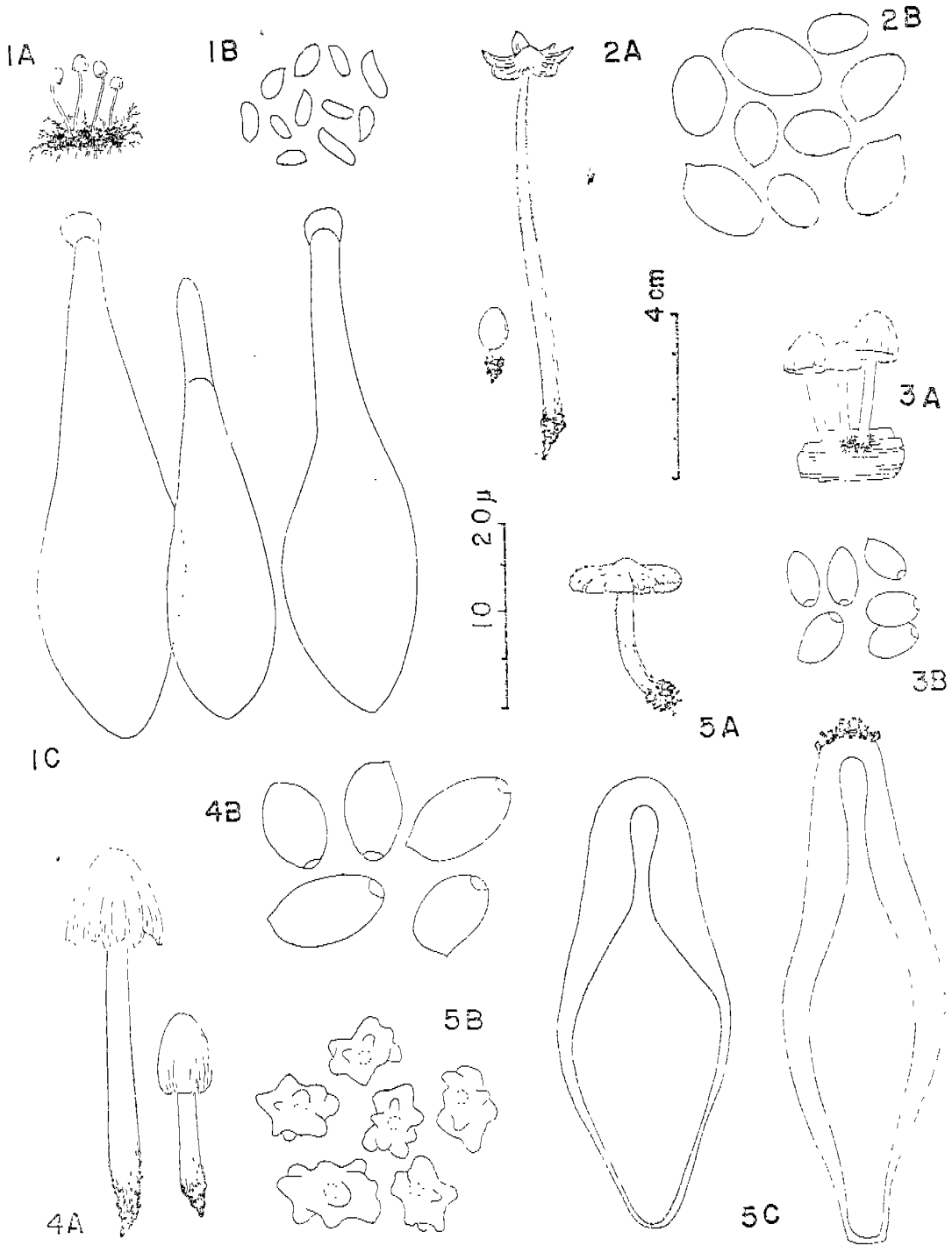


Plate 3

