On some extraordinary species of *Galerina* EARLE from New Zealand, Australia and Indonesia, with annotations to related South American taxa

E. HORAK

Herbarium, Geobotanical Institute, ETHZ, CH-8092 Zürich, Switzerland

Abstract. – Six new species of *Galerina* EARLE with eccentric to lateral stipe are described from New Zealand (*G. nothofaginea, G. excentrica*), Australia (*G. eucalyptorum, G. inaequalis, G. tabacina*) and Indonesia (*G. bambusae*). *Galerina recedens* (SINGER) HK. c. n. (= *Pyrrhoglossum recedens* SINGER, 1973), *G. velutinoaffinis* (SINGER) HK. c. n. (= *Crepidotus velutinoaffinis* SINGER in DENNIS, 1960) and *G. bryogena* (HK.) HK. c. n. (= *Neopaxillus bryogenus* HORAK, 1979) are proposed. Illustrations and a key to the New Zealand and Australian records are presented.

Introduction

Typical species of *Galerina* are small, saprobic, cortinarioid agarics which inhabit predominantly living or dead plant debris and soil. As a consequence of their extraordinary ability to adapt to extreme ecological conditions taxa of *Galerina* have been recorded not only from temperate regions but also occur in arctic-antarctic and subtropical-tropical habitats. Regardless of this remarkable physiological flexibility to adjust to unusual life-conditions in a vast variety of different microhabitats, the macromorphology of the basidiomes (in particular the insertion of the stipe) is apparently constant. Subsequently the *stipe* of all taxa hitherto described in *Galerina* is in central position. To my knowledge there are no exceptions to this principle also outlined and emphasized in the generic circumscription (SMITH & SINGER, 1964). Thus galerinoid specimens with eccentric or lateral stipe were traditionally not accommodated in *Galerina* but in the more or less related genera *Crepidotus* (FR.) KUMMER or *Pyrrhoglossum* SING. (SINGER, 1986). Critical revision of two neotropical taxa (viz. *C. velutoaffinis, P. recedens)* revealed, however, that they actually belong to *Galerina* s. str. Concerning the "abnormal" stipe-insertion these records from Venezuela and Argentina are no isolated exceptions restricted to the South American mycoflora. In the present contribution six additional taxa of *Galerina* with eccentric to lateral stipe are described which have been gathered in several australasian localities under widely different ecological conditions.

Key to species of *Galerina* with eccentric to lateral stipe
(New Zealand, Australia, Indonesia, Argentina, Venezuela)

1. Cheilocystidia dimorphic (lecythiform and fusoid-capitate) intermixed on gill edges 2
1*. Cheilocystidia either fusoid-capitate or lecythiform 3
2. Pileus –10 mm, argillaceous to cinnamon brown; spores 7–9 × 5–6 µm, plage indistinct; on *Nothofagus;* New Zealand ..... 1. *G. nothofaginea*
2*. Pileus –15 mm, dark brown; spores 8–10 × 5–6 µm, plage distinct; on rotten dicotyledonous wood; Australia (NSW) ..... 5. *G. tabacina*
3. Spores 7–10 × 6.5–8 µm, subglobose; pileus –5 mm, yellow brown with reddish tinge; cheilocystidia fusoid-capitate; among moss, 3440 m; Venezuela [cf. 9. *G. bryogena* (Hk.) Hk.; Argentina] ..... 8. *G. velutinoaffinis*
3*. Spores and habitat different 4
4. Spores ovate, 5.5–6.5 × 4 µm; pileus –12 mm, honey brown to date brown; pilocystidia not lecythiform, on rotten dicotyledonous wood; New Zealand .... 2. *G. excentrica*
4*. Spores ellipitical to amygdaliform, larger 5
5. Pilocystidia not lecythiform; cheilocystidia fusoid-capitate; spores elliptical; pileus –8 mm, pale argillaceous; on *Bambusa;* Indonesia ..... 6. *G. bambusae*
5*. Pilocystidia and cheilocystidia distinctly lecythiform; spores ± amygdaliform 6
6. Spores 10–11 × 6.5–7 µm; pileus –7 mm, pale brown to cinnamon brown; on *Eucalyptus;* Australia (WA) ..... 4. *G. inaequalis*
6*. Spores 7–9.5 × 4.5–6 µm 7
7. Pileus –6 mm, white to pale brown; on *Alnus;* Argentina ..... 7. *G. recedens*
7*. Pileus –20 mm, golden yellow to yellow-brown turning rust orange with age; on *Eucalyptus;* Australia (WA) ..... 3. *G. eucalyptorum*

Enumeration of taxa

New Zealand

1. *Galerina nothofaginea* Horak sp. n. – Pl. 1, 1–7

Pileus –10 mm, orbiformis vel conchatus, pallide brunneus, pruinosus. Lamellae ex argillaceo luteobrunneae dein umbrinae, albofimbriatae. Stipes –5 × –1 mm, cylindricus, excentricus vel lateralis, pileo concolor, pruinosus. Velum nullum. Sporae 7–9 × 5–6 µm, pruniformes, valde verrucosae, perisporio instructae. Cheilocystidia biformia (lecythiformia vel fusoideo-capitata). Pilocystidia ex cylindraceo vel subfusoideo-capitata. Ad lignum putridum Nothofagi. Novazelandia. PDD 27218 (Holotypus).

