

ON TWO INTERESTING SPECIES OF INOCYBE FROM SWEDEN

MEINHARD MOSER

Innsbruck\*

Two new species of *Inocybe* from Sweden are described and discussed, *Inocybe mammifera* spec. nov. and *I. teraturgus* spec. nov.

During more than twenty, partly rather long visits to Sweden for studying fungi also a number of *Inocybes* have been collected. Two species with peculiar characters will be presented here.

*Inocybe mammifera* Moser, spec. nov.—Figs. 1, 2a, b

Pileo 18–14(–50) mm lato, convexo-conico dein convexo cum umbone mammiforme, umbone glabro, cetera fibrilloso-squammoso, ochraceo-brunneo, lamellis primo albidis, dein griseo-brunneis, acie albida, confertis, stipite 20–45 mm longo, 4–8 mm crasso, albido, dein leviter brunnescente, plus-minusve aequali, carne albida cum odore forte saponaceo. Sporis ellipsoideis usque subreniformibus, (7.7–)8.5–10(–11.3) × (4.7–)5.0–5.5(–5.7) μm, basidiis 4-sporigeris, 40–42 × 11–12 μm, cheilocystidiis lanceolatis usque lageniformibus, interdum clavatis, saepe mucronatis, pleurocystidiis similibus. Habitatio sub Betulis. — Typus: Lectus ad Femsjö, Smolandia, Suecia, 21 Sept. 1980, M. Moser (holotypus IB 80/379).

Cap 18–40(–50) mm broad, in young specimens convex-conic, in older fruit-bodies constantly with an extremely large umbo (similar to *Macrolepiota gracilentia*); surface of the umbo glabrous; the rest of the surface with brown appressed to subsquarrose fibrils and squamules on a pallid ochraceous ground. In young specimens the scales may be almost squarrose. Lamellae young whitish, becoming greyish, finally greyish brown, but not with an olivaceous or yellowish tinge; edge whitish, but not floccose, crowded. Stem whitish, pallid, 20–45 mm long, 4–8 mm thick, more or less cylindric, only in young carpophores somewhat clavate, apex pruinose. Context white. Odour very strong of curd-soap. Taste mild.

**Microscopic characters.**—Spores smooth, elliptic to slightly reniform, occasionally somewhat irregular, 7.7–11.3 × 4.7–5.7 (means 9.2 (s = 0.68) × 5.3 (s = 0.21 μm)), Q = 1.7, vol. 137–140 (s = 17–21)), basidia 4-spored, 40–42 × 11–12 μm, base 4 μm; cheilocystidia with moderately thick walls, lanceolate to broadly lageniform or even somewhat clavate, often with crystals at the apex, 55–65 × 12–24 μm, pleurocystidia similar but often shorter and sometimes broader, 45–65 × 16–25 μm; caulocystidia similar, frequent only in the upper part. Hyphae of the cuticle 5–6 μm thick. Clamp connections present.

**Etymology.**—From Latin, mamma = mammary papilla and ferre = carry, bear; bearing papillae.

**Habitat.**—Under birch in a garden in large groups.

**Specimen examined.**—Sweden: Smoland, Femsjö, Skattegård, 21 Sept. 1980, M. Moser (holotype, IB 80/379).

\* Institut für Mikrobiologie, Universität Innsbruck, Technikerstrasse 25, A-6020 Innsbruck, Austria.

