PERSOONIA
Volume 18, Part 3, 341–364 (2004)

NOTES ON THE GENUS FAYODIA S.L. (TRICHOLOMATACEAE) – II
Type studies of European species described in the genera Fayodia and Gamundia

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Type studies of all European taxa described or combined in the genera *Fayodia* and *Gamundia* (Basidiomycetes, Tricholomataceae) are given. As a result of these studies, a new combination is proposed: *Fayodia anthracobia* var. *bisphaerigerella* (M. Lange) Antonín & Noordel.

The genera *Fayodia* Kühner (1930: 68) and *Gamundia* Raithelh. (1979: 34) are sometimes considered subgenera of the broader genus *Fayodia* (e.g. Singer, 1986). However, Kühner (1980) as well as Bon (1997), Bigelow (1979), and Kuyper (1995a, b) distinguished both as independent genera. This concept is accepted in this paper.

The genus *Fayodia* is characterised especially by having a very distinct, two-layered basidiospore wall and a dry, not gelatinised pilei- and stipitipellis. *Gamundia* is distinguished by verruculose-echinulate, thin-walled, non-amyloid basidiospores and a gelatinised pileipellis. The results of the revisions of all type specimens preserved and available in herbaria and their descriptions in literature are summarised in this paper.

Microscopical features are described from examined material mounted in Melzer's reagent, Congo Red, and KOH. For the basidiospores the following factors are used: Q = quotient of length and width in any one spore; Q av. = mean of Q-values.

The first part of this revision was published in Mycotaxon (Antonín, 1999).

abundans

Agaricus abundans Peck, Ann. Rep. N.Y. State Mus. 29 (1878) 38; *Collybia abundans* (Peck) Sacc., Syll. Fung. 5 (1887) 241; *Fayodia abundans* (Peck) Singer, Lloydia 5 (1942) 126; *Clitocybula abundans* (Peck) Singer, Sydowia 15 (1962) 53.

Syntype: USA, woods Sandlake and Greig (NYS).

Original description. Pileus thin, convex or expanded, subumbilicate, innate-fibrillose, whitish inclining to fuscous, often a little darker and more densely fibrillose on the disk, the thin margin easily splitting; lamellae narrow, close, adnate, sometimes veined, white; stem equal, smooth, hollow, easily splitting, often curved, coloured like the pileus, pruinose at the top. Plant gregarious or subcaespitose, 1'–2' high, pileus 1'–1.5' broad, stem 1" thick. Decaying trunks in woods. Sandlake and Greig. August and September. This fungus is not frequent, but when it does occur it is usually in great abundance. When drying the margin rolls inward and the colour becomes darker. (According to Peck, 1878.)

Notes. The syntype specimen (NYS) was not revised. This fungus belongs to the genus *Clitocybula* (Singer) Métrod, and its correct name is *Clitocybula abundans* (Peck) Singer (see also Halling, 1983).

agloea

See Antonín (1999).

anthracobia — Plate 2a

Fayodia bisphaerigera var. *anthracobia* J. Favre, Assoc. fong. Hauts-Marais (1948) 213; *Fayodia anthracobia* (J. Favre) Kühner & Romagn., Fl. anal. (1953) 126. (invalid combination; Art. 33.2 ICBN); *Fayodia anthracobia* (J. Favre) Knudsen, Nord. J. Bot. 11 (4) (1991) 477.

Holotype: Switzerland, Jura, Tourbière des Rousses, 27.IX.1935, leg. J. Favre (G 8073).

Original description. Pileus reaching 10 mm in diam., campanulate-subhemispherical, dark black-brown, with slightly paler margin, indistinctly translucently striate when moist, becoming paler when dry, but remaining rather dark brown, slightly silky, glabrous, slightly granulose virgate at centre under lens. Lamellae broad, emarginate but decurrent by tooth, rather thick, distant (14–16, 1 or 3 lamellae), intervenose, rugulose at sides, sometimes furcate towards pileus margin, pale grey, with sinuose and under lens finely flocculose edge. Stipe fragile, cylindrical, always short, up to 18 mm long and 1.5 mm wide, fistulose, glabrous, flocculose at apex, satin-like, black-brown at base, whitish above. Context black-brown under pileus cuticle, pale grey in stipe, without taste, inodorous. (According to Favre, 1948.)

Type revision. The type specimen has not been received for revision since it was on loan for a long time. The type revision by Horak (1962) was therefore used: basidiospores 6.5–8.0 × 6.5–8.0 µm, (sub)globose, distinctly of two layers – verruculose-echinulate epispore and smooth perispore, verruculae 1.0–1.2(–1.5) µm high, hyaline in KOH. Basidia 22–27 × 5.0–7.0 µm, 2-spored, clavate to subutriform or subfusoid. Cheilocystidia numerous, 45–60 × 9.0–15 µm, subutriform, subcylindrical or subfusoid, ± thin-walled. Pileipellis a cutis made up of radially arranged, cylindrical, thin-walled, minutely brown incrusted hyphae. Clamp-connections absent in all tissues. Chemical reactions: no part of tissue dextrinoid or amyloid. Basidiospores with non-amyloid epispore including verruculae and amyloid perispore.

Notes. This fungus is similar to *Fayodia bisphaerigera*, but differs especially in having smaller mycenoid carpophores with darker pileus, smaller basidiospores, clampless tissues, and by its occurrence on burnt ground. Also the warts on the spore wall seem to be narrower than in *F. bisphaerigera*. It represents a distinct taxon, and its correct name is *Fayodia anthracobia* (J. Favre) Knudsen var. *anthracobia*.

arctica — Fig. 1, Plate 1a

Fayodia arctica Gulden, Sydowia 40 ('1987' 1988) 52; *Gamundia leucophylla* var. *arctica* (Gulden) Bon, Doc. Mycol. 26 (102) (1996) 19; *Gamundia arctica* (Gulden) E. Ludw., Pilzkompendium 1 (Beschreibungen) (2001) 140.

Holotype: Norway, Svalbard, Kongsfjord distr., Ossian Sars-fjella, 7.VIII.1986, leg. K.M. Jensen & G. Gulden 262/86 (O 72600).

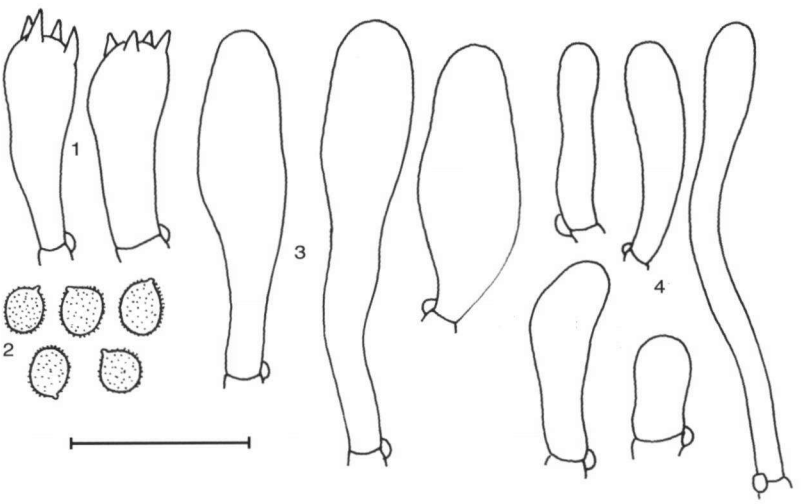

Fig. 1. *Fayodia arctica* (holotype). 1. Basidia; 2. basidiospores; 3. hymenial cystidia; 4. caulocystidia. Scale bar = 20 μm.

Original description. Pileus 1.3–3.5 cm, thin-fleshed, depressed, with down-bent margin, margin somewhat undulate and crenulate to lobed, opaque or very faintly translucently striate at outermost margin, innately fibrillose, smooth, somewhat fatty-shiny when moist, dark brown or blackish brown (darker than T 30), not (or faintly) hygrophanous. Lamellae slightly decurrent, moderately close, with many lamellulae inserted from margin and becoming interveined, thin, up to 4 mm high, whitish, becoming pale brownish or greyish (M 50, M 70, N 70, N 71), in age ± dark veined on the sides and brown-edged. Stipe 1.4–5 × 0.2–0.35 mm, cylindrical, pitted then fistulose, smooth, at first concolorous with pileus, fading to paler brown (P 50), often intermediate between pileus and lamellae and paler at apex and in lower part, base white tomented. Flesh white in pileus and stipe, cortical layers brown. Smell indistinct to faintly farinaceous. Taste mild. Found in small groups, in deep carpet of *Tomenthypnum nitens*, also among *Dryas* and *Salix polaris* in bird cliff vegetation, and in heath vegetation among *Salix polaris*, mosses and lichens; on calcareous soils. (According to Gulden, 1988.)

