

## Notulae Mycologicae (12)

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Tsuguo HONGO

In this paper seven species of Agaricales are reported to Japan; one of them, *Tylopilus nigropurpureus*, for the first time in this country, and the others, namely, *Pleurotus incarnatus*, *Lepiota fusciceps*, *Panaeolina rhombisperma*, *Boletus odaiensis*, *Leccinum subradicatum* and *Russula castanopsidis*, new to science.

In the following account, color names within quotation marks are taken from R. Ridgway, Color Standards and Color Nomenclature, Washington, D. C., 1912. The collections cited are all deposited in the writer's herbarium.

89) ***Pleurotus incarnatus*** Hongo sp. nov.  
(Fig. 39, 1–4)

Pileo 2–14cm vel ultra lato, e convexo plano, conchiformi vel flabelliformi, saepe lobato, e incarnato salmonicolori, sicco pallidiori, flocculoso-fibrilloso vel glabro, basi tomentoso, margine primum involuta; carne elastica, pallide incarnata; sapore miti, odore subnullo; lamellis decurrentibus, confertis vel subdistantibus, 3–4mm latis, incarnatis vel carnis; stipite laterali, 1–3cm longo, saepe nullo; sporis in cumulo carnis, 6–9 (11)×3–4.5(4.8) $\mu$ , subcylindricis, inamyloideis; cheilocystidiis 26–38×7.5–12 $\mu$ .

Cespitosely imbricate. Cap 2–14cm or more broad, convex then flattened, shell-shaped, or fan-shaped, often lobed, "grenadine pink", "bittersweet pink", flesh color", "salmon color", "salmon-buff" or "shell pink", fading to paler with age, flocculose-fibrillose or glabrous, the base white

tomentose, the margin incurved at first. Flesh elastic, pale pinkish, taste mild, odor faint. Gills decurrent, crowded or subdistant, "shrimp pink", "safrano pink" or "vinaceous-pink", 3–4mm broad, the edges even or slightly eroded. Stem often lacking, when present 1–3cm long, laterally attached, not clearly distinct from the cap, firm, often white tomentose. Spores "flesh color" in mass, 6–9(11)×3–4.5(4.8) $\mu$  (or 7.5–12×3.5–4 $\mu$ ), subcylindric, smooth, nonamyloid; basidia four-spored; cheilocystidia numerous, 26–38×7.5–12 $\mu$  (or 18–28×7–13 $\mu$ ), clavate or ventricose, sometimes mucronate, hyaline, thin-walled gill-trama irregular,

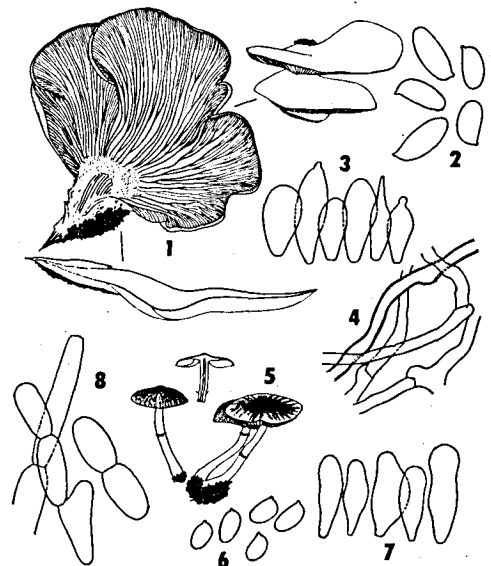


Fig. 39. *Pleurotus incarnatus*: 1, carpophores; 2, spores; 3, cheilocystidia; 4, tramal hyphae. *Lepiota fusciceps*: 5, carpophores; 6, spores; 7, cheilocystidia; 8, cuticular cells. (1, 5 ×1/2; 2, 6 ×750; 3, 4, 7, 8 ×450)

consisting of more or less thick-walled hyphae, 3–5 $\mu$  wide, with clamp connections.

