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韓國產 *Lepiota*屬의 分類學的 硏究

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摘 要

韓國產 高等菌類 가운데서 Agaricaceae의 *Lepiota*屬을 분류 동정하였다. 분류방식은 Smith, A.H. et al.과 Singer, R.의 분류체계를 따른 Ito, S.의 Keys를 變形하여 사용하였다. 그러므로 Singer, R.의 *Macrolepiota*, *Leucocoprinus*, *Leucoagaricus*는 전부 *Lepiota*屬으로 통합하였다.

韓國產 *Lepiota*屬의 種은 이미 발표된 17種과 필자가 未記錄種으로 同定한 2種을 합하여 19種을 확인하였다. 새로 확인된 未記錄種은 *L. clypeolaria*, *L. castanea*이고 이것들의 韓國標準名을 新稱하였다. 또 한국표준명이 중복 新稱된 *L. luteus*에 대하여 改稱하였다.

Introduction

Study on higher fungi of Korea has been started from 1930. But substantial study has been started at end of 1950.

Lee et al.(1959) published 228 species in "Coloured Illustration of Korea." After that Korean Society of Mycology(1978) published 585 species in "Standard Korean Names of Mushrooms in Korea".

Study on *Lepiota* genus of Korea was 6 species by Lee et al.(1959) and 12 species by Korean Society of Mycology(1978).

After that Kim et al.(1978) published two species(but one species was prepublished), Cho and Lee(1980) published two species (one species prepublsihed also), Cho et al.(1983) published three species and one species was published by Park(1983).

This time author classified 19 species with prepublished 17 species and identified unrecorded 2 species. By succeeding study in future, many species will be added to *Lepiota* flora of Korea.

Materials and Methods

A. Materials:

1) Cited papers were investigated prepublished till now.

2) Sample species were collected at Mt. Mudeung Areas during April, 1982 to November, 1983.

B. Methods:

1) Classified keys were modified Smith, A. H. et al. and Ito, S. based on Singer, R. key.

2) Genera of Agaricaceae were classified according to Smith, A.H. et al. key. Therefore sporeprint white, lamellae free or remote classified *Lepiota*. *Macrolepiota*, *Leucoagaricus* and *Leucocoprinus* divided by Singer, R. unified *Lepiota*.

Results

Ⅰ. *Lepiota* genus S.F. Cray

Fruit body was small or large and typical parasol-shaped. Pileus were distributed scales or powdery, flesh red when brusied. Lamellae free or remote. Partial veils forming annulus attached stipe, annulus movoble, deciduous, traced, volva absent. Sporeprint white, spore germ pore or absent, inconspicuous, pseudoamyloid, 4 spores, clamp connection present or absent.

Habt.: On the soils and various plant debris, living or dead, such as wood, ferns, palm detritus, fiber, straw etc., notectomycorrhizal.

Distr.: Almost cosmopolitan, but the majority of the species tropical and subtropical.