Type revision. Basidiospores 6.0–7.0(–8.0) × 4.5–5.5(–6.0) μm, Q = 1.2–1.5, Q av. = 1.3, ellipsoid, broadly ellipsoid, sometimes subglobose, minutely echinulate, thin-walled or slightly thick-walled, hyaline. Basidia 25–32(–42) × 8.0–10 μm, 4-spored, clavate. Basidioles 10–34 × 3.0–10.0 μm, clavate, cylindrical, subutriform. Cheilocystidia scattered, 42–80(–98) × 6.5–13 μm, (sub)cylindrical, clavate, (sub)utriform, often pedicellate, thin-walled, hyaline. Pleurocystidia similar to cheilocystidia. Hymenophoral hyphae composed of cylindrical to subellipsoid cells, smooth, up to 15 μm wide, with subhyaline to pale yellowish walls in KOH and with many small vacuoles in Congo Red. Pileipellis a cutis made up of radially arranged, cylindrical, thin- to slightly thick-walled, up to 8.0 μm wide hyphae, sometimes with scattered diverticula, with a zebra-like incrustation; pigmentation ± dark-brown in KOH; terminal cells or lateral projections adpressed to erect, cylindrical, clavate to subcoralloid, obtuse. Stipitipellis a cutis

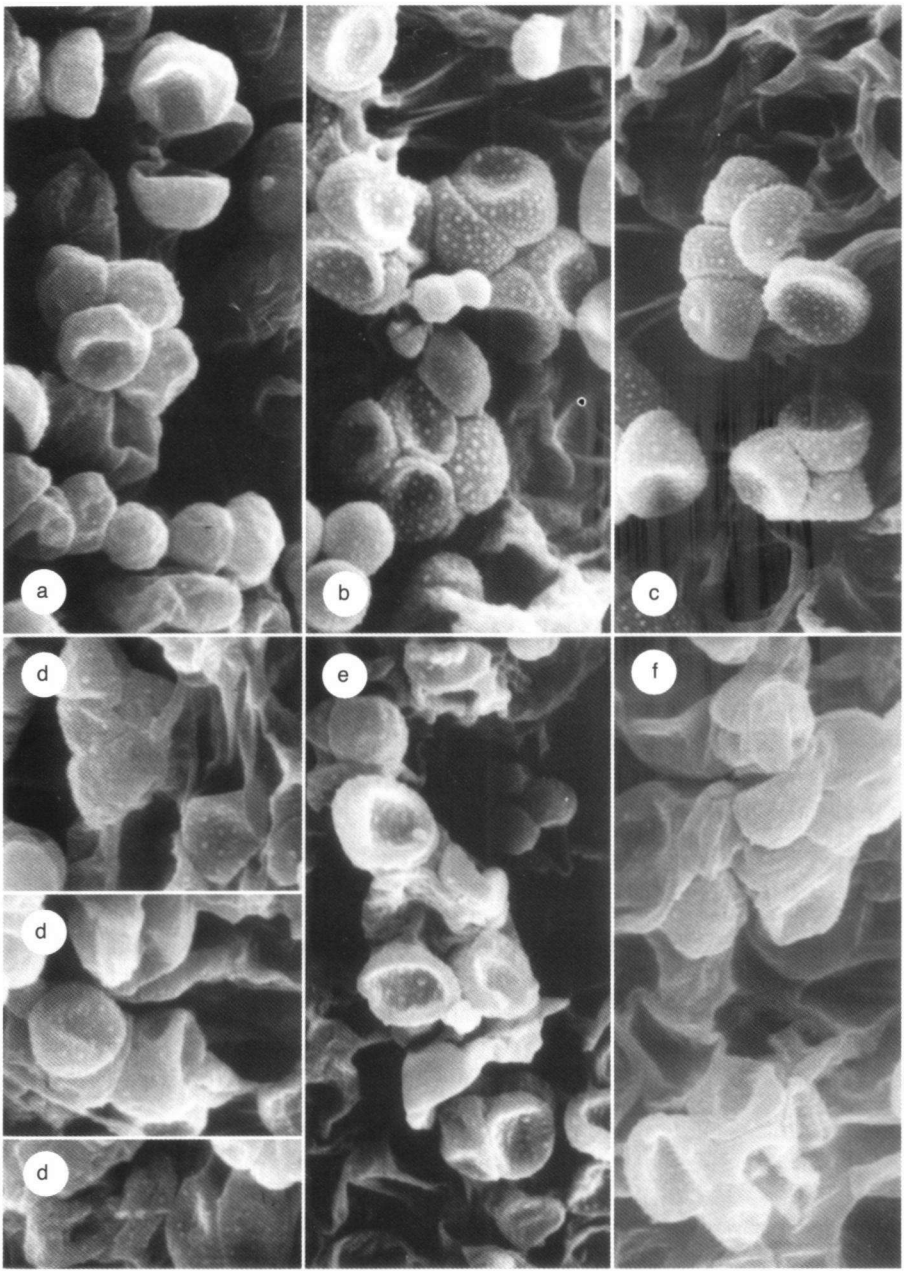

Plate 1. SEM-photomicrographs of basidiospores (species currently belonging to the genus *Gamundia*). a. *Fayodia arctica* (holotype); b. *Fayodia hygrocyboides* (holotype); c. *Gamundia lonatii* (holotype); d. *Collybia pseudoclusilis* (holotype); e. *Rhodocybe striatula* (holotype); f. *Fayodia xerophila* (holotype).

of parallel, cylindrical, slightly thick-walled, smooth, up to 6.0 μm wide hyphae, pale yellowish-greyish in KOH. Caulocystidia (apex) numerous, single or forming groups, 14–70 × 4.5–8.0 μm, clavate, (sub)cylindrical, thin-walled, ± hyaline. Clamp-connections present in all tissues. Chemical reactions: no part of tissue or basidiospores dextrinoid or amyloid.

Notes. Gamundia arctica is characterised by having a dark-coloured, not (or faintly) hygrophanous, not translucently striate pileus, a coloured lamellar edge in age, basidiospores which are often broadly ellipsoid or subglobose, and by growing in mosses and lichens in arctic and alpine communities with *Dryas* or *Salix* spp. on calcareous soil. Gulden (1988) mentioned that some *Gamundia*-species may be connected with a lichen (*Peltigera* sp.). SEM-microphotographs showed that basidiospores have low, indistinct warts.

Kuyper (1995b) considered it a synonym of *G. striatula*. However, on the basis of the above-mentioned characters (especially a non-hygrophanous and very dark-coloured pileus, and basidiospore ornamentation), I consider it a separate species with the correct name *Gamundia arctica* (Gulden) E. Ludw.

bisphaerigera — Fig. 2, Plate 2b

Omphalina bisphaerigera J.E. Lange, Dansk. bot. Ark. 6 (5) (1930) 9; *Fayodia bisphaerigera* (J.E. Lange) Singer, Rev. Mycol. 1 (1936) 279; *Mycena bisphaerigera* (J.E. Lange) A.H. Sm., N. Amer. Spec. Mycena (1947) 449.

Holotype: not preserved. Neotype (designated here): Denmark, Sjaelland, Jægersborg Dyrehave, Skovriddergården, 4.XI.1984, leg. T. Læssøe (C 46258).

Original description. Medium to rather large. Cap about 2.5 cm, strongly convex, slightly umbilicate, fuscous, somewhat paler towards the edge, pellucido-striate (pale dirt-brown and even when dry). Gills rather distant, very pale grayish, broadly adnate with a slightly decurrent tooth, arcuato-plane, rather broad. Stem straight, rather tall, cartilaginous, 5 cm × 3.5 mm, pallid. (According to Lange, 1930.)

Neotype revision. Basidiospores 8.5–11.0 × 8.5–11.0 μm, Q = 1.0–1.1, Q av. = 1.04, globose to subglobose, distinctly two-layered: verruculose-echinulate epispore and smooth perispore, verruculae up to 0.8(–1.0) μm high, hyaline in KOH. Basidia 27–38 × 9.0–12 μm, 2-spored, clavate, subutriform or subfusoid. Basidioles 12–32 × 4.0–12 μm, clavate, subfusoid or cylindrical. Cystidia 35–70 × 10–15 μm, clavate, utriform, subcylindrical, subfusoid, thin-walled, hyaline in KOH. Hymenophoral hyphae made up of cylindrical, fusoid or (sub)ellipsoid, thin-walled, up to 22 μm wide cells with hyaline walls in KOH. Pileipellis a cutis composed of radially arranged, cylindrical, thin- to slightly thick-walled, smooth or minutely incrusted, up to 9.0 μm wide hyphae; with adpressed to (sub)erect, clavate to narrowly fusoid, 7.0–12 μm wide terminal elements. Stipitipellis a cutis of parallel, cylindrical, slightly thick-walled, smooth to minutely incrusted, up to 7.0 μm wide hyphae with hyaline to pale yellowish-greyish walls in KOH. Caulocystidia (at apex) 33–120 × 9.0–13 μm, adpressed to erect, cylindrical, narrowly clavate, sublageniform, thin- to slightly thick-walled. Clamp-connections present in all tissues. Chemical reactions: no part of tissue dextrinoid or amyloid. Basidiospores with non-amyloid epispore including verruculae and amyloid perispore.

