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The genus *Steccherinum* in Poland. I. *Steccherinum bourdotii* found in Tarnów town

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P i ą t e k M.: *The genus Steccherinum in Poland. I. Steccherinum bourdotii found in Tarnów town.* Acta Mycol. 35 (1): 41–46, 2000.

Steccherinum bourdotii Saliba et David is described and illustrated. Also, its occurrence in Poland and in the world is presented. The fungus is reported here to be new in Poland, earlier it has been confused with *Steccherinum ochraceum* (Pers.: Fr.) S. F. Gray. A handful information on its ecology is provided.

Key words: *Basidiomycetes*, fungal chorology, *Steccherinum bourdotii*, *Steccherinum ochraceum* complex, Poland, taxonomy.

INTRODUCTION

In his taxonomic monograph of the families *Hydnaceae* and *Steccherinaceae*, D o m a ń s k i (1981) reported only two species of *Steccherinum* from Poland, namely *S. fimbriatum* (Pers.: Fr.) J. Erikss. and *S. ochraceum* (Pers.: Fr.) S. F. Gray. Another species, *S. rhois* (Schw.) Banker was reported by K o t l a b a and L a z e b n i č e k (1967). Recently B u j a k i e w i c z (1999) found *S. robustius* (J. Erikss. et Lund.) J. Erikss. and recorded it as new to Poland. So, up to now, four species of the genus have been reported from the country.

S a l i b a and D a v i d (1988) on the basis of specimens collected in France described a new species *Steccherinum bourdotii* Saliba et David, closely related to *S. ochraceum*. This species has been found in the Tarnów town during studies on wood-decaying saprobic *Basidiomycetes* and is reported here as new to Poland.

MATERIAL AND METHODS

The description of morphology of basidiocarps of *Steccherinum bourdotii* is based on original Polish material. Basidiocarps of the fungus were examined in a light microscope. The solution of phloxine B in KOH (5%) was used in observation and measurements of microscopical elements. For comparison some specimens of *S. ochraceum* were also examined. The list of specimens of both fungi is included below. The following abbreviations were used: L = mean basidiospore length (arithmetical mean of all measured basidiospores, in μm), W = mean basidiospore width (arithmetical mean of all measured basidiospores, in μm), Q = quotient of mean basidiospore length and mean basidiospore width (L/W ratio, variation of the specimens means), (n = x/y) = x measurements of basidiospores from y specimens (according to N i e m e l ä 1998a).

DESCRIPTION AND DISCUSSION

Steccherinum bourdotii Saliba et David
Cryptogamie Mycologie 9: 100. 1988.

Basidiocarps annual, resupinate and effused on margin, sometimes forming small pilei. Pilei up to 0.5 cm width, the upper surface cream, tomentose, indistinctly zonate, margin sharp. *Hymenophore* hydnoid, spines cylindrical, cream or orange and slightly reddish (not ochraceous), 3–4(–5) per mm, 1–4 mm long.

Hyphal system dimitic, generative hyphae thin-walled, with clamp connections, skeletal hyphae thick-walled, without clamps, 3–4 μm width. *Skeletocystidia* present, narrow clavate, strongly encrusted at the apex, and projecting over hymenium. *Basidia* subclavate, with four sterigmata and basal clamp, 15–20 × 4–5 μm. *Basidiospores* subglobose or almost globose, hyaline, thin-walled, usually with one oil drop, (3.12–)3.74–4.16 (–4.57) × 3.12–4.16 μm, L = 3.99, W = 3.66, Q = 1.08–1.09 (n = 40/2).

For comparison the basidiospores size in *Steccherinum ochraceum*: 2.49–4.16 × 1.66–2.08 μm, L = 3.18, W = 1.76, Q = 1.66–1.92 (n = 40/2).

P o l i s h c o l l e c t i o n s e x a m i n e d. ***Steccherinum bourdotii*** Saliba et David. Kotlina Sandomierska (Sandomierz Basin): **(1)** Nizina Nadwiślańska (Nadwiślańska Lowland), Tarnów: Dąbrówka Infułacka, cemetery in Czarna Droga street, 50°00′10″N, 20°55′30″E, grid square **Fe-76**; loose young tree-stand, 25.10.1996, leg. M. Piątek (KRAM-F 39788); **(2)** Płaskowyż Tarnowski (Tarnowski Plateau), Tarnów: Krzyż, forest at the end of Wiśniowa street, 50°03′40″N, 20°58′10″E, grid square **Fe-67**; *Tilio-Carpinetum*, 21.09.1999, leg. M. Piątek (KRAM-F 39815).

Related material examined. ***Steccherinum ochraceum*** (Pers.: Fr.) S. F. Gray. Kotlina Sandomierska (Sandomierz Basin): **(1)** Nizina Nadwiślańska (Nadwiślańska Lowland), Niepołomice Forest, forest division 447, between Chobot and Ispina, 50°05'40"N, 20°21'50"E, grid square **Fe-62**; *Tilio-Carpinetum*, fallen branch of *Carpinus*, 27.07.1994, leg. W. Wojewoda (KRAM-F 35498) (Wojewoda et al. 1999); **(2)** Płaskowyż Tarnowski (Tarnowski Plateau), Tarnów: Piaskówka, near Piaskowa street, 50°02'00"N, 20°59'00"E, grid square **Fe-67**; tree-stand, fallen branch of *Betula pendula*, 18.09.1999, leg. M. Piątek (KRAM-F 39814).