Type species: *Lepiota colubrina* (Pers. ex) S.F. Cray

Ⅱ. Key to genera

Spore deposit green to olive·····*Chlorophyllum*

Spore deposit white to light buff ·····*Lepiota*···1

Ⅲ. Key to species

1. Germ pore present; pseudoamyloid; free or remote····· 2

1. Germ pore absent; pseudoamyloid; or seldom amyloid; free ····· 3
2—1 Clamp connection present, scales ····· 4
4—1 Spore large, 12×7μM above; pileus umbonate, scale darkish brown, flesh not changing; stipe furfuraceous or finely squamulose ····· *L. procera*
4—2 Spore medium, 12×7μM more or less ····· 5
5—1. Pileus white, scale browny, large, thick; flesh not changing; stipe staining brown where handled ····· *L. rachodes*
4—3 Spore small, 12×7μM below ····· 6
6—1 Pileus umbonate; scale large; flesh changing red when bruised; faring forming ····· *L. alborubescens*
2—2 Clamp connection absent, groove radially at margin; stipe slender, long ····· 7
7—1 Pileus white ····· 8
8—1 Pileus reddish brown at center; scales darkish brown; Stipe long, annulus inconspicuous ····· *L. otsuensis*
8—2 Pileus yellowish brown; scale white ····· *L. cepaestipes*
7—2 Pileus yellow ····· 9
9—1 Stipe long, bulb at base; fruiting body bright yellow ····· *L. fragilissismus*
9—2 Stipe short, not bulb at base ····· *L. luteus*
7—3 Pileus reddish brown ····· 10
10—1 Stipe long, not bulb at base ····· *L. japonica*
3—1 Fruit body large or medium, echinate or hair, scales ····· 11
11—1 Context thick and more or less firm; warts relatively large and soon deciduous; scales on stipe ····· *L. acutesquamosa*
11—2 Rough scale under annulus ····· 12
12—1 Stipe shaggy at first from floccose to fibrillose scales and patches; disc and scales yellowish brown to orange-tawny; spore fusiform ····· *L. clypeolaria*
12—2 Spore large, long, fusiform; scales cottony ····· *L. rubrotincta*
12—3 Pileus yellow; echinate darkish brown ····· *L. aurnatioflava*
3—2 Fruit body medium or small ····· 13
13—1 Spore bullet-shaped ····· 14
14—1 Fruit body medium; pileus with more or less crust brown disc and scales ····· *L. cristata*
14—2 Fruit body small; scales brownish orange; pileus and stipe cinnamon brown to orange buff; fruit body becoming rust orange after injury ····· *L. castanea*

13—2 Finely scales brown ·····*L. pravetrivias*

13—3 Pileus white cottony·····*L. cygnea*

13—4 Scales darkish browny·····*L. atrosquamulosa*

3—3 Fruit body small; scales powdery·····15

15—1 Pileus white; reddish brown powdery·····*L. pseudograrnnulosa*

15—2 Pileus dirty white to grayish brown·····*L. hetieri*

1) *L. procera*(Fr.) S.F. Gray 갓버섯

Habt.; Clustered on soils and weeds during summer to autumn. Edible.

Distr.; Korea (Kwangneung, Hongsung, Andong, Youngju, Mt. Muhack and Mt. Mudeung), Japan, China, Minor Asia, Europe, North America, Africa and Australia.

2) *L. rachodes* (Vitt.) Quel. 갓버섯 아재비

Habt.; Solitary or clustered on soils of needle and bamboo forests. Summar to autumn. Edible.

Distr.; Korea, Japan, Europe, North America and Australia.

3) *L. alborubescens* Hongo 두엄 갓버섯

Habt.; Clustered or cespitose on the compost or fairing on soils of bamboo forests. Summer to autumn.

Distr.; Korea(Damyang's bamboo forests) and Japan.

4) *L. otsuensis* Hongo 우산각시버섯

Habt.; Clustered on humus, rotten wooden and dead roots of bamboo at autumn.

Distr.; Korea(Damyang's bamboo forests) and Japan

5) *L. cepaestipes*(Fr.) Pat. 노란 각시버섯

Habt.; On the humus of forests during summer to autumn. Edible.

Distr.; Korea, Japan, Europe, North America and Australia.

6) *L. fragilissimus*(Berk. et Rav.) Pat. 여우꽃 각시버섯

Habt.; Weeds of forests during summer to autumn.

Distr.; Korea(Kwangneung) Japan, Europe, North America and Australia.

7) *L. luteus*(Secr.) Locquin 노란 흠 갓버섯(改稱)

Habt.; On the humus of forests during summer to autumn.

Distr.; Korea(Kwangneung), Japan, India, Europe and North America.

8) *L. japonica* Kawam. ex Hongo 여우 갓버섯

Habt.; Solitary, clustered, cespitose on the humus of forests and bamboo forests.

Distr.; Korea(Kwangneung), Japan and Europe.

