

Two New Species of *Amanita* from Korea

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ABSTRACT

Two new species of *Amanita* were collected in central areas of Korea from 1997 to 2000. They were identified, described and illustrated. One of them, *Amanita aureofarinosa* is covered with golden yellow farina and annulus is absent. The other, *A. longistipitata* has turtle-shaped warts in crust and its stipe under the soil is longer than it above the soil. Both are solitary in soil with sand.

Key words : *Amanita aureofarinosa*, *A. longistipitata*, new species

Introduction

Study on higher fungi has been done for a long time in Korea. Until now, 2,000 species are reported from Basidiomycetes to Ascomycetes. Among them, *Amanita* are 46 species. Natural environment in Korea has a good condition. It has much rain and high temperature in summer and forests for developing mushrooms. Most of higher fungi are developed from summer to autumn. Two *Amanita* were collected in Mt. Nam of Seoul and in Sokwang-ri of Kyungsangbuk-do from July 1997 to August 2000. They were worked about fruiting body, observation of spores and ecological habitation and surveyed references of Bas(1969), Cetto(1987), Cho(2002), Courtecuisse(1994), Imazeki & Hongo(1987) and Phillips(1981,1991). According to the resulting, they are confirmed newly to the world.

Amanita aureofarinosa D.H. Cho, sp. nov.

Pileo 7.8cm lato, convexo vel plano-depressed, aureo-farinovus, margin integer, striatus, lamellis remote, confertus, albus, stipite 11cm long, 1.5cm crasso, aureus farinosus, saccatus absens. sporis 9.0~12 × 6.5~10 μm, late ellipsoidsis, broad ellipsoidsis, basidis tetrasporis, clavate, pleurocystidia and cheilocystidia ampuliformis.

Amanita aureofarinosa D.H. Cho, sp. nov.

Pileus 7.8cm broad, convex to plane, yellow, disc reddish yellow, striate at margine, depressed at center, reddish. Floccose of yellow covered all surface. Lamellae more or less crowded, remote, 7~8mm wide, white, edge yellow, farinaceous. Stipe 11cm long, 1.5cm thick, downwards thick, farinaceous of scale, hollow, white, volava none. Fruit body pale yellow when dry.

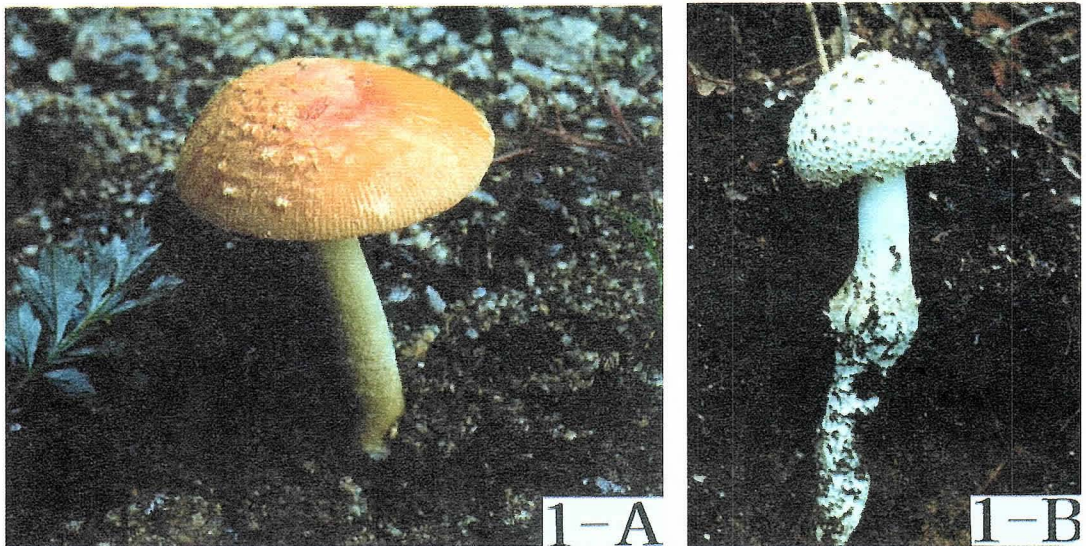


Fig. 1. Fruiting bodies; 1-A, *Amanita aureofarinosa* $\times 1/2$, 1-B, *Amanita longistipitata* $\times 1/2$.

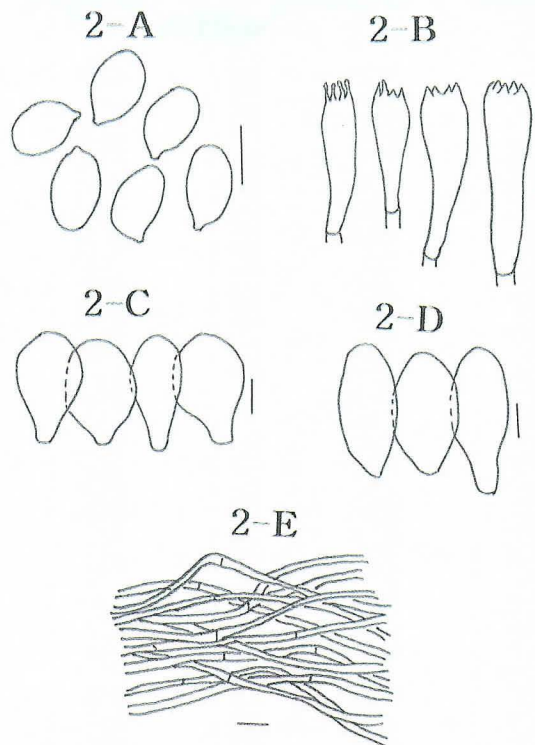


Fig. 2. *Amanita aureofarinosa*; 2-A, spores. 2-B, basidia. 2-C, pleuro-cheilocystidia. 2-D, pilocystidia. 2-E, hyphae from lamellae trama. (bars : 10 μm)

