

New variety of *Psilocybe moravica* and notes on *Psilocybe bohemica*

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The new taxon *Psilocybe moravica* var. *sternberkiana* Borovička is described and an epitype of *Psilocybe bohemica* Šebek ex Šebek is designated.

Key words: *Agaricales*, *Strophariaceae*, *Psilocybe*, taxonomy, new variety, typification.

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V článku je popsána nová varieta lysohlávky moravské – *Psilocybe moravica* var. *sternberkiana* Borovička a je stanoven epityp lysohlávky české – *Psilocybe bohemica* Šebek ex Šebek.

INTRODUCTION

According to my former study (Borovička 2005), the broad concept of *Psilocybe cyanescens* Wakef. emend. Krieglst. (1984) cannot be accepted. Recently, two new blueing *Psilocybe* species have been described from the Czech Republic – *Psilocybe arcana* Borovička et Hlaváček and *Psilocybe moravica* Borovička. They belong to stirps *Serbica* (Borovička 2005) together with *Psilocybe serbica* M.M. Moser et E. Horak and *Psilocybe bohemica* Šebek ex Šebek. In this study, a new variety of *Psilocybe moravica* is described. Furthermore, an epitype of *Psilocybe bohemica* Šebek ex Šebek is designated.

MATERIALS AND METHODS

The description of *Psilocybe moravica* var. *sternberkiana* Borovička is based on studies of two fresh collections from the Czech Republic and one dried collection obtained from Germany. Herbarium specimens are available at PRM. Holotype and paratype collections of *Psilocybe bohemica* Šebek ex Šebek (kept at PRM) were studied microscopically. Observations on microscopic features were

made using small fragments of the lamellae in Congo-red and 5 % aqueous KOH solution. For spore size measurements, 30 randomly selected mature spores were used per collection; aberrant spores (>1.5 times longer than the normal ones) were not taken into account. Spore length/width quotients (Q-values) are presented as minimum, lower quartile, upper quartile and maximum, respectively.

RESULTS AND DISCUSSION

Psilocybe moravica* var. *sternberkiana Borovička var. nov.

Syn.: *Psilocybe moravica* var. *macrospora* Borovička 2005 (nom. prov., sine diagn. lat.)

Diagnosis latina: A typo differt imprimis sporis maioribus, (11.0–)12.5–16.0(–17.3) × (6.2–)6.8–7.4(–7.8) μm, Q = (1.7–)1.8–2.1(–2.5). Holotypus (Czech Republic, Moravia, Šternberk, Bělkovice-Lašťany, leg. L. Hraběta, D. Kuška et J. Borovička, 1. XI. 2003) in herbario Musei Nationalis Pragae depositus est (PRM 901650). Paratypi: Czech Republic, Moravia, Bělkovice-Lašťany, leg. J. Borovička, 1. XI. 2003 (PRM 905446); Germany, Bavaria, Leiten prope Simbach, leg. C. Hahn, 26. X. 2002 (PRM 901651).

Psilocybe moravica Borovička is a psychoactive wood-rotting species recently described from the Czech Republic (Borovička 2003) belonging to stirps *Serbica* (Borovička 2005). Closely related species are *Psilocybe arcana* Borovička et Hlaváček (Borovička and Hlaváček 2001a), *Psilocybe bohémica* Šebek ex Šebek (Šebek 1983) and *P. serbica* M.M. Moser et E. Horak (Moser and Horak 1968). *Psilocybe moravica* is a relatively variable species. It is characterised by e.g. a broadly conical, almost hemispherical or plano-hemispherical pileus, often not umbonate, but also with a distinct umbo, sometimes with an expanded or somewhat wavy margin. The lamellae are adnate (not subdecurrent), relatively broad (ventricose), dark brown when mature, often with a grey tone, with a white edge. The stipe is characteristically longitudinally white-fibrillose on a dark background (mottled), in some specimens with remains of the partial veil building a fibrillose annular zone coloured purple-brown by the spores (this feature is absent in all European species of the stirps *Serbica*). Microscopically, *P. moravica* is characterised by spores (10.0–)11.0–13.5(–14.8) × (6.0–)6.2–7.0(–7.8) μm [Q = (1.5–)1.7–1.9(–2.0)], and narrowly lageniform pleurocystidia (not clavate-mucronate); the number of pleurocystidia varies from low to relatively high.