Hab. On stump of broad-leaved tree, Botanical Garden of Kyoto University, Kitashirakawa, Kyoto, July 8, 1952 (no. 411-type); Sept. 3, 1954 (no. 990).

Distr. Japan (Kyoto, Hokkaido).

This remarkable species is easily recognized by the uniform pink to flesh color of both carpophores and spore prints. Rather rare.

90) **Lepiota fusciceps** Hongo sp. nov. (Fig. 39, 5–8)

Pileo 1–2cm vel ultra lato, e convexo expanso, umbonato, sicco, dense et minute squamuloso, fusco, ad marginem saepe rimoso; carne tenui, alba, fragili; sapore odoreque nullo; lamellis liberis, albis, dein cremeis, confertis, 2–3mm latis; stipite 1.5–3cm longo,  $\pm$ 2mm crasso, aequali vel basi leviter incrassato, albo, infra annulam interdum minute fibrilloso-squamuloso, fistuloso; annulo distante, angusto, erecto, atromarginato; sporis 4.5–6.5(7.5)  $\times$  (2.8)3–3.5 $\mu$ , ovatis vel ellipsoideis, pseudoamyloideis; cheilocystidiis 21–34  $\times$  8–10 $\mu$ .

Cap 1–2cm or more broad, convex, then flattened, umbonate, surface dry, densely and minutely squamulose, "fuscous" on the disc, paler toward the margin, the marginal part often radially cracked. Flesh thin, white, fragile; taste and odor none. Gills free, white, then creameous, close, 2–3mm broad. Stem 1.5–3cm long,  $\pm$ 2mm thick, equal or somewhat thickened at the base, white, silky, sometimes minutely fibrillose-squamulose below the ring, often curved, hollow. Ring distant, white, thin, narrow, erect, fuscous at the margin. Spores hyaline under the microscope, 4.5–6.5(7.5)  $\times$  (2.8)3–3.5 $\mu$ , ovate to ellipsoid, smooth, pseudoamyloid; basidia four-spored; cheilo-

cystidia numerous, 21–34  $\times$  8–10 $\mu$ , clavate or somewhat flask-shaped, thin-walled, hyaline; cuticle composed of chains of elliptic to cylindric, often branched, brownish gray cells.

Hab. On stump of *Pinus*, in *Pinus densiflora*-*Castanopsis cuspidata* forest, Tanakami-Sekinotsu, Ōtsu, June 30, 1971 (no. 4437-type).

Distr. Japan (Shiga).

Distinguished from *L. atosquamulosa* Hongo by the somewhat smaller spores. From *L. praetervisa* Hongo [= *L. neglecta* Hongo (non Murrill)] it differs chiefly in the darker cap cuticle.

91) **Panaeolina rhombisperma** Hongo sp. nov. (Fig. 40, 1–3)

Pileo 1–1.7cm vel ultra lato, obtuse conico vel campanulato,  $\pm$ expanso, udo atro-brunneo vel subfusco, sicco avellaneov. vel subargillaceo, ad marginem leviter striatulo; carne tenui, concolore; lamellis adnatis vel fere liberis, ventricosis vel fere

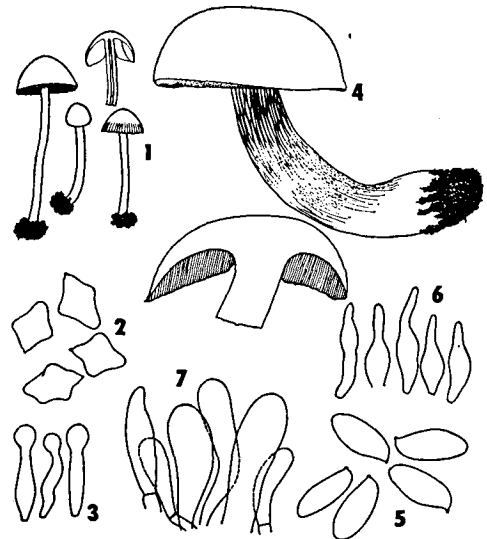


Fig. 40. *Panaeolina rhombisperma*: 1, carpophores; 2, spores; 3, cheilocystidia. *Boletus odaiensis*: 4, carpophores; 5, spores; 6, cheilocystidia; 7, epicutis. (1, 4  $\times$  1/2; 2, 5  $\times$  750; 3, 6, 7  $\times$  450)

