

Notes on some European species of the genus *Crepidotus* (*Agaricales*)

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Some European species of the genus *Crepidotus* were revised with regard to their taxonomical value. *Crepidotus applanatus* var. *subglobiger* sensu Senn-Irlet is described as the new species *C. stenocystis* Pouzar, *C. acerinus* Vacek is included in *C. mollis* (Schaeff.: Fr.) Staude, *Agaricus zahlbruckneri* Beck is confirmed as a synonym of *C. cesatii* (Rabenh.) Sacc., *C. caspari* Velen. is merged with *C. lundellii* Pilát (a younger synonym) and *C. lundellii* var. *subglobisporus* (Pilát) Pilát is hence combined as *C. caspari* var. *subglobisporus* (Pilát) Pouzar. *C. sambuci* Velen. is considered a dubious name.

Key words: *Agaricales*, *Crepidotus*, taxonomy, nomenclature

Pouzar Z. (2005): Poznámky k některým evropským druhům rodu *Crepidotus* (*Agaricales*). – Czech Mycol. 57(3-4): 299-305.

Některé evropské druhy rodu *Crepidotus* byly revidovány z taxonomického a nomenklatorického pohledu. *C. applanatus* var. *subglobiger* sensu Senn-Irlet je popisován jako nový druh *C. stenocystis* Pouzar, *C. acerinus* Vacek je ztotožněn s *C. mollis* (Schaeff.: Fr.) Staude, *Agaricus zahlbruckneri* Beck je potvrzen jako synonymum druhu *C. cesatii* (Rabenh.) Sacc., *C. caspari* Velen. je ztotožněn s *C. lundellii* Pilát (mladší synonymum) a pro *C. lundellii* var. *subglobisporus* (Pilát) Pilát je navržena kombinace *C. caspari* var. *subglobisporus* (Pilát) Pouzar. *C. sambuci* Velen. je pokládán za pochybný druh.

INTRODUCTION

During the preparation of a key to the identification of the species of the genus *Crepidotus* (Fr.) Staude of the Czech Republic (Pouzar 2005) some taxonomic problems appeared and a solution was proposed. A part of these results is published here. The collection of the Mycological Department of the National Museum in Prague (PRM) and partly also the collection of the Department of Botany of Charles University in Prague (PRC) was the main source of the material, together with a new collecting made in autumn 2004 in Prague. Particularly useful was the material collected in the Šumava Mountains and perfectly dried by J. Holec (preserved in PRM).

MATERIAL AND METHODS

The spore ornamentation is described from material mounted in Melzer's reagent. Herbarium specimens are those of the Mycological Department of the National Museum in Prague (PRM) and the Department of Botany of Charles University in Prague (PRC).

RESULTS AND DISCUSSION

Crepidotus stenocystis Pouzar spec. nov.

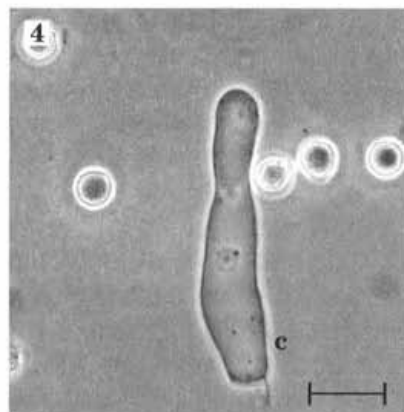
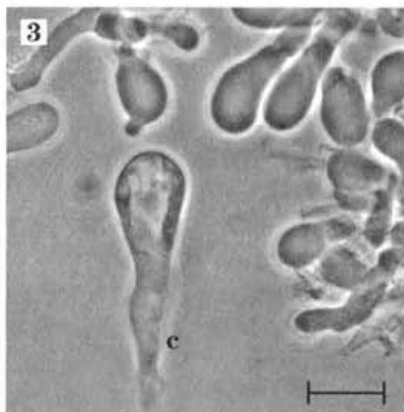
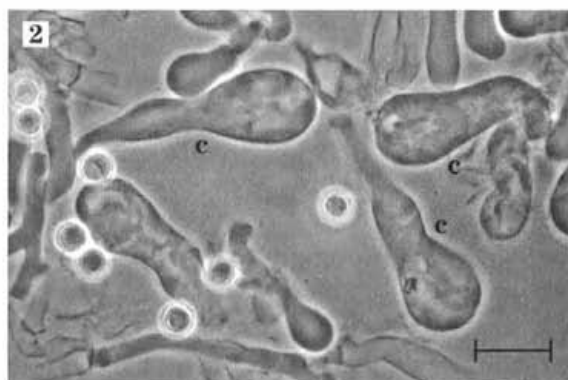
Figs. 4-7