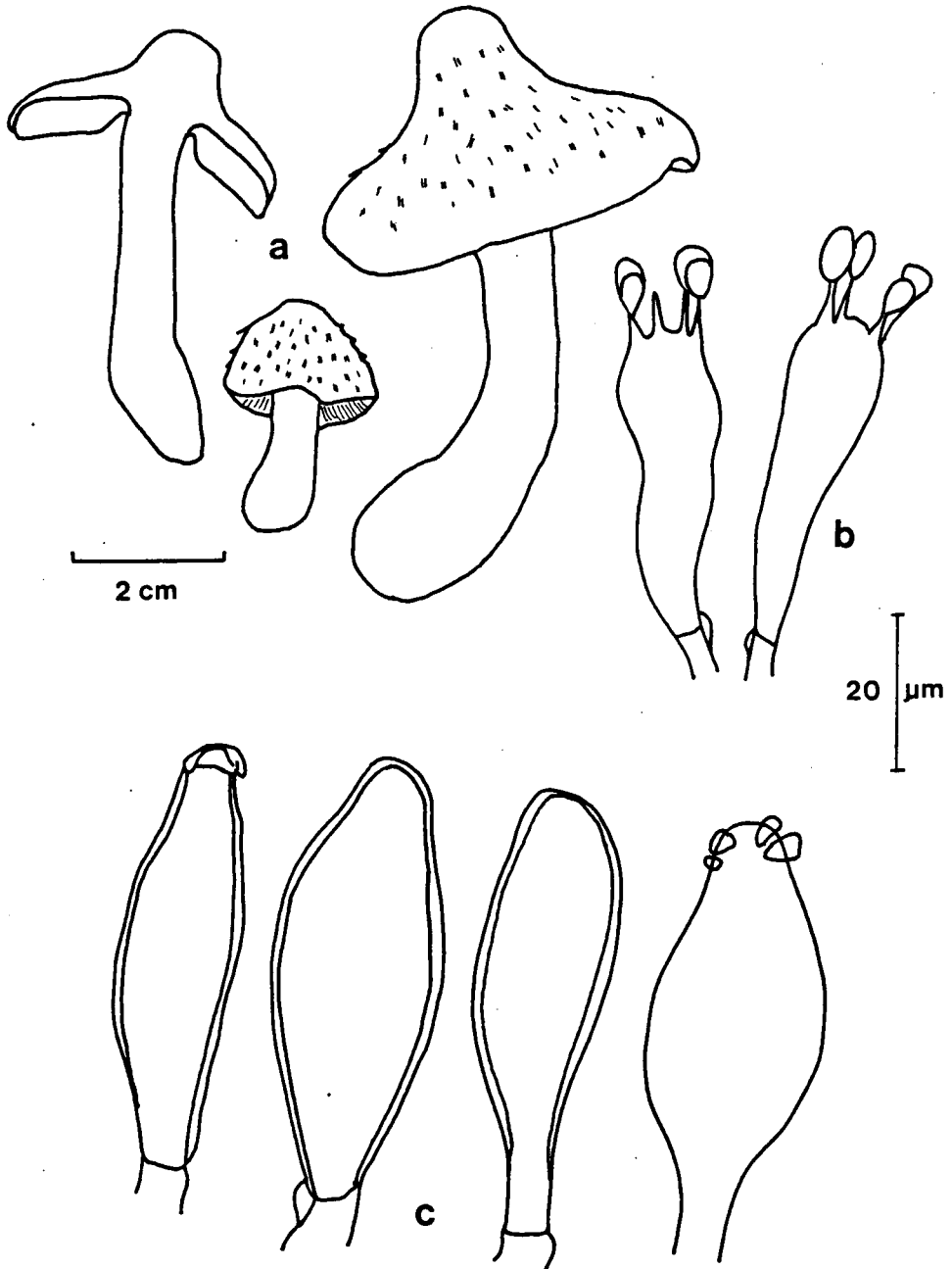


Fig. 1. *Inocybe mammifera*. — a. Sporophores. — b. Basidia. — c. Cheilocystidia.