triquetris, 3–4mm latis, distantibus, e pallidis subavellaneis, deinde fuscis, acie albida; stipite 1–4cm longo, 1.5–3mm crasso, aequali, pallido, inferne brunnescente, albo-pruinoso, tubuloso; sporis sub microscopio obscure brunneis,  $9.5\text{--}12.5 \times 6.5\text{--}9\mu$ , rhomboideis, crasse-tunicatis; cheilocystidiis  $26\text{--}34 \times 6\text{--}9\mu$ , capitatis.

Cap 1–1.7cm or more broad, obtusely conic to campanulate, becoming more or less expanded, surface at first covered with a faint bloom but soon polished, when moist "natal brown", "deep brownish drab" or "dusky drab", and fading to "avellaneous" or sordid "cinnamon-buff", the margin slightly striatulate when moist. Flesh thin, concolorous with the surface, fading to "pinkish buff" when dry, taste none, odor faint. Gills adnate or almost free, ventricose or triangular, 3–4mm broad, rather distant, pallid, then "wood brown" and at length becoming fuscous, the edges whitish. Stem 1–4cm long, 1.5–3mm thick, equal, "tilleul-buff", becoming brownish from the base upward, densely white pruinose, cartilaginous, tubular. Spores dark brown under the microscope,  $9.5\text{--}12.5 \times 6.5\text{--}9\mu$ , rhomboid, smooth, thick-walled; basidia four-spored,  $28\text{--}31 \times 8.5\text{--}9.5\mu$ ; cheilocystidia abundant,  $26\text{--}34 \times 6\text{--}9\mu$ , cylindric or subventricose, capitate, thin-walled, hyaline; pleurocystidia none; cuticular cells  $11.5\text{--}31\mu$  in diam.; clamp connections present.

Hab. On urea-applied soil, among grasses, Kyoto University, Kyoto, Oct. 16, 1967 (no. 3561, coll. N. Sagara-type).

Distr. Japan (Kyoto).

This little fungus differs greatly from all other members of the Coprinaceae in the rhomboid or cruciform spores like those of *Pterospora atrocyanea* Métrod, *Marasmiellus nigripes* (Schw.) Sing., *Crucispora*

*naucorioides* Horak (New Zealand Journal of Botany 9: 489. 1971), etc. Though the taxonomic position of this species is somewhat in doubt, the writer has provisionally placed it in *Panaeolina*.

92) ***Boletus odaiensis*** Hongo sp. nov. (Fig. 40, 4–7)

Pileo 5–10cm lato, convexo, sicco, subtomentoso, e ochraceo fulvo; carne crassa, firma, pallide flava, fracta pilei leviter caerulescente; sapore miti, odore nullo; tubulis depressis ad stipitem, luteis, dein olivaceis, 7–9mm longis; poris parvis,  $\pm 2$  in uno mm, subangularibus, luteis, fractis caerulescentibus; stipite 7–10cm longo,  $\pm 1.3$  cm crasso, subventricoso, deorsum subattenuato, striato subpruinosoque, sursum rubello, basi flavido,  $\pm$  rubro-reticulato, solido; sporis sub microscopio melleis,  $9.5\text{--}15 \times 4\text{--}6\mu$ , oblongato-subfusoides; cystidiis pororum numerosis,  $27\text{--}38 \times 5\text{--}7.5\mu$ , subcylindraceo-fusiformibus vel sublageniformibus.

