

***Entoloma cremeoalbum* – a new member of subgenus *Omphaliopsis* from Norway**

JOHN BJARNE JORDAL

Jordalsgrend

N-6610 Øksendal, Norway

Email: john.bjarne.jordal@sunndals.net

MACHIEL E. NOORDELOOS

Netherlands Centre for Biodiversity Naturalis, NHN section

P.O. Box 9415

2300 RA Leiden, The Netherlands

Email: noordeloos@nhn.leidenuniv.nl

Accepted 29. 10. 2010

Key words: *Agaricales*, *Entoloma*, section *Insolita*, *Entoloma cremeoalbum*. – New species. – Mycota of Norway.

Abstract: *Entoloma cremeoalbum* is described as a new species belonging to subgenus *Omphaliopsis*. It is related to *E. cettoi*, *E. heterocystis*, and *E. neglectum*, growing in seminatural grasslands, probably with preference for calcareous soil. The species is so far only known from Norway.

Zusammenfassung: *Entoloma cremeoalbum* wird als neue Art der Untergattung *Omphaliopsis* beschrieben. Sie ist mit *E. cettoi*, *E. heterocystis* und *E. neglectum* verwandt und kommt in naturnahem Weideland vor. Sie ist bisher nur aus Norwegen bekannt.

During field work for management purposes in the municipality Oppdal, southern Norway, in the period 2006-2010, the first author came across an unknown *Entoloma* species at several occasions at three separate localities. It has many features in common with *Entoloma cettoi* and *E. neglectum* (NOORDELOOS 1992, 2004; NOORDELOOS & HAUSKNECHT 1994), but differs in some important characters. After the collection of new and rich material at one of the localities in 2010, it was concluded to describe it as a new species. A full description, illustrations, and notes, are presented below.

***Entoloma cremeoalbum* NOORDEL. & JORDAL, spec. nova** (Figs. 1, 2)

Mycobank MB 519096

Descriptio latina:

Pileus 10-35 mm latus, plane convexus, infundibuliformis, margine interdum irregulariter crenulatus, haud hygrophanus, haud striatus, pallidus, albo-cremeus, toto fibrillo-tomentosus, tomentosus, paulisper vel distincte zonatus, centro interdum rugulosus; lamellae distantes, adnato-decurrentes, anastomosantes, pallide cremeae pileo concolores, demum sordide roseae aciebus concoloribus; stipes 13-30 × 1,5-3,0 mm, pileo concolor, glaber, politus; odore saporeque valde farinaceis. Sporae 12,0-17,0 (-18,5) × 7,5-10,0 µm, Q = 1,4-2,2, Q in medio 1,7, heterodiametricae, polyangulatae; basidia

bisporigera, fibulata; acie lamellarum heterogenea vel sterili; cheilocystidia cylindracea vel tibiformia; pileipellis cutis vel trichoderma hyphis cylindraceis vel inflatis pigmentis intracellularibus; fibulae presentes. Habitat in pratis.

Holotypus: Norway, Sør-Trøndelag province, Oppdal municipality, Aunsætra, 735 m s. m., 62°38'33"N, 9°46'06"E (EUREF89), 30. 8. 2010, leg. PERRY G. LARSEN and JOHN BJARNE JORDAL (holotype O, isotype L).

Etymology: *cremeus* (Latin) = cream-coloured; *albus* (Latin) = white, referring to the pale coloured fruiting bodies.

Characters:

Pileus: 10-35(-50) mm, plano-convex to plano-concave with involute margin, margin often irregularly crenulate, centre often depressed, not hygrophanous, not translucently striate, very pale, uniformly white to cream-coloured, young almost white without any grey tinge, later sometimes with a weak red tinge at centre, dull, sometimes subzonate, minutely tomentose, sometimes slightly rugulose at centre.

Lamellae: L = 20-36, l = 1-3-5, broadly adnate-decurrent, very distant, often irregular and anastomosing, pale cream (like pileus) at first, then strongly pink, with irregular to subentire concolourous edge.