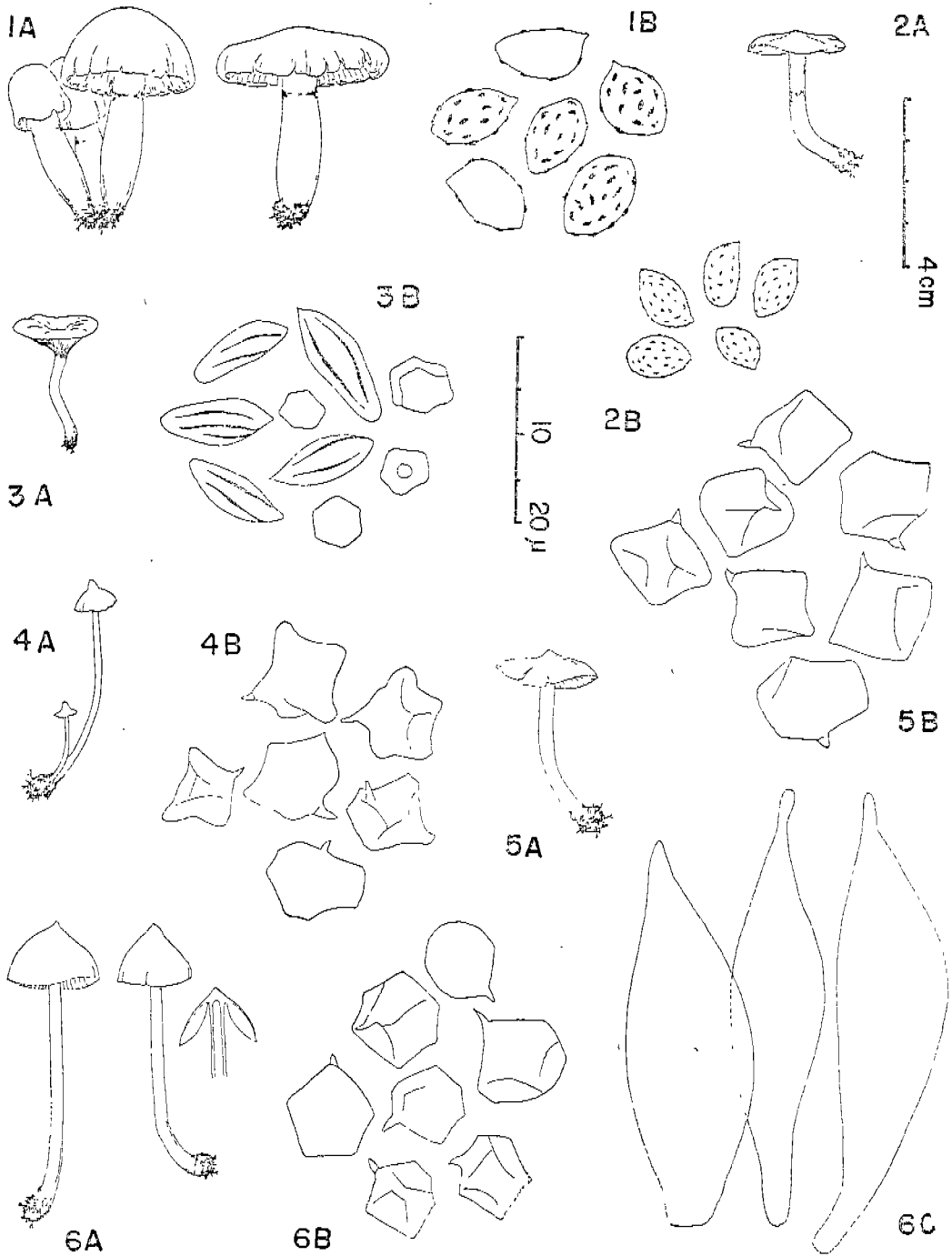


Plate 4

