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ON TULASNELLA CYSTIDIOPHORA

W. JÜLICH

Rijksherbarium, Leiden

Type material of *Tulasnella cystidiophora* Höhn. & Litsch. has been studied. The species is characterized by often moniliform gloeocystidia and clamp-less hyphae (at least in the subhymenium).

When von Höhnel & Litschauer (1907) studied Karsten's taxa from the Helsinki herbarium, they found that a specimen filed under the name *Prototremella tulasnei* Pat. did not belong to that species but to a new taxon which they called *Tulasnella cystidiophora* Höhn. & Litsch. This species seems to be rare, it was found only by a few European specialists (Bourdot & Galzin, 1928; Pearson, 1928) and is not yet well understood.

Recently a British specimen of a gloeocystidiate *Tulasnella*, possibly representing *T. cystidiophora*, was sent for identification. Since the available descriptions did not allow a designation with certainty, the type material was studied. A description and figures are given here which should make future identification of the taxon easier.

Tulasnella cystidiophora Höhnel & Litsch. — Fig. 1, 2

Tulasnella cystidiophora Höhnel & Litsch. in Sber. Akad. Wiss. Wien, Math.-naturw. Kl., Abt. I, 155: 1557. 1907.

Misapplied name. — *Prototremella tulasnei* Pat. sensu P. Karst. in Hedwigia 35: 45. 1896.

Basidiocarp annual, resupinate, effused, up to 1–2 cm large, adnate, ceraceous when dry, context homogeneous, margin thinning out, indistinct, rhizomorphs or hyphal strands lacking. Hymenial surface even, not cracked when dry. Thin specimens are pale yellowish brownish and almost invisible when dry, thicker specimens are darker brownish to blackish and then somewhat visible. Hyphal system monomitic. Hyphae hyaline, cylindrical or in the subhymenium often slightly inflated and rather densely arranged, branching often near the septa, thin- to somewhat thick-walled (0.2–0.6 μm), 3–5(–10) μm wide, with smooth surface; clamps absent in the subhymenium, probably also absent in the subiculum; septa show prominent dolipores; contents of the hyphae homogeneous. Gloeocystidia present, abundant, of hymenial to subhymenial origin, with hyaline walls, clavate when young, later moniliform or of irregular shape, 30–72 × 5–10 μm, thin-walled throughout or the basal part somewhat thick-walled (0.2–0.4 μm), smooth, always without a basal clamp, enclosed or projecting; contents pale yellowish (type) or hyaline, homogeneous (type) or guttulate. Basidia hyaline, broadly clavate when mature, 12–18 × 8–10 μm, thin-walled, smooth, four-spored; basal clamp always lacking; contents homogeneous or slightly guttulate. Epibasidia ellipsoid, slightly guttulate, 8–10 × 5.5–6.5 μm, finally growing out to a short and conical or tubular (up to 20 × 2 μm) upper part. Spores hyaline, broadly ellipsoid when mature, subglobose when young, thin-walled, smooth, 5.5–6.5(–7) × 5.5–6 μm, with distinct apiculus; contents homogene-