Stipe: 13-30 × 1.5-3.0 mm, often shorter than pileus diameter, cylindrical, straight or curved, base often more or less swollen, very pale cream, concolourous with or paler than pileus, (sub-)polished.

Context: more or less concolourous with pileus, very brittle, smell and taste strongly farinaceous.

Spores: 12.0-17.0(-18.5) × 7.5-10.0 μm, Q = 1.4-2.2, Q_{av} = 1.7, heterodiametrical, nodulose-angular, 6-10-angled in side view.

Basidia: 24-34 × 7.5-10.0 μm, 2-spored, with clamp connections, with brilliant granules.

Cheilocystidia: 45-75 × 12-25 μm, cylindrical to subcapitate, thin-walled. Lamellar edge heterogenous to entirely sterile.

Hymenophoral trama: regular, made up of cylindrical to inflated elements, 8-35 μm wide.

Pileipellis: a cutis with transitions to a trichoderm, made up of cylindrical hyphae 2-5 μm wide mixed with up to 30 μm wide, inflated elements. Pigment intracellular and minutely incrusting in pileipellis and upper pileitrama.

Pileitrama: regular, made up of cylindrical to broadly inflated, sometimes sub-spherical elements, 10-30 μm wide, and normally less than 200 μm long. Brilliant granules absent or scattered, not very obvious.

Caulocystidia: absent, or present as simple, cylindrical, clavate or subcapitate terminal endings of surface hyphae.

Clamp connections: scattered.

Habitat: in non- or poorly manured, seminatural grassland.

Distribution: So far only known from three localities in Oppdal municipality, southern Norway.