Diagnosis latina: Carposomata in inventute cum stipite brevi, laterali, maturitate pileus (0,5-)1-3 cm latus cum margine primo involuto, consistentia carposomatum molliter subceracea; superficies pilei hygrophana, alba vel griseo-alba usque lutea vel ochraceo-lutea, glabra vel leviter pubescens. Lamellae sparsae, usque 3 mm latae, primo albidae, postea griseo-brunneae, nonnumquam tinctu roseolo. Sporae (5-)6-7,5(-8) μm , globosae, ad apiculum abrupte contractae, luteo-umbrinae. Basidia 22-35 \times 8-10 μm , basim 3-4 μm lata, breviter clavata, cum sterigmatibus quatuoribus 6,5 \times 2 μm . Cheilocystidia 35-78 μm longa, in parte distante 6-8 μm lata et in parte inferiore 8-12,5 μm lata, lageniformia seu cylindrica ex parte majore haud clavata (prorsus singulariter clavata), tenuiter tunicata, hyalina, glabra. Pleurocystidia absunt. Pileocystidia (25-)35-70 μm longa, 5-7 μm (raro 9,5-11 μm) lata in parte distale, 5-11 μm lata in parte inferiore, prorsus singulariter clavata, hyalina, raro cum tinctu leviter brunneolo, pariete haud incompressa. Omnes hyphae fibulatae.

Holotypus: Bohemia, montes Šumava, ap. ostio rivuli Slatinný potok prope Modrava, ad truncum iacentem: *Picea abies*, 1. X. 1994, leg. Z. Pouzar, in herbario Musei Nationalis Pragae asservatur (PRM 902018).

Detailed description in English: see Senn-Irlet (1995), p. 41 (as *C. applanatus* var. *subglobiger* Singer).

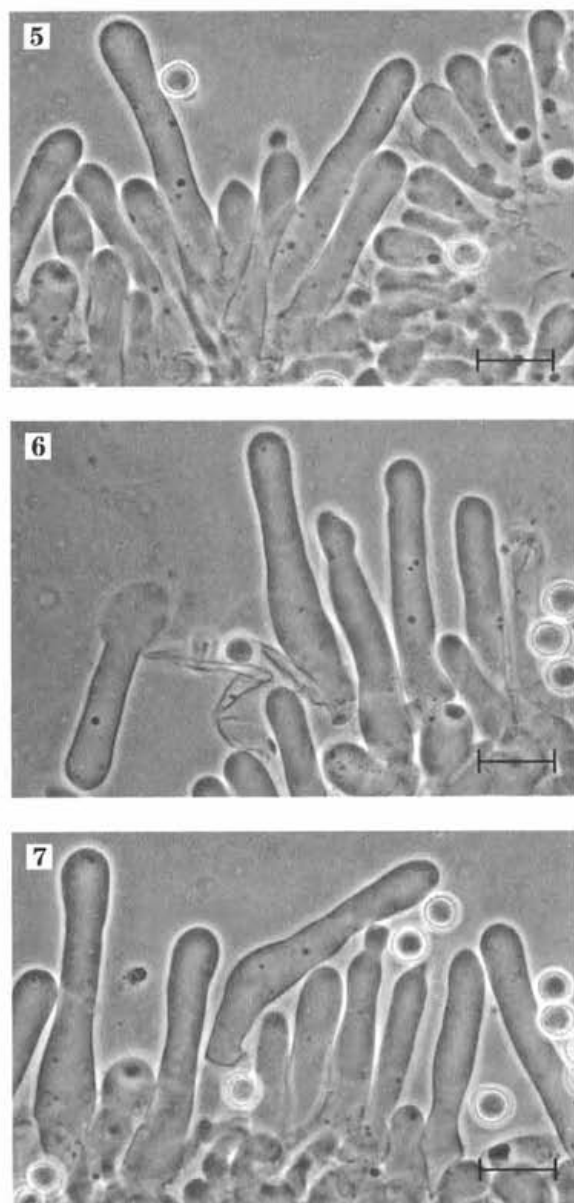
Specimens studied (all from Bohemia: western part of the Czech Republic): montes Šumava, mons „Smrčina“ prope Nová Pec, in colle situ sept.-or., silva mixta, 1130 m s. m., *Abies alba*: ad truncum iacentem, 25. IX. 1997, leg. J. Holec, PRM 891358. – Šumava, Plechý, prope Nová Pec, 0,5 km sept.-occid. ab culmine, 1330 m s. m., *Piceum*, ad truncum putridum *Piceae abietis*, 26. VIII. 1996, leg. J. Holec, PRM 889104. – Šumava, Žlebský kopec, mer.-occid. versus České Žleby, 1000 m s. m., silva mixta, *Abies alba*: ad truncum putridum, 13. IX. 1999, leg. J. Holec, PRM 898008. – Šumava, ap. ostio Slatinný potok prope Modrava, ad truncum iacentem *Piceae abietis*, cca 1000 m s. m., 1. X. 1994, leg. Z. Pouzar, PRM 902018, holotypus. – Šumava, Povydí, inter Horní Hrádky et Rokyta, 1,3 km sept.-occid. versus Antýgl, *Picea abies*, ad truncum iacentem 17. IX. 1998, leg. J. Holec, PRM 897232. – Šumava, in valle rivi Vydra inter Čeňkova Pila et Rejštejn, in codice: *Picea abies*, 5. IX. 1970, leg. M. Svrček (1945/70), PRM 716226. – Český les, area tuta „Bystřice“ ap. Pec pr. Domažlice, cca 730 m s. m., *Picea abies*: ad codicem, 27. IX. 1989, leg. Z. Pouzar, PRM 869600. – Brdy, prope domum „Amerika“ ap. Strašice, *Abies alba*: in codice, 23. IX. 1925, leg. K. Kavina, PRM 665171.