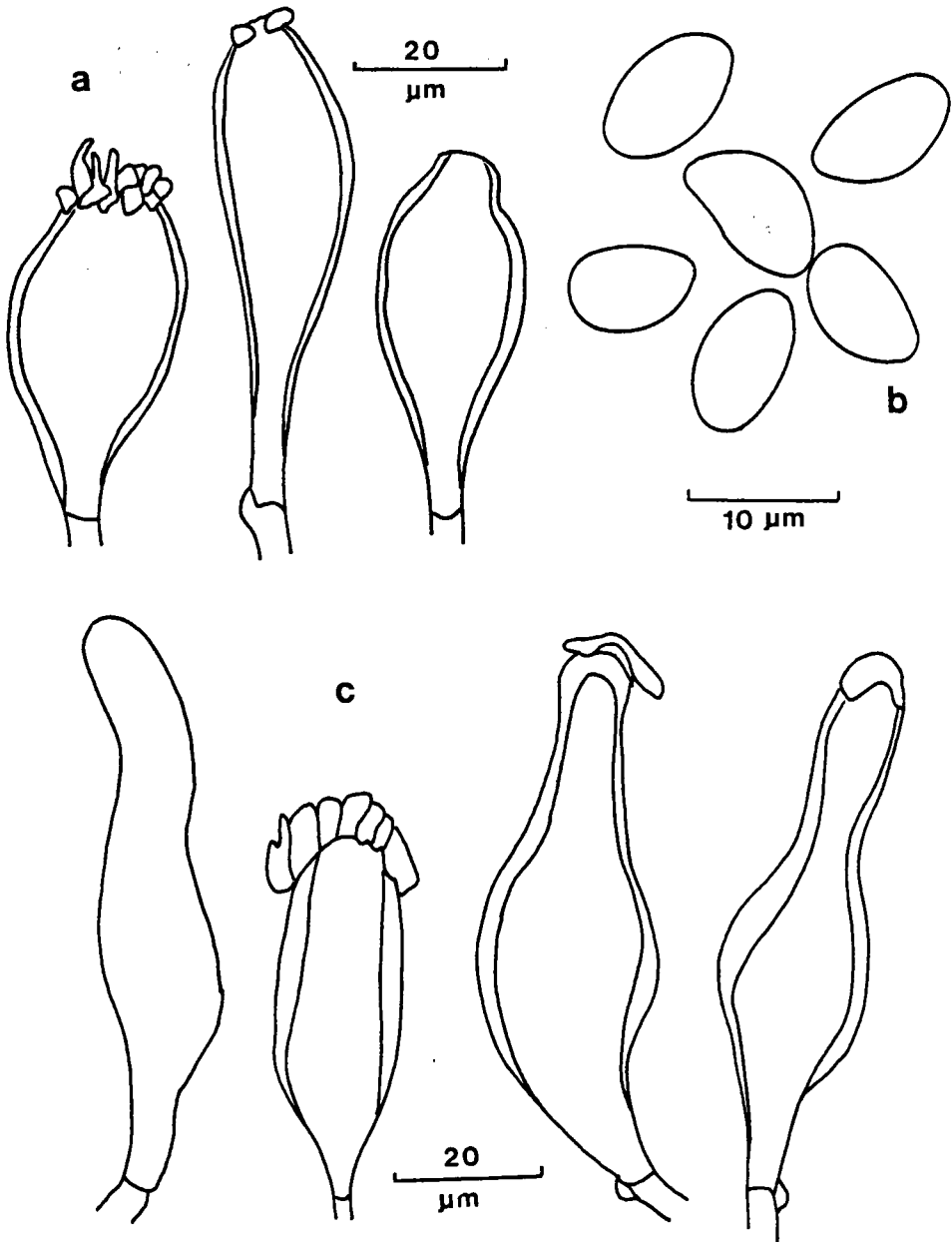


Fig. 2a, b. *Inocybe mammifera*. — a. Pleurocystidia. — b. Spores.  
Fig. 2c. *Inocybe teraturgus*, cheilocystidia.

The striking characters of the species are the extremely large and big umbo and the strong smell of curd soap. We collected numerous specimens and the mentioned characters were constant. Fries (1878) described in *Icon. Sel. Vol. II p. 11 a Hebeloma mitratus* and figures this fungus on plate 112, fig. 2. This fungus has some resemblance with our fungus and at first we were tempted to identify our collection with this species. However, there are several discrepancies. All our specimens are distinctly smaller, and the surface of the cap is fibrillose to squamulose, whereas Fries describes and figures his species with a smooth cap. *Agaricus mitratus* Fr. was actually not collected by Fries himself but by von Post at Reymyra in East Götland. So the fungus could have suffered from manipulation, painting, recopying, etc. Nevertheless we think now that our fungus is not identical. Also *Agaricus (Hebeloma) magnimamma* Fr. could be considered having a prominent umbo and at least some specimens figured by Fries in *Icones* plate 114, fig. 2 show squamules. The species is sometimes interpreted as a *Hebeloma*, but the scaly specimens and Fries's comparison with *Inocybe petiginosa* indicate that it is in reality an *Inocybe*. This taxon, however, seems to be smaller and of darker colours than our fungus.