Steccherinum bourdotii is considered to be the same as *Mycoleptodon dichroum* (Pers.) sensu Bourdot et Galzin, while the true *Hydnum dichroum* Pers. is conspecific with *S. ochraceum* on the basis of basidiospores characters (Saliba and David 1988; Niemelä 1998b).

The first Polish collection of this fungus was made in 1996 in the housing estate of Dąbrówka Infułacka in the Tarnów town. The second time the fungus was found in 1999, also in the Tarnów town (Figs 1 and 2). Macroscopically the collected basidiocarps resembled *Steccherinum ochraceum* and this name was used in the field notes. Microscopical examination showed that the basidiocarps have almost globose basidiospores. Hence determination of these materials as *S. ochraceum* was out of the question because this species has ellipsoid basidiospores (Fig. 3). The shape and dimensions of basidiospores fit well with diagnose of *S. bourdotii*. Other differences between the two fungi are included in Table 1.

Fig. 1. Distribution map of *Steccherinum bourdotii* in Poland

Table 1
Main differences between *Steccherinum bourdotii* and *S. ochraceum*

Feature	*Steccherinum bourdotii*	*Steccherinum ochraceum*
Pileus thickness	up to 3 mm	up to 1 mm
Colour of spines	orange or slightly reddish	ochraceous
Number of spines per mm	3–4(–5)	4–5(–6)
Basidiospores (L, W and Q)	subglobose or globose L = 3.99, W = 3.66, Q = 1.08–1.09 (n = 40/2)	ellipsoid L = 3.18, W = 1.76, Q = 1.66–1.92 (n = 40/2)

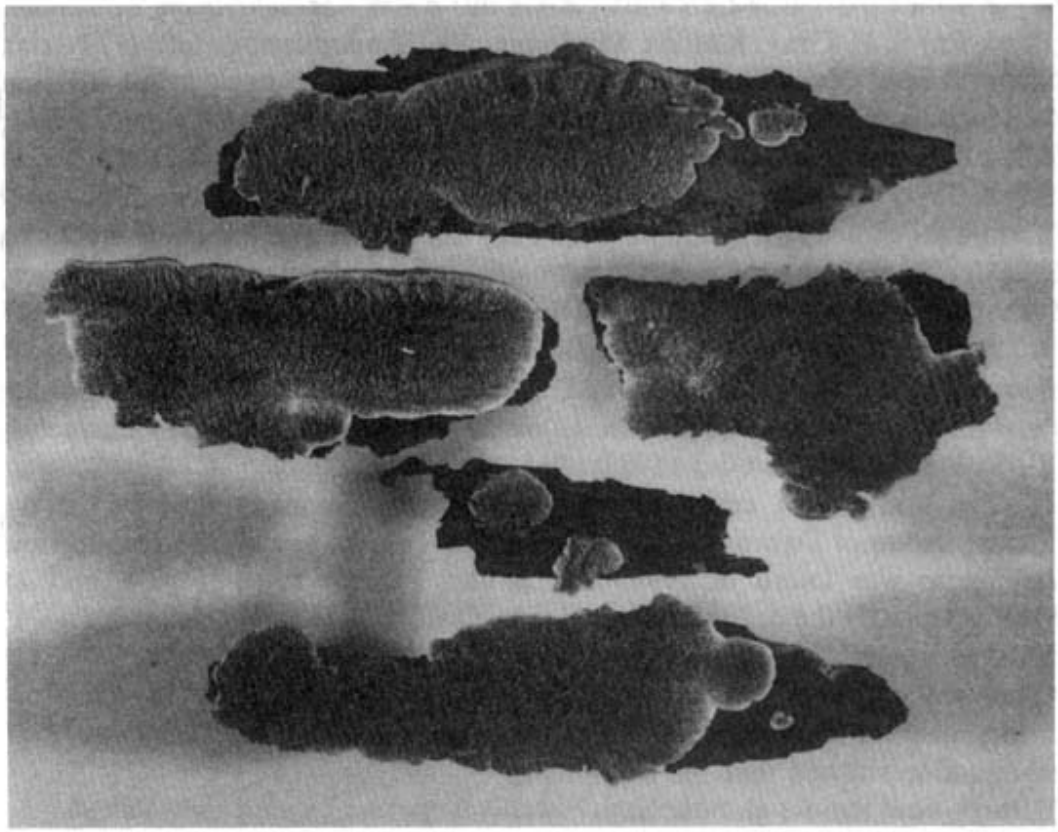

Fig. 2. Dry basidiocarps of *Steccherinum bourdotii* collected on fallen branch of *Padus avium*, locality in Tarnów: Krzyż (phot. A. Pachoński)

In Poland the fungus has been found in a cemetery and in a natural forest from the *Tilio-Carpinetum* association. In the first case some basidiocarps emerged in a wound on strongly decayed wood and bark of trunk of living *Sorbus aucuparia*, at a height of 1.5–2 m above the ground. Together with *Steccherinum bourdotii* a few basidiocarps of *Pholiota aurivella* (Batsch: Fr.) Kumm. were observed. Probably the latter parasitized on the tree and the former colonised dead wood. In the second case basidiocarps occurred on the lower side of fallen branch of *Padus avium* (= *Prunus padus*), ca. 4 cm in diameter and only slightly decayed.