Pileus –10 mm, circular becoming hemispherical or conchate to kidney-shaped, at first convex later expanded, margin slightly incurved; argillaceous to cinnamon brown; dry, membranaceous, conspicuously pruinose to appressed-fibrillose, striate when moist. – Lamellae (L –6, l –3) adnate to almost free; concolorous with pileus turning (yellow-)brown or tobacco brown, edge fimbriate to notched, concolorous or white, occasionally with guttation droplets in young basidiomes. – Stipe –5 × 1 mm, always distinctly developed, cylindrical, eccentric or lateral, curved; concolorous with

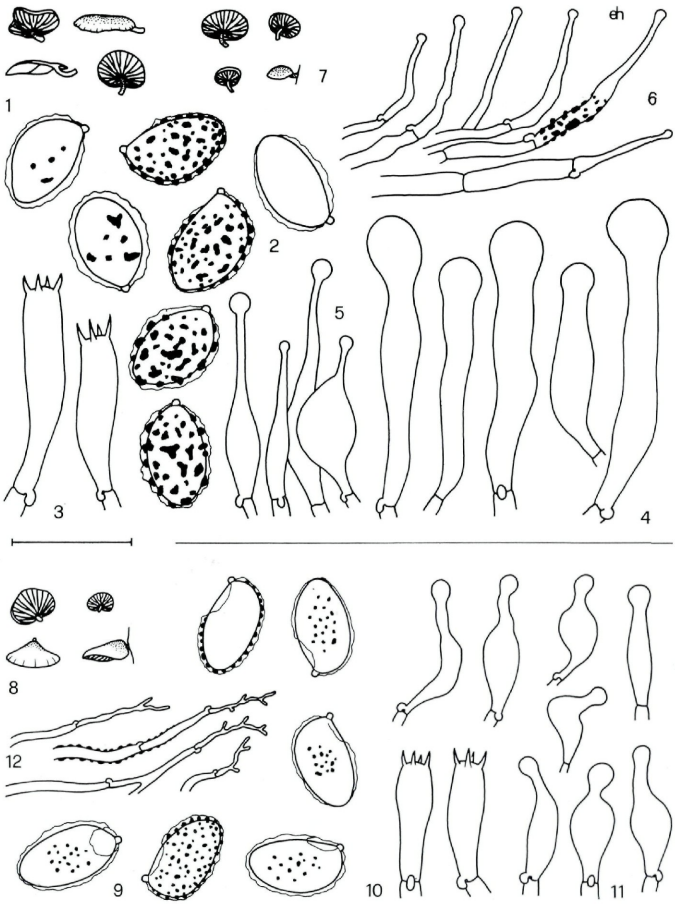

Plate 1. 1–7: *Galerina nothofaginea* HORAK (1–6: PDD 27218, holotype): 1. habit. – 2. spores. – 3. basidia. 4, 5. cheilocystidia. – 6. pilocystidia. – (ZT 69/27): 7. habit. 8–12: *Galerina bambusae* HORAK (ZT 77/177, holotype): 8. habit. – 9. spores. – 10. basidia. – 11. cheilocystidia. – 12. pilocystidia.

pileus; pruinose, solid, single, basal tomentum none. – Veil remnants absent. – Odour and taste not distinctive.

Spore print rust brown. – Spores 7–9 × 5–6 µm, pip-shaped to subamigdaliform, coarse warts embedded in conspicuous perispore, supraapicular depression and plage not distinct, germ pore absent, rust brown. – Basidia 25–35 × 7–8 µm, 4-spored. – Cheilocystidia dimorphic: a) fig. 4: 30–50 × 4–8(–10) µm, broadly fusoid-capitate, with or without strongly refracting plasmatic pigment; b) fig. 5: 25–50 × 5–8(–3) µm, lecythiform, slender neck with distinct capitate apex, thin-walled, hyaline. – Pleurocystidia scattered, in size and shape as cheilocystidia. – Caulocystidia numerous, habit as cheilocystidia (b). – Pileipellis an irregular cutis composed of cylindrical hyphae (5–10 µm diam.), strongly encrusted with brown pigment, membranes not gelatinized, terminal cells lecythiform, 30–60 × 1–5 µm, apex 3.5–7 µm diam., numerous, hyaline. – Clamp connections present.

Habitat. – On rotten wood (and bark) of *Nothofagus cliffortioides* (Hook. f.) Oerst. and *N. fusca* (Hook f.) Oerst. (Fagaceae). – New Zealand.

Material. – New Zealand: South Island, Nelson: Tophouse, 3. III. 1968, leg. Horak (PDD 27218, holotype; 68/107, isotype); Matakitaki, Murchison, 27. I. 1969, leg. Horak (ZT 69/27).

Remarks. – This species closely resembles *Galerina excentrica,* the second New Zealand species with eccentric stipe, by its shape, size and colour of basidiomes. Microscopically *G. nothofaginea* is characterized by its rather large, pip-shaped or subamygdaliform spores whose coarse warts are embedded in a thick (–2 µm diam.) perispore. It is noteworthy that the spores' plage is usually poorly delimited despite the conspicuous perisporial coat. Another remarkable microscopical feature are the dimorphic cheilocystidia (and pleurocystidia) which are found side by side both on the edges and to a lesser degree also on the faces of the lamellae. The clavate cystidia with broadly rounded apices described above under a) are reminiscent of the striking (cheilo-)cystidia observed in *Galerina* sect. Physocystis (Smith & Singer, 1964). The cheilocystidia mentioned under b), however, are distinguished by their typical tibiiform shape. Similar lecythiform cystidia are also observed on the surface of stipe and pileus (pilocystidia).

