

TAXONOMIC PART

I. *Entoloma sericeum* and closely related taxa

KEY TO THE SPECIES

1. Pileus not or hardly hygrophanous, not or hardly translucently striate, usually very dark brown to almost black.....2.
1. Pileus distinctly hygrophanous, translucently striate at least to halfway the radius, usually up to centre, medium brown, red-brown, grey-brown or blackish brown (at centre).....6.
2. Spores large, frequently over 10 μm long; hymenophoral trama of short elements; clamp-connections present in all tissues.....3.
2. Spores smaller, never exceeding 10 μm ; hymenophoral trama of long elements; clamp-connections frequent in hymenium only, elsewhere rare.....4.
3. In (sub-)alpine habitats; spores 7.5-11.5 x 6.5-10 μm , $Q_m = 1.15$, weakly angled, almost rounded.....4. *E. atrosericeum*
3. In xerophytic grassland; spores 7.0-11 x 7.0-8.5 μm , $Q_m = 1.15$, irregularly 6-7-angled..... 6. *E. vindobonense*
4. Pileus with surface very dark, more or less waxy, hardly fibrillose; spores with 6-7 angles, more or less indistinctly angled; in montane *Pinus* forest, sometimes also with *Alnus incana*.....9. *E. brunneosericeum*
4. Pileus surface pruinose to hoary, especially at centre; spores pronouncedly angled.....5.
5. Pileus with small, persistent umbo, radially fibrillose with pruinose apex; in mixed wood and copses of *Buxus* and *Prunus spinosa* 3. *E. conicosericeum*
5. Pileus depressed or with weak umbo within central depression, entirely pruinose-hoary when fresh; in dune grasslands with *Salix repens*5. *E. cinereoopacum*
6. Spores (6.8)-7.3-8.4-(9.2) x (5.9)-6.3-7.2-(8) μm , $X_m = 7.8 \times 6.8 \mu\text{m}$, $Q = (1.01)-1.09-1.23-(1.36)$, $Q_m = 1.16$; in Mediterranean vegetation....2. *E. minutisporum*
6. Spores 7.7-10-(11) μm long.....7.
7. Smell spermatial; spores 8.3-9.6 x 7.5-8.5 μm , $X_m = 8.9 \times 7.9 \mu\text{m}$, $Q = 1-1.21$, $Q_m = 1.12$, with 5-7 angles in side-view; in Mediterranean *Cistus* or *Quercus* vegetation..... 10. *E. ilimonae*
7. Smell different; spores usually regularly 5(-6) angled in side-view; in Mediterranean

- vegetation (*Pinus*, *Quercus*) or not 8.
8. Smell raphanoid-herbaceous; pileus often conico-campanulate for a long time, very strongly aeriferous-lustrous with loose fibrils when dry; spores with weak angles 7. *E. nitens*
8. Smell farinaceous; pileus different; spores with more pronounced angles 9.
9. Basidioma small; pileus slightly sericeous; stipe smooth or rarely with fine fibrils; in *Pinus* or *Quercus* forests 8. *E. juncinum*
9. Basidioma more robust; pileus sericeous; stipe densely to hardly fibrillose; in meadows and pastures, wide-spread in whole of Europe 1. *E. sericeum*

1. *Entoloma sericeum* Quéf.

Entoloma sericeum Quéf., Mémoires de la Société d'Émulation de Montbéliard 5: 119 (1872)

Agaricus sericeus Bull., Herb. Fr. 9: tab. 413 (1789) (illegitimate name, being a later homonym of *A. sericeus* Schaeff., Fung. Bavar. Palat. 4: 12 (1774); *Rhodophyllus sericeus* (Quéf.) Quéf., Enchir. fung. (Paris): 59 (1886); *Nolanea sericea* (Quéf.) P.D. Orton, Trans. Br. mycol. Soc. 43(2): 179 (1960)

= *Rhodophyllus sericeus* var. *nolaniformis* Kühner & Romagn., Revue Mycol., Paris 19: 9 (1955) [1954]; *Entoloma sericeum* f. *nolaniforme* (Kühner & Romagn.) Noordel., Persoonia 10(4): 480 (1980)

Lectotypus (designated here): Planche 413, fig. II, in BULLIARD (1789, *sub Agaricus sericeus*), Herbar de la France. Champignons de la France, vol. 9.

Epitypus (designated here): SPAIN: Arriu de Bordius, Canejan (Lleida), alt. 1440 m; in a meadow, among grasses, near *Abies alba*, *Betula pendula* and *Fagus sylvatica*, 31 Aug. 2006, leg. J. Vila and F. Caballero, LIP JVG 1060831P, isoepitypus JVG 1060831-8.

a) ON THE TYPIFICATION OF *ENTOLOMA SERICEUM* QUÉF.

From our molecular study on a large number of collections in the *sericeum*-group, it became very apparent that several undescribed species hide in the *sericeum*-complex. In order to get a better understanding of the group, it is essential to fix the current concept of *Entoloma sericeum* with an epitype, based on a modern, well-annotated collection and sequence data. The choice of this epitype is very important, and should be unambiguous, and preferably be based on a collection that comes closest to the original diagnosis and the current use of the name.