9) *L. acutesquamosa*(Weimn) Gill.

가시 갓버섯

Habt.; On the soils of forests and refuse. Summer to autumn.

Distr.; Korea (Mt. Muhack, Mt. Geroung), Japan, Minor Asia, Europe, North America, China and Siberia.

10) *Lepiota clypeolaria* (Fr.) Quel.

솜갓버섯(新稱)

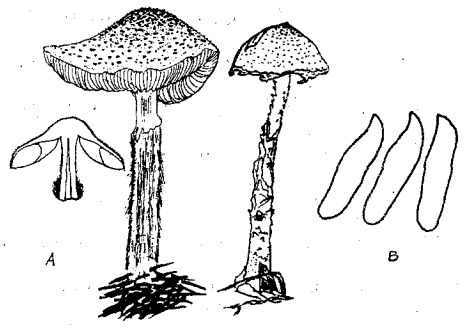

Fig. 1. *L. Clypeolaria*; **A, Fruit body ×1/2 B, Spores ×1000.**

Qu'el., Champ. Jira Vosg. 1:72, 1872.

Imazeki, R. and T. Hongo, Coll. Ill. Fung. Jap. vol.(Ⅰ), 51, Pl.23, f.123, 1957.

Singer, R., Agaricales, 474, 1975.

Soothill, E & A. Fairhurst, The New Field Guide to Fungi, 114, 1978.

Lange, L. & F. Hora, Mushrooms and Toadstools, 126, 1981.

Lincoff, G. H., The Audubon Society Field Guide to North America Mushrooms, 516, f.176, 1981.

Agaricus clypeolarius Fries, Syst, Myc. 1:21, 1821.

Mastocephalus clypeolarius O. Kuntze, Rev. Gen. Pl. 2:860, 1891.

Lepiota magnispora Murr. Macoloia, 4:237, 1912.

Pileus 2—8*cm* broad, semi-globouse, umbonate at center then plane, margin with teeth-like veil fragments, background white but covered with a yellow or brown felt-like layer which breaks up into patches, reddish brown over center, flesh thin, white. Lamellae 1.5—4*mm* wide, white, free, crowded. Stipe 6—8.5*cm* long, 2—3*mm* thick, slender, fragil, equal, bent at base, color as pileus, upwards whitish yellow, cottony, annulus white, wooly, rough, soon eroding felty below the annulus when young, but becoming almost naked, hollow. Spores 12.9−17.2×3.6−4.9μm, colorless, long fusiform, pseudoamyloid, sporeprint white.

Hab.: Clustered on ground or fallen-leaves under forests during summer to fall. Ediblity. In North America it is to be poisonous but Japan to be eat.

Distr.: Korea (Mt. Mudeung), Japan, Europe, North America, South America and Australia.

11) *L. rubrotincta* Pk. 주홍색 갓버섯

Habt.; Clustered on the humus mixed broad and bamboo forests. Edible.

Distr.; Korea (Gwangju, Mt. Muhack) and North America.

12) *L. aurantioflava* Hongo 노랑 갓버섯

Habt.; Gregarious at bamboo and broad forests. Summer to fall.

Distr.; Korea(Gwangju, Mt. Muhack) and Japan.

13) *L. cristata*(Bolt. ex Fr.) Quel. 갈색고리 갓버섯

Habt.; Solitary or clustered on the fallen leaves or soils.

Distr.; Korea (Mt. Soback), Japan China, Minor Asia, Europe, North America and Australia.

14) *Lepiota astaneus* Qu'el.

밤색 갓버섯(新稱)

Qu'elt., Champ. Jura Vosg, 10 Suppl. 661, Pl. 8, f. 1, 1880.

Ito, S., Myc. Fl. Japan 2(4): 278, 1955.

Imazeki, R. and T. Hongo, Coll. Ill. Fung. Jap. vol.(I), 50, Pl. 22, f. 120, 1957.