Cap 5–10cm broad, convex and pulvinate, surface dry, subtomentose, yellow ocher to reddish golden, the margin more or less exceeding the tubes. Flesh thick, firm, pallid yellow, turning slightly bluish in the cap on exposure to the air; taste mild, odor none. Tubes depressed around the stem, light yellow, then olivaceous, 7–9mm long; pores small,  $\pm 2$  per mm, subangular, yellow, bluing when bruised. Stem 7–10cm long,  $\pm 1.3$ cm thick, subventricose (1.8cm thick at the middle), somewhat narrowed at the base, streaked and subpruinose, reddish upward, yellowish at the basal portion, with red (Pompeian red) incomplete network, solid. Spores melleous under the microscope,  $9.5\text{--}15 \times 4\text{--}6\mu$ , oblong to somewhat fusoid, smooth, sometimes with a suprahilar depression; basidia four-spored,

33–41×10–11.5 $\mu$ ; cystidia numerous on the pores, 27–38×5–7.5 $\mu$ , subcylindric-fusiform or sublageniform, hyaline, thin-walled; tube-trama bilateral of the *Boletus*-type; cuticle made up of interwoven hyphae, the terminal members of which are clavate and 7.5–15 $\mu$  thick; clamp connections absent.

Hab. In forest of *Abies homolepis*, etc., Mt. Ôdaigahara, ca. 1,600m alt., Nara-pref., Aug. 2, 1972 (no. 4687—type); Aug. 3, 1972 (no. 4688, coll. Dr. M. Hamada).

Distr. Japan (Nara).

Distinguished from *B. appendiculatus* (Fr.) Secr. chiefly by the reddish stem. From *B. speciosus* Frost it differs in the color of the cap and the somewhat broader spores.

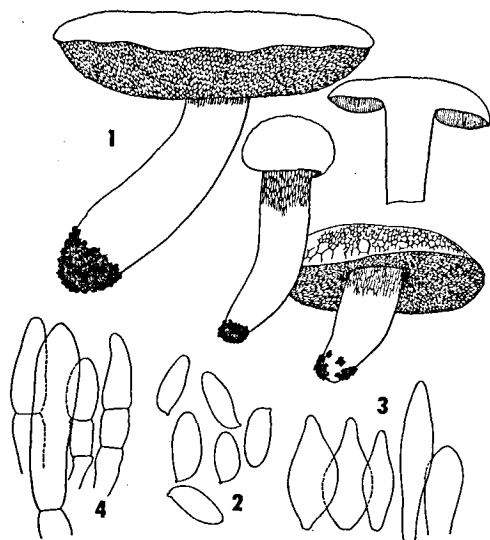


Fig. 41. *Tylopilus nigropurpureus*: 1, carpophores; 2, spores; 3, cheilocystidia; 4, cuticle. (1  $\times 1/2$ ; 2  $\times 750$ ; 3, 4  $\times 450$ )

### 93) *Tylopilus nigropurpureus* (Corner)

Hongo comb. nov.—*Boletus nigropurpureus* Corner, *Boletus in Malaysia* 178, pl. 14 (1). 1972. (Fig. 41)

Cap 3–8cm broad, hemispherical to convex, then flattened, surface dry, often rugose, subpruinose or nearly smooth, "blackish

brown (3)" to "fuscous", often minutely rimose-areolate. Flesh thick, firm, pallid to grayish white, turning grayish red or brownish orange upon exposure, and finally blackish, taste mild, odor none. Tubes adnate then depressed, pale grayish then dingy gray or sordid flesh color, turning rapidly reddish when bruised and finally blackish, 3–10mm long; pores small,  $\pm 1$ mm across, subcircular or subangular, grayish, becoming blackish where touched. Stipe 3–7cm long, 5–15mm thick, ventricose, subequal, or tapering downward, subpruinose or finely furfuraceous, usually reticulate in the upper half, concolorous with or paler than the cap, solid. Spores pale melleous under the microscope, 8.5–11 (12.5)×3.5–4.5 (5.5)  $\mu$ , spindle-shaped, smooth, often with a suprahilar depression; basidia four-(rarely two-)spored, 26×10.5 $\mu$ ; cheilocystidia numerous, 23–61×6–13 $\mu$ , clavate, subventricose or somewhat flask-shaped, thin-walled, hyaline; hymenophoral trama of the *Phylloporus*-type; clamp connections absent; cuticle made up of a palisade of 7.5–11 $\mu$  broad hairs which are septate, slightly tapering upward and with smooth dark brownish walls.