G. nothofaginea is closely related to the Australian *G. tabacina* (No. 5) recorded from northern New South Wales (cf. key). In New Zealand *G. nothofaginea* occurs on rotten, mossy logs of *Nothofagus (N. cliffortioides, N. fusca).* In the field it is readily confused with several taxa of similar habit and colours which, however, belong to *Phaeomarasmius, Flammulaster* (Horak, 1980 a), *Simocybe* (Horak, 1980 b) or *Crepidotus.*

2. ***Galerina excentrica*** HORAK sp. n. – Pl. 2, 1–5

Pileus –12 mm, orbiformis dein hemisphaericus, ex melleo brunneus, minute fibrillosus. Lamellae aurantiacae dein cinnamomeo-aurantiacae, albofimbriatae. Stipes –7 × –1 mm, cylindricus, excentricus, pileo concolor. Velum nullum. Sporae 5.5–6.5 × 4 µm, ovatae, verrucosae, ferrugineae. Cheilocystidia 30–65 × 4–7 µm, lecythiformia. Pilocystidia nulla. Ad lignum putridum. Novazelandia. PDD 27221 (Holotypus).

Pileus –12 mm, circular becoming hemispherical or conchate, convex when young, expanded in mature basidiomes, margin slightly incurved; honey brown to date brown; dry, membranaceous, minutely felty to velutinous, not hygrophanous. – Lamellae (L –10, l –3) adnexed to adnate; at first orange brown turning cinnamon brown or umber brown with orange tinge, edge albofimbriate. – Stipe –7 × –1 mm, in all stages developed, cylindrical, eccentric, curved; concolorous with pileus, base covered with conspicuous white tomentum; dry, pruinose at apex, solid, single. – Veil remnants absent. – Odour and taste not distinctive. – Chemical reactions on pileus: KOH – negative.

Spore print rust brown. – Spores 5.5–6.5 × 4 µm, ovate, minutely warted, perispore absent, supraapicular depression and plage present but not distinct, germ pore absent. – Basidia 16–26 × 5–6 µm, 4-spored. – Cheilocystidia 30–65 × 4–7 µm, lecythiform, capitate apex –5 µm diam., hyaline, towards base often encrusted with brown pigment. – Pleurocystidia none. – Caulocystidia in shape and size as cheilocystidia. – Pileipellis an irregular cutis composed of cylindrical to ovoid cells, membranes not gelatinized, but strongly encrusted with brown pigment (occasionally also with plasmatic pigment), terminal cells cylindrical (or gradually tapering towards apex), hyaline, –2 µm diam., ± erect. – Clamp connections present.

Habitat. – On rotten wood of broad-leaved tree (species unknown). – New Zealand.

Material. – NEW ZEALAND: North Island, Coromandel Peninsula, Kirikiri Valley, 10. VII. 1968, leg. HORAK (PDD 27221, holotype; ZT 68/659, isotype).

Remarks. – Macroscopically *Galerina excentrica* is strikingly similar to *G. nothofaginea* but differs in its microscopical characters. The most distinguishing feature of *G. excentrica* are the slender tibiiform cystidia both on the gill edges and on the surface of the stipe; remarkably the terminal cells of the pileal hyphae are not lecythiform but cylindrical at the apical tips. In addition this species is recognized by its small, ovate spores (covered with rather minute warts) without perispore.