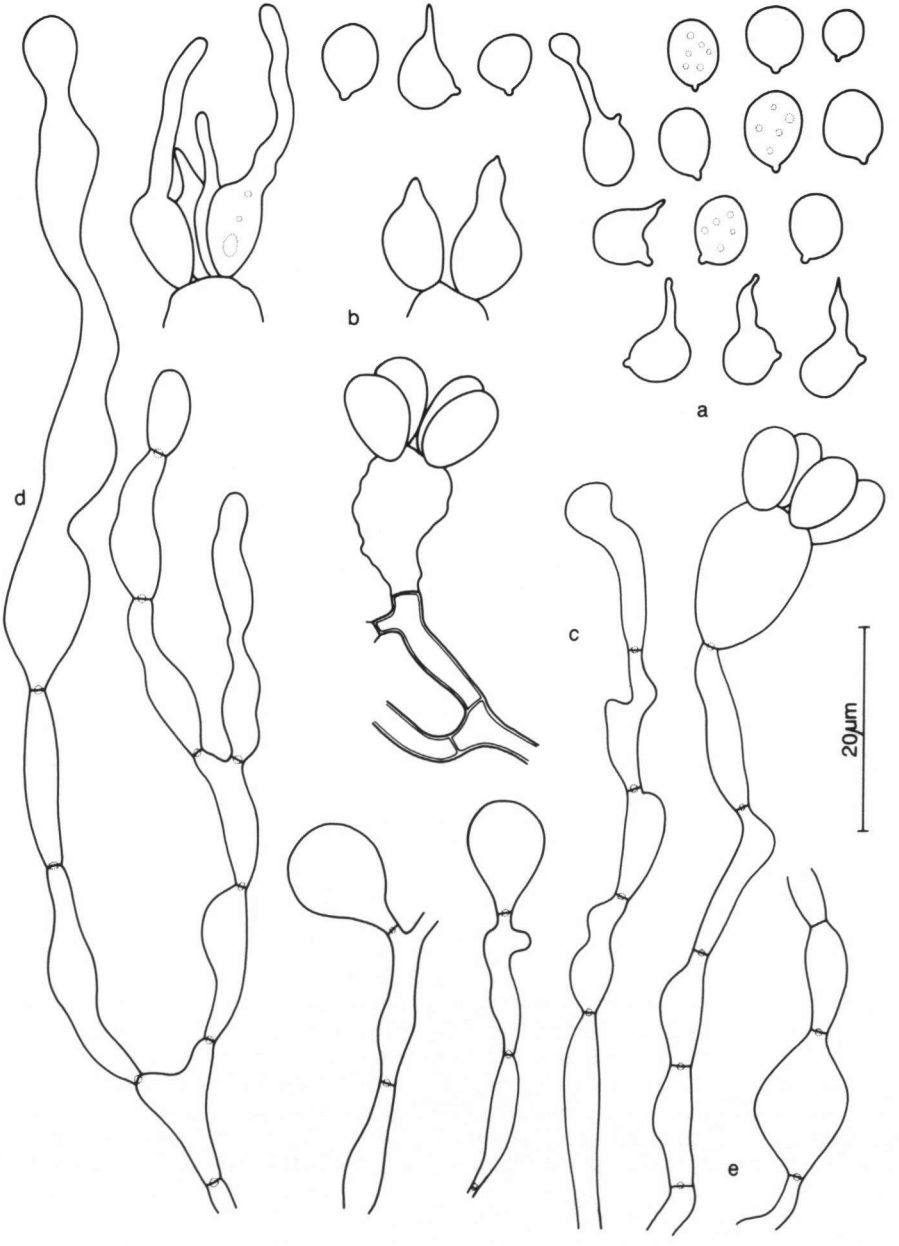

Fig. 1. *Tulasnella cystidiophora* (type). — a. Spores. — b. Epibasidia. — c. Basidia. — d. Gloeocystidia. — e. Hyphae with dolipores.