Figs. 1–3. *Crepidotus applanatus*, cheilocystidia (Bohemia, Šumava, Ždanidla, *Fagus sylvatica*, 9. VII. 1998, leg. J. Holec, PRM 896977).

Fig. 4. *Crepidotus stenocystis*, cheilocystidium (Bohemia, Šumava, inter Horní Hrádky et Rokyta, *Picea abies*, 17. IX. 1998, leg. J. Holec, PRM 897232).

c: cheilocystidia. Scale bars = 10 μ m. Photographed by Jan Holec.



Figs. 5-7. *Crepidotus stenocystis*, cheilocystidia (Bohemia, Šumava, inter Horní Hrádky et Rokytá, *Picea abies*, 17. IX. 1998, leg. J. Holec, PRM 897232).

Scale bars = 10 μ m. Photographed by Jan Holec.

Notes: *Crepidotus stenocystis* is closely related to *Crepidotus applanatus* (Pers.) P. Kumm., but differs not only in anatomical characters, but also ecologically. The principal difference is in the shape of the cheilocystidia, which are mostly attenuated in their upper half (Figs. 4–7), whereas in *C. applanatus* most of them are broadened towards the end (Figs. 1–3), here being mostly capitate. The same relates to the cystidia present in some parts of the pileus cuticle. *C. stenocystis* occurs solely on wood of *Picea* and *Abies* in the Czech Republic (in other countries also on *Pinus*), especially on prostrate trunks and on stumps. It is so far known in the Czech Republic only from the mountains and has not been collected at lower altitudes. Nevertheless it is known in the Netherlands from a low altitude and it is probable that its occurrence is rather dependent on humid climatic conditions. This fungus is well described with a delineation of its microscopic structures by Senn-Irlet (1995) on p. 39 and 41, where it is named *C. applanatus* var. *subglobiger* Singer. This name, however, cannot be applied to our fungus. In the original description (Singer 1973) its cheilocystidia are characterised as „clavate ventricose and with a slight constriction between the upper and lower ventricosity...“, whereas in our fungus they are narrower in their upper part and broadened in their basal part. Moreover, *C. applanatus* var. *subglobiger* was described according to material from Mexico where it was collected on wood of oak. Therefore it can be concluded that our European fungus is different from the Mexican one. As our material from Bohemian mountains displayed a fairly high level of stability in the character of the cystidia, it appears that it represents rather a separate species than a mere variety.