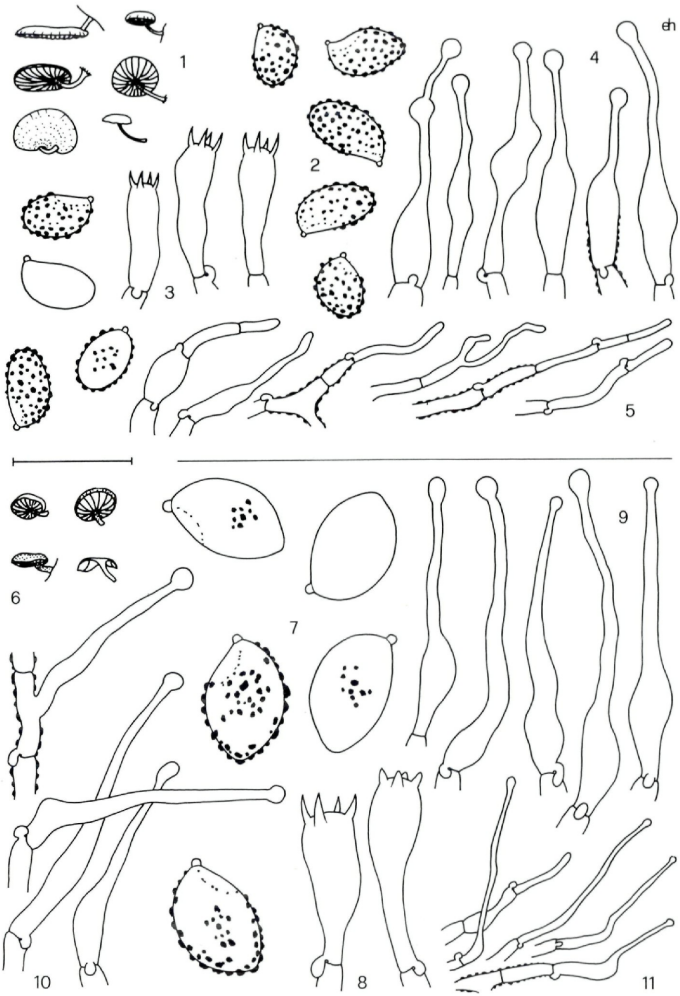

Plate 2. 1–5: *Galerina excentrica* HORAK (PDD 27221, holotype): 1. habit. – 2. spores. – 3. basidia. – 4. cheilocystidia. – 5. pilocystidia.
6–11: *Galerina inaequalis* HORAK (ZT 2702, holotype): 6. habit. – 7. spores. – 8. basidia. – 9. cheilocystidia. – 10. caulocystidia. – 11. pileipellis.

Within the genus *Galerina* (SMITH & SINGER, 1964) *G. excentrica* is apparently related to taxa assembled in the stirps Triscopa (sect. Mycenopsis).

Australia

3. ***Galerina eucalyptorum*** HORAK sp. n. – Pl. 3, 1–6 (type); pl. 4, 1–6 (ZT 1238)

Pileus –20 mm, orbiformis vel conchatus, ex ochraceo aureofulvus, pruinosus vel minute fibrillosus. Lamellae luteae dein pileo concolores vel aurantio-ferrugineae, albofimbriatae. Stipes –15 × 1(–2) mm, cylindricus, excentricus vel lateralis, raro centralis, pileo concolor, basim versus brunneus, pruinosus. Velum nullum. Sporae 7.5–9.5 × 5–6 µm, ovatae vel pruniformes, verrucosae, ferrugineae. Cheilocystidia 30–45 × 4–10 µm, lecythiformia. Pilocystidia, cheilocystidiis similia. Ad lignum putridum Eucalypti. Australia. ZT 2708 (Holotypus).

Pileus –20 mm, circular when young becoming hemispherical or conchate with age, margin inrolled in young specimens, convex becoming expanded; golden yellow to rust brown-ochre when moist turning to honey yellow-brown or pale ochre-argillaceous in drying basidiomes, hygrophanous; dry, striate in moist condition, glabrous or minutely fibrillose to scurfy at centre. – Lamellae (L –16, l –3, rarely 5) adnexed to adnate, often emarginate with short decurrent tooth, up to 4 mm wide, ventricose in aged specimens; pale yellow or ochre turning rust brown-yellow or rusty orange, edge concolorous or paler, fimbriate. – Stipe –15 mm × 1(–2) mm, well developed in all stages, cylindrical, eccentric to lateral, occasionally swollen at base; at apex concolorous with lamellae becoming pale brown or dark brown towards base, at times with greenish tinge; dry, pruinose in upper portion, fibrillose or glabrous towards base, basal tomentum absent, solid, single. – Veil remnants none. – Odour not distinctive. – Taste bitter. – Chemical reaction on pileus: KOH – negative.

Spore print rust brown. – Spores 7.5–9.5 × 5–6 µm, ovate to pip-shaped, verrucose, rust brown, perispore absent, supraapicular depression none or shallow, plage ± distinct, germ pore absent. – Basidia 20–32 × 7–8 µm, 4-spored. – Cheilocystidia 30–45 × 4–10 µm, lecythiform, apex –7 µm diam., hyaline. – Pleurocystidia none. – Caulocystidia 25–100 × 1–6 µm, cylindrical to slender fusoid, apex capitate (–4 µm diam.), hyaline, numerous. – Pileipellis a cutis composed of cylindrical hyphae (4–10 µm diam.), strongly encrusted with yellow-brown or rust brown pigment, sometimes with lumps of yellow-brown subcrystaline extracellular pigment among subcuticular hyphae, terminal cells cylindrical to lecythiform, 20–30 × 2–6 µm, membranes not gelatinized. – Clamp connections present.