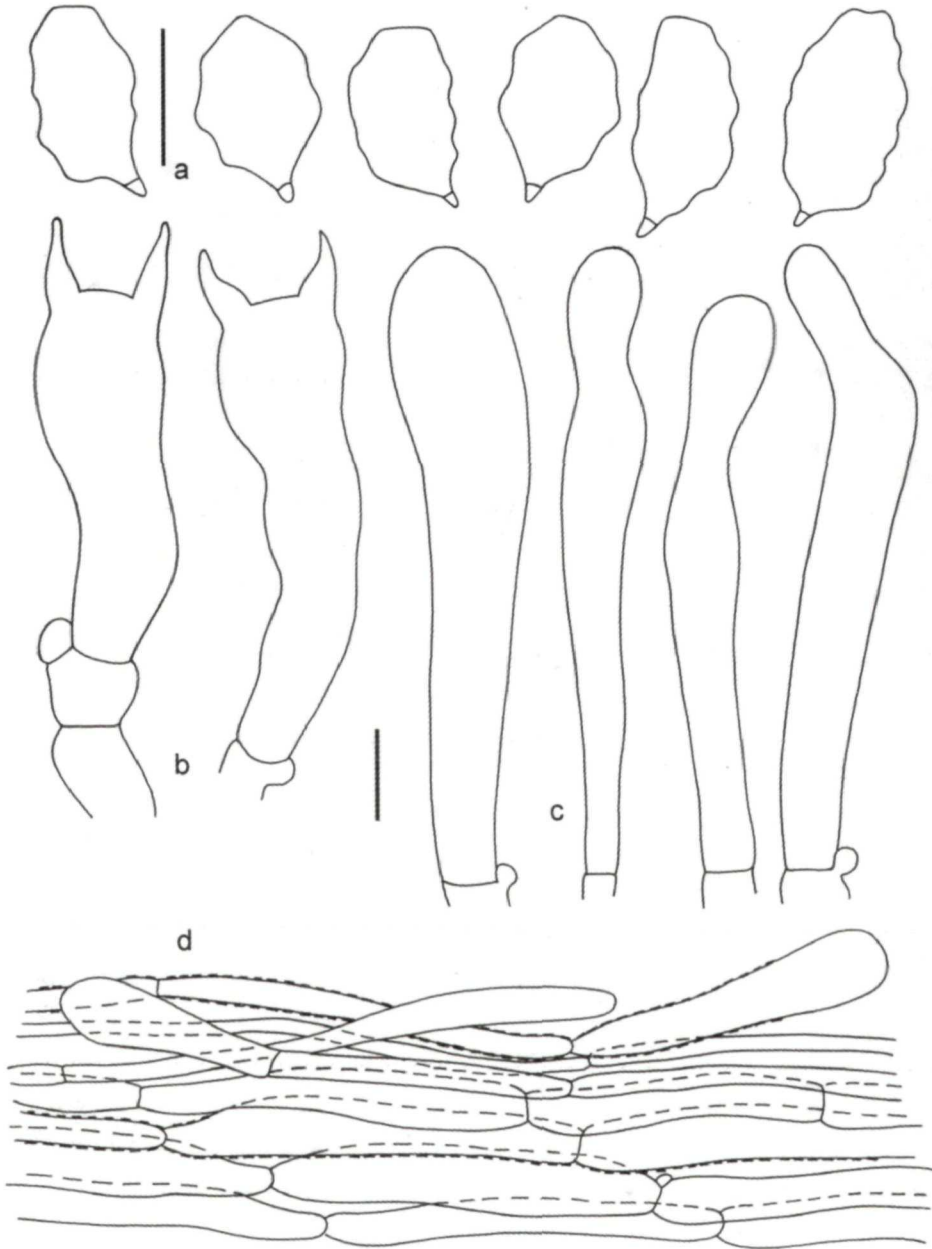


Fig. 1. Microscopical characters of *Entoloma cremealbum*. a spores, b basidia, c cheilocystidia, d pileipellis and upper pileitrama. – Bar: 10 μ m.

Specimens examined (besides holotype): **Norway:** Sør-Trøndelag province, Oppdal municipality, Nervika, 505 m s. m., 62°35'26"N, 9°37'48"E (EUREF89), 31. 8. 2006, 11. 9. 2006 and 28. 8. 2010, leg. JOHN BJARNE JORDAL (all in O); - - Oppdal municipality, Ørstad, 610 m s. m., 62°33'21"N, 9°36'13"E (EUREF89), 28. 8. 2009, leg. JOHN BJARNE JORDAL (O); - - Oppdal municipality, Aunsætra, 735 m s. m., 62°38'33"N, 9°46'06"E (EUREF89), 7. 8. 2009, leg. JOHN BJARNE JORDAL (O).

Description of the localities and habitats:

The three known localities, Nervika, Ørstad, and Aunsætra, are lying in the central parts of the municipality Oppdal, province Sør-Trøndelag, southern Norway (Fig. 3). The distance between the southernmost (Ørstad) and the northernmost (Aunsætra, Fig. 4) is about 13 kilometres. They are all seminatural (nonmanured) grasslands grazed by sheep in spring and autumn, sometimes also during summer. Nervika and Ørstad are calcareous grasslands, while Aunsætra is somewhat more intermediate. The vegetation is dominated by grasses and herbs like, e.g., *Anthoxanthum nipponicum*, *Agrostis tenuis*, *Avenula pubescens*, *Festuca rubra*, *Nardus stricta*, *Plantago media*, *Trifolium repens*, and *Hieracium auricula*. Among more rare plant species growing together with *Entoloma cremeoalbum* are *Gentianella campestris* (only Nervika) and *Botrychium multifidum* (only Aunsætra). Many grassland fungi are growing at the localities, e.g., *Calocybe carnea*, *Clavaria amoenoides* (only Aunsætra), *Clavulinopsis cinereoides* (only Aunsætra), *C. corniculata*, *C. laeticolor*, *Clitopilus scyphoides*, *Entoloma asprellum*, *E. caesiocinctum*, *E. corvinum*, *E. cuspidiferum*, *E. exile*, *E. griseocyaneum*, *E. infula*, *E. jubatum*, *E. longistriatum*, *E. papillatum*, *E. politoflavipes* (only Nervika), *E. prunuloides*, *E. rhombisporum*, *E. sericellum*, *E. sericeum*, *E. serrulatum*, *E. velenovskyi*, *E. weholtii* (only Ørstad), *E. xanthochroum*, *Geoglossum fallax*, *Hygrocybe acutoconica*, *H. cantharellus*, *H. ceracea*, *H. chlorophana*, *H. coccinea*, *H. conica*, *H. helobia*, *H. insipida*, *H. lacmus*, *H. laeta*, *H. mucronella*, *H. nitrata*, *H. pratensis*, *H. psittacina*, *H. reidii*, *H. turunda* and *H. virginea*. Oppdal is one of the most important municipalities for seminatural grasslands in Norway, with many localities rich in grassland fungi, mainly on calcareous soil. It is also one of the most important areas for sheep keeping in the country, giving the grassland fungi possibility to survive.