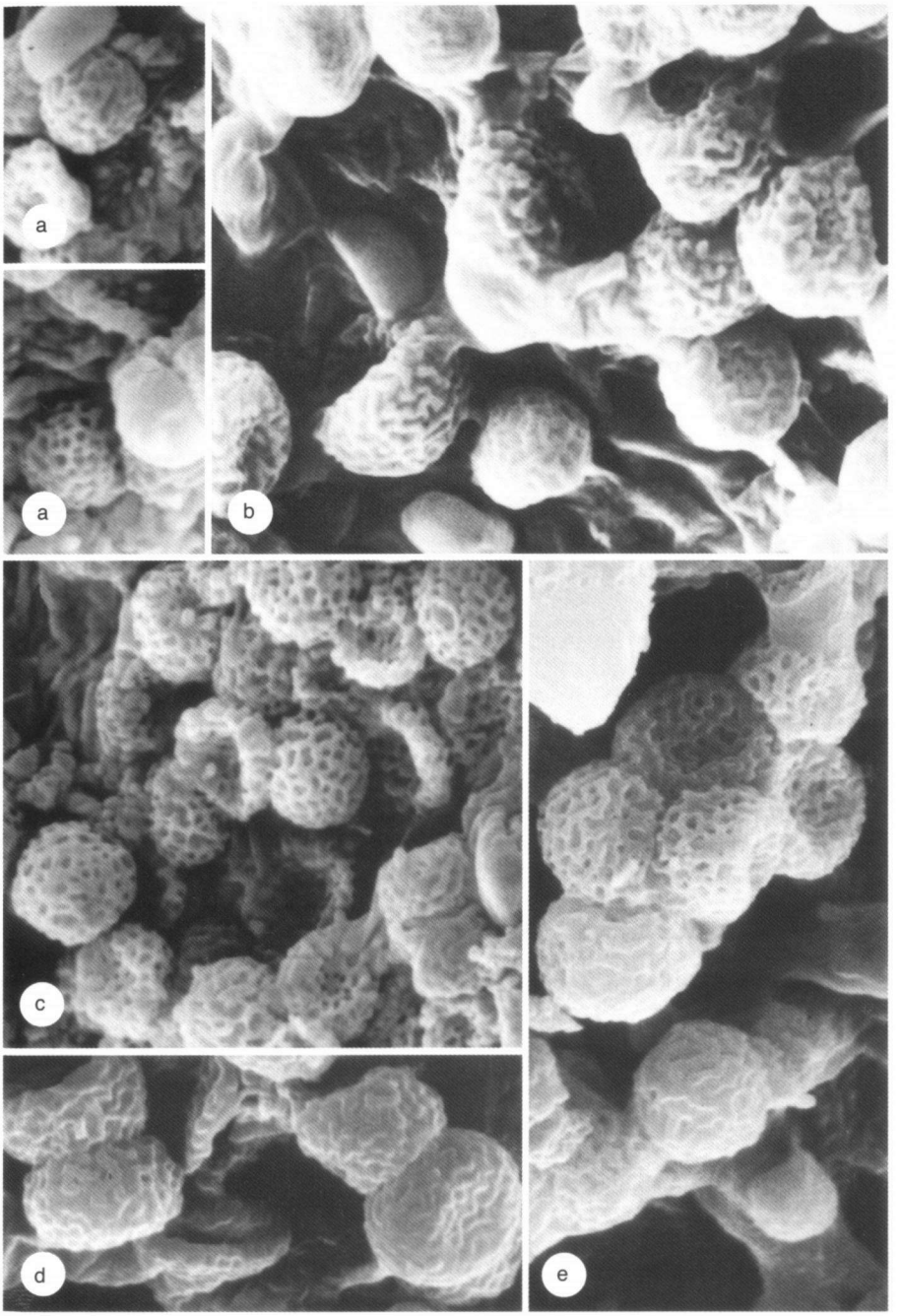

Plate 2. SEM-photomicrographs of basidiospores (species currently belonging to the genus *Fayodia*): a. *Fayodia bisphaerigera* var. *anthracobia* (non-type specimen); b. *Omphalina bisphaerigera* (neotype); c. *Omphalia bisphaerigerella* (holotype); d. *Fayodia campanella* (holotype); e. *Fayodia bisphaerigera* var. *longicystis* (holotype).

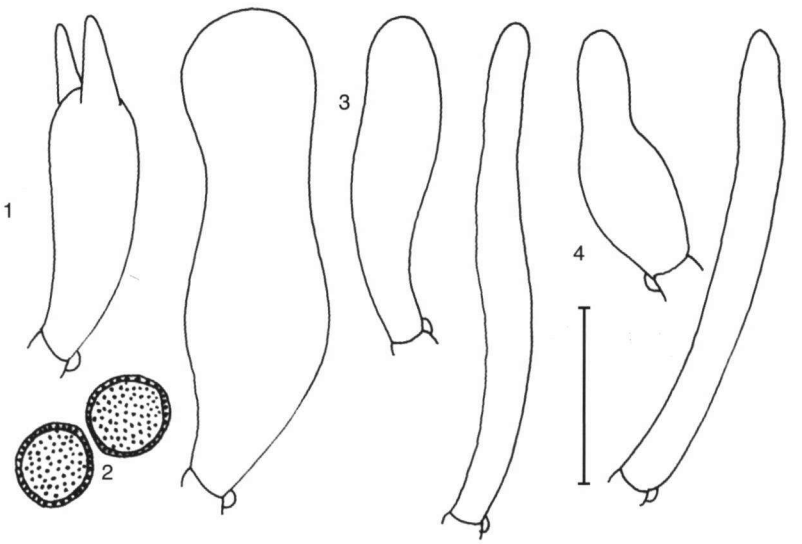

Fig. 2. *Fayodia bisphaerigera* (neotype). 1. Basidium; 2. basidiospores; 3. hymenial cystidia 4. caulocystidia. Scale bar = 40 μm for caulocystidia, 20 μm for other structures.

Notes. Omphalina bisphaerigera is characterised by its rather large carpophores, 2-spored basidia, the presence of clamps, and large basidiospores with verruculose-echinulate epispore and smooth perispore. It represents a separate and well-delimited species, the correct name of which is *Fayodia bisphaerigera* (J.E. Lange) Singer.

bisphaerigerella — Fig. 3, Plate 2c

Omphalia bisphaerigerella M. Lange, Friesia 3 (1946) 209; *Fayodia bisphaerigerella* (M. Lange) M. Lange & Sivertsen, Bot. Tidskrift 62 (1966) 198.

Holotype: Denmark, Maglemose, Grib skov, 21.X.1944, leg. M. Lange (C).

Original description. Pileus 2–12(–15) mm broad, convex-campanulate, with moderately depressed centre, with undulate-crenulate margin, membranaceous, hygrophanous, glabrous, striate, grey-brown, darkest at centre, pallescent. Lamellae subdistant, emarginate, thickish, broad, pale greyish. Stipe 20–30 × 0.5 mm, cylindrical, curved, attenuate and hispid at base. (According to Lange, 1946.)

Type revision. Basidiospores (6.0–)7.0–8.0 × (6.0–)7.0–8.0 μm, Q = 1.0–1.07, Q av. = 1.01, (sub)globose, distinctly of two layers – verruculose-echinulate epispore and smooth perispore; verruculae 0.8–1.2 μm high, hyaline in KOH, easily peeling. Basidia 15–21 × 6.5–9.0 μm, 2-spored, clavate to subutriform or subfusoid. Basidioles 10–23 × 4.0–8.0 μm, clavate, cylindrical or subutriform. Cheilocystidia numerous, forming sterile lamellar edge, 32–87 × (9.0–)11–23 μm, clavate, broadly clavate, utriform, less frequently ± cylindrical, thin-walled, hyaline. Hymenophoral hyphae composed of cylindrical to narrowly ellipsoid cells, thin-walled, hyaline, up to 20 μm wide. Pileipellis a

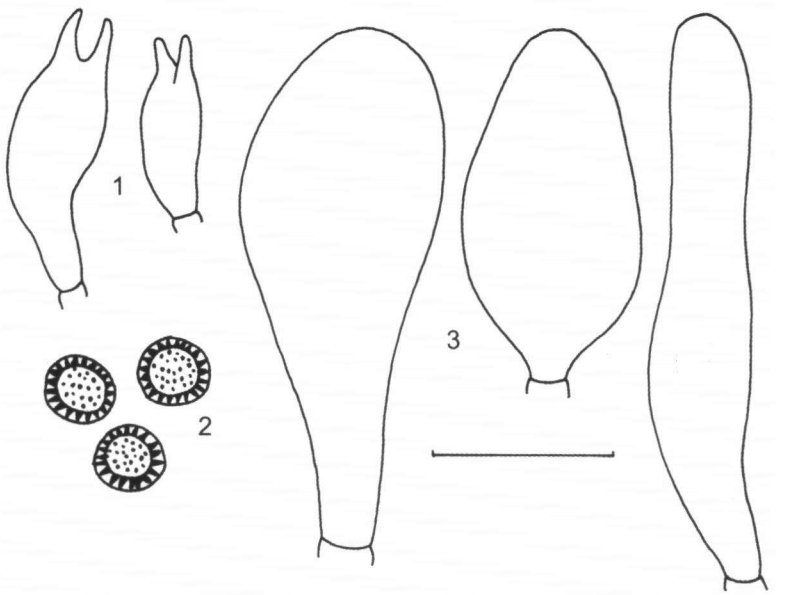

Fig. 3. *Omphalia bisphaerigerella* (holotype). 1. Basidia; 2. basidiospores; 3. cheilocystidia. Scale bar = 20 μm.

cutis made up of radially arranged, cylindrical to slightly fusoid, thin-walled, mostly minutely incrusted, up to 10 μm wide hyphae; pigment parietal, pale yellowish-brownish in KOH; with adpressed to suberect cylindrical, narrowly clavate or subfusoid terminal cells. Hyphae of subpileipellis composed of cylindrical, ellipsoid or fusoid, sometimes branched, ± thin-walled, rarely slightly thick-walled, distinctly incrusted, up to 30 μm wide cells. Stipitipellis a cutis of parallel, cylindrical, thin- to slightly thick-walled, smooth to minutely incrusted, up to 7.0 μm wide hyphae, pale yellowish in KOH. Caulocystidia absent; scattered adpressed to erect cylindrical to narrowly clavate, obtuse terminal cells present. Clamp-connections absent in all tissues. Chemical reactions: no part of tissue dextrinoid or amyloid. Basidiospores with non-amyloid to dextrinoid epispore, inamyloid, non-dextrinoid verruculae and amyloid perispore.

Notes. The type collection of *Omphalia bisphaerigerella* is similar to *Fayodia anthracobia*. However, it differs slightly in having a paler pileus (but of the same colour) with a more or less umbilicate centre, a longer and narrower stipe (20–30 × 0.5 mm), constantly smaller basidia (16–21 × 6.5–9.0 μm), more frequently present (broadly) clavate cheilocystidia, and by growing on peat soil. Its basidiospores often peel in microscopic preparations and peeled basidiospores (slightly thick-walled perispore) are sometimes dextrinoid. Other features fully agree with *F. anthracobia*. Bon (1997) also mentioned *F. anthracobia* as rarely growing on peat soil. *Fayodia bisphaerigerella* therefore represents a variety of *F. anthracobia*:

Fayodia anthracobia var. **bisphaerigerella** (M. Lange) Antonín & Noordel., *comb. nov.*

Basionym: *Omphalia bisphaerigerella* M. Lange, Friesia 3 (1946) 209.

campanella — Fig. 4, Plate 2d

Fayodia campanella E. Horak, Z. Pilzk. 28 (1962) 14.
Holotype: Switzerland, Graubünden, Davos, Aebiwald, 29.IX.1961, leg. E. Horak 61/376 (ZT).

Original description. Pileus 8(–10)–12 mm, campanulate, obtuse papillate, irregularly denticulate at margin, slightly translucently striate, smooth, glabrous, whitish-brownish, when dry whitish, beige-greyish to greyish-brownish. Lamellae rather distant, L = 7–8, l = 1, broadly adnate to with slightly decurrent tooth, whitish-greyish, with smooth, sharp edge. Stipe 30–40 × 1 mm, regularly cylindrical, curved, solid, glabrous, only at apex whitish hairy (lens), whitish-brownish, brown at base. Context brownish, with slightly rancid smell. (According to Horak, 1962 and E. Horak's private notes.)

