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Fungi of the Bonin Islands. IV.

By

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1. *Volvaria bombycina* (SCHAEFF. ex FR.) QUÉL.

Champ. Jura Vosg. I, in Mém. Soc. D'Emul. Montb. 2 sér. V, 114, 1872-GILL. Hymen. Fr. 387, cum icone, 1874-SACC. Syll. Fung. V, 656, 1887-KAUFFM. Agar. Mich. 527, pl. 100, 1918-BRES. Icon. Myc. XI, pl. 526, 1929-LANGE, Fl. Agar. Dan. II, 78, pl. 68, f. F, 1936-IMAI, Journ. Fac. Agr. Hokkaido Imp. Univ. XLIII, 154, pl. 3, f. 8, 1938.

Agaricus bombycinus SCHAEFF. Fung. Bavar. IV, Ind. 42, pl. 98, 1774.

Agaricus incarnatus BATSCH, Elench. Fung. 51, 1783.

Amanita incarnata PERS. Syn. Fung. 248, 1801.

Agaricus (Volvaria) bombycinus FR. Syst. Myc. I, 277, 1821; Epicr. Myc. 138, 1838; Hymen. Eur. 182, 1874-BARLA, Champ. Nice, 50, pl. 25, f. 1-5, 1859-BERK. Outl. Brit. Fung. 139, pl. 7, f. 1, 1860-CKE. Ill. Brit. Fung. pl. 293, 1886.

Volvariopsis bombycina MURRILL, Mycologia, III, 281, 1911; North Amer. Fl. X, 143, 1917.

Hab. On dead wood. Hahashima: Kitamura-Sekimonzan (Nov. 20, 1936).

Distr. Europe, North America, Australia, Africa, Siberia, Asia Minor, Japan (Hokkaido, Honshu, Bonin Islands).

Jap. name. *Kinu-ô-fukuro-take*.

2. *Volvaria microspila* (BERK. & CURT.) SACC.

Syll. Fung. V, 660, 1887.

Agaricus (Volvaria) microspila BERK. et CURT. Proceed. Amer. Acad. IV, 115, 1860.

?*Agaricus (Volvaria) pseudovolwaceus* BERK. et CURT. Journ. Linn. Soc., Bot. XI, 530, 1871.

?*Agaricus (Volvaria) apalotrichus* BERK. et CURT. Ibid. XI, 530, 1871.

?*Agaricus (Volvaria) coleatus* BERK. et CURT. Ibid. XI, 530, 1871.

?*Volvaria pseudovolwacea* SACC. Syll. Fung. V, 657, 1887-PETCH, Ann. Royal Bot. Gard. Peradeniya, IX, 203, 1924.

?*Volvaria hapalotricha* SACC. Ibid. V, 659, 1887.

?*Volvaria coleata* SACC. Ibid. V, 659, 1887.

Solitary. Pileus about 3.2 cm. broad, at length nearly plane; surface slightly viscid, not purely dry, 'light' olive-brown at the centre, paler toward the margin, silky downy with concolorous downs; context white; lamellae remote, at length onion-skin-pink or buff-pink, crowded, minutely serrulate on the edge, 4 mm. wide; stipe about 5 cm. long and 3 mm. thick, equal or slightly attenuated upward, largely enlarged or subbulbous at the base, white or faintly yellowish, silky-downy, slightly viscid, solid and white within; volva vaginate, about 12 mm. high and 10 mm. thick, broken into three thin lobes

above, nearly olive-brown at the lobe, whitish below; spores salmon-pink in mass, broadly oblong or broadly ellipsoidal, $3.5-5 \times 3-4\mu$, smooth, 1-guttulate.

Hab. On rotten wood in shady damp woods. Chichishima: Takedabokujō (Nov. 5, 1936).

Distr. Bonin Islands and ?Ceylon.

Jap. name. *Munin-hime-fukuro-take* (n. n.).

The type specimen preserved in CURTIS Herbarium has subglobose spores, and CURTIS has noted, on the sheet of specimen, $1/4000$ inch of the dimension of spore. Our fungus, however, has broadly oblong or broadly ellipsoidal spores by which the two are not identical. But the macroscopic features closely resemble each other. According to PETCH's report, Cuban fungi above cited which were published by BERKELEY and CURTIS are very related with ours, and we include with some doubt these fungi into the synonym of ours.

3. *Pluteus horridilamellus* S. ITO et IMAI, sp. nov.

Solitarius. Pileo circa 4 cm. lato, subumbonato, "colonial-buff", pulveribus brunneis dense oblecto, centro irregulariter rugoso, margine velati et sub lente fimbriato; carne albida, margine tenui; lamellis liberis, albis dein carneis, confertis, acie fulvis; stipite circa 11 cm. longo 4 mm. crasso, leviter attenuato, subfibroso, contorto, "antimony-yellow"; sporis in cumulo carneis, late ellipsoideis, laevibus, $5-7.5 \times 3-5\mu$; cystidiis acuminatis, ventricosis, hyalinis fulvidulisque.