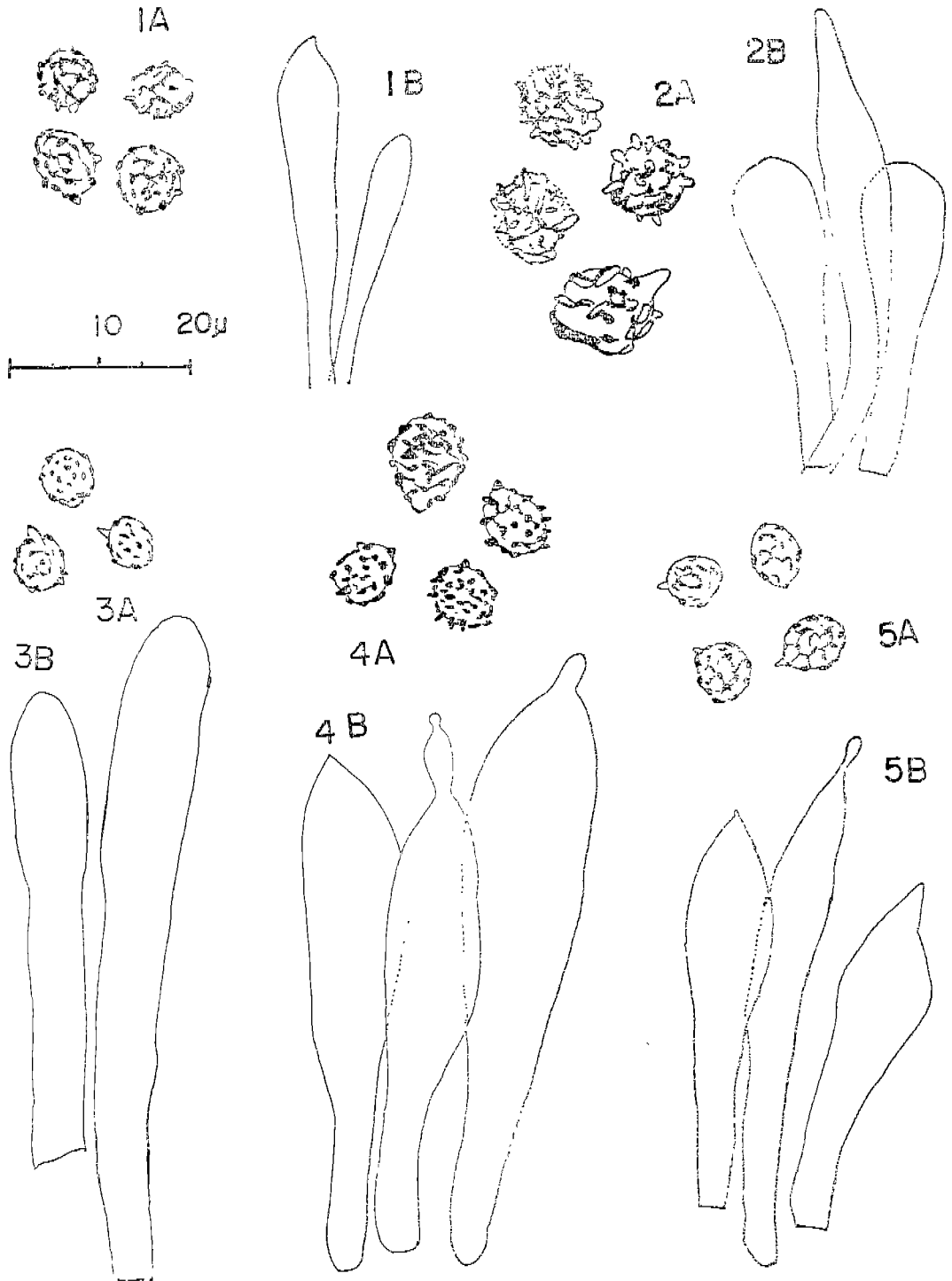


Plate 5