Type revision. Basidiospores 9.0–10.5 × 9.0–10.5 μm, Q = 1.0–1.1, Q av. = 1.04, (sub)globose, distinctly of more layers – verruculose-echinulate epispore and smooth perispore, verruculae ± 1 μm high, hyaline in KOH. Basidia 30–38(–43) × 10–11.5 μm, 2-spored, clavate to subutriform. Basidioles 16–40 × 5.0–10 μm, clavate, subfusoid, subutriform, subcylindrical. Cystidia 70–95 × 8.0–16(–21) μm, cylindrical, clavate, subfusoid, thin-walled, hyaline in KOH. Hymenophoral hyphae composed of cylindrical

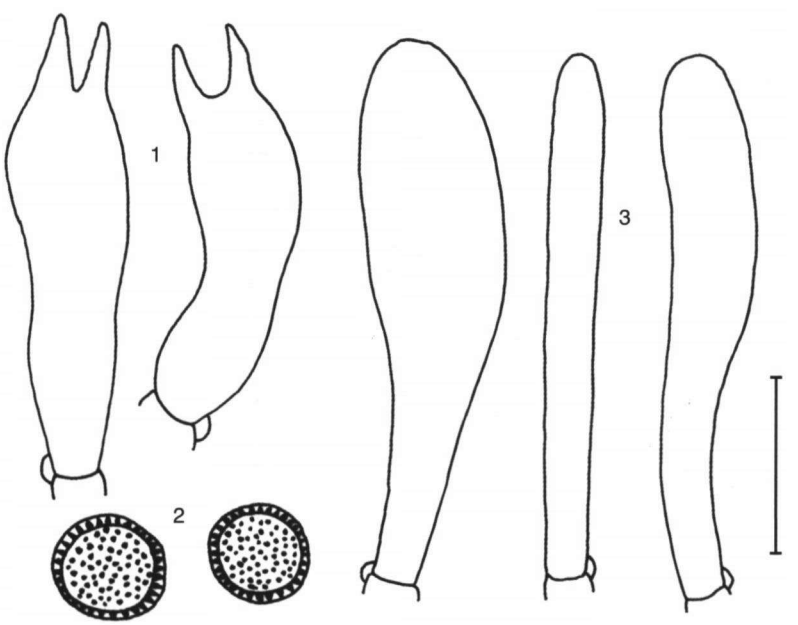

Fig. 4. *Fayodia campanella* (holotype). 1. Basidia; 2. hymenial cystidia; 3. basidiospores. Scale bar = 20 μm.

to ellipsoid, thin-walled, up to 20 μm wide cells, with hyaline to pale yellowish walls in KOH. Pileipellis a cutis made up of radially arranged, cylindrical, ± thin-walled, smooth to minutely incrusted, up to 15 μm wide hyphae, with ± hyaline to pale yellowish or yellowish-greyish walls in KOH; terminal cells scattered, adpressed to suberect, obtuse, ± cylindrical. Stipitipellis a cutis of parallel, cylindrical, slightly thick-walled, up to 5 μm wide hyphae, with subhyaline to pale yellowish walls in KOH; medullar hyphae thin-walled, up to 20 μm wide. Caulocystidia absent; scattered (sub)erect or adpressed cylindrical to clavate terminal cells present. Clamp-connections present in all tissues. Chemical reactions: no part of tissue dextrinoid or amyloid. Basidiospores with non-amyloid epispore including verruculae and amyloid perispore.

Notes. This species is characterised especially by having small, inconspicuous, mycenoid carpophores, rather distant lamellae, 2-spored basidia, and (sub)globose basidiospores with verruculose-echinulate epispore and smooth perispore. Only with a microscope it is possible to recognize it as a *Fayodia*-species. It represents a well-delimited separate species and its correct name is *Fayodia campanella* E. Horak.

fuscoalba

Omphalia fuscoalba F.H. Møller, Fungi Faeroes 1 (1945) 263.
Holotype: not preserved (Knudsen, in litt.).

Original description. Cap 1–1.5 cm broad, hygrophanous, sooty-brown (almost G 8), fatty-shiny when watery, dirty ochre-brown (almost G 7) and opaque when dry, when drying up for a long time with dark edge-zone, convexo-plane and flatly umbilicate, smooth, under the lens minutely innately radiating fibrillose, the margin pellucido-striate, at first inflexed. Gills white, narrow (2–3 mm broad), shortly decurrent, crowded, thin, the edge concave. Stem rather short, 2–2.5 cm × 1–2 mm, pale clay-coloured (H 4), cylindrical, or slightly thickened downwards, curved, smooth, tough, solid. Flesh yellowish ash-coloured (I 3), thin (1 mm thick near the stem), in stem fibrous. Smell faint (spermatic?), not farinaceous, taste absent. Spore-powder white. Basidiospores ovate, with oblique pedicel, 6–7 × 4–4.5 μm, often 1–2-guttulate. Basidia 4-spored, hyaline, clavate, 24–28 × 6(–8) μm, Sterigmata 3 μm long. Cystidia: the edge of the gills fertile with sparse hyaline, cylindrico-clavate cystidia, 40–70 × 10–11 μm, deeply immersed, free part 18 μm long. Gregarious, among moss by the roadside, growing among gravel and small stones. July–August. (According to Møller, 1945.)

Notes. Møller did not mention echinulate basidiospores, and he drew them as smooth. In notes, he discussed the similarity of his fungus to *Omphalia maura* (= *Myxomphalia maura*) and *O. leucophylla* s. Lange (= *Gamundia striatula*). Considering the cheilocystidia described above (which were also originally drawn by Møller), *O. fuscoalba* may represent *Gamundia striatula* (Kühner) Raithelh. The original description by Møller (1945) differs from this species only in smaller carpophores (pileus 10–15 mm broad, stipe 20–25 × 1–2 mm large).

gracilipes

Agaricus (Omphalia) gracilipes Britzelm., Ber. Naturw. Ver. Augsburg 30, 14 (Hymenomyc. Südbayern) (1890) 296, Tab. 42; *Fayodia gracilipes* (Britzelm.) Bresinsky & Stangl, Z. Pilzk. 40 (1974) 73.

Holotype: not preserved. Iconotype: Britzelmayr, Ber. Naturw. Ver. Augsburg 30, 14 (Hymenomyc. Südbayern) (1890) Tab. 42.

Original description. Pileus 20 mm broad, applanate-convex and slightly depressed, hygrophanous, translucent, brownish, brownish grey, pallescent to whitish, very fragile. Lamellae 3 mm wide, brownish white, close to very close, slightly decurrent. Stipe 50 mm long, 2 mm above, 4 mm below wide, solid, brownish. Spore-print white. (According to Bresinsky & Stangl, 1974.)

Notes. Bresinsky & Stangl (1974) synonymised *Fayodia gracilipes* with *Fayodia bisphaerigera*, and the name *F. gracilipes* is still in use by some authors (e.g. Lonati, 1989; Breitenbach & Kränzlin, 1991; Courtecuisse & Duhem, 1994). However, it is not clear if Britzelmayr's fungus really represents this species. Basidiospores are described as globose and spiny ('stachelig'), but Britzelmayr's description is too short and he did not mention either 2-spored basidia or (of course) amyloidity. Therefore, I propose to use the younger but quite clear name *F. bisphaerigera* for this taxon and to consider Britzelmayr's name a nomen dubium.

grisea

Fayodia bisphaerigera var. *grisea* Singer, Collect. Bot. 1 (1947) 243.

Holotype: not preserved (?). The presence of the type is also not mentioned by Mueller & Quixin Wu (1997).

Original description. Pileus grey, striate, fuscous-grey when dried-out, striate at margin in exsiccates, subpapillate and round papilla umbilicate, others applanate, 11–21 mm broad. Lamellae grey, rather close, broad (2–2.5 mm), arcuate-sinuate-adnexed. Stipe pale, strict, cartilaginous, 45–50 × 2–3 mm. In mixed forest between Bossost and Portilló, October. – Basidiospores and strongly amyloid perispore covered by rugulose membrane. They are almost globose, 8–11.5 μm in diam. Basidia with 1, 2 or 3 sterigmata. Without cystidia. Cheilocystidia ± 60–70 μm long, 8–11 μm broad, cylindrical with a narrow appendiculus. Cuticle consists of long, clamped, septate, 7–10 μm wide hyphae with often rugulose membrane. (According to Singer, 1947.)

Notes. In notes additional to his original description, Singer (1947) mentioned that this may represent *Omphalia orbispora* Britzelm. which he considered identical with *Fayodia bisphaerigera*. Moreover, this taxon is not included in the latest edition of 'The Agaricales in modern taxonomy' (Singer, 1986). According to the original macroscopic and microscopic descriptions, it represents *Fayodia bisphaerigera* (J.E. Lange) Singer var. *bisphaerigera*.

hygrocyboides — Fig. 5, Plate 1b

Fayodia hygrocyboides Lonati, Micol. Veget. Mediter. 11 (1) (1996) 20; *Gamundia hygrocyboides* (Lonati) Bon, Doc. Mycol. 27 (106) (1997) 54; *Gamundia hygrocyboides* (Lonati) Bon & Röllin, Doc. Mycol. 29 (114) (1999) 8 (superfluous combination).

Holotype: Italy, Aquilla, Avezzano, Monte Salviano, 13.XII.1994, leg. G. Lonati (AQUI).

Original description. Pileus 5–10(–12) mm broad, convex-hemispherical, then convex with a central depression (but not umbilicate), with ± regular margin, not involute, glabrous, greasy, translucently striate, honey-coloured with well-delimited brown centre.