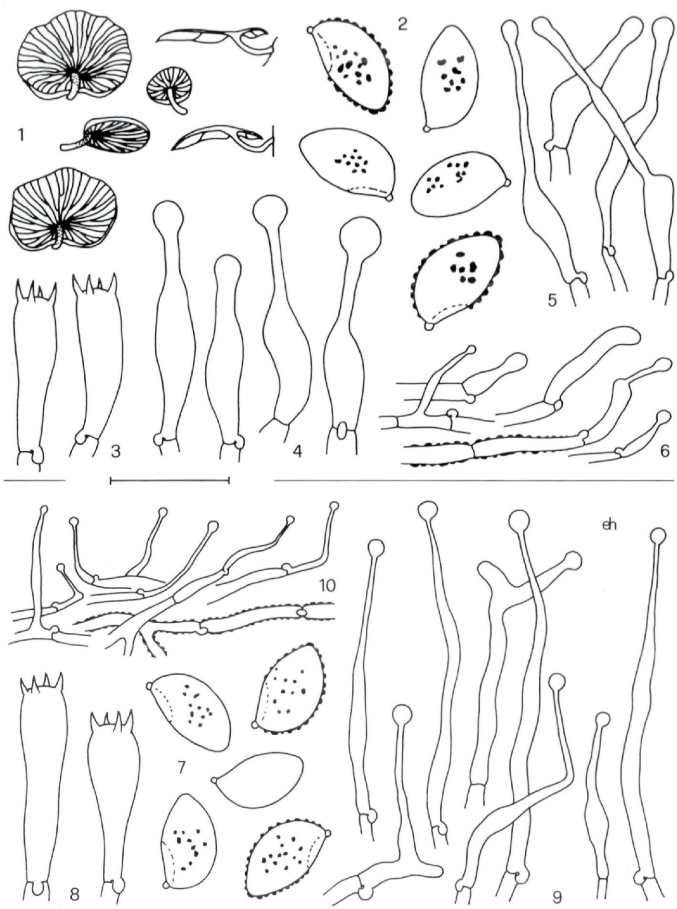

Plate 3. 1–6: *Galerina eucalyptorum* HORAK (ZT 2708, holotype): 1. habit. – 2. spores. – 3. basidia. – 4. cheilocystidia. – 5. caulocystidia. – 6. pilocystidia.
7–10: *Galerina recedens* (SINGER) HORAK (T 5143, F): 7. spores. – 8. basidia. – 9. cheilocystidia. – 10. pilocystidia.

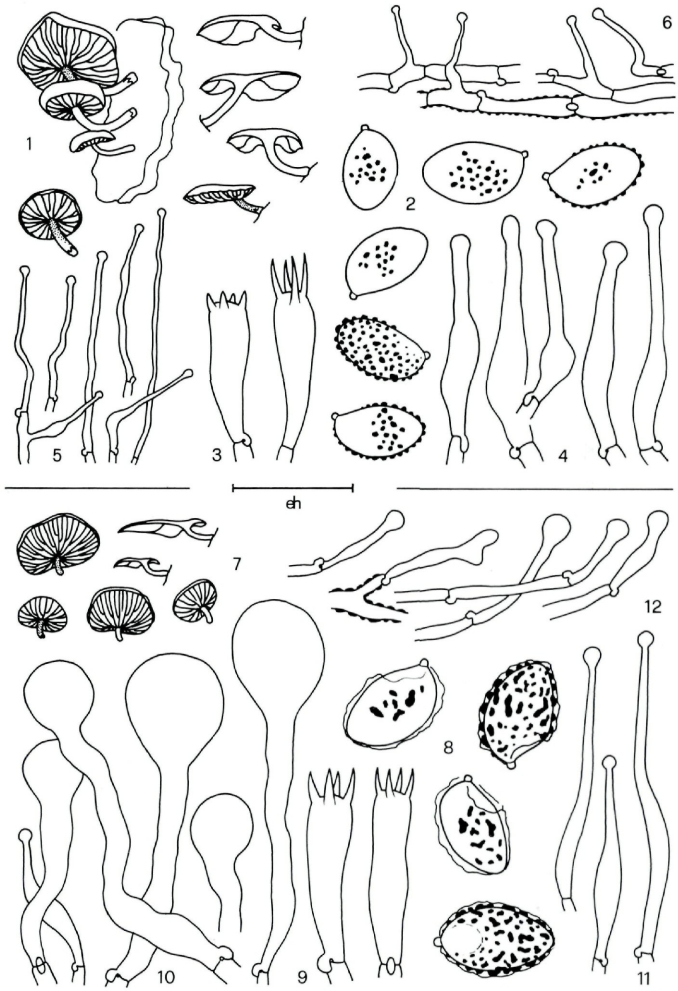

Plate 4. 1–6: *Galerina eucalyptorum* HORAK (ZT 1238): 1. habit. – 2. spores. – 3. basidia. – 4. cheilocystidia. – 5. caulocystidia. – 6. pilocystidia.
7–12: *Galerina tabacina* HORAK (ZT 1267, holotype): 7. habit. – 8. spores. – 9. basidia. – 10, 11. cheilocystidia. – 12. pilocystidia.

Habitat. – On rotten (rarely also on charred) wood of *Eucalyptus marginata* DONN and *E. calophylla* BROWN (Myrtaceae). – Australia.

Material. – AUSTRALIA: Western Australia: Quininup, Northcliff Forest Park, Snake Gully, 21. VI. 1985, leg. HORAK (ZT 2708, holotype); Armadale, Gleneagle Forest, Cunning Dam, 8. VIII. 1981, leg. HORAK (ZT 1238); E of Dwellingup, 25. VI. 1985, leg. HORAK (ZT 2748).

Remarks. – This species appears to have a wide distribution in the Western Australian sclerophyll forests dominated by *Eucalyptus* spp. Based upon three collections from different localities the range of variation of its macroscopical and microscopical characters is much better known than in the second sympatric *Galerina (G. inaequalis)* with eccentric stipe. The predominantly golden yellow to ochre, rather robust basidiomes of *G. eucalyptorum* occur gregariously and occasionally large colonies can be observed on the substrate. Its outstanding characters are the bitter taste of the context, the warted spores without perispore ranging from 7.5–9.5 × 5–6 µm and the tibiiform cheilocystidia, caulocystidia and pilocystidia. At first sight *G. eucalyptorum* could be taken for a small representative of *Gymnopilus* KARSTEN, also characterized by its vivid yellow colours in all parts of the basidiomes and the bitter taste of its context. Microscopical analysis, however, reveals that this taxon can not be accommodated in *Gymnopilus* where lecythiform caulocystidia and pilocystidia have not yet been reported. In addition the cheilocystidia of the Western Australian taxon are always devoid of any plasmatic pigment and the KOH-reaction on the surface of the pileus is also negative.