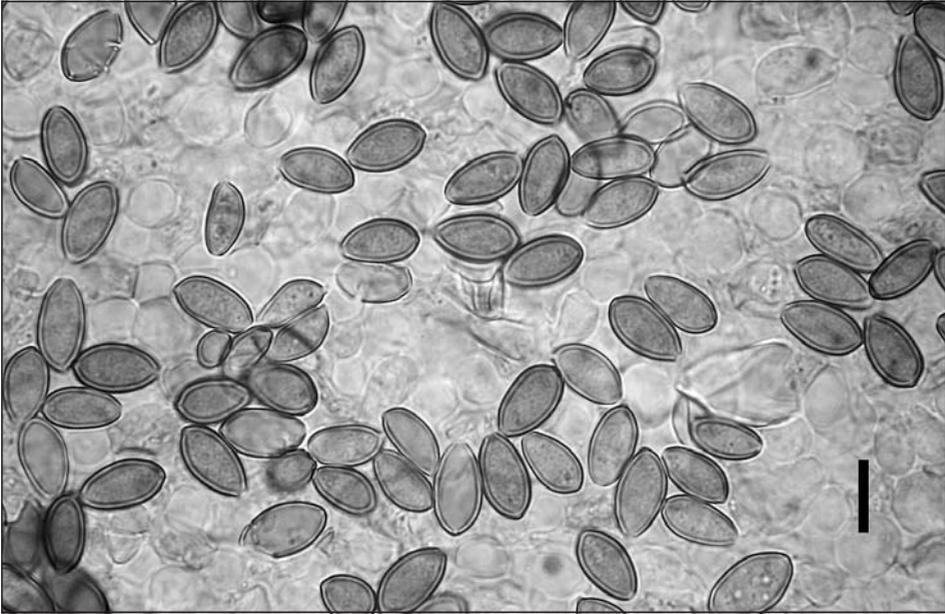


Fig. 1. *Psilocybe moravica* var. *moravica*, holotype (PRM 900455). Scale bar: 10 μ m.

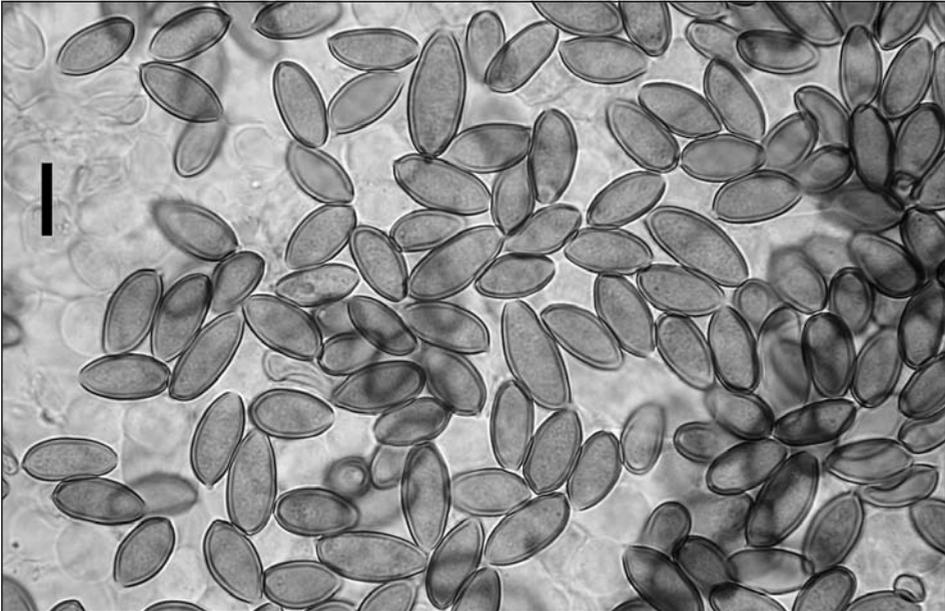


Fig. 2. *Psilocybe moravica* var. *sternberkiana*, holotype (PRM 901650). Scale bar: 10 μ m.

P. moravica is reported from the Czech Republic (Borovička 2003), Austria (collection at PRM identified by the author), East Slovakia (collection at BRA revised by the author) and Italy (collection PRM 905515 identified by the author, see also Galli 2003, 2005 – reported as *P. cyanescens*).