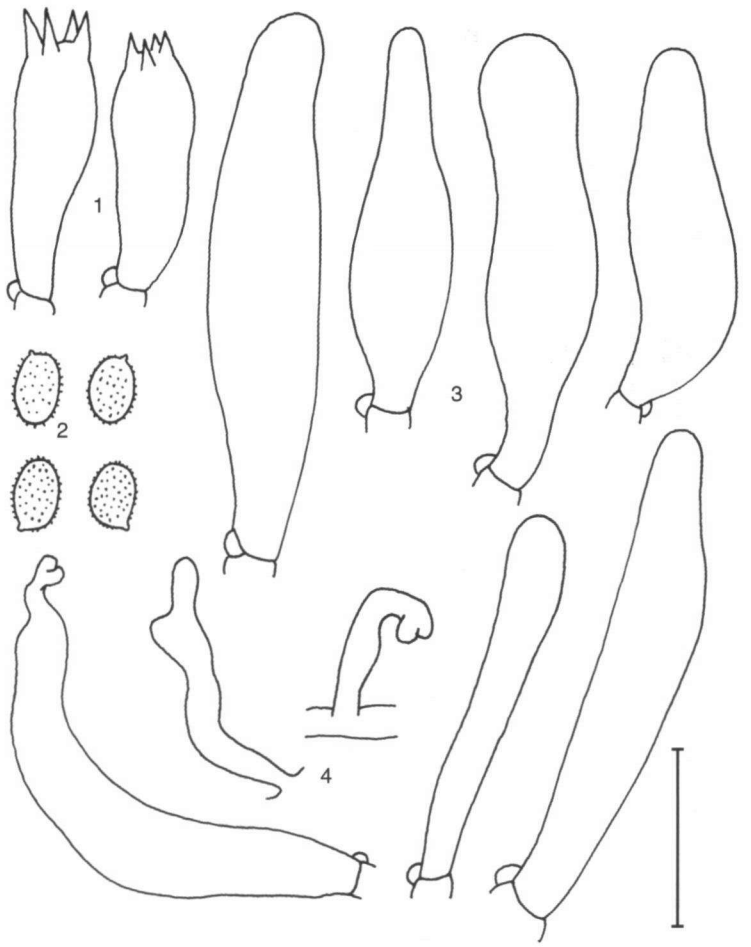

Fig. 5. *Fayodia hygrocyboides* (holotype). 1. Basidia; 2. basidiospores; 3. cheilocystidia; 4. caulocystidia. Scale bar = 30 μm for caulocystidia, 20 μm for other structures.

Lamellae distant, L = 13–16, l = 1–3, subemarginate-adnate to ventricose-adnate, white, with concolorous, finely pubescent edge. Stipe 10–20 × 1–1.5 mm, cylindrical or slightly broadened at apex, distinctly flexuose, fistulose, minutely floccose above, glabrescent below, without basal tomentum, the stipe base attached to mosses, concolorous with pileus, slightly darker towards base. Context fragile, glassy translucent, taste mild, smell indistinct. Saprotrophic, terrestrial, among mosses on soil in sunny forest with *Pinus nigra*. (According to Lonati, 1996.)

Type revision. Basidiospores (6.5–)7.0–8.0 × 4.5–5.7 μm, Q = 1.3–1.6, Q av. = 1.4, broadly ellipsoid, rarely subfusoid-ellipsoid, distinctly minutely acutely echinulate, thin-walled, hyaline. Basidia 15–31 × 7.0–10.5 μm, 4-spored, clavate. Basidioles 11–30 × 3.0–9.0 μm, cylindrical, clavate, subfusoid. Cheilocystidia not frequent, 40–62(–80) × 8.5–15 μm, clavate, subcylindrical, subutriform, (sub)lageniform, sometimes (sub)rostrate, often pedicellate, thin-walled, hyaline in KOH. Pleurocystidia scattered, similar to cheilocystidia. Hymenophoral hyphae composed of cylindrical, subellipsoid, subfusoid cells, thin-walled, smooth, rarely minutely incrusted, up to 15 μm wide, subhyaline to pale yellowish in KOH. Pileipellis an ixocutis made up of radially arranged, cylindrical, ± thin-walled, smooth to minutely incrusted, gelatinised, hyaline to subhyaline, up to 10 μm wide hyphae; terminal cells and lateral projections cylindrical, clavate, often irregular to coralloid, ± thin-walled. Stipitipellis a cutis of cylindrical, parallel, slightly thick-walled, slightly gelatinised(?), smooth to minutely incrusted, up to 5 μm wide hyphae, with pale (greyish) yellowish walls in KOH. Caulocystidia numerous at apex, 50–97 × 7.0–12 μm, in the form of typical cystidia or lateral projections, adpressed to erect, (sub)cylindrical to clavate, irregular to coralloid, sometimes (sub)rostrate, sometimes branched or with projections, hyaline. Clamp-connections present in all tissues. Chemical reactions: no part of tissue or basidiospores dextrinoid or amyloid.

Notes. Fayodia hygrocyboides is especially characterised by having small carpophores, a honey-coloured pileus with a well-delimited brown centre and only a few lamellae (L = 13–16). Having thin-walled and minutely echinulate inamyloid basidiospores, it belongs to the genus *Gamundia* Raithelh. In the SEM-microphotograph, basidiospores have distinct and sharply delimited warts (in contrast to other *Gamundia* species, except for *G. lonatii*). It represents a well-delimited separate species with the correct name *Gamundia hygrocyboides* (Lonati) Bon.

invita

See Antonín (1999).

lacerata

Agaricus lacerata Lasch in Fr., Epicrisis (1838) 97; *Fayodia lacerata* (Lasch) Singer, Ann. mycol. 34 (1936) 331; *Clitocybula lacerata* (Lasch) Singer, Sydowia 15 (1962) 53; *Baeospora lacerata* (Lasch) Zerova, in Zerova & Peresipkin, Viznachnik Gribiv Ukraini 5 Basidiomycetes (1979) 203.
Holotype: absent.

Original description. Pileo carnoso-membranaceo campanulato subretuso udo fusco-virgato, stipite e farcto cavo firmo torto fibroso-striato apice floccoso-pruinoso demum compresso, lamellis adnexis distantibus latis crassis albo-griseis. Lasch! in litt. nec obstat Scop. p. 439. Ag. Secr. n. 758 (excl. syn. fico) – ? b. major, pileo squamul. *A. microlepideus* Pers. Myc. Eur. n. 348. In humo pinetorum, circa truncos etc. subcaespitos. Pileus 1.5 unc., fuligin., demum expallens, rimosus cum stipite 2–4 unc. long. nitidulus. Heteroclitus inter Collybias; sed *A. platyphyllo* affinis. (According to Fries, 1838.)

Note. The correct name for this species is *Clitocybula lacerata* (Lasch) Singer.

leucophylla

Omphalia leucophylla Gillet, Hymenomyc. (1874) 296; *Clitocybe leucophylla* (Gillet) M. Lange, Meddr Grønland 147 (1955) 11; *Fayodia leucophylla* (Gillet) M. Lange & Sivertsen, Bot. Tidskr. 62 (1966) 202; *Gamundia leucophylla* (Gillet) Bigelow, Sydowia 36 (1983) 16.

Holotype: not preserved (Monthoux, in litt.).

Original description. Pileus almost membranaceous, infundibuliform, smooth, with translucent margin, involute, dark ash-coloured, 2 cm and more. Lamellae distant, decurrent, arcuate, white. Stipe solid, then hollow, rigid, cylindrical, smooth, concolorous with pileus but paler, about 3 cm long, 2 mm thick. (According to Gillet, 1874.)

Notes. Some authors (Bigelow, 1983; Lonati, 1994; Bon, 1997) have synonymised this taxon with *Gamundia striatula* (Kühner) Raithelh.; in this case, Gillet's name has priority. However, since the type specimen of *Omphalia leucophylla* Gillet is not preserved and the original description (Gillet, 1874) is too short and unclear, I have decided to use Kühner's name for this taxon. Moreover, the epitheton *leucophyllus* has been used in several senses in literature (for details see Lange & Sivertsen, 1966). I propose to consider the name *Omphalia leucophylla* Gillet a nomen dubium.

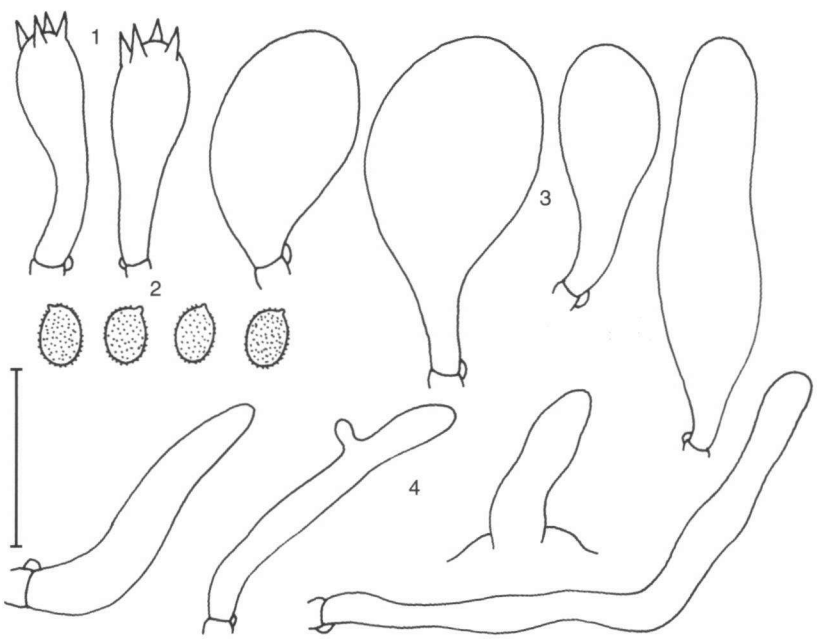

Fig. 6. *Gamundia lonatii* (holotype). 1. Basidia; 2. basidiospores; 3. cheilocystidia; 4. caulocystidia Scale bar = 40 μm for caulocystidia, 20 μm for other structures.

lonatii — Fig. 6, Plate 1c

Gamundia lonatii Bon & Röllin, Doc. Mycol. 29 (114) (1999) 8.
Misapplied name: *Fayodia xerophila* s. Lonati 1996.
Holotype: Italy, Aquilla, Avezzano, Monte Salviano, 16.XI.1995, leg. G. Lonati (G 452166).