The fungus has the characteristic smell and the umbo in common with a species recently described by Kuyper (1986) from Finnish Lappland as *I. saponacea*. This species was known to him only from one record from Kevo, collected by Bas in 1973. So we tried also to identify our fungus with this species, thinking that the range of variability might be wider than given by Kuyper. However, there are too many differences: the fibrillose to scaly surface, the colour of the gills and stipe and also the spore-size is larger although overlapping Kuyper's measurements.

### *Inocybe teraturgus* Moser, *spec. nov.*—Figs. 2c, 3

Pileo 10–28 mm lato, primo subgloboso, dein convexo-applanato, umbrino, postquam pallidior, cremeo-brunneo, griseo-brunneo, disco umbrino, dense oblecto a squamulis fibrillosis, lamellis brunneo-olivaceis, subconfertis, stipite 15–30 × 3–5 mm, aequali, pileo concolore, fibrilloso, carne pallida. Sporis gibbosis, 8.6–11.3 × 6–8 μm, basidiis 4-sporigeris, 40–43 × 10–11 μm, cheilocystidiis crassiparietalibus, uteriformibus sublageniformibusque, 48–70 × 15–23 μm, pleurocystidiis similibus 70–110 × 20–23 μm, saepe muricatis. Habitatio in sphagnetis (*Sphagnum fuscum*). — Typus: Prope lacum dictu Naren, Ulvanå, Wermlandia, Suecia, 8 Aug. 1982, *M. Moser* (holotypus IB 82/95).

Cap nearly globose when young, applanate convex in older fruit-bodies, 10–28 mm broad; young specimens dark brown, umber-brown, (Caill. 69R; Cailleux & Taylor, 1958), later paler (69P, 75P), appearing often strikingly pale cream brownish, greyish brown (Caill. 77M), due to the fibrillose covering, in older ones only the centre remaining dark brown (umber); the whole surface densely covered by fine fibrillose scales. Lamellae brown with a distinct olive tinge (Caill. 77P, 79P); edge concolorous, slightly serrulate, moderately crowded,  $L = 35$ ,  $l = 1-3$ , deeply emarginate at the stem. Stem 15–30 mm long, 3–5 mm thick, equal, concolorous to the cap surface, fibrillose, not pruinose. Context pale. Smell slightly of fresh, cut grass.

**Microscopic characters.**—Spores gibbose, with 6–7 visible nodules, 8.6–11.3 × 6–8 (means 9.9 ( $s = 6.0$ ) × 6.6 ( $s = 0.5$ ) μm),  $Q = 1.5$ , vol. = 228 ( $s = 45.8$ ); basidia 4-spored, 40–43 × 10–11 μm, at the base 4 μm; cheilocystidia thick-walled, uteriform to

