

A NEW GALERINA FROM PEAT-BOGS

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(With five Text-figures)

*Galerina propinqua* Bas, sp. nov., belonging to *Galerina* section *Tubariopsis*, is described. The name *Galerina* sect. *Tubariopsis* Kühn. is validly published by providing a Latin description; the taxonomic status of this section is discussed.

During the past few years, Dr. J. J. Barkman, Mr. P. B. Jansen, and I collected on several occasions a small, pale, entirely pruinose species of *Galerina* in peat-bogs in The Netherlands and north-western Germany. Sometimes it was found growing on bare or mossy peat, sometimes among *Sphagnum*.

At first view I identified this species with *G. laevis* (Pers.) Sing., usually called *G. graminea* (Velen.) Kühner. However, repeated close observations revealed that the spores differed considerably.

The description of a new species of *Galerina* is a hazardous undertaking on account of the many new North American species published by Smith (1953) and Smith & Singer (1955, 1958a). Fortunately, Dr. A. H. Smith, Ann Arbor, was so kind as to study material of the present species and to express as his opinion that he too considered it undescribed.

I am convinced that the taxonomy of *Galerina* in Europe is considerably more complicated than one would conclude from the literature. Quite a number of collections in the Rijksherbarium at Leiden seem to represent undescribed species. The same I found true when I studied the material under the names *G. marginata* and *G. unicolor* in the herbaria at Stockholm and Uppsala. However, before publishing a new species in a genus as difficult as *Galerina* it is important to have a clear picture in mind of its habit and habitat. That is why at the moment only one of the unnamed species met with is considered for publication.

In the following description, the abbreviation "Expo" refers to the colour-card of Cailleux A. & Taylor G., Code Expolaire, Boubée & Cie, Paris.

***Galerina propinqua* Bas, nov. spec.**

Pileus 5-13 mm latus, pallide ochraceus vel pallide ochraceo-brunneus, pellucido-striatus, sub lente minute pubescens. Lamellae subconfertae vel subdistantes, pallide ochraceae. Stipes 12-32 × 0.4-2 mm, pallidus, minute pubescens. Sporae 8-10 × 4.5-5.5 μ, pallidae, leviter vel mediocriter rugulosae, sine areola supra-apiculari glabra, obtuse subamygdaliformes, non-collapsae. Pleurocystidia nulla. Cheilocystidia 20-40 × 5-10 μ, collo 1.5-2.5 μ lata, apice 3-5.5 μ. Pileocystidia caulocystidiaque praesentia. Hyphae defibulatae vel fibulis raris praeditae. — Typus: J. J. Barkman 7837, 27 May 1964, Germany, Hannover, Meppen, Klein Heseper Moor (L, MICH).

Etymology.—Propinquus, resembling, related (on account of the resemblance of this species to *Galerina laevis* = *G. graminea*).

Cap 5–14 mm wide and 2–7 mm high, at first parabolical with slightly incurved margin to hemispherical with obtuse umbo, becoming conical to plano-conical with obtuse apex, pale ochraceous to pale brownish ochraceous, ochraceous brown or buff, honey-buff or pale honey, sometimes pale tawny with age (Expo C66, D66, C74 but less dingy, A84), often somewhat dingy, translucently striate almost to centre (4/5 R), pruinose under hand-lens when young, without remnants of veil, subviscid, slightly shining. Gills moderately crowded to rather distant, 11–16 with 1–3 small ones between each pair, rather thin, ventricose, ascendent, narrowly adnate to adnate-emarginate, pale ochraceous or yellowish buff (Expo A78) when young, pale but rather clear honey-ochraceous ( $\pm$  Expo D66 but brighter) to rusty ochraceous with age, with whitish pruinose, sometimes minutely crenulate edge. Stem 12–32(–50)  $\times$  0.4–2 mm, equal or slightly attenuate upward, often with small, 1.2–1.8 mm wide bulb at base, becoming fistulose, hyaline whitish, pale buff or pale honey, mostly unicoloured, very seldom slightly darker toward base, pruinose all over, sometimes whitish tomentose at base, remnants of veil as some scattered, minute, white fibrils only in young specimens. Flesh concolorous with surface. Taste weak, subraphanoid, not farinaceous. Smell herbaceous when crushed.