Hab. On rotten wood in shady woods. Hahashima: Okimura-Kuwanoki-yama (Nov. 18, 1936).

Distr. Endemic.

Jap. name. *Fusa-benihida-take* (n. n.).

The present fungus is somewhat related to *P. spinulosus* MURRILL in the brown colored edge of lamellae, but it is clearly different from the latter by the powdery pileus and the smaller spores.

4. *Pluteus Okabei* S. ITO et IMAI, sp. nov.

Solitarius. Pileo circa 1 cm. lato, demum plano, sicco, "mummy-brown", laevi, glabro; carne alba, tenuissima; lamellis subliberis, confertis, "vinaceous-cinnamon"; stipite circa 3 cm. longo 1.5 mm. crasso, aequali, albo, solido; sporis in cumulo carneis, globosis, subglobosis, ovatis vel late ellipsoideis, laevibus, 6 vel $6-8 \times 6-7\mu$; cystidiis ventricosis, apice laevibus vel substellatis, hyalinis.

Hab. On the decayed wood in woods. Chichishima: Mt. Asahi-yama (Nov. 12, 1936).

Distr. Endemic.

Jap. name. *Okabe-benihida-take* (n. n.).

5. *Pluteus Machidae* S. ITO et IMAI, sp. nov.

Gregarius. Pileo 3.5–5 cm. lato, demum obtuso-umbonato, sicco, albido, disco pulveribus brunneis oblecto; carne alba, disco crassa, margine tenui; odore saporeque blando; lamellis liberis, latis, carneis, confertis; stipite 4–8 cm. longo, 4–6 mm. crasso, leviter attenuato, basi incrassato, albido, fibroso, nitente, leviter contorto, farcto; sporis in cumulo "orange-cinnamon", late ellipsoideis, ovatis, subglobosis vel globosis, laevibus, 5–6 vel 6–7.5 × 5–6 μ .

Hab. On the dead trunk in woods. Hahashima: Kitamura-Sekimonzan (Nov. 20, 1936).

Distr. Endemic.

Jap. name. *Machida-benihidatake* (n. n.).

6. *Pluteus Daidoi* S. ITO et IMAI, sp. nov.

Solitarius. Pileo circa 7 cm. lato, obtuso-umbonato, udo subviscido, disco flavidulo glabroque, margine olivaceo-brunneo-fibrilloso; carne alba, crassa, odore saporeque nullo; lamellis liberis vel remotis, carneis, confertis; stipite circa 7 cm. longo 6 mm. crasso, leviter attenuato, basi leviter incrassato, albo, nitente, subglabro, solido; sporis in cumulo carneis, late ellipsoideis, ovatis, subglobosis vel globosis, laevibus, 7.5–10 μ in diam. vel 7.5–10 × 7.5–9 μ ; cystidiis ventricosis vel subfusiformibus, apice stellatis, hyalinis, membrano crassis.

Hab. On the ground in woods. Hahashima: Okimura-Kuwanokiyama (Nov. 20, 1936, K. DAIDO).

Distr. Endemic.

Jap. name. *Daido-benihidatake* (n. n.).

7. *Pluteus verruculosus* S. ITO et IMAI, sp. nov.

Solitarius. Pileo circa 7 cm. lato, umbonato, subfuligineo, verruculoso, margine striato; carne alba; lamellis liberis, confertis, primo albis, dein carneis; stipite circa 7 cm. longo et 6 mm. crasso, leviter attenuato, albo, nitente, subfibroso vel subsulcato, leviter contorto; sporis in cumulo carneis, globosis vel subglobosis, 6–8 μ , laevibus; cystidiis nullis.

Hab. On the ground in woods. Hahashima: Kitamura-Sekimonzan (Nov. 20, 1936).

Distr. Endemic.

Jap. name. *Munin-shikatake* (n. n.).

The present fungus is allied to *P. cervinus* but it differs from the latter by the verruculose and striate pileus. It also somewhat resembles *P. spilopus* (BERK. et BR.) SACC., from which it is distinguishable by the glabrous and white stipe.

8. *Leptonia lampropus* (FR.) QUÉL.

Champ. Jura Vosg. I, in Mém. Soc. D'Emul. Montb. 2 sér. V, 121, 1872-GILL. Hymen. Fr. 416, cum icone, 1874-SACC. Syll. Fung. V, 707, 1887-RICKEN, Blätterp. 293, pl. 73, f. 7, 1915-BRES. Icon. Myc. XII, pl. 570, f. 1, 1929-IMAI, Journ. Fac. Agr. Hokkaido Imp. Univ. XLIII, 175, 1938.

Agaricus (*Leptonia*) *lampropus* FR. Syst. Myc. I, 203, 1821; Epicr. Myc. 152, 1838; Hymen. Eur. 202, 1874-CKE. Ill. Brit. Fung. pl. 331, 1886.