4. ***Galerina inaequalis*** HORAK sp. n. – Pl. 2, 6–11

Pileus –7 mm, orbiformis vel ovatus, convexus, pallide argillaceus, minute fibrillosus. Lamellae pallide argillaceae dein ferrugineae, albofimbriatae. Stipes –4 × –1 mm, cylindricus, excentricus, pileo concolor, pruinosus. Velum nullum. Sporae 10–11 × 6.5–7 µm, pruniformes, verrucosae, ferrugineae. Cheilocystidia 40–60 × 5–8 µm, fusoideo-capitata. Pilocystidia cheilocystidiis similia. Ad lignum putridum Eucalypti. Australia. ZT 2702 (Holotypus).

Pileus –7 mm, circular becoming conchate with age, hemispherical to plano-convex, margin inrolled; pale argillaceous; dry, membranaceous, not hygrophanous, minutely fibrillose. – Lamellae (L –8, l 1–3) adnate, becoming ventricose with age, up to 2 mm wide; pale argillaceous turning rust brown, edge albofimbriate. – Stipe –4 × –1 mm, in all stages well developed, cylindrical, eccentric, curved; concolorous with pileus; dry, pruinose over whole length, basal tomentum absent, solid, single. – Veil remnants none.

– Odour and taste not distinctive. – Chemical reaction on pileus: KOH- negative.

Spore print rust brown. – Spores 10–11 × 6.5–7 µm, pip-shaped or amygdaliform, verrucose, perispore none, rust brown, plage ± distinct, supraapicular depression absent, germ pore none. – Basidia 22–30 × 8–9 µm, 4-spored. – Cheilocystidia 40–60 × 5–8 µm, lecythiform, apex capitate (–4 µm diam.), hyaline. – Pleurocystidia absent. – Caulocystidia in shape and size as cheilocystidia. – Pileipellis a cutis of interwoven cylindrical hyphae (4–6 µm diam.), membranes not gelatinized, encrusted with pale yellow-brown pigment, terminal cells cylindrical-capitate or slender lecythiform, capitate apex –3 µm diam., oleiferous hyphae absent. – Clamp connections numerous.

Habitat. – On rotten wood of *Eucalyptus diversicolor* F. v. M. and *E. calophylla* Brown (Myrtaceae). – Australia.

Material. – Australia: Western Australia, E of Manjimup, 20. VI. 1985, leg. Pearce (ZT 2702, holotype).

Remarks. – The most apparent macroscopical characters of this small eccentric *Galerina* are the pruinose stipe and pileus. The hoary appearance of both young and mature basidiomes, in combination with pale argillaceous to cinnamon colours observed in all parts of the fruitbodies, in the field recalls rather a taxon of *Simocybe* Karsten. The recognition of *Galerina inaequalis* is readily accomplished with its microscopical features (rust brown warted spores with ± distinct plage, conspicuous tibiiform cystidia on the gill edges, surface of stipe and pileus) which leave no doubt about its actual taxonomic position within the Cortinariaceae. All data available and the combination of characters observed on *G. inaequalis* taken into account suggest that this species is best placed in sect. Mycenopsis subsect. Tibiicystidiae (Smith & Singer, 1964).

5. ***Galerina tabacina*** Horak sp. n. – Pl. 4, 7–12

Pileus –15 mm, orbiformis vel conchatus, umbrinus vel tabacinus, velutinosus. Lamellae pileo concolores, albofimbriatae. Stipes –5 × –1 mm, cylindricus, excentricus vel lateralis, pileo concolor, pruinosus. Velum nullum. Sporae 8–10 × 5–6 µm, pruniformes vel amygdaliformes, valde verrucosae, ferrugineae, perisporio instructae. Cheilocystidia biformia, lecythiformia vel clavata. Caulo- et pilocystidia similia. Ad lignum putridum. Australia. ZT 1267 (Holotypus).

Pileus –15 mm, circular becoming hemispherial or conchate with age, convex then expanded or depressed at centre, margin inrolled in young basidiomes; dark umber brown, tobacco brown or chocolate brown, fading with age; dry, slightly hygrophanous, obscurely striate in fresh condition. – Lamellae (L –10, l –5–7) adnate to adnexed, ventricose, up to 2.5 mm wide; concolorous with pileus, edge notched, albofimbriate. – Stipe –5 mm × –1 mm, in all stages

developed, cylindrical, equal, curved, eccentric to sublateral; concolorous with pileus, basal tomentum absent; dry, pruinose over whole length, solid, single. – Veil remnants absent. – Odour and taste not distinctive. – Chemical reaction on pileus: KOH-negative.

Spore print dark brown. – Spores 8–10 × 5–6 µm, pip-shaped or amygdaliform, apex not mucronate, coarse warts embedded in a conspicuous perispore, plage and supraapicular depression distinct, germ pore none, dark (rust) brown. – Basidia 25–30 × 6–8 µm, 4-spored. – Cheilocystidia dimorphic: a) fig. 10: 40–60(–80) × 4–7 µm, conspicuously clavate, apex up to 18 µm diam., occasionally with pale brown plasmatic pigment; b) fig. 11: 25–60 × 2–5 µm, lecythiform, occasionally with resinous cap over capitulate apex, hyaline. – Pleurocystidia none. – Caulocystidia in shape and size as cheilocystidia. – Pileipellis a cutis of cylindrical hyphae, strongly encrusted with dark brown or rust brown pigment, membranes not gelatinized, oleiferous hyphae absent, terminal cells cylindrical to slender fusoid with capitate apex (20–50 × 3–10 µm). – Clamp connections numerous.