Discussion:

Entoloma cremeoalbum clearly fits in subgenus *Omphaliopsis* because of the omphalinoid habit and type of pigmentation. It is close to *E. cettoi* NOORDEL., HAUSKN. & ZUCCHERELLI (section *Insolita*), from which it differs by the lack of grey colours when young, more or less polished stipe, very brittle flesh, predominantly 2-spored basidia, very large spores, and slightly different cheilocystidia (less capitate; lageniform cystidia absent). *Entoloma heterocystis* CONTU is also close, but differs, however, by the non decurrent lamellae, 4-spored basidia, and clampless hyphae (CONTU 1995). *Entoloma cremeoalbum* differs from *E. neglectum* by the presence of cheilocystidia and incrusting pigments, by 2-spored basidia and larger spores. It seems obvious that *E. cremeoalbum* is a rare species, but it could possibly appear by revision of herbarium collections of the very similar *E. neglectum*. The habitat in seminatural grasslands is vulnerable because of changing management (no more grazing resulting in vegetation change) or in other places by fertilization and other aspects of modern agriculture. *Entoloma cremeoalbum* should therefore be evaluated as a candidate to the red list of threatened fungi in Norway and eventually also in other countries where it might be found.

Mrs. ANITA WALSMIT-SACHS kindly prepared the line-drawings for print, for which we are very grateful.

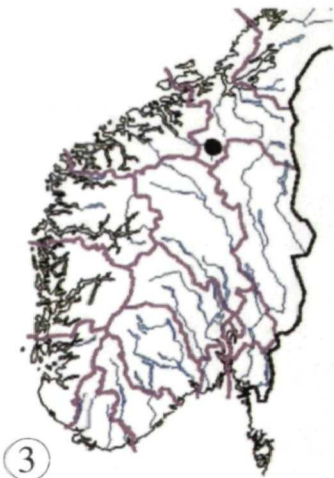


Fig. 2. *Entoloma cremeoalbum*, a part of the type material in situ. – Fig. 3. Map of southern Norway showing the known distribution of *E. cremeoalbum*. – Fig. 4. The type locality of *E. cremeoalbum*, an old pasture which is still grazed by sheep. Norway, Oppdal, Aunsætra, 30. 8. 2010. – Phot. JOHN BJARNE JORDAL (Figs 2, 4).

References

- CONTU, M., 1995: Una nuova specie di *Entoloma* sezione *Insolita* NOORD. dalla Gallura (Sardegna settentrionale). – *Micol. Veget. Medit.* **10**(2): 85-87.
- NOORDELOOS, M. E., 1992: *Entoloma* s. l. *Fungi Europaei* 5. – Saronno: Giovanna Biella.
- 2004: *Entoloma* s. l. supplemento. *Fungi Europaei* 5a. – Alassio: Edizioni Candusso.
- HAUSKNECHT, A., 1994: *Entoloma cettoi*, eine neue Art aus Italien. – *Österr. Z. Pilzk.* **3**: 25-28.

ZOBODAT - www.zobodat.at

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Österreichische Zeitschrift für Pilzkunde](#)

Jahr/Year: 2010

Band/Volume: [19](#)

Autor(en)/Author(s): Jordal John Bjarne, Noordeloos Machiel Evert

Artikel/Article: [Entoloma cremeoalbum - a new member of subgenus Omphaliopsis from Norway. 127-132](#)