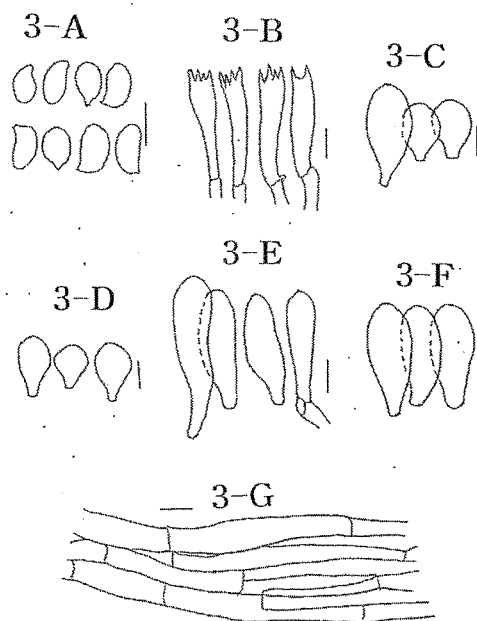


Fig. 3. *Amanita longistipitata*; 3-A, spores. 3-B, basidia. 3-C, pleurocystidia. 3-D, cheilocystidia. 3-E, cells of warts. 3-F, pilocystidia. 3-G, hyphae from lamellae trama. (bars: $10\mu\text{m}$).

Spores $9.0\sim 12 \times 6.5\sim 10\mu\text{m}$, elliptical, broad elliptical, basidia $25.5\sim 31.5 \times 7.8\sim 9.0\mu\text{m}$ clavate, cheilocystidia and pleurocystidia $26.3\sim 37.5 \times 13.8\sim 25\mu\text{m}$, flask-shaped, pilocystidia $37.5\sim 50 \times 17.5\sim 25\mu\text{m}$, fusiform, hyphae from lamellae trama $2.5\sim 3.8\mu\text{m}$ wide.

Habt. : Solitary on soil with sand.

Distr.: Korea(Sokwang-ri of Wooljin-kun in Kyungsangbuk-do)

Specimens studied : CHO-6217(August 1, 1999) collected in Sokwang-ri, Wooljin, Kyungsangbuk-do.

Amanita longistipitata D.H. Cho, sp. nov.

Pileo 8cm vel lato, hemisphaerico vel convex, cretaceus, canus, verrucosus, papilatus, cruciatim crux, margin squamulosus, odor grato, sapore mitis, lamellis sinuatus, albus, confertus, farinaceus, stipite 7.5 cm long, 8mm crasso, annulus, albus, squamulosus ventricosus, solid, sporis $7.5\sim 10 \times 5\sim 6\mu\text{m}$, late ellipsoidsis, amyloideis, basidis tetrasporis, pleurocystidia and cheilocystidia ampuliformis, cellula in verrucose subglobose, clavato.

Amanita longistipitata D.H. Cho, sp. nov.

Pileus 8cm broad, more or broad, white, grayish white, hemiglobose, with warts of papillatus with crack

cross, diminishing in size toward margin larger at center, smaller at margin, cross crack at center, grayish brown but darkish brown at top, margin attaching scales, incurved when young. Context white, thin, more or less tough, taste mild, odor farinaceous. Lamellae sinuate, white, more or less crowded, farinaceous, 4~6 mm wide, edge minutely farinaceous. Stipe 18cm long, white, from pileus to base 7.5 cm long, 8 mm thick, downwards thick and bulbous, annulus easily deciduous, white, base incomplete circle, squamulose, scale of grayish brown, from surface of soil to under soil 10.5 cm long, 7 mm thick, larger bulbous at near soil surface, slender and bent downwards in soil, white, hollow white. Volva none.

Spores $7.5\sim 10 \times 5\sim 6\mu\text{m}$, elliptical, amyloid, basidia $35\sim 52 \times 7.5\sim 10.5\mu\text{m}$, 4-spored, clavate, clamp connection at base, pleurocystidia $10\sim 16 \times 7\sim 11.5\mu\text{m}$, flask-shaped, cheilocystidia $10\sim 12 \times 6\sim 8\mu\text{m}$, similar to pleurocystidia, cell of warts in pileus $27.5\sim 55 \times 17.5\sim 25\mu\text{m}$, subglobose, clavate, pileocystidia $37.5\sim 50 \times 20\sim 30\mu\text{m}$, fusiform or clavate, hyphae from lamellae trama $25\sim 65 \times 5\sim 10\mu\text{m}$, cylindrical.

Hab. : Solitary on soil with sand of broadleaved and needle trees.

Distr.: Korea(Mt. Namasan).

Specimens studied : CHO-5792(September 6, 1998) collected at Mt. Nam of Seoul.

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