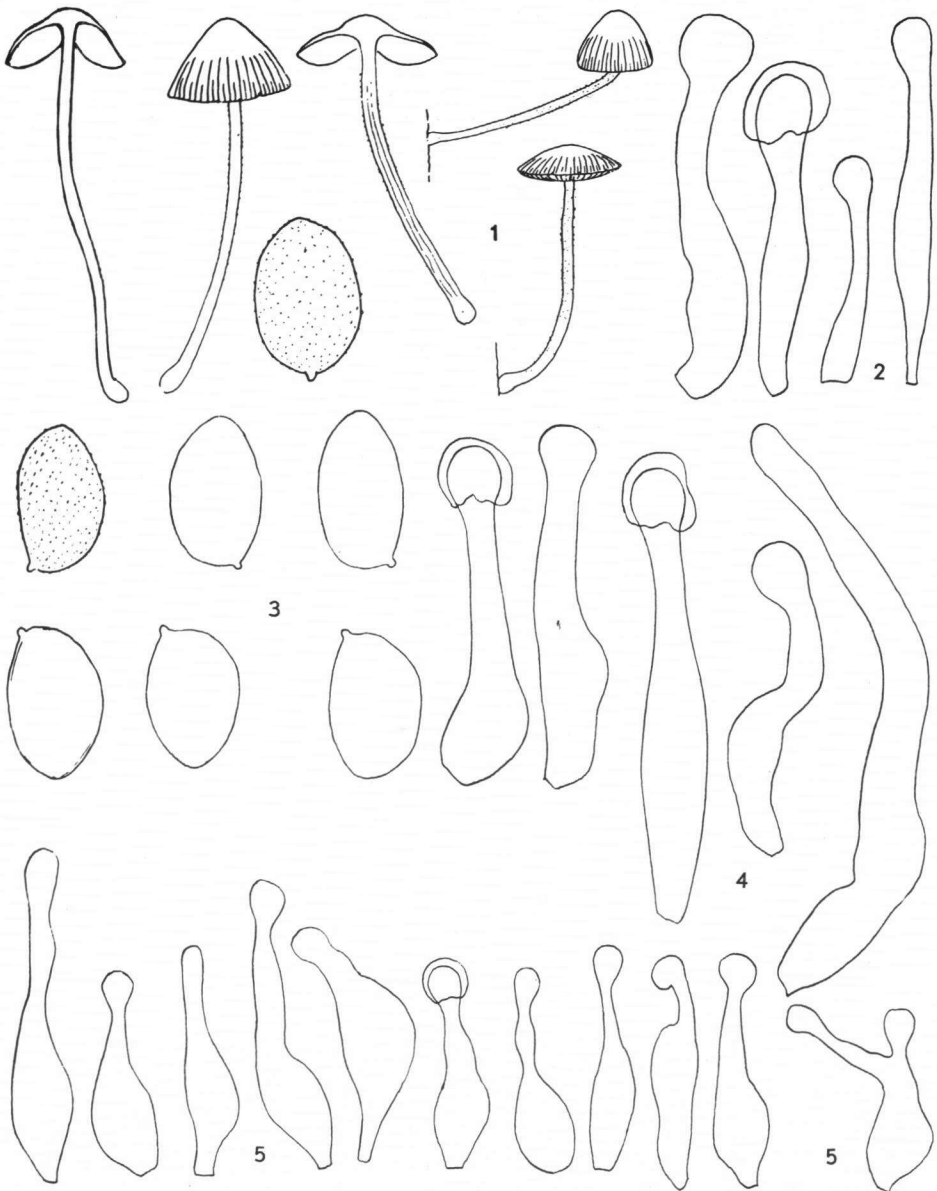
Spores 7.8–10.4(–11.2)  $\times$  4.3–5.9  $\mu$ , subamygdaliform to amygdaliform, mostly with rather obtuse apex, with small apical pore (several spores germinating through this pore), faintly to moderately rough, without plage, with somewhat thickened wall (consisting of at least two layers) and therefore not easily collapsing, pale dingy yellow in water, pale brownish yellow in  $\text{NH}_4\text{OH}$  solution, moderately dark dingy rusty brown in KOH solution, not or only faintly pseudo-amyloid after many hours. Basidia 4-, rarely 2-spored, with clamps when young. Cheilocystidia 20–39  $\times$  4.2–10.8  $\mu$  with neck 1.4–2.8  $\mu$ , and apex 2.6–7.1  $\mu$ , wide, abundant, rendering edge of gills sterile, capitate to subcapitate lageniform, broader, up to 15  $\mu$  wide, near edge of cap and there sometimes vesiculose with or without a non-capitate neck, thin-walled, colourless sometimes forked, often bearing small to very large apical hyaline globules. Pleurocystidia absent. Cuticle composed of (4–)8–18  $\mu$  wide, radial to interwoven hyphae, the thinner ones sometimes pale yellow encrusted, not gelatinized at surface, with scattered to numerous subcapitate to capitate filiform to slender-lageniform pileocystidia, 26–55  $\times$  3–12  $\mu$ . Caulocystidia similar but larger, 38–81  $\times$  8–14  $\mu$ . Trama of gills subregular. Clamps present at base of young basidia; absent or very scarce elsewhere (only a very few seen at narrow hyphae of stem and gills).