Crepidotus acerinus Vacek, *Studia Bot. Českoslovaca* 10: 132, 1949.

Holotype: Bohemia, Karlštejn, ad truncum (*Acer pseudoplatanus*) inter muscos, 30. VI. 1945, leg. V. Vacek, PRM 149001.

The type specimen of *Crepidotus acerinus* Vacek agrees microscopically well with *Crepidotus mollis* (Schaeff. Fr.) Staude. Spores are entirely smooth, clamps on hyphal septa absent and a gelatinous layer is present. Carpophores are smaller than usual, but such a form rarely occurs in Central Bohemia. *C. acerinus* is certainly not *C. calolepis* (Fr.) P. Karst., as the surface of the pileus lacks brownish scales. Hence *C. acerinus* is a synonym of *C. mollis*.

Agaricus zahlbruckneri Beck, *Verh. Zool.-Bot. Gesellsch. Wien* 39: 613, 1889.

Holotype: Austria, NÖ, Sonntagsberg, IX. 1888, leg. A. Zahlbruckner (herb. Beck 964), PRM 197705 (depon. ut *Claudopus zahlbruckneri*).

The holotype is quite a typical *Crepidotus cesatii* (Rabenh.) Sacc. Especially important is the form of the spores, which are mostly subglobose (up to 7.2 µm wide). The identity of this fungus was already indicated by Pilát (1948a, 1948b).

Crepidotus caspari Velenovský, Mykologia, Praha, 3: 70, 1926.

Holotype: Praha, Petřín, ad terram in horto publico, XI. 1925, leg. Antonín Kašpar^{*)}, PRM 149109.

The type specimen represents an average form of *Crepidotus lundellii* Pilát 1935, a fungus which is rather common in Prague and its close vicinity. The cheilocystidia of the type specimen are broadly lageniform, clamps on the hyphal septa are richly present and the spores are 8–9 × 5–6 µm, ellipsoidal or amygdaliform in side view, irregularly and faintly rugulose.

The name *Crepidotus caspari* Velen. should be used as the correct name for *C. lundellii* Pilát, as this is the oldest name for this rather common fungus. *C. caspari* is not related to *C. autochthonus* J. E. Lange, as has been supposed so far (Pilát 1948a, 1948b). *C. autochthonus* is characterised by an entirely glabrous spore-wall.

Crepidotus caspari var. *subglobisporus* (Pilát) Pouzar comb. nov.

Basionym: *Crepidotus versutus* var. *subglobisporus* Pilát, Sborník Nár. Musea v Praze, vol. 2 B, no. 3: 74, 1940.

Syn.: *Crepidotus lundellii* var. *subglobisporus* (Pilát) Pilát, Atlas champ. Europe 6: 50, 1948.

This is a rare fungus described originally from Ukraine (Transcarpathian region) known now also from Slovakia (Dobroč virgin forest, PRM 583548). Spores of this variety are distinctly shorter (in the original diagnosis 6–7.5 × 4.5 µm) than in the typical *Crepidotus caspari* – hence shortly ellipsoidal. *Crepidotus versutus* (Peck) Sacc., under which Pilát originally placed his var. *subglobisporus*, is a completely different species, characteristic i.e. by the absence of clamps.

Crepidotus sambuci Velenovský, České houby 4–5: 919, 1922.

Holotype: Bohemia, Slivenec, X. 1921, leg. J. Velenovský, PRC (bottle no. 117).

The type is preserved in conservation liquid (alcohol + formaldehyde) and a study of the anatomy of the carpophores is rather difficult, as all their parts are hard due to the influence of the preservation liquid. The spores are completely glabrous, without any ornamentation, which is rather surprising; it cannot be excluded that the ornamentation has been destroyed by the liquid. For the time being *Crepidotus sambuci* should be considered an unidentifiable species due to the bad state of the holotype. Interpretations of *C. sambuci* in literature were commented by Senn-Irlet (1995, p. 59, 73).

* The epithet "*caspari*" is derived from the latinised form of the personal name Kašpar (= Casparus). The name was dedicated by J. Velenovský to Antonín Kašpar (1864–1940), a school principal in Prague, who contributed some collections to Velenovský's study of fungi (Cejp, Věda Přírodní 20: 95, 1940).

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