Rhodophyllus (*Leptonia*) *lampropus* QUÉL. Ench. Fung. 60, 1886-LANGE, Fl. Agar. Dan. II, 98, pl. 76, f. C, 1936.

Hyporhodium (*Leptonia*) *lampropus* SCHROET. Pilze Schles. I, 615, 1889.

Hab. On the ground in woods. Chichishima: Ôgimura-Renjudani (Nov. 7, 1936).

Distr. Europe, North America, Japan (Hokkaido, Honshu, Bonin Islands).

Jap. name. *Ao-e-no-momiuratake*.

9. *Leptonia brunneola* S. ITO et IMAI, sp. nov.

Solitaria. Pileo circa 3 cm. lato, depresso-convexo, expanso, sicco, brunneo-farinoso vel brunneo-farinoso-squamuloso, margine primo valde involuto; carne tenuissima, alba; lamellis, adnatis, primo albis dein carneis, distantibus, subangustis; stipite circa 5 cm. longo et 4 mm. crasso, subaequali, albo vel albido, fibroso, apice leviter farinoso, cavo; sporis anguloso-ellipsoideis, $9-11 \times 6.5-7.5\mu$; cystidiis nullis.

Hab. On the ground in woods. Chichishima: Asahiyama (Nov. 12, 1936).

Distr. Endemic.

Jap. name. *Munin-cha-momiuratake* (n. n.).

The fungus is allied to *L. gnaphalodes* (BERK. et BR.) SACC., from which it is easily distinguished.

10. *Pholiota tabacinirugosa* S. ITO et IMAI, sp. nov.

Solitaria vel subgregaria. Pileo 4-8 cm. lato, convexo, dein expanso, obtuso, irregulariter rugoso, centro badio, margine pallidiore, sicco, glabro, margine diu involuto; carne albida vel flavidula, subcrassa, odore saporeque nullo; lamellis late adnexis vel adnatis, avellaneis vel brunneis, confertis; stipite 6-11 cm. longo, 4-8 mm. crasso, aequali, flavidulo, infra annulam squamulis brunneis oblecto, supra albo striatoque, solido; annulo apicali, margine pilei concolori, membrano, persistente, subtus floccoso-squamulis brunneis ornato; sporis in cumulo fulvis, ellipsoideis, laevibus, apice truncatis, $7.5-10 \times 3.5-5\mu$; cystidiis nullis.

Hab. On dead bark or wood of *Celtis boninensis* KOIDZ. (*Munin-enoki*). Hahashima: Okimura-Kuwanokiyama (Nov. 18, 1936).

Distr. Endemic.

Jap. name. *Shirva-sugitake* (n. n.).

11. *Pholiota Livistonae* S. ITO et IMAI, sp. nov.

Gregaria. Pileo 1.5–2 cm. lato, subconico, dein expanso, umbonato, sicco, fibroso-squamuloso, brunneo vel brunneolo, fibrilloso-squamulis badiis dense obtecto, margine saepe cyaneo-colorato; carne flavidula, odore nullo, sapore amaro; lamellis adnexis, submarginatis vel adnatis, brunneis, confertissimis, acie serrulatis vel subfimbriatis; stipite 1–2 cm. longo, 1.5–3.5 mm. crasso, subaequali, supra brunneo, infra fulvo, cavo; annulo fugacissimo, fibroso-membranaceo; sporis in cumulo brunneis, ellipsoideis, asperulis, non-truncatis, $6-8 \times 3.5-5\mu$; cystidiis ignotis.

Hab. On dead trunks of *Livistona chinensis* R. BR. (*Birô*). Chichishima: Fukurozawamura-Kobikidani (Nov. 15, 1936).

Distr. Endemic.

Jap. name. *Birô-sugitake* (n. n.).

12. *Gymnopilus noviholocirrhus* S. ITO et IMAI, sp. nov.

Dense caespitosus. Pileo 4–10 cm. lato, convexo, dein expanso, plano vel subumbonato, sicco, udo; ferrugineo, sicco pallescente, centro spinulis dense obtecto, margine fibroso; carne flava vel flavidula, crassa, odore nullo, sapore amaro; lamellis late adnexis, post latioribus, confertis, latis, subcinnamomeis; stipite 4–10 cm. longo, 5–10 mm. crasso, aequali, basi saepe incrassato, cinnamomeo vel brunneo, fibroso, subelastico, fragilique, farcto; sporis in cumulo ferrugineis, ellipsoideis, verruculosus, saepe apiculatis, $6.5-8.5 \times 5-6.5\mu$.

Hab. On dead trunks of *Celtis binimensis* KOIDZ. (*Munin-enoki*). Hahashima: Okimura-Kuwanokiyama (Nov. 18, 1936).

Distr. Endemic.

Jap. name. *Ogasawara-tsumutake* (n. n.).