On *Sorbus aucuparia* the fungus has been hitherto reported only from Finland (Niemelä 1998b). In other European countries *S. bourdotii* has been recorded mainly on deciduous trees, and only once on conifers (*Pinus*). Niemelä (1998b) listed 14 genera of host trees for this species.

General distribution of *S. bourdotii* is little known yet. The fungus has been reported almost exclusively from Europe: France, Croatia, Germany, Italy, Romania, Switzerland, Belgium, Austria, Finland and Estonia (Niemelä 1998b). The majority of known localities have been found in Germany (Grosse-Brauckmann 1986, 1999; Krieglsteiner 1991).

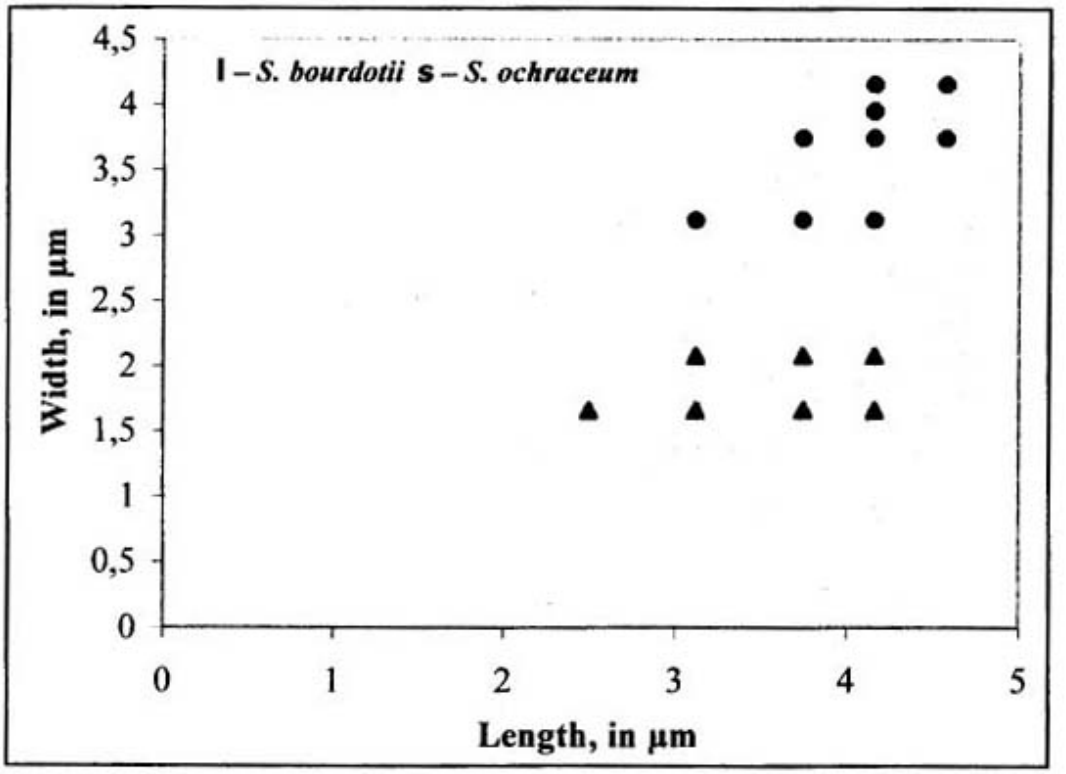

Fig. 3. Basidiospores size distribution in examined specimens of *Steccherinum bourdotii* and *S. ochraceum*

Outside Europe the species has been recorded in South America: Argentina (Saliba and David 1988) and Asia: Turkey (Hallenberg 1991). The discovery of *S. bourdotii* in Poland is broadening our knowledge of its distribution. Probably the species should be found in other regions of Poland. Microscopical examination is necessary for correct identification and distinguishes it from *S. ochraceum*.

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Rodzaj *Steccherinum* w Polsce. I. *Steccherinum bourdotii* znaleziony w Tarnowie

Streszczenie

W pracy podano informacje o nowym dla Polski gatunku z rodzaju *Steccherinum* znalezionym w Tarnowie – *Steccherinum bourdotii* Saliba et David. Przedstawiono opis makro- i mikrostruktury owocników oraz cechy odróżniające go od pokrewnego *Steccherinum ochraceum* (Pers.: Fr.) S. F. Gray. Ponadto praca zawiera informacje o ekologii i rozmieszczeniu geograficznym tego grzyba, który prawdopodobnie jest dość częsty, ale do niedawna nie był odróżniany od *Steccherinum ochraceum*.