In 2002, I received an interesting collection of a blueing *Psilocybe* sp. from Bavaria (Germany) collected by Christoph Hahn. It was close to *P. moravica* but the spores were very large. One year later I studied two aberrant collections of *P. moravica* found near Šternberk (North Moravia, Czech Republic). These samples were also characterised by such large spores. In my opinion, these three collections are identical and represent a variety of *P. moravica*, which is described above. The difference between var. *moravica* and var. *sternberkiana* in size and shape of spores is clearly demonstrated in Figs. 1–2. Although there is an overlap in their size range, the spores of var. *sternberkiana* are often distinctly longer and their Q-values are also different. Macroscopically, no distinguishing characters have been found (but only two collections were studied in the field).

Guzmán et al. (2002) reported a blueing *Psilocybe* sp. from Sardinia (as *P. cyanescens*). Unfortunately, I was unable to study these collections (kept at CAG) but I think they do not belong to *P. cyanescens* sensu stricto (Borovička 2005). With regard to the published spore size, they might be identical with *P. moravica* var. *sternberkiana*, although common pleurocystidia have been reported in the Sardinian collections. In *P. moravica* var. *moravica*, the number of pleurocystidia varies from low to relatively high. However, in the holotype and paratype collections of *P. moravica* var. *sternberkiana*, pleurocystidia are scarce.

The name of the taxon refers to the town of Šternberk (North Moravia, Czech Republic) close to which the holotype collection was found.

***Psilocybe bohémica* Šebek ex Šebek**

Holotypus: Moravia, Zbraslav prope Rosice (vicinitas urbis Brno), 12. XI. 1973 leg. B. Kasala (PRM 829241). Epitypus hic designatus: Bohemia Centralis, Poříčko nad Sázavou, 25. XI. 1982, leg. E. Dlouhý et J. Havelík (PRM 829237).

Psilocybe bohémica is a blueing species belonging to stirps *Serbica* (Borovička 2005). It is reported from the Czech Republic (Šebek 1975, 1983; Borovička and Hlaváček 2001b) and perhaps from Austria (Michael et al. 1981, fig. 265b). It was described by Šebek (1975), but invalidly (ICBN, Art. 37.1 – no type indicated). After 8 years, the name was validated (Šebek 1983). Therefore, this species should be cited as *Psilocybe bohémica* Šebek ex Šebek.

Generally, the description of *P. bohémica* was based on collections from the locality in Central Bohemia (Poříčko nad Sázavou) already reported by Herink (1950, as *Hypholoma coprinifacies*). However, the holotype designated by Šebek

(1983) originates from another locality (Zbraslav near Rosice, Moravia). Unfortunately, the combination of macro- and microscopical characters in the holotype of *P. bohemica* is very unusual and I am not able to decide which blueing *Psilocybe* species the collection really is. *P. bohemica* [as *Hypholoma coprini-facies* (Rolland) Herink ss. Herink 1950] is characterised by a hygrophanous pileus (usually caramel brown when moist, fading to pale coffee-white) and pale ochraceous lamellae (slightly paler on the edge), which are often distinctly subdecurrent. These features have been observed in collections from many sites in the Czech Republic studied by the author (e.g. HR 45499, HR 49755, PRM 829237, PRM 901176, PRM 901177, PRM 901648, PRM 901649, PRM 902308, PRM 905481, PRM 905484). In the holotype, the lamellae are chocolate-brown with a distinctly white edge, the colour of the pilei is dark ochraceous and somewhat brown-orange toned.

Despite the microcharacters of the holotype (especially spore size) being similar to the collection from Poříčko nad Sázavou (PRM 829237, paratype), the combination of characters generally does not agree with the widely accepted concept of *P. bohemica*, in the past named *Hypholoma coprini-facies* (Rolland) Herink or *Psilocybe coprini-facies* (Rolland) Pouzar in Czech mycological literature (Herink 1950, Pouzar 1953, Borovička and Hlaváček 2001b). Moreover, the collection is poor and in a very bad state. To avoid further confusion, I propose an epitype which comes from the original locality (Poříčko nad Sázavou) and was originally designated as a paratype by Šebek (1983).

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