The present fungus somewhat resembles *Gymnopilus subpenetrans* MURRILL, *G. Nashii* MURRILL and *G. Earlei* MURRILL. But it is clearly distinct from these American species. *Agaricus holocirrhus* BERK. et CURT. is very close to this, and it may be a small form of ours. According to SACCARDO's system in Sylloge, the present fungus may be named *Flammula noviholocirrhia* S. ITO et IMAI.

13. *Crepidotus palmularis* (BERK. et CURT.) SACC.

Syll. Fung. V, 880, 1887.

Agaricus (Crepidotus) palmularis BERK. et CURT. Proceed. Amer. Acad. IV, 117, 1860.

? *Agaricus (Crepidotus) leucochrysos* BERK. et CURT. Ibid. IV, 117, 1860.

Imbricated caespitose or gregarious. Pileus 2-7 × 2-4 cm. broad, sessile, suborbicular, dimidiate or reniform; surface white and adpressedly silky flocculose, subhygrophanous, margin when wet brownish and striate; context white; lamellae adnate or adnate with a decurrent tooth, broad, finally cinnamon-buff, edge entire, moderately crowded; spores clay color in mass, ovate, subglobose or globose, 5-7 × 5-6 μ , verruculose.

Hab. On dead wood in shady woods. Chichishima: Ôgimura-Renjudani (Nov. 7, 1936). Hahashima: Kitamura-Sekimonzan (Nov. 20, 1936).

Distr. Endemic.

Jap. name. *Ogasawara-chahiratake* (n. n.).

CURTIS described the character of the fungus from the dried specimens only. The spores of the type specimen of *C. palmularis* are subglobose and verruculose. *C. leucochrysos* is probably the same as *C. palmularis*. In his manuscript, CURTIS has noted that the spores of *C. palmularis* like those of *C. leucochrysos*.

14. *Crepidotus uber* (BERK. et CURT.) SACC.

Syll. Fung. V, 878, 1887.

Agaricus (Crepidotus) uber BERK. et CURT., Proceed.: Amer. Acad. IV, 117, 1860.

Imbricated or gregarious. Pileus 0.8-1.3 × 0.7-1.0 cm. wide, flabelliform or subreniform; surface whitish when fresh, becoming yellowish or brownish when dry, slightly viscid when wet, hygrophanous, dark-brown-striate about half length of radius of pileus when wet, astriate when dry, almost glabrous, except a white villosulous base; lamellae decurrent, radiating from a basal point, narrow, crowded, ferruginous when matured; stipe almost none; spores snuff-brown in mass, ellipsoidal, smooth, 6-8 × 3.5-6 μ , mostly 7.5 × 5 μ .

Hab. On dead twigs or on rotting wood in shady woods. Chichishima: Asahiya (Nov. 12, 1936); Fukurozawamura-Kobikidani (Nov. 15, 1936). Hahashima: Kitamura-Sekimonzan (Nov. 20, 1936).

Distr. Endemic.

Jap. name. *Munin-hime-cha-hiratake* (n. n.).

The spores of the type specimen of *C. uber* are broadly ellipsoidal, smooth, and about 7.5 × 5 μ in the size. The original specimen is accompanied on the sheet by the note "white? becoming light brown".

15. *Crepidotus subpurpureus* S. ITO et IMAI, sp. nov.

Gregarious. Pileo 5-10 × 4-8 mm. lato, hemisphaerico, flabelliformi vel subreniformi, subconvexo, subvelutino, subpurpureo, margine involuto; carne albida, pellicula subpurpurea, subcarnosa; lamellis decurrentibus vel adnatis, avellaneis, acie fimbriatis subpurpureisque; stipite laterali, circa 1 mm. longo

crassoque, concolori villosoque; sporis in cumulo ferrugineis, late ellipsoideis vel suboblongis, verruculosis, $6-7.5 \times 3.5-5\mu$.

Hab. On rotting trunk of wood in woods. Hahashima: Kitamura-Sekimonzan (Nov. 20, 1936).

Distr. Endemic.

Jap. name. *Murasaki-cha-hiratake* (n. n.).

The present fungus is somewhat allied to *C. reversus* (B. & BR.) SACC., from which it is easily distinguished by the ellipsoidal spores.

16. *Agaricus Hahashimensis* S. ITO et IMAI, sp. nov.

Solitarius. Pileo circa 8 cm. lato, convexo dein plano, flavidulo vel ochraceo, brunneo-fibrilloso, disco obscuriore subglabrosoque, margine pallidiore et albo-velati; carne albida, crassa, molli, odore saporeque blando; lamellis, liberis, confertis, demum atro-purpureis, ventricosus; stipite circa 9 cm. longo, 8 mm. crasso, leviter attenuato vel basi incrassato, albo vel albido, supra annulam subglabro, infra fibrilloso-squamuloso, basi subglabro, cavo; annulo superiore, membranaceo, subcrasso, subpersistente, albo, acie subduplice; sporis in cumulo atro-brunneis, ellipsoideis, oblongis vel late ellipsoideis, laevibus, $5-7 \times 3-4.5\mu$.