Original description. Pileus 15–40 mm broad, subhemispherical to convex-applanate, distinctly deeply umbilicate, strongly lobate to lacerate when old, glabrous, up to centre translucently striate, hygrophanous, dark bright brown with fuligineous brown centre, drying grey-brown. Lamellae moderately distant, L = 20–35, l = 3–5, horizontal, adnate with a tooth, whitish, soon pale greyish brownish, with concolorous, eroded edge. Stipe 25–35 × 2–5 mm, cylindrical, straight to rarely flexuous, entirely or at least at apex finely furfuraceous, whitish at apex, dark brown towards base; without basal tomentum. Context fine, fragile, hyaline whitish in pileus, darker in stipe, cortex concolorous with surface; smell and taste distinctly farinaceous-spermatic. (According to Lonati, 1996.)

Type revision. Basidiospores 6.0–8.0 × 4.2–5.0(–5.5) µm, Q = 1.3–1.6, Q av. = 1.5, ellipsoid to broadly ellipsoid, ± thin-walled, finely echinulate, hyaline. Basidia 23–28 × 7.5–9.5 µm, 4-, rarely 2-spored, clavate. Basidioles 11–27 × 3.0–9 µm, cylindrical to clavate. Cheilocystidia numerous but mixed with basidia, 30–50(–60) × 9.0–20 µm, clavate, broadly clavate, subvesiculose, lanceolate, subcylindrical or subfusoid, often pedicellate, hyaline. Pleurocystidia similar to cheilocystidia. Hymenophoral hyphae ± cylindrical, ± thin-walled, sometimes seem to be slightly gelatinised, hyaline, up to 20 µm wide. Pileipellis a cutis made up of radially arranged, not gelatinised to slightly gelatinised, ± thin-walled, grey-brownish incrusted, 3.0–8.0(–10) µm wide hyphae; terminal cells and lateral projections 12–60 × 2.0–7.0 µm, cylindrical or clavate, subhyaline, simple to subcoralloid. Pileocystidia absent. Stipitipellis a cutis of cylindrical, parallel, slightly thick-walled, smooth, subhyaline to pale yellowish-greyish, up to 6.0 µm wide hyphae. Caulocystidia in the form of cylindrical to subfusoid, sometimes submoniliform cystidia or lateral projections, 20–120 × 4.5–9.0 µm, single or in small groups, sometimes with small lateral projections, obtuse. Clamp-connections present in all tissues. Chemical reactions: no part of tissue or basidiospores dextrinoid or amyloid.

Notes. Gamundia lonatii is characterised by a rather dark coloured, entirely and distinctly striate pileus, greyish brownish lamellae, a distinctly farinaceous-spermatic smell and taste, rather large, ± thin-walled, finely echinulate basidiospores [6.0–8.0 × 4.2–5.0(–5.5) µm], and broad, voluminous and obtuse cystidia. Having these features, it is considered a separate well-delimited species. The correct name is *Gamundia lonatii* Bon & Röllin.

longicystis — Fig. 7, Plate 2e

Fayodia bisphaerigera var. *longicystis* J. Favre, Assoc. fong. Hauts-Marais (1948) 213.
Holotype: France, Jura, Vaudois, Valle de Joux, Tourbiere des Piquet-Dessus, 19.IX.1941, leg. J. Favre (G K8074).

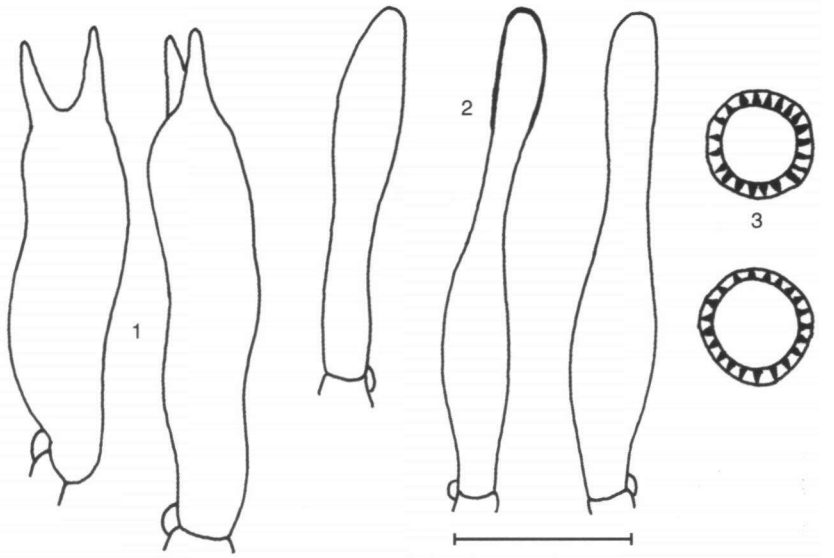

Fig. 7. *Fayodia bisphaerigera* var. *longicystis* (holotype). 1. Basidia; 2. hymenial cystidia; 3. basidio spores. Scale bar = 20 μm.

Original description. Pileus up to 28 mm broad, subhemispherical, conical-campanulate, sometimes truncate and slightly depressed at centre, very hygrophanous, slightly lustrous, pale ash-grey brownish, with darker centre, translucently striate almost to the centre, then grey whitish and not striate when dry, slightly silky and, under lens, finely radially virgate. Slowly becoming yellow. Lamellae broad, usually emarginate but decurrent with a tooth, sometimes horizontal and subdecurrent, rather thick, subdistant (16–22; 3 or 7 lamellulae, rarely 1 in small carpophores), rugulose at sides, slightly intervenose, pale grey, with grey whitish and long villose edge under lens. Stipe slender, long, flexuous, reaching up to 8 × 3.5 cm, fistulose, fragile, glabrous, smooth, hyaline, pale grey above, darker at base. Slowly becoming yellow from base towards apex. Context concolorous with external parts, with farinaceous smell. The whole carpophore with yellow brownish tinge when old. (According to Favre, 1948.)

Type revision. Basidiospores 9.5–11.5(–13.0) × 9.5–11.0(–13.0) μm, Q = 1.0–1.1, Q av. = 1.03, globose to almost globose, of two layers – verruculose-echinulate epispore and smooth perispore, verruculae up to 1.5 μm high, hyaline in KOH. Basidia 30–38 × 8.0–9.5 μm, 2-spored, clavate. Basidioles 13–34 × 3.5–9.0 μm, cylindrical, clavate, subfusoid. Cystidia (40–)58–140 × 7.0–12 μm, cylindrical, narrowly lageniform, narrowly fusoid, sometimes (sub)rostrate, thin- to sometimes (especially at the top) slightly thick-walled, hyaline, with refractive contents. Hymenophoral hyphae made up of ellipsoid to cylindrical, ± thin-walled, hyaline, up to 20 μm wide cells. Pileipellis a cutis or weak ixocutis of radially arranged, cylindrical, slightly thick-walled, smooth to minutely incrusted, up to 10 μm wide hyphae, with pale yellowish walls in KOH, with scattered lateral projections, and adpressed to suberect cylindrical, narrowly clavate, regular, irregular to coralloid terminal cells. Stipitipellis a cutis of parallel, cylindrical,

slightly thick-walled, subhyaline to pale yellow, 2.0–5.0 μm wide hyphae. Caulocystidia absent. Clamp-connections present in all tissues. Chemical reactions: no part of tissue dextrinoid or amyloid. Basidiospores with non-amyloid epispore including verruculae and amyloid perispore.

Notes. This taxon is very close to *Fayodia bisphaerigera*, but differs in having a paler coloured, ± mycenoid pileus, carpophores slowly becoming yellowish when old, and longer cystidia. It represents a separate variety of *Fayodia bisphaerigera*, and its correct name is *Fayodia bisphaerigera* var. *longicystis* J. Favre.

marthae

See Antonín (1999).

maura

See Antonín (1999).

pseudoclusilis — Fig. 8, Plate 1d

Collybia pseudoclusilis Joss. & Konrad, Bull. mens. Soc. linn. Lyon 10 (1931) 22; *Clitocybe pseudoclusilis* (Joss. & Konrad) P.D. Orton, Trans. Br. mycol. Soc. 43 (1960) 174; *Fayodia pseudoclusilis* (Joss. & Konrad) Singer, Sydowia 15 ('1961' 1962) 66; *Gamundia pseudoclusilis* (Joss. & Konrad) Raithelh., Metrodiana 8 (1979) 34 (invalid combination); *Gamundia pseudoclusilis* (Joss. & Konrad) Raithelh., Metrodiana 9 (1980) 48.

Holotype: France, Lyon, Le Pré-Vieux, 29.XI.1928, leg. M. Josserand (G, herb. Josserand V/47).

Original description. Pileus (10–)15–20(–30) mm broad, hemispherical, convex with applanate centre at first, then convex-depressed but not distinctly umbilicate, soft, hygrophanous, subfleshy, slightly hygrophanous, slightly viscid but becoming gelatinous when old and moist; variable beige-isabelle or brown-greyish when moist, whitish-greyish when dry; totally glabrous and smooth. Margin remains a long time inflexed; ± long striate when moist but only transparently. Cuticle very thin, slightly separable; distinctly separable when gelified and then translucent and elastic like *Mycena epipterygia*. Flesh almost absent, grey-whitish in stipe as well as in pileus. Lamellae almost close, slightly variable: 1–3 lamellulae; simple, broad, sometimes very broad and reaching up to 5 mm; slightly thick, rarely intervenose on sides, soon applanate, soon ventricose, broadly adnate by the whole breadth or sinuate-adnate; soft, of variable colour: white, then pale grey or white, then pale incarnate. Edge entire and concolorous. Stipe soft but not fragile, rather thin, rather short: 14–20(–30) × 1.5–3 mm, cylindrical, sometimes sinuose-tortuose, not bulbose, solid then fistulose, grey-beige, paler than pileus, translucent when moist, dry, lubricous when rainy weather, glabrous with slightly pruinose apex; not striate. Spore-print white. Smell and taste constantly absent. (According to Josserand & Konrad, 1931.)