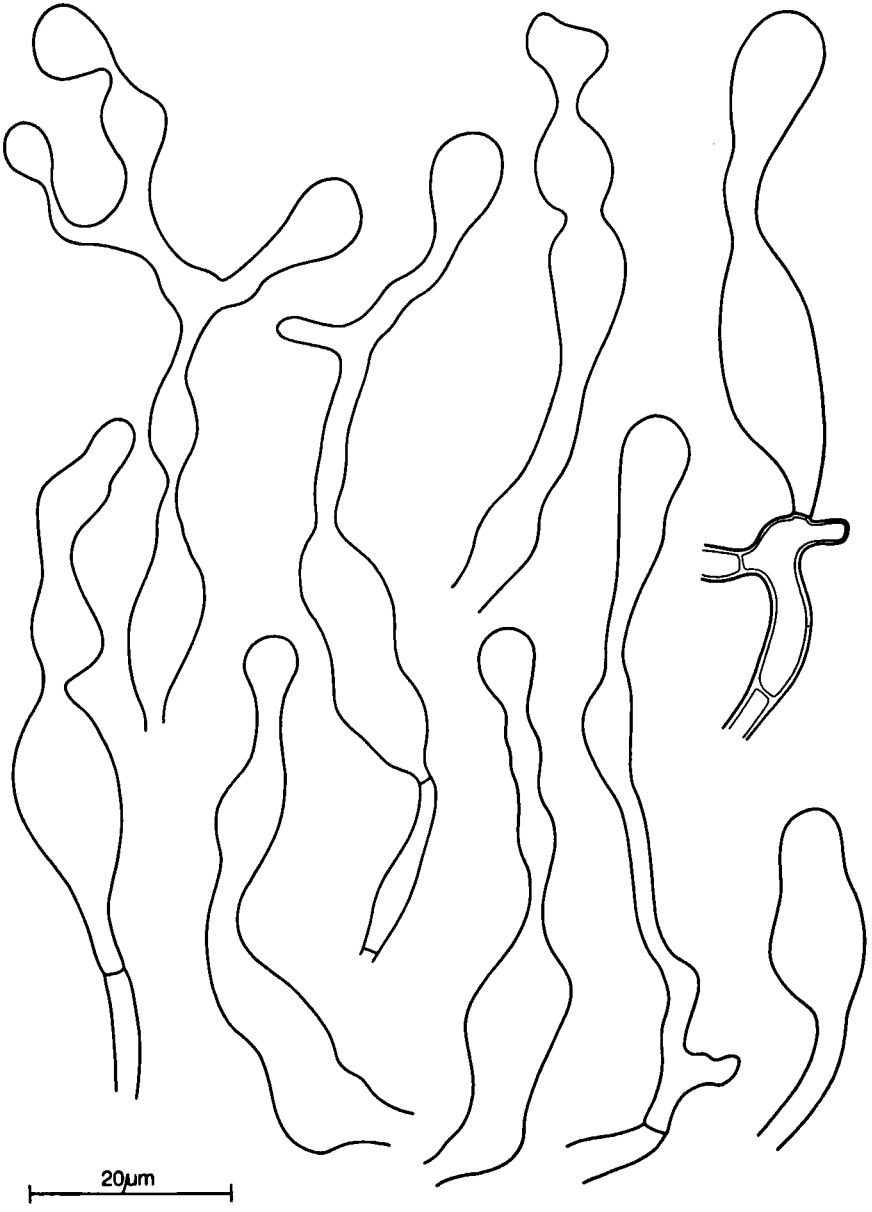

Fig. 2. *Tulasnella cystidiophora* (type), gloeocystidia.

ous or slightly guttulate or somewhat granular; the walls neither amyloid, dextrinoid nor cyanophilous.

Habitat.—Saprophytic on wood or bark of trees.

Distribution in Europe.—Finland, France, Great-Britain.

Material studied.—Finland, 'Mustiala in cortice interiore Populi, Oct. 1895', *P. A. Karsten* (type, H).

According to Karsten's publication (Karsten, 1896: 45) the specimen grew on bark of *Salix phylicaefolia*, which seems to be an error because in Karsten's herbarium the substrate is given as bark of *Populus*, a fact already pointed out by von Höhnel & Litschauer (1907).

The most conspicuous character of this species is the presence of moniliform gloeocystidia whose contents are slightly yellowish, a feature only visible in unstained preparations. Whether or not these gloeocystidia are always yellow is difficult to decide without a larger number of specimens. Another character is still not well known, viz. the presence or absence of clamps. According to von Höhnel & Litschauer and most subsequent authors dealing with this species, clamps are rare. But my own studies have not shown any clamps on hyphae definitely belonging to *Tulasnella cystidiophora*. Basidia, gloeocystidia, and subhymenial hyphae are invariably devoid of clamps and so are most hyphae from the subiculum. Close to the substrate are some hyphae with clamp connections, but I could not make sure that these hyphae really belonged to the *Tulasnella* species. In this group of fungi with barely visible, very thin basidiocarps, one often finds hyphae of other fungal taxa growing on the same spot and between the hyphae of the main fungus. It is therefore not always possible to differentiate between these taxa, especially when colour, shape, and size of the hyphae is very similar. No clamps were found on subhymenial hyphae and on those subicular hyphae clearly belonging to *Tulasnella cystidiophora* because they produced the typical basidia or gloeocystidia of that species. Therefore one can safely state that clamps are either completely absent or occur only rarely on subicular hyphae.

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