Hab. On the ground in woods. Hahashima: Kitamura-Sekimonzan (Nov. 20, 1939).

Distr. Endemic.

Jap. name. *Hahashima-morinokasa* (n. n.).

17. *Agaricus silvicola* (VITT.) SACC.

Forma *immutatus* S. ITO et IMAI, nov. f.

A typo diferto colore ad flavido immutato.

Hab. On the ground in open places in Gardens. Chichishima: Ômura (Nov. 11, 1936).

Distr. Endemic.

Jap. name. *Chichishima-Ô-haratake* (n. n.).

The present form is distinguished from the typical form of the species by the non-changing color to yellow with age and on dried, as well as by the habitat.

18. *Hypholoma fasciculare* (HUDS. ex FR.) QUÉL.

Champ. Jura Vosg. I, in Mém. Soc. D'Emul. Montb. 2 sér. V, 144, 1872-GILL. Hymen. Fr. 573, cum icone, 1874-SACC. Syll. Fung. V, 1029, 1887-ROLLAND, Atl. Champ. 71, f. 163, 1910-HARPER, Trans. Wisc. Acad. Sci. Arts & Lett. XVII, 1149, pl. 75, 1914-RICKEN, Blätterp. 249, pl.

65, f. 1, 1915-KAWAMURA, Ill. Jap. Fung. pl. 16, f. 16-17, 1915-BRES. Icon. Myc. XVII, pl. 847, 1931-IMAI, Journ. Fac. Agr. Hokkaido Imp. Univ. XLIII, 278, 1938-LANGE, Fl. Agar. Dar. IV, 74, pl. 144, f. E, 1939.

Agaricus fascicularis HUDS. Fl. Angl. ed. 2, 615, 1778.

Agaricus (Hypholoma) fascicularis FR. Syst. Myc. I, 288, 1821; Epicr. Myc. 122, 1838; Hymen. Eur. 291, 1874-CKE. Ill. Brit. Fung. pl. 561, 1886.

Naematoloma fasciculare KARST. Hattsv. I, 496, 1879.

Geophila (Stropharia) fascicularis QUÉL. Ench. Fung. 113, 1886.

Hab. On dead wood in woods. Chichishima: Ôgimura-Renjudani (Nov. 9, 1936). Hahashima: Okimura-Kuwanokiyama (Nov. 18, 1936); Kitamura-Sekimonzan (Nov. 20, 1936).

Distr. Europe, North America, Australia, Asia Minor, Japan proper, Bonin Islands.

Jap. name. *Niga-kuritake*.

19. *Hypholoma hydrophyllum* (BULL. ex Fr.) QUÉL.

Champ. Jura Vosg. I, in Mém. Soc. D'Emul. Montb. 2 sér. V, 146, 1872-SACC. Syll. Fung. V, 1041, 1887-RICKEN, Blätterp. 247, pl. 64, f. 6, 1915-HARPER, Trans. Wisc. Acad. Sci. Arts & Lett. XVIII, 417, pl. 24, 1916-KONR. et MAUBL. Icon. Sel. Fung. pl. 42, 1927-BRES. Icon. Myc. XVIII, pl. 854, 1931-PARKER, Mycologia, XXV, 181, pl. 26, f. 10; pl. 27, f. 22; pl. 28, f. 28; pl. 30, f. 36, 1933-IMAI, Journ. Fac. Agr. Hokkaido Imp. Univ. XLIII, 281, 1938.

Agaricus hydrophilus BULL. Champ. Fr. pl. 511, 1791.

Agaricus (Psathyra) stipatus β *hydrophilus* FR. Syst. Myc. I, 296, 1821.

Agaricus (Hypholoma) hydrophilus FR. Epicr. Myc. 225, 1838; Monogr. Hymen. Suec. I, 427, 1857-CKE. Ill. Brit. Fung. pl. 605, f. B, 1886.

Bolbitius hydrophilus FR. Hymen. Eur. 333, 1874-GILL. Hymen. Fr. 594, cum icone, 1874.

Drosophila (Hypholoma) hydrophila QUÉL. Ench. Fung. 116, 1886.

Hab. On dead wood in woods. Hahashima: Okimura-Kuwanokiyama (Nov. 18, 1936).

Distr. Europe, North America, Japan (Hokkaido, Honshu, Bonin Islands).

Jap. name. *Musasabi-take*.

20. *Hypholoma boninense* S. ITO et IMAI, sp. nov.