Type revision. Basidiospores (6.2–)6.5–7.5(–8.2) × 4.0–5.0 μm, Q = 1.4–1.8, Q av. = 1.6, ellipsoid to broadly ellipsoid, minutely verruculose-echinulate, thin-walled, hyaline. Basidia 30–35 × 8.0–9.0 μm, 4-spored, clavate. Basidioles 12–30 × 4.0–10 μm, clavate, subcylindrical, subfusoid. Cheilocystidia numerous, 38–80 × 6.5–10 μm, (sub)cylindrical, narrowly clavate, sublageniform, sometimes slightly irregular, ± thin-walled, hyaline. Hyphae of trama composed of cylindrical, ellipsoid to subfusoid,

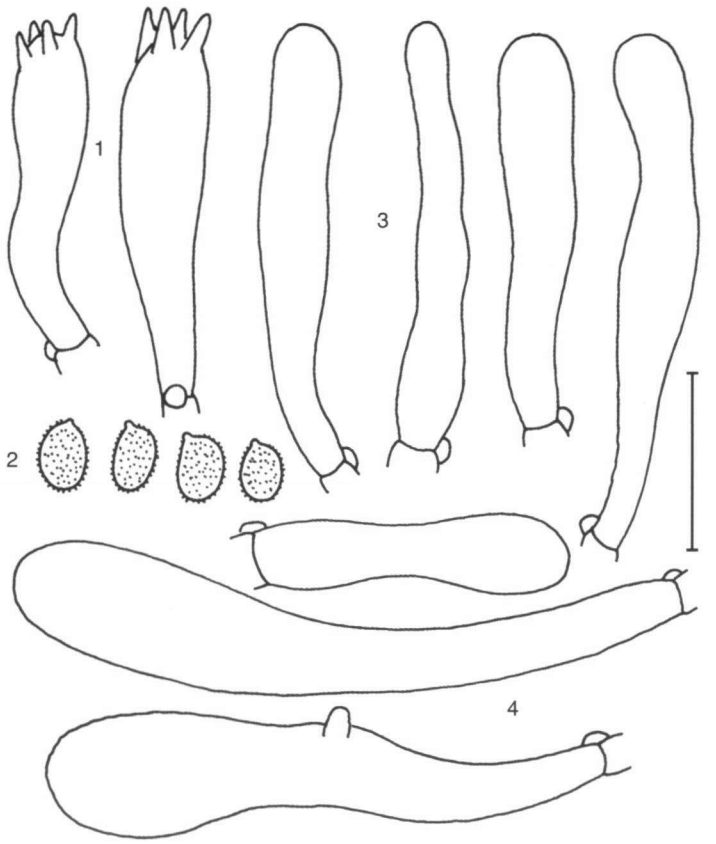

Fig. 8. *Collybia pseudoclusilis* (holotype). 1. Basidia; 2. basidiospores; 3. cheilocystidia; 4. caulocystidia. Scale bar = 40 μm for caulocystidia, 20 μm for other structures.

thin-walled, smooth, up to 30 μm wide, in subhymenium slightly gelatinised cells. Pileipellis a cutis made up of radially arranged, ± cylindrical, thin-walled, slightly gelatinised, up to 8.0 μm wide hyphae, with hyaline walls in KOH; terminal cells adpressed to erect, cylindrical, narrowly clavate to fusoid. Stipitipellis a cutis of parallel, cylindrical, slightly thick-walled, up to 6.0 μm wide hyphae. Caulocystidia 40–85 × 9.0–14 μm, adpressed to erect, subcylindrical, clavate, subutriform, sometimes irregular or with rare projection(s), thin-walled. Clamp-connections present in all tissues. Chemical reactions: no part of tissue or basidiospores dextrinoid or amyloid.

Notes. Collybia pseudoclusilis is characterised by having ± beige to grey carpophores with a slightly gelatinised surface when moist, broadly adnate to sinuate-adnate lamellae, moderately large basidiospores and rather large and relatively narrow cheilo- and caulocystidia. In the original description, Josserand & Konrad (1931) described the basidiospores as smooth. However, all preserved collections from Josserand's herbarium (including the type specimen) have distinctly echinulate basidiospores.

This taxon is very similar to *Rhodocybe striatula* (= *Gamundia striatula*) from which it should differ especially in having a greasy to subviscid pileus and stipe and by the presence of a well-developed ixocutis in pilei- and stipitipellis. However, *G. striatula* (see type revision) also has some slightly gelatinised pileipellis hyphae (but never so distinct as in carpophores of the type specimen of *C. pseudoclusilis*). Other features agree with *G. striatula*; therefore, I consider them identical.

striatula — Fig. 9, Plate 1e

Rhodocybe striatula Kühner, Bull. mens. Soc. linn. Lyon 2 (1928) 140; *Omphalina striatula* (Kühner) Kühner & Romagn., Fl. Anal. (1953) 127; *Clitocybe striatula* (Kühner) P.D. Orton, Trans. Br. mycol. Soc. 43 (1960) 174; *Fayodia striatula* (Kühner) Singer, Beih. Nova Hedw. 29 (1969) 146; *Stachyomphalina striatula* (Kühner) H.E. Bigelow, Mycotaxon 9 (1979) 42; *Gamundia striatula* (Kühner) Raithelh., Metrodiana, Sonderheft 2 (1983) 9.

Holotype: France, St. Bon, leg. R. Kühner (G, herb. Kühner, as *Omphalia leptonioides* sp. n. = *Leptoniopsis striatulus*).

Original description. Pileus (7–30 mm) broadly convex or convex-applanate with slightly depressed to subumbilicate centre, slightly striate at margin or long and very distinctly striate with close striae, dirty grey-brown-yellowish, unicolorous (without darker centre). Surface totally glabrous, also at centre, shining. Flesh very thin, concolorous, with a faint smell of *Melanoleuca grammopodium*. Lamellae (length: 15–20, breadth: 3–7) subdistant, white, not changing colour to pink when fresh but becoming reddish in herbarium, subhorizontal or slightly sinuose-subdecurrent. Stipe (length: 2–5.5 cm, width: 2 mm) slightly broadened towards base, grey-brown whitish or pale corn-coloured, smooth and glabrous, cylindrical. (According to Kühner, 1928.)

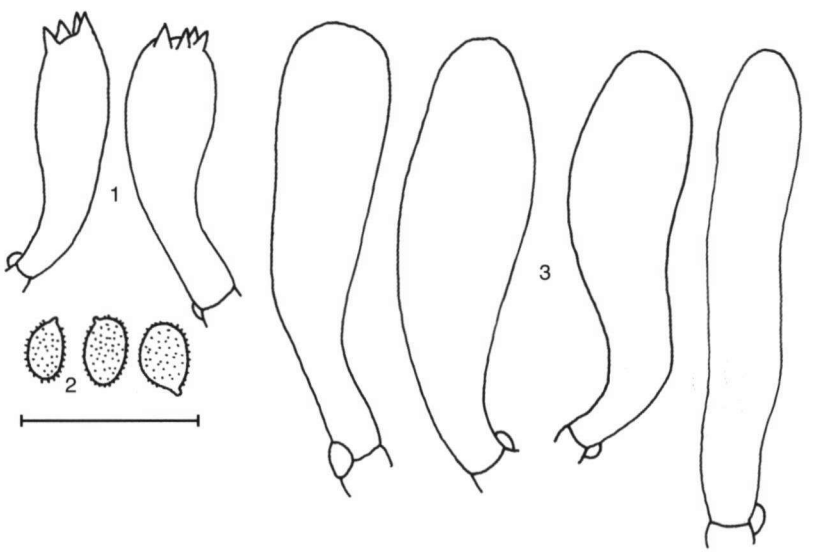

Fig. 9. *Rhodocybe striatula* (holotype). 1. Basidia; 2. basidiospores; 3. cheilocystidia. Scale bar = 20 μm.

Type revision. Basidiospores (5.0–)6.0–7.0(–8.0) × 4.0–4.5(–5.0) µm, Q = 1.3–1.8, Q av. = 1.5, ellipsoid to broadly ellipsoid, thin-walled, minutely but distinctly echinulate-verruculose, hyaline. Basidia 25–32 × 8.0–10 µm, 4-spored, clavate. Basidioles 13–30 × 4.0–10 µm, cylindrical, clavate. Cheilocystidia numerous, 38–65 × 10–14 µm, subcylindrical, clavate, subfusoid, thin-walled. Hymenophoral hyphae cylindrical, thin-walled, smooth, hyaline in KOH, up to 12 µm wide. Pileipellis a cutis made up of radially arranged, cylindrical, ± thin-walled, smooth or minutely incrusted, sometimes slightly gelatinised, up to (8.0–)10 µm wide hyphae, sometimes with scattered diverticula; terminal cells adpressed to erect, cylindrical to narrowly clavate; walls (sub)hyaline in KOH. Clamp-connections present in all tissues. Chemical reactions: no part of tissue or basidiospores dextrinoid or amyloid. Stipe not preserved in the holotype specimen.

Notes. Rhodocybe striatula is characterised by having a uniformly coloured, yellowish grey-brown, mostly distinctly translucently striate pileus and moderately large basidiospores. It belongs to a group of very similar taxa (i.e. *Gamundia leucophylla, G. pseudoclusilis, G. striatula* and *G. xerophila*). Considering the variability of macro- and microfeatures not only in the type revision but also in the revision of other herbarium specimens I consider all the above-mentioned taxa conspecific. The oldest and correct name of this taxon is *Gamundia striatula* (Kühner) Raithelh.

tilieti — Fig. 10

Fayodia tilieti Singer, Ann. Mycol. 41 (1943) 63; *Clitocybula tilieti* (Singer) Singer, Sydowia 8 (1954) 110 (not validly published); *Clitocybula tilieti* (Singer) Singer, Sydowia 15 (1962) 53.

Holotype: Russia, Mordovskiy zapovednik (Mordova nature reserve), in Tilietis, 1937, leg. Kuznetsov, det. R. Singer (LE 17627).