Hab. On the ground under *Pinus densiflora*, *Quercus serrata*, etc., by roadside, Ishiyama-Hiratsu, Ôtsu, July 14, 1958 (no. 1815); in forest under *Q. glauca*, *Q. serrata*, etc., Tanakami-Kurozu, Ôtsu, July 6, 1961 (no. 2276) & July 16, 1964 (no. 2890); in forest of *Castanopsis cuspidata*, Arato-jinja, Ôtsu, July 29, 1972 (no. 4686).

Distr. Singapore, Malaya, New to Japan (Shiga).

Rather common in broad-leaved woods, chiefly under *Quercus* and *Castanopsis*, in summer. Easily recognizable by the blackish cap and stem and by the flesh which

becomes first reddish then blackish on exposure to the air.

94) **Leccinum subradicatum** Hongo sp. nov. (Fig. 42)

Pileo 5—6.5cm lato, hemisphaerico, dein convexo, in humidis subviscido, glabro vel  $\pm$  subtomentoso, e albido dilute argillaceo; carne crassa, alba, fracta vinaceo-grisea; odore saporeque subnullo; tubulis depressis ad stipitem, albidis, deinde sordide brunneolis, 7—12mm longis; poris parvis, 2—3 in uno mm, rotundatis vel plus minus angularibus, pallidis, fractis luteo-brunneis; stipite 7—9cm longo, 8—13mm crasso, subventricosus, basi subradicato, albo vel albido, decorum eburneo, ruguloso-striato, furfuraceo-punctato; punctis albis, tarde griseo-brunneis vel fuscis; sporis sub microscopio pallide fulvis,  $11.5-19 \times 4-5\mu$ , anguste subfusiformibus; cheilocystidiis  $25-36 \times 7.5-10\mu$ , clavatis, interdum fusoido-ventricosus; pleurocystidiis  $28-32 \times 7.5-10\mu$ , sub-

lageniformibus.

Cap 5—6.5cm broad, hemispherical, then convex, surface subviscid when wet, glabrous or slightly subtomentose, whitish to "pale pinkish cinnamon", sometimes becoming pale sordid grayish brown in age; margin slightly extended beyond the tubes. Flesh thick, white, turning vinaceous gray when cut, often with greenish blue spots in the stem; odor slight, taste mild. Tubes depressed around the stem, at first whitish, then yellowish to sordid brownish, 7—12mm long; pores small, 2—3 to a mm, round or subangular, pallid, staining yellow brown when bruised. Stem 7—9cm long, 8—13mm thick, subventricose and somewhat rooting at the base, white or whitish, ivory in the basal area, coarsely rugulose-striate and somewhat reticulate, ornamented with white furfuraceous squamules which slowly become grayish brown to fuscous, solid or stuffed. Spores pale fulvous under the microscope,  $11.5-19 \times 4-5\mu$ , narrowly subfusiform, smooth, the suprahilar depression often distinct; basidia four-spored,  $25-32 \times 7.5-10.5\mu$ ; cheilocystidia abundant,  $25-36 \times 7.5-10\mu$ , clavate, sometimes fusoid-ventricose, melleous in KOH; pleurocystidia scattered,  $28-32 \times 7.5-10\mu$ , ventricose with an elongated narrow neck, hyaline or melleous; caulocystidia  $16-48 \times 7.5-17\mu$ , clavate or ovate-pedicellate; tube-trama of somewhat divergent hyphae  $5.5-16\mu$  wide, the end-cells often tapered to a subacute apex.

Hab. Under *Populus sieboldii*, Kamidana-kami-Kiryu, Ôtsu, Sept. 18, 1971 (no. 4570); Sept. 24, 1971 (no. 4576); Sept. 26, 1972 (no. 4767—type).

Distr. Japan (Shiga).