Gregarium vel subcaespitosum. Pileo 3-5 cm. lato, conico dein expanso, glabro, hygrophano, centro "orange-cinnamon", margine udo "prussian-red", ruguloso asperuloque, margine undulato; carne tenui, sub pellicula "vinaceous-buff", subtus albidâ, odore saporeque nullo; lamellis adnatis vel adnexis, confertissimis, angustis, "avellaneus" vel "wood-brown", demum "fuscous"; stipite 4-8 cm, longo, 4-8 mm. crasso, aequali, albido vel brunneoli, fibrilloso, contorto, cavo; sporis in cumulo fuscis, lemoniformibus vel amygdaliformibus, apiculatis, tuberculoso-verruculosis, sub microscopi olivaceis, $8-10 \times 5-6\mu$.

Hab. On the ground in woods. Hahashima: Kitamura-Sekimonzan (Nov. 20, 1936).

Distr. Endemic.

Jap. name. *Ogasawara-itachitake* (n. n.).

21. *Hypholoma stipatum* (PERS. ex Fr.) IMAI

Journ. Fac. Agr. Hokkaido Imp. Univ. XLIII, 280, 1938.

Agaricus appendiculatus BULL. Champ. Fr. pl. 392, 1791.

Agaricus stipatus PERS. Syn. Fung. 423, 1801.

Agaricus (*Psathyra*) *stipatus* FR. Syst. Myc. I, 296, 1821, p. maj. p.

Agaricus (*Hypholoma*) *appendiculatus* FR. Epicr. Myc. 224, 1838; Hymen. Eur. 296, 1874-BERK.

Outl. Brit. Fung. 170, pl. 11, f. 3-4, 1860-CKE. Ill. Brit. Fungi. pl. 547, 1886.

Hypholoma appendiculatum QUÉL. Champ. Jura Vosg. I, in Mém. Soc. D'Emul. Montb. 2 sér. V, 146, 1872-GILL. Hymen. Fr. 570, cum icone, 1874-SACC. Syll. Fung. V, 1039, 1887-RICKEN, Blätterp.

47, pl. 64, f. 5, 1915-KAWAMURA, Ill. Jap. Fung. pl. 16, f. 1-5, 1915-HARPER, Trans. Wisc. Acad. Sci. Arts & Lett. XVIII, 413, pl. 22, f. A, B, C, 1916-BRES. Icon. Myc. XVIII, pl. 853, 1931.

Drosophila (*Hypholoma*) *appendiculata* QUÉL. Ench. Fung. 116, 1886.

Hab. On the ground or decayed wood in woods. Chichishima: Asahiyama (Nov. 12, 1936).

Distr. Europe, North America, Asia Minor, Japan (Hokkaido, Honshu, Bonin Islands).

Jap. name. *Itachitake*.

22. *Hypholoma stellatofurfuraceum* S. ITO et IMAI, sp. nov.

Dense gregarium vel caespitosum. Pileo 1.5-2.5 cm. lato, conico dein convexo, demum plano, juvenile "pinkish-cinnamon", vel "pale pinkish-buff" dein "vinaceous-buff" vel avellaneous, centro obscuriore, vix hygrophano, leviter ruguloso, atomato, centro stellato-furfuraceo, margine primo floccoso-velato, dein evanescente, longe striato, carne tenui, concolora, sapore odoreque nullo; lamellis adnexis, moderate confertis, "benzo-brown"; stipite 2.5-5 cm. longo, 1.5-3.0 mm. crasso, aequali, albo, sericeo-nitente; basi albo-strigoso, cavo; sporis in cumulo "fuscous-brown", ellipsoideis, laevibus, $7-8 \times 4-5 \mu$.

Hab. On dead wood in shady woods. Chichishima: Ôgimura-Renjudani (Nov. 5, 1936).

Distr. Endemic.

Jap. name. *Kirara-itachitake* (n. n.).

The present fungus is allied to *H. stipatum*, from which it is easily distinguished by the stellately furfuraceous small pileus and the strigoso-villous base of the stipe.

23. *Coprinus plicatilis* [CURT.] FR.

Epicr. Myc. 252, 1838; Hymen. Eur. 331, 1874-GILL. Hymen. Fr. 612, cum icone, 1874-SACC. Syll. Fung. V, 1108, 1887-CKE. Ill. Brit. Fung. pl. 686, f. A, 1888-MASS. Ann. Bot. X,

177, pl. 11, f. 23-25, 1896-RICKEN, Blätterp. 65, pl. 23, f. 2, 1915-BRES. Icon. Myc. XVIII, pl. 884, 1931-IMAI, Journ. Fac. Agr. Hokkaido Imp. Univ. XLIII, 304, 1938.

Agaricus plicatilis CURT. Fl. Lond. pl. 200, 1777.

Agaricus pulcher PERS. Tent. Disp. Fung. 63, 1797; Syn. Fung. 404, 1801.

Agaricus (Coprinus) plicatilis FR. Syst. Myc. I, 312, 1821.

Hab. On the ground or on decayed wood or vegetable in woods. Chichishima: Ôgimura-Renjudani (Nov. 9, 1936); Asahiyama (Nov. 12, 1936). Hahashima: Okimura-Kuwanokiyama (Nov. 18, 1936).