Original description. Pileus grey-fuscous or black-fuscous, almost smooth, not viscid, hygrophanous(?), plano-infundibuliform, ± 40 mm broad in dried state, rather fleshy. Lamellae white, dirty pale greyish ochraceous when dry, not furcate, close to very close, long decurrent, narrow. Stipe concolorous with pileus, smooth, glabrous, but finely white-tomentose, solid, subcylindrical, 40 × 5–7 mm when dry. Context white.

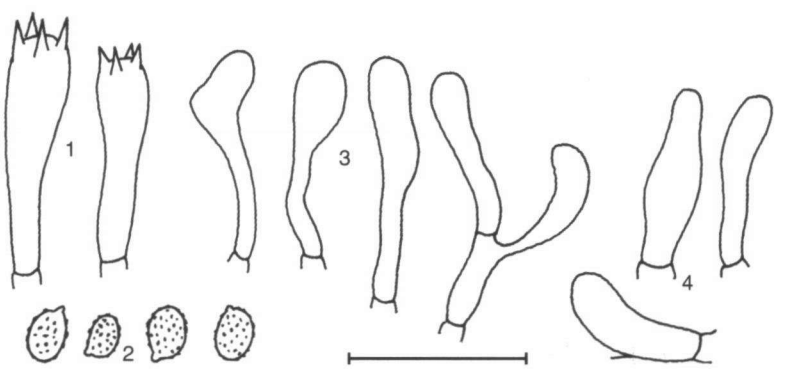

Fig. 10. *Fayodia tilieti* (holotype). 1. Basidia; 2. basidiospores; 3. cheilocystidia; 4. caulocystidia. Scale bar = 20 µm.

Smell indistinct. Taste mild. Hab.: on twigs of *Tilia*, in fallen leaves and detritus of *Tilia*. August to September. Rare. (According to Singer, 1943.)

Type revision. Basidiospores (5.0–)5.5–7.0 × 3.2–4.5 µm, Q = 1.3–1.8, Q av. = 1.5, broadly ellipsoid, sometimes subamygdaliform or subglobose, thin-, less frequently slightly thick-walled, minutely asperulate to verruculose, sometimes smooth. Basidia 22–30 × 6.0–7.0 µm, 4-spored, clavate. Basidioles 15–30 × 3.0–7.0 µm, cylindrical to clavate. Cheilocystidia inconspicuous, 16–30 × 4.0–5.0(–7.0) µm, cylindrical to (narrowly) clavate, often irregular. Pleurocystidia not found. Hyphae of trama cylindrical, thin-walled, 2.0–8.0 µm wide. Pileipellis a cutis made up of cylindrical, branched, smooth or incrusted, 2.5–6.0 µm wide hyphae; smooth walls hyaline, incrusted ones dark brown to black-brown in KOH; terminal cells adpressed to erect, up to 40 × 2.5–6.0 µm, cylindrical to narrowly clavate. Pileocystidia absent. Stipitipellis a cutis of cylindrical, parallel, slightly thick-walled, up to 5.0 µm wide hyphae. Caulocystidia (apex) 15–21 × 4.5–7.0 µm, adpressed to erect, clavate, cylindrical to subfusoid; caulocystidia at lower part of stipe scattered to absent. Clamp-connections very rare and inconspicuous, seemingly absent in some tissues. Chemical reactions: basidiospores slightly amyloid, cyanophilous, no part of tissue dextrinoid or amyloid.

Notes. Having smooth, subasperulate to verruculose, subglobose basidiospores and inconspicuous or rare cheilocystidia, this species, together with *F. lacerata*, was placed by Singer (1943) in subgen. *Clitocybula* of the genus *Fayodia*. Singer (1986) included it in the genus *Clitocybula* (Singer) Métrod as *C. tilieti* (Singer) Singer.

Considering the microscopic features described above, this species does not belong to the modern concept of the genera *Fayodia* or *Gamundia*. It probably belongs to the genus *Clitocybula*; however, its position here is rather unique in having mostly asperulate to minutely verruculose basidiospores. Moreover, the basidiospores are smaller and of a different shape than in other known European species.

xerophila — Fig. 11, Plate 1f

Fayodia xerophila Luthi & Röllin, Bull. trimestr. Soc. mycol. Fr. 88 ('1972' 1973) 174; *Gamundia xerophila* (Luthi & Röllin) Raithelh., Metrodiana 8 (1979) 34 (invalid combination); *Gamundia xerophila* (Luthi & Röllin) Raithelh., Metrodiana 9 (1980) 48; *Gamundia leucophylla* var. *xerophila* (Luthi & Röllin) Bon, Doc. Mycol. 102 (1996) 19.

Misapplied name: *Fayodia xerophila* s. Lonati 1996 (= *Gamundia lonatii* Bon & Röllin).

Holotype: Switzerland, Boucle du Rhône, Moulin de Vert, 5.XII.1971, leg. O. Röllin 6507 (G 5714).

Original description. Pileus 15–45 mm, almost hemispherical at first, then convex with a distinct umbilicate centre, regular when young, then ± strongly translucently striate and lobed, slightly rimose at margin when old, smooth, glabrous, shining, dark fuligineous brown, drying to pale grey brownish. Lamellae moderately distant, l = 3, adnate to slightly decurrent, broad to very broad, sometimes veined at base, whitish, then slightly brownish. Stipe 25–40 × 2–8 mm, cylindrical, sometimes slightly broadened at base and at apex, solid, then stuffed, fistulose at the end, often longitudinally striate when old, brownish, paler than pileus. Context thin, whitish; with ± farinaceous or spermatic smell and mild and similar taste. (According to Luthi & Röllin, 1973.)

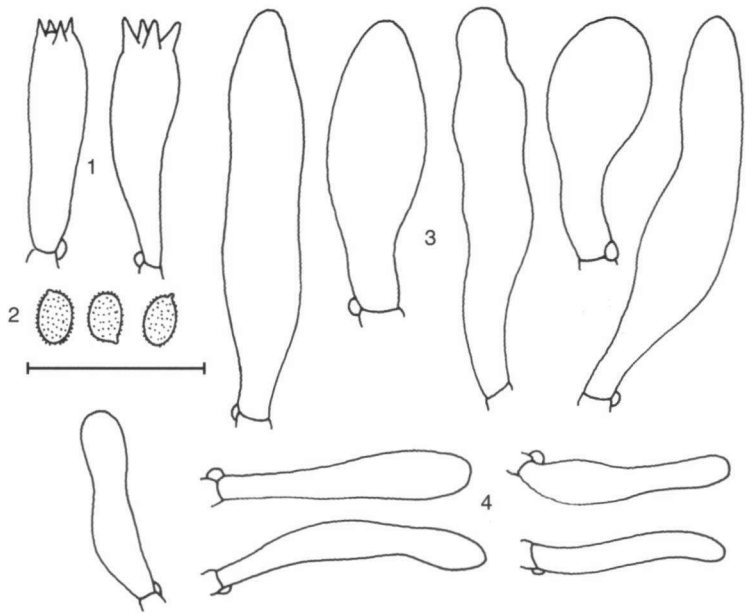

Fig. 11. *Fayodia xerophila* (holotype). 1. Basidia; 2. basidiospores; 3. cheilocystidia; 4. caulocystidia. Scale bar = 30 μm for caulocystidia, 20 μm for other structures.

Type revision. Basidiospores (6.0–)7.0–8.5(–9.0) × (4.0–)4.2–5.0(–6.0) μm, Q = 1.4–1.9, Q av. = 1.6, ellipsoid, minutely verruculose, thin-walled, hyaline. Basidia 25–33 × 8.5–10 μm, 4-spored, clavate. Basidioles 14–32 × 3.0–10 μm, clavate, subcylindrical, subfusoid. Cheilocystidia numerous, 32–92 × 9.0–15 μm, subcylindrical, sublageniform, clavate, subfusoid, sometimes submoniliform, mostly pedicellate, obtuse, sometimes slightly irregular, ± thin-walled, rarely with projection(s), hyaline. Hymenophoral hyphae cylindrical, thin-walled, smooth, up to 15 μm wide. Pileipellis a cutis made up of radially arranged, ± cylindrical, thin-walled, minutely incrusted, subhyaline in KOH, 3.0–10 μm wide hyphae; terminal cells adpressed to erect, cylindrical, clavate to fusoid, simple to rarely with some projections or subcoralloid. Stipitipellis a cutis of parallel, cylindrical, slightly thick-walled, 2.0–7.0 μm wide, sometimes diverticulate hyphae. Caulocystidia in groups or not, 30–48 × (3.0–)5.0–9.0 μm, cylindrical to clavate, sometimes sublageniform, sometimes rostrate, sometimes irregular to subcoralloid, thin-walled. Clamp-connections present in all tissues. Chemical reactions: no part of tissue or basidiospores dextrinoid or amyloid.

Notes. Fayodia xerophila is characterised by a rather dark, strongly translucently striate pileus, rather large, minutely verruculose, thin-walled basidiospores, slightly thick-walled cheilocystidia and by growing in xerophytic stands. It belongs to the genus *Gamundia* Raithelh. Bon (1996, 1997) and Bon & Röllin (1999) considered this taxon a variety of *G. leucophylla*. Kuyper (1995b) and Watling & Turnbull (1998) considered

it identical with *G. striatula*. Considering the differences between both taxa and their variability, *F. xerophila* differs from *G. striatula* only in the slightly darker coloured pileus and a different ecology; basidiospores of both species are identical in SEM photomicrographs. This difference is considered too small to distinguish two taxa. We therefore consider it identical with *Gamundia striatula* (Kühner) Raithelh.

ACKNOWLEDGEMENTS

I am very obliged to E. Horak (Zürich, Switzerland, ZT), A. Kovalenko (St. Petersburg, Russia, LE), G. Lonati (Roma, Italy), and curators of the herbaria C, G, and O for sending the type specimens for the revisions, and to E. Horak for enabling me to study his type revision of *Fayodia anthracobia* and other notes. I also thank Mr. J. Lhotecký (Brno, Czech Republic) who kindly provided the SEM photomicrographs. The study of this group belongs to a larger taxonomic project supported by the Grant Agency of the Czech Republic (No. 206/98/0257).

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