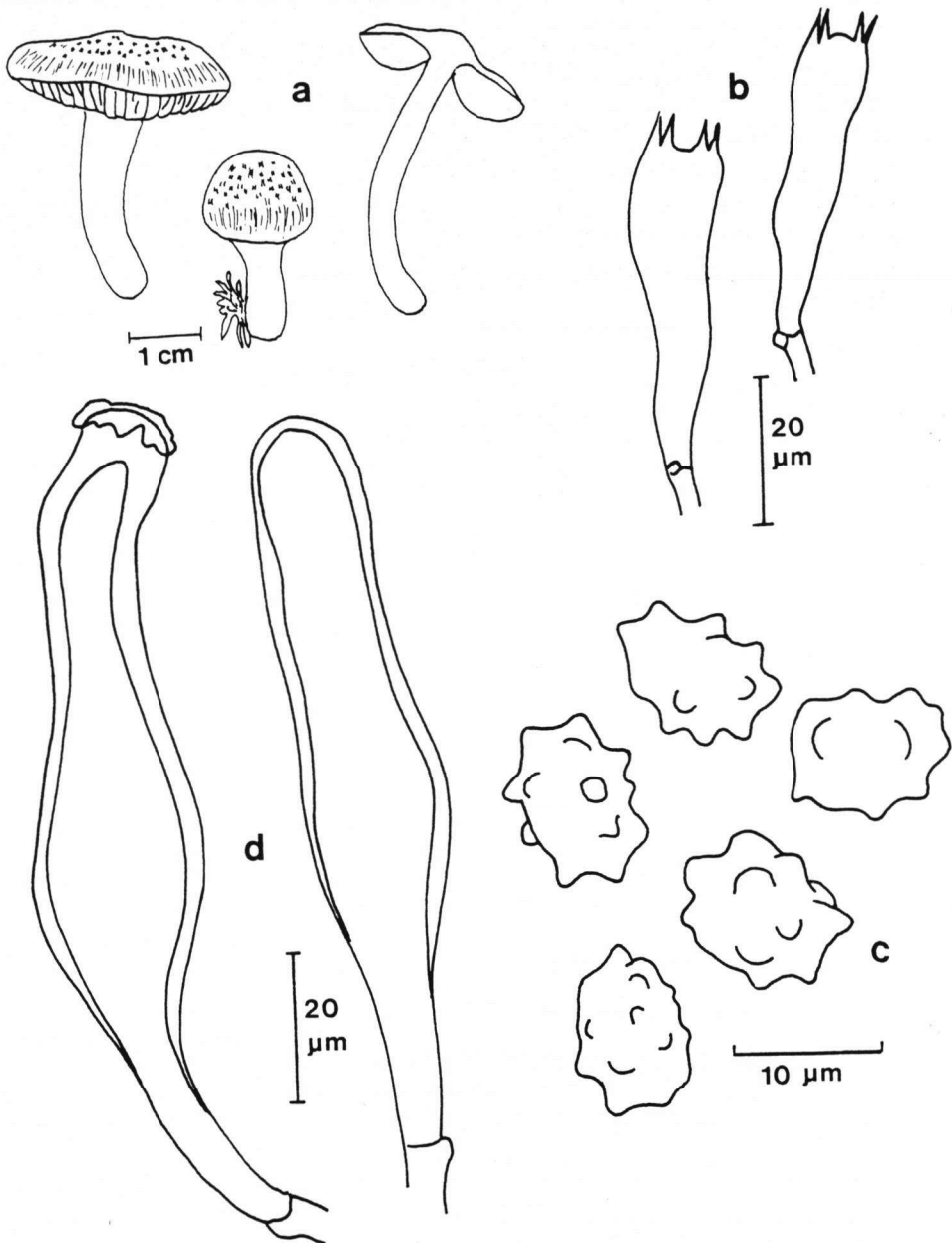


Fig. 3. *Inocybe teraturgus*. — a. Sporophores. — b. Basidia. — c. Spores. — d. Pleurocystidia.

bottle-shaped, 48–70 × 15–23 μm, often with crystals; pleurocystidia 70–110 × 20–23 μm; clamp-connections present.

E t y m o l o g y.—From Greek, teratourgis = juggler, swindler, impostor.

H a b i t a t.—Between *Sphagnum fuscum* on a bog at the border of a pond.

S p e c i m e n e x a m i n e d.—Sweden: Värmland, N.-W. of the Narensjö, near Ulvanå, 8 Aug. 1982, *M. Moser* (holotype, IB 82/95).

Macroscopically the fungus suggests immediately a species of the *dulcamara*-group and I collected it as such, puzzled by the peculiar habitat. The spores, however, turned out to be gibbose; the cystidia are metuloid and bear crystals. The habitat and the surface of the cap could also suggest *I. fuscomarginata* Kühn. (= *I. relicina* ss. Heim non Fr.), but this is also a smooth-spored species.

#### REFERENCES

- CAILLEUX, A. & TAYLOR, C. (1958). Code expolaire. Paris.  
FRIES, E. (1863). Monographia hymenomycetum Suecia II. Upsala.  
— (1878). Icones selectae hymenomycetum II, fasc. 2.  
KUYPER, TH. W. (1986). A revision of the genus *Inocybe* in Europe. —I. Subgenus *Inosperma* and the smooth-spored species of subgenus *Inocybe*. In *Persoonia* Suppl. 3.