Habitat. – On rotten wood (probably *Eucalyptus* sp.). – Australia.

Material. – AUSTRALIA: New South Wales, Wauchope, Hastings Range, Mt. Boss, Rimau Rd., 15. VIII. 1981, leg. HORAK (ZT 1267, holotype).

Remarks. – Among the three eccentric taxa of *Galerina* so far recorded from Australia, *G. tabacina* exhibits the most outstanding microscopical characters. The thick perispore and the sharply delimited plage are distinctive features of the coarsely warted spores measuring 8–10 × 5–6 µm. According to the conspicuous dimorphic cheilocystidia this taxon from northern New South Wales is undoubtedly closely related to the New Zealand *G. nothofaginea* (No. 1) from which it differs, however, by pale colour of the basidiomes and several spore characters.

Both taxa belong to sect. Physocystis (SMITH & SINGER, 1964) and approach the type species of this section, *G. pruinatipes* SMITH (1953), reported both from boreal-temperate North America and from montane-subalpine habitats in the Alps (syn. *Gymnopilus laricicola* FAVRE).

Indonesia

6. ***Galerina bambusae*** HORAK sp. n. – Pl. 1, 8–12

Pileus –8 mm, hemisphaericus vel conchatus, ex isabellino argillaceus, glabrus. Lamellae isabellinae dein ochraceo-argillaceae. Stipes –1 × –0,5 mm, cylindricus, lateralis (pileo concolor) vel deest. Velum nullum. Sporae 7–8.5 × 4–4.5 µm, ellipticae,

minute verrucosae, ferrugineae, perisporio instructae. Cheilocystidia 14–25 × 4–7 µm, sublecythiformia. Pilocystidia ramificata. Ad frustulas Bambusae. Indonesia. ZT 77/177 (Holotypus).

Pileus –8 mm, circular becoming hemispherical to conchate, convex then applanate, margin not inrolled; pallid to pale argillaceous; dry, obscurely striate, membranaceous, glabrous to minutely fibrillose. – Lamellae adnexed, crowded, very narrow; pallid at first turning ochre-argillaceous, often with faint orange tint, edge entire, occasionally albofimbriate. – Stipe –1 ×–0,5 mm, rudimentary in lateral position or occasinally absent, cylindrical, equal; concolorous with pileus; subglabrous, dry, solid, single, basal tomentum absent. – Veil remnants absent. – Odour and taste not distinctive. – Chemical reactions unknown.

Spore print rust brown. – Spores 7–8.5 × 4–4.5 µm, elliptical, rust brown, verrucose, small warts embedded in conspicuous perispore, plage distinct, supraapicular depression none, germ pore absent. – Basidia 15–20 × 6 µm, 4-spored. – Cheilocystidia 14–25 × 4–7 µm, fusoid-capitate to lecythiform, capitate apex –4 µm diam., hyaline. – Pleurocystidia none. – Caulocystidia not observed. – Pileipellis a cutis composed of interwoven, cylindrical hyphae (3–6 µm diam.), membranes not gelatinized, encrusted with pale yellow-brown pigment, terminal cells gradually tapering, often with finger-like projections, hyaline, oleiferous hyphae absent. – Clamp connections present.

Habitat. – On poles, sheaths and leaves of living *Bambusa* sp. (bamboo). – Indonesia.

Material. – INDONESIA: Java, Bogor, Botanical Garden, 11. III. 1977, leg. HORAK (ZT 77/177, holotype).

Remarks. – Macroscopically *Galerina bambusae* is chiefly characterized by its extremely reduced lateral stipe. Sometimes it can be observed that some specimens within one population are stipeless and thus are laterally attached to the substrate. The habit of the pale argillaceous basidiomes therefore closely resemble that of many *Crepidoti*, often observed on bamboo in the tropics. However, *G. bambusae* is distinguished from typical taxa of *Crepidotus* (FR.) KUMMER by the elliptical spores whose warts are embedded in a conspicuous perispore absent in the plage area. The fusoid-capitate cheilocystidia represent another distinctive feature indicating its actual taxonomic position in *Galerina*.

Argentina

7. ***Galerina recedens*** (SINGER) HORAK c. n. – Pl. 3, 7–10

Bas.: *Pyrrhoglossum recedens* SINGER (1973): Sydowia Beih. 7: 91.

For description of macroscopical characters cf. SINGER (1973).

Spore print? – Spores 7–8.5 × 4.5–5 µm, slender pip-shaped to subamygdaliform, verrucose, perispore absent, plage poorly delimited, supraapicular depression mostly absent, rust brown, germ pore none. – Basidia 25–35 × 8–9 µm, 4-spored. – Cheilocystidia 30–65 × 3–5 µm, cylindrical-capitate to lecythiform, capitate apex up to 4 µm diam., hyaline or pale yellow from plasmatic pigment. – Pleurocystidia absent. – Caulocystidia in shape and size as cheilocystidia. – Pileipellis a cutis composed of interwoven cylindrical hyphae (4–6 µm diam.), encrusted with pale yellow-brown pigment, oleiferous hyphae absent, terminal cells as cheilocystidia, apex –3 µm diam. – Clamp connections present.