Recognizable by the habitat, the whitish



Fig. 42. *Leccinum subradicatum*: 1, carpophores; 2, spores; 3, cheilocystidia; 4, pleurocystidia; 5, cuticular hyphae; 6, caulocystidia.

(1  $\times 1/2$ ; 2  $\times 750$ ; 3—6  $\times 450$ )

cap, the staining of the flesh to vinaceous gray and the somewhat rooted stem. Differs from *L. variabile* Smith, Thiers & Watling in the narrowed base of the stem, the color change of the flesh and the tree-associate. *L. chalybaeum* Singer is a pale buff species found under *Quercus*, superficially like *L. subradicatum*, but with spores being not so variable in size ( $16.3\text{--}17.7 \times 5.5\text{--}6.2\mu$ ) and more or less equal stem, not rooted.

95) ***Russula castanopsidis*** Hongo sp. nov. (Fig. 43)

Pileo 3.5–5.5cm lato, convexo, dein expanso, medio latius depresso, sicco, e pallide argillaceo isabellino, ad marginem pallidiore, cutifracto, margine breviter subsulcata; carne tenui, alba; odore nullo, sapore miti; lamellis attenuato-liberis, confertis, 3–6mm latis, ventricosis, albis; stipite 4–6.5cm longo, 6–8mm crasso, aequali vel ad basim attenuato, albo, rugoso-striato, farcto; sporis in pulvere albis,  $7.5\text{--}9(9.5) \times 5.5\text{--}7(8)\mu$ , subglobosis, echinulatis; cheilocystidiis  $48\text{--}63 \times 7\text{--}13\mu$ ; pleurocystidiis  $58\text{--}75 \times 11\text{--}20\mu$ .

Cap 3.5–5.5cm broad, convex, then flattened and broadly depressed, surface dry,

often wrinkled in the center, color between "pale pinkish buff" and "tilleul-buff", or "Isabella color", paler (or whitish) at the margin, cuticle soon cracking from the margin inward into irregular, firmly adnate patches, margin slightly and shortly striate. Flesh rather thin, white, somewhat elastic; odor none, taste mild. Gills narrowed behind, almost free, rather crowded, 3–6mm broad, ventricose, equal, edges minutely fimbriate. Stem 4–6.5cm long, 6–8mm thick, equal or narrowed toward the base, white, wrinkled-striate, stuffed. Spores white in mass,  $7.5\text{--}9(9.5) \times 5.5\text{--}7(8)\mu$ , subglobose, coarsely warty-spinulose; basidia four-spored,  $32\text{--}38 \times 11.5\text{--}14\mu$ ; cheilocystidia abundant,  $48\text{--}63 \times 7\text{--}13\mu$ , acuminate or mucronate; pleurocystidia sparse,  $58\text{--}75 \times 11\text{--}20\mu$ , ventricose-rostrate, hyaline, thin-walled; epicutis composed of a turf of more or less erect hyphae, apices rounded or subacute, no pilocystidia.

Hab. Under oaks (*Quercus glauca*, *Q. serrata*, etc.), Kamidanakami-Dô, Ôtsu, July 12, 1971 (no. 4451): under *Castanopsis cuspidata*, Tanakami-Sekinotsu, Ôtsu, July 15, 1971 (no. 4458-type): under *C. cuspidata* Arato-jinja, Ôtsu, July 19, 1971 (no. 4462) & Sept. 11, 1972 (no. 4741): under *Castanopsis*, *Quercus*, etc., Minoo Park, Minoo, July 18, 1969 (no. 4804, coll. T. Ueda).

Distr. Japan (Shiga, Osaka).

Very common in broad-leaved forests, chiefly under *Castanopsis* and *Quercus*, from summer to autumn, often growing in large numbers. This is a small to medium species, recognizable by the slender stature and the cuticle of the cap becoming broken up into areolate squamules.