Distr. Europe, North America, Australia, Japan (Hokkaido, Honshu, Bonin Islands).

Jap. name. *Hime-higasa-hitoyo*.

24. *Coprinus boninensis* S. ITO et IMAI, sp. nov.

Gregarius. Pileo circa 3 cm. lato, oblongo, expanso, subumbonato, udo leviter viscidulo, disco squamulis "ochraceous-tawny" coloratis ornato, periphero brunneo vel albidulo-fibrilloso; carne alba, tenuissima; lamellis liberis, primo albis, demum purpureo-fuscis vel brunneo-atris, deliquescentibus, confertis, tenuissimis; stipite 5-8 cm. longo, 3-6 mm. crasso, attenuato, albo vel albidulo, fibrilloso-squamuloso, cavo; sporis in cumulo purpureo-atris, late ellipsoideis vel subglobosis, laevibus, sub microscopi purpureo-brunneis, circa $7.5 \times 5-6\mu$.

Hab. On decaying herbs. Chichishima: Ômura (Nov. 12, 1936).

Distr. Endemic.

Jap. name. *Munin-hitoyotake* (n. n.).

25. *Psathyrella disseminata* (PERS. ex FR.) QUÉL.

Champ. Jura Vosg. I, in Mém. Soc. D'Emul. Montb. 2 sér. V, 153, pl. 8, f. 5, 1872-GILL. Hymen. Fr. 618, cum icone, 1874-SACC. Syll. Fung. V, 1134, 1887-BRES. Icon. Myc. XVIII, pl. 889, f. 2, 1931-IMAI, Journ. Fac. Agr. Hokkaido Imp. Univ. XLIII, 295, 1938.

Agaricus minutulus SCHAEFF. Fung. Bavar. IV, Ind. 72, pl. 308, 1774.

Agaricus disseminatus PERS. Syn. Fung. 403, 1801.

Agaricus (Coprinarius) disseminatus FR. Syst. Myc. I, 305, 1821.

Agaricus (Psathyrella) disseminatus FR. Epicr. Myc. 240, 1838; Hymen. Eur. 316, 1874-CKE. Ill. Brit. Fung. pl. 657, f. B, 1888.

Coprinarius (Psathyrella) disseminatus QUÉL. Ench. Fung. 120, 1886.

Coprinus disseminatus RICKEN, Blätterp. 67, pl. 23, f. 4, 1915.

Psathyrella minutula SACC. Fl. Ital. Crypt., Hymen. 868, 1916.

Hab. On dead wood in woods. Chichishima: Ôgimura-Renjudani (Nov. 7, 1936).

Distr. Europe, North America, Australia, Asia Minor, Japan (Hokkaido, Honshu, Taiwan, Bonin Islands).

Jap. name. *Inusebontake*.

26. *Lactarius sanguifluus* [PAUL.] FR.

Epicr. Myc. 341, 1838; Hymen. Eur. 431, 1874-SACC. Syll. Fung. V, 439, 1887-ROLLAND, Atlas Champ. 37, f. 70, 1910-RICKEN, Blätterp. 31, pl. 11, f. 5, 1915-BRES. Icon. Myc. VIII, pl. 374, 1928-IMAI, Journ. Fac. Agr. Hokkaido Imp. Univ. XLIII, 331, 1938.

Hypophyllum sanguifluum PAUL. Traite Champ. pl. 81, f. 3-5, 1793.

Lactarius sanguifluus var. *vinosus* QUÉL. Champ. Jura Vosg. 10 Suppl., in Assoc. Fr. IX, 668, pl. 8, f. 8, 1880.

Lactarius subpurpureus PK. 29 Ann. Rep. N. Y. State Mus. 43, 1878-SACC. Syll. Fung. V, 439, 1887.

Lactarius Hatsudake TANAKA, Bot. Mag. (Tokyo), IV, 393, pl. 15, 1890-SACC. Syll. Fung. XIV, 95, 1899-KAWAMURA, Ill. Jap. Fung. pl. 7, f. 5-7, 1913.

Lactaria Hatsudake MATSUM. Ind. Pl. Jap. I, 149, 1904.

Lactaria subpurpurea BURLINGH. Lactariae U. S. 60, 1908.

Hab. On the ground in woods of *Pinus liuchuensis* MAYR. (*Liukiu-matsu*). Chichishima: Ôgimura-Kuwanokiyama (Nov. 5, 1936); Ôgimura-Renjudani (Nov. 9, 1936). Edulis.

Distr. Europe, North America, Japan proper, Taiwan, Bonin Islands.
Jap. name. *Hatsudake*.

27. *Lactarius Ogasawarashimensis* S. ITO et IMAI, sp. nov.