Habitat. – On rotten wood of *Alnus jorullensis* H. B. & K. var. *spachii* CALLIER (Betulaceae). – Argentina.

Material. – Argentina: Jujuy, Lagunas de Yala, 2400 m, 14. II. 1962, leg. SINGER T 5143 (holotype; F).

Remarks. – The reexamination of the fragmentary type material demonstrated that this small crepidotoid agaric represents a taxon belonging to *Galerina*. The proposed transfer from *Pyrrhoglossum* to *Galerina* is supported by the presence of rust brown, pip-shaped to subamygdaliform, warted spores with lacking perispore and poorly defined plage. In addition *G. recedens* is recognized by the presence of extremely large and slender tibiiform cheilocystidia and pilocystidia, the latter being reponsible for the tomentose appearance of the pileal surface in fresh basidiomes.

G. recedens is reported from rotten wood of the South American alder *(Alnus jorullensis)* whose area of distribution reaches its southernmost limit in the Andes not far beyond the type locality in northern Argentina.

Venezuela

8. ***Galerina velutinoaffinis*** (SINGER) HORAK c. n.

Bas.: *Crepidotus velutinoaffinis* SINGER in DENNIS (1960): Kew Bull, 15: 145.

Habitat. – On moss. – Venezuela (DENNIS, 1960).

Material. – VENEZUELA: Merida, Sierra de Santo Domingo, Laguna Negra, 3440 m, 31. VII. 1958, leg. DENNIS (holotype, K).

Remarks. – Although originally placed in *Crepidotus*, the rather large, subglobose, inequilateral spores (8–10 × 6.5–8 µm) with warted to marbled ornamentation and a ± distinct plage are not typical of this genus. The slender fusoid to cylindrical-capitate cheilocystidia and pilocystidia make *Galerina* a more adaequate genus for this taxon. Furthermore the proposed transfer is supported by the presence of clamp connections and the yellow-brown pigment which strongly encrusts the non-gelatinized hyphae of the pileipellis.

The small, spathulate basidiomes (–5 mm diam.) were found on moss in the Andes (3440 m) of Venezuela. This collection represents the first South American record of *Galerina* with crepidotoid basidiomes (i.e. with eccentric to lateral-rudimentary stipe).

Addendum

9. *Galerina bryogena* (HORAK) HORAK c. n.

Bas.: *Neopaxillus bryogenus* HORAK (1979): Fl. cript. Tierra del Fuego 11: 47.

The original description (HORAK, 1979) of the Fuegian *G. bryogena* does not report several data about its microscopical characters. These are supplemented herewith: Caulocystidia 20–50 × 4–8 µm, cylindrical to slender fusoid, single and in clusters, hyaline membrane near basal septum often encrusted with yellow-brown pigment, occasionally plasmatic pigment of the same colour also observed. – Pileipellis a cutis of interwoven, cylindrical hyphae (6–18 µm diam.), non gelatinized membranes encrusted with yellow-brown pigment, terminal cells cylindrical to fusoid-cystidioid, oleiferous hyphae absent; veil remnants (covering the surface of the pileipellis) consist of slightly gelatinized, cylindrical hyphae (1–2 µm diam.), with clamp connections.

Habitat. – On living moss in *Nothofagus* forest [*N. pumilio* (POEPP & ENDL.) KRASSER, *N. betuloides* (MIRB.) OERST.; Fagaceae]. – Argentina (Tierra del Fuego).

Material. – ARGENTINA: Tierra del Fuego: NE of Ushuaia, Tierra Major, 7. III. 1974, leg. HORAK (LPS 37849, holotype; ZT 74/158, isotype); N of Ushuaia, 11. III. 1975, leg. HORAK, ZT 75/90.

Remarks. – *Galerina bryogena,* a species with permanently central stipe, is obviously closely related to the above mentioned *G. velutinoaffinis* (Nr. 8). Both taxa are reported to grow on (living) moss either in the temperature zone above timberline in Venezuela or in subantarctic *Nothofagus* forests in Tierra del Fuego.

Galerina bryogena, originally assigned with some hesitation to the endemic South American genus *Neopaxillus* (HORAK, 1968), is actually a representative of *Galerina.* The reexamination of the authentic collections supported evidence for the suggested relegation. The most distinctive microscopical characters are the relatively large, subglobose, inequilateral spores (8.5–10 × 7–8 µm) whose external structures are identical with those observed in *G. velutinoaffinis.* The hyaline cheilocystidia range in shape from clavate to fusoid (often with several constrictions towards the subcapitate apex).

In the two populations recorded so far the slender stipe of *G. bryogena* has not been observed in eccentric or lateral position. However, there is no doubt that *G. bryogena* is systematically closely

allied to *G. velutinoaffinis*. In addition both taxa require (living) moss as host substrate which in the case of *G. bryogena* is a member of the Dicranales.

Magnifications of illustrations: length of bar: 20 mm (basidiomes; nat. size), 10 µm (spores; × 2000), 20 µm (basidia, cystidia; × 1000), 40 µm (pileipellis, vertical section; × 500).

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