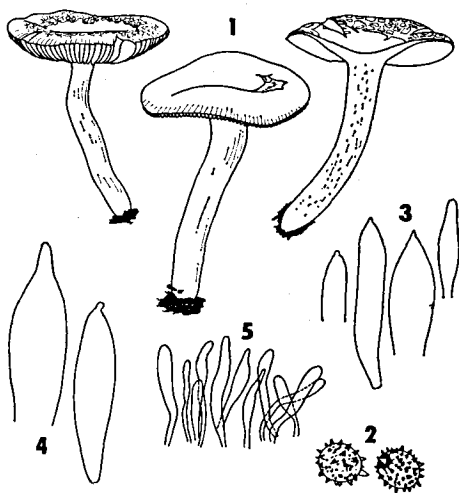


Fig. 43. *Russula castanopsidis*: 1, carpophores; 2, spores; 3, cheilocystidia; 4, pleurocystidia; 5, epicutis. (1  $\times 1/2$ ; 2  $\times 750$ ; 3–5  $\times 450$ )

Biological Institute, Faculty of Education, Shiga University, Otsu, Japan.

## 菌 類 記 (12)

この報文では日本産ハラタケ目菌類7種をとり扱ったが、うちトキイロヒラタケ・クロヒメカラカサタケ・ヒシノミシバフタケ・オオダイアシベニイグチ・ネナガシロヤマイグチ・カレバハツの6種は新種、クロニガイグチは日本新産種である。引用した標本はすべて滋賀大学教育学部生物研究室(大津市石山平津町)の筆者の手もとに保存されている。

89) *Pleurotus incarnatus* Hongo トキイロヒラタケ (新種)。ヒラタケ *P. ostreatus* (Fr.) Kummer に似るが、全体が美しいトキ色～肉色を呈し、また胞子紋も肉色である。京都市左京区北白川、京都大学植物園で採集。北海道にも産することが知られている。食用にすることができる。

90) *Lepiota fusciceps* Hongo クロヒメカラカサタケ (新種)。ナカグロキツネノカラカサ *L. atosquamulosa* Hongo およびナカグロヒメカラカサタケ *L. praetervisa* Hongo に近縁であるが、前者とは胞子が多少小形な点、後者とはかさの表皮が黒かっ色を呈する点で区別される。大津市田上関ノ津町シイ林内のアカマツの古い切り株に発生。

91) *Panaeolina rhombisperma* Hongo ヒシノミシバフタケ (新種)。黒かっ色の小菌で、胞子がヒシ形をしている点がいちじるしい特徴である。分類学的位置については今後検討を要するが、とりあえず *Panaeolina* 属として

記載することにした。相良直彦氏(京都大学教養部)が京都大学構内の、尿素を施した地上で採集したものである。

92) *Boletus odaiensis* Hongo オオダイアシベニイグチ (新種)。*B. appendiculatus* (Fr.) Secr. に近縁の種類で、かさは黄かっ色、茎には赤色の不明りょうな網目があり、肉は淡黄色で多少青変する。奈良県大台が原山、海拔1,600m 付近のウラジロモミ林内に発生。

93) *Tylopilus nigropurpureus* (Corner) Hongo クロニガイグチ (新称)。かさ・茎ともに黒かっ色で、茎の上半部には網目模様をあらわす。肉は灰白色であるが、空気に触れれば赤くなり、ついには黒く変わる。大津市内のアカマツ・コナラ林、シイ林などの地上に発生。

94) *Leccinum subradicatum* Hongo ネナガシロヤマイグチ (新種)。かさ・茎ともに類白色で、茎の基部はやや根状に細まる。茎の表面には白色の小りん片を付けるが、しだいに灰かっ色～黒色に変わる。9月中・下旬ごろ、大津市上田上桐生町の国有林内、ヤマナラシの樹下に発生。

95) *Russula castanopsisidis* Hongo カレバハツ (新種)。かさの中央部はくぼみ、淡灰黄かっ色、周辺部は淡色～ほとんど白色、表皮はしばしば不規則にひびわれる。ひだと茎は白色。大津市内の林内、コナラ・アラカン・シイなどの樹下に通常群生する。大阪府箕面市、箕生公園のシイ林にも発生(上田俊穂氏採集)。