HABITAT.—On bare or mossy peat and on *Sphagnum*.

DISTRIBUTION.—North-west Germany, Netherlands.

COLLECTIONS EXAMINED.—GERMANY: Hannover, Meppen, Klein Heseper Moor, 27 May 1964, *J. J. Barkman* 7837 (type, L, MICH); Ostfriesland, Ewiges Mehr, north of Aurich, 22 Aug. 1962, *C. Bas* 2607 (L). — NETHERLANDS: Drente, Meerstalblok near Zwartemeer, east of Coevorden, 20 May 1960, *J. J. Barkman* & *C. Bas* (L, MICH); Noord-Brabant, Grote Peel, near Asten, east of Eindhoven, 12 Sept. 1963, *P. B. Jansen* (L); Goudbergven near Strijbeek, south of Breda, 27 May 1954, *M. Jansen-van der Plaats* (L); same locality, 10 Oct. 1961, *P. B. Jansen* (L).

On account of the pale colours and the minutely pruinose stem and cap, the species described above is very similar to *G. laevis* (Pers.) Sing. which has been



Figs. 1-5. *Galerina propinqua*. — 1. Fruit-bodies ( $\times 2$ ). — 2. Pileocystidia ( $\times 1000$ ). — 3. Spores ( $\times 2500$ ). — 4. Caulocystidia ( $\times 1000$ ). — 5. Cheilocystidia ( $\times 1000$ ). — All Figs. from type.

currently called *G. graminea* (Velen.) Kühner. It differs, however, from the latter by rather thick-walled, more amygdaliform spores with a small but distinct apical pore and cheilocystidia which cover the edge of the gills completely, whereas those in *G. laevis* occur scattered among the basidia.

When I tried to determine the present species by means of a provisional, unpublished key to the North American species of *Galerina*, I arrived at *G. dimorphocystis*, a species published by Smith & Singer (1955: 558). Dr. A. H. Smith, Ann Arbor, was so kind as to compare material of the collection from Drente cited above, with that of *G. dimorphocystis* and found it different, mainly on account of the spores, which have a more obvious apical pore in *G. propinqua*.

During the summer of 1963 I had the privilege to collect agarics in Michigan under the guidance of Dr. A. H. Smith. We met *G. dimorphocystis* several times (Bas 3184, 3213, 3228). In my opinion it has also more slender, less ornamented spores than *G. propinqua*. In addition it has a different habitat: it mainly occurs on mossy logs in woods, whereas *G. propinqua* typically grows on peat or among *Sphagnum* in open peat-bogs.

One collection studied (Netherlands, Noord-Brabant, Strijbeek, Goudbergven, 12 May 1954, M. Jansen-van der Plaats, L) appears to represent a form which is closely related to *G. propinqua*. It differs from the latter mainly in the red-brown colour of the cap and the much rougher spores, which turn considerably darker in KOH solution. This may be a variety of *G. propinqua* or an independent but closely related species.

Though in *G. propinqua* clamps occur at the base of young basidia, I think that in the classification of Smith & Singer (1958: 446) this species belongs to *Galerina* subgenus *Tubariopsis* (Kühner) A. H. Sm. & Sing. As I found clamps at the base of the basidia of *G. dimorphocystis* too (checked in several collections of that species) it would seem that the absence of clamps as a character of '*Tubariopsis*' should be dropped, a fact that undoubtedly weakens the status of this group.

On the other hand, the following set of characters seem to be common to such species as *G. heterocystis* (Atk.) A. H. Sm. & Sing. [= *G. clavata* (Velen.) Kühner], *G. laevis*, *G. dimorphocystis* and *G. propinqua*: the absence of a plage on the spores, the pruinose stem, the absence or the extreme scarcity of clamps on the hyphae, the capitate cheilocystidia with thin necks and the lacking or very weak pseudo-amyloid reaction in Melzer's solution. For this reason I prefer to maintain this group, but merely as a section. Unfortunately, the epithet *Tubariopsis* Kühner was not validly published, the original publication lacking a Latin description.

*Galerina* sectio **Tubariopsis** Kühner ex Bas, *nov. sect.* — Protonym: *Galerina* "section" *Tubariopsis* Kühner, *Le Genre Galera in Encycl. mycol.* 7: 168. 1935. — Sporae leviter vel forte ornatae, sine areola supra-apiculari glabra. Hyphae defibulatae vel fibulis raris praeditae. — Lectotypus (Sing. in *Lilloa* 22: 571. 1951): *Galerina graminea* (Velen.) Kühner = *G. laevis* (Pers.) Sing.

## REFERENCES

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