Solitarius vel gregarius, edulis. Pileo 3-10 cm. lato, convexo dein plano, demum centro depresso, viscido, glabro, juvenile "congo-pink" dein pallescente, juvenile vix zonato, dein circulis "tilleul-buff" et obscuriore coloratis concentrice zonato, albo-lustrato, margine primo nudo; carne albida, crassa, lacte caerulescente, sapore odoreque nullo; lacte non copioso, "colombia-blue"; lamellis decurrentibus, confertis, "olive-buff", basi aliquando rugulosis, poste aliquando furcatis; stipite 2.5-6 cm. longo, 6-15 mm. crasso, subtus attenuato vel subaequali, "light sky-blue" vel "parula-blue", lustrato, cavo; sporis in cumulo "light buff", subglobosis, $7.5-8.5 \times 7-7.5\mu$, verrucosis.

Hab. On the ground in woods of *Pinus liuchuensis* MAYR. (*Liukiu-matsu*). Chichishima: Ôgimura-Kuwanokiyama (Nov. 5, 1936); Ôgimura-Renjudani (Nov. 9, 1936). Edulis.

Distr. Endemic.

Jap. name. *Ogasowara-hatsudake* (n. n.).

The present fungus occurs in mixing with *L. sanguifluus* and it is closely related with the last one. But it is easily distinguished by the color of latex.

28. *Russula emetica* [SCHAEFF.] FR.

Epicr. Myc. 357, 1838; Hymen. Eur. 448, 1874-GILL. Hymen. Fr. 243, cum icone, 1874-SACC. Syll. Fung. V, 469, 1887-CKE. Ill. Brit. Fung. pl. 1030, 1890-KAWAMURA, Ill. Jap. Fung. pl. 1, f. 7-9, 1912-BRES. Icon. Myc. IX, pl. 435, 1929-IMAI, Journ. Fac. Agr. Hokkaido Imp. Univ. XLIII, 341, 1938.

Agaricus emeticus SCHAEFF. Fung. Bavar. IV, Ind. 9, pl. 15, f. 4-6, 1774.

Agaricus (Russula) emeticus FR. Syst. Myc. I, 56, 1821, p.p.

Hab. On the ground in woods. Chichishima: Ôgimura-Kuwanokiyama (Nov. 5, 1936); Ôgimura-Renjudani (Nov. 9, 1936).

Distr. Europe, North America, Africa, Australia, Asia Minor, Japan proper, Bonin Islands.

Jap. name. *Doku-benitake*.

29. *Russula boninensis* S. ITO et IMAI, sp. nov.

Gregaria vel solitaria. Pileo circa 4-7 cm. lato, convexo dein plano, centro demum depresso, viscidulo, glabro, margine demum striatulo, albido vel flavidulo, centro obscuriore, pellicula separabili; carne alba, spongiosa, crassa, piperata, odore nullo; lamellis adnatis, subaequalis, primo albis, dein flavidulis, confertis; stipite 4-5 cm. longo, 1-1.5 cm. crasso, aequali, albo, basi flavidulo, glabro, nitente, farcto; sporis in cumulo flavidulis, subglobosis vel late ellipsoideis, echinulatis, $7.4-10 \times 7-8\mu$.

Hab. On the ground among fallen needles of *Pinus liuchuensis* MAYR. (*Liukiumatsu*). Chichishima: Ôgimura-Kuwanokiyama (Nov. 5, 1936); Ôgimura-Renjudani (Nov. 7, 9, 1936); Asahiya (Nov. 12, 1936).

Distr. Endemic.

Jap. name. *Ogasawara-ki-hatsu* (n. n.).

The present fungus is somewhat related to *R. farinipes* ROM. sensu J. SCHAEFF., *R. fellea* FR. and *R. similima* PK. It, however, is quite distinct from these species.

30. *Boletus bovinus* LINN. ex FR.

Syst. Myc. I, 388, 1821; Epicr. Myc. 411, 1838; Hymen. Eur. 499, 1874-GILL. Hymen. Fr. 641, cum icone, 1874-SACC. Syll. Fung. VI, 6, 1888-ROLLAND, Atlas Champ. 75, pl. 79, f. 178 1910-KAWAMURA, Ill. Jap. Fung. pl. 3, f. 5-7, 1911-KALLENE. Pilze Mitteleur. I, 70, pl. 28, 1930-BRES. Icon. Myc. XIX, pl. 909, 1931.

Boletus bovinus L. Sp. Pl. 1177, 1753.

Boletus mitis PERS. Myc. Eur. II, 129, 1825.

Viscipellis bovina QUÉL. Ench. Fung. 157, 1886.

Hab. On the ground under trees, especially under *Pinus liuchuensis* MAYR. (*Liukiumatsu*). Chichishima: Ômura (Nov. 4, 1936); Takeda-bokujô (Nov. 5, 1936); Ôgimura-Renjudani (Nov. 5, 1936).

Distr. Cosmopolitan.

Jap. name. *Amitake*.