Singer, R., Agricales, 747, 1975.

Phillips, R., Mushrooms and other Fungi of Great Britain and Europe, 28, 1981.

Lange, L. & F.B. Hora, Mushrooms and Toadstools, 126, 1981.

Mastocephalus castaneus O. Kuntze, Rev. Gen, Pl. 2: 859, 1891.

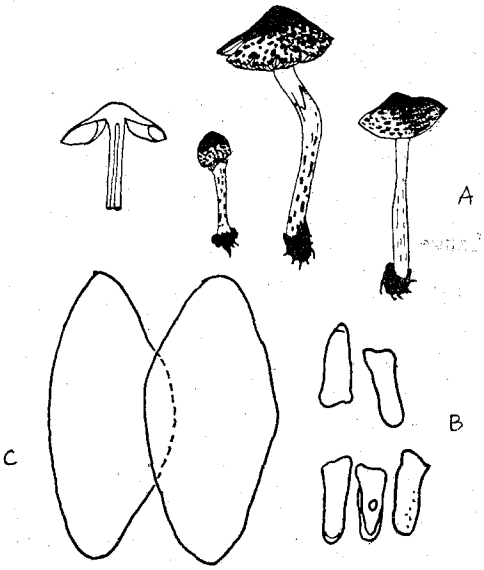

Fig. 2. *L. Castanea* **A, Fruit body ×1; B, Spores ×1000; C, Cystidia ×1000.**

Pileus 1.5—4*cm* broad, umbonate to plane, incurved at margin, background pale yellowish brown; scales more or less chesnut to rusty brown, granular, deeper at center; flesh thin. Lamellae white to whitish yellow, browning with age, crowded. Stipe 2.5—3*cm* long, 2—3*mm* thick, concolorous with pileus, brown scaly; annulus white, inconspicuous; hollow brown. Spores 7.2−10.0×2.6−3.6μm, bullet-shaped, pseudoamyloid; cystidia 35.8—38.6×15.7−20.0μm, broad elliptical.

Hab.: Solitary or clustered on ground under forests during summer to fall. Ediblity unknown.

Distr.: Korea(Temple Haein), Japan and Europe.

15) *L. pravetervisa* Hongo 애기 갓버섯

Habt.; On the humus of forests of at summer.

Distr.; Korean and Japan.

16) *L. cygnea* Lange 흰주름 갓버섯

Habt.; Scattered on the soils of broad-needle forests.

Distr.; Korea(Gwangju, Mt. Mudeung, Mt. Muhack), Japan, Europe and North America.

17) *L. atrosquamulosa* Hongo 검은비늘 갓버섯

Habt.; Clustered on humus of forests or on soils of bamboo forests.

Distr.; Korea(Suwon, Damyang's bamboo forests, Mt. Chiri) and Japan.

18) *L. pseudongranulosa*(Berk. et Br). Sacc. 흰여우 갓버섯 아재비

Habt.; Gregarious on soils with fallen leaves. Summer to autumn.

Distr.; Korea(Youngju), Japan, Srilanca, England and Venezuela.

19) *L. hetieri* Boud. 대나무 갓버섯

Habt.; Solitary or clustered on the fallen leaves of bamboo or on the soils at summer.

Distr.; Korea(Damyang's bamboo forests) and Japan.

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Taxonomical Study on *Lepiota* genus of Korea

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>***Abstract***<

Lepiota genus among Agaricaceae of Korean higher fungi were identified. It was identified according to Smith, A.H. et al. and Ito, S. based on Singer, R. classification. *Lepiota* were unified *Macrolepiota, Leucocoprinus, Leucoagaricus* that were classified by R. Singer.

As the resulting, total 19 species were replaced which contained prepublished 17 species and 2 species unrecorded to be Korea by author. Unrecorded species were *L. clypeolaria, L. castanea* and they were nomenclatured Korean common name.

L. luteus was renomenclatured of Korean common name which has unsuitable name till now.