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Dedicated to Professor Alina Skirgiełło on the occasion of her ninety-fifth birthday

Clitocybe splendoides H.E. Bigelow (Agaricales, *Tricholomataceae*), a new species for Poland

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Records of *Clitocybe splendoides* H. E. Bigelow, a rare fungus belonging to the species group of the *C. gibba* type, associated with deciduous forests, especially beech forests, collected at three localities in Poland are described.

Key words: Agaricales, *Tricholomataceae, Clitocybe splendens, C. splendoides*, Poland

INTRODUCTION

Clitocybe splendoides H.E. Bigelow, Lloydia 31: 49. 1968. – *C. splendens* (Fr.) Gillet ss. Bresadola, Icon. Mycol. IV: 168. 1928. – *C. infundibuliformis* (Fr.) ex Schaef. var. *splendens* (Bres. *nec al*.) Kühner & Romagnesi Flore Analytique: 138. 1953.

SYSTEMATIC ARRANGEMENT: Bigelow (1968)decided to propose the epithet *splendoides* as *nomen novum* for *C. splendens* (Fr.) Gillet ss. Bresadola, Icon. Mycol. 4: pl. 168. 1928 because "in the sense of most modern investigators, *C. splendens* is a synonym of *C. gilva, C. inversa*, or *C. flaccida*. While there are some disagreements in the literature on the limits of these three species, at least all have ornamented spores" (Bigelow 1968: 49). These three species are now placed in the genus *Lepista*, and *L. splendens* (Pers.) Gillet is either distinguished as a separate species (Bon 1997) or considered as a synonym of *L. gilva* or *L. flaccida* (Kuyper 1995; Horak 2005).

C. splendens sensu Bresadola has smooth, eliptical, obovate or pyriform spores in face view, and occurs on leaves under beech, trees; its *nomen novum* = *C. splendoides* H.E. Bigelow. Although Bigelow initially placed it in the section *Infundibuliformes* because of the shape of the pileus and the resemblance of the pileal colour to some colours occasionally found in *C. gibba* (Fr.) P. Kumm. (Bigelow 1968: 43), he later recognised this disposition as incorrect. Species close to *C. gilva* have encrusted pigments on the surface hyphae, and since such pigments are absent in *C. splendoides*, he placed it in the section *Candicantes*, noticing that *C. splendoides* H. E. Bigelow and *C. catina* (Fr.) Quél. may represent a possible link of the *Candicantes* to

the *Infundibuliformes* (Bigelow 1982: 119). Other mycologists assign it to the new section *Gilvoideae* Harmaja (Singer 1978: 209, 210; Clémençon 1984: 38). Bon (1997: 38) and Horak (2005: 106, 108), for instance, place it in the section *Clitocybe* (= *Infundibuliformes* Fr.) with other species of the group *C. gibba*.

SELECTED DESCRIPTIONS: Bigelow, Beihefte Nova Hedw. 72: 119. 1982; Bon, Doc. Mycol. 13(51): 14. 1983; Clémençon, Beihefte Z. Mycol. 5: 38. 1984; Schwöbel, Beiträge Kenn. Pilze Mitteleuropas 1: 7. 1984; Bon, Doc. Mycol. Mémoire 4: 38. 1997; Urbonas, Lietuvos grybai 8/2: 33. 1997.

ICONOGRAPHY: Bresadola 1928: 168; Bon 1997: pl. 1A; Schwöbel 1984: 7, Abb. 1 (as *C. splendens* ss. Bresadola); Urbonas 1997: VI. 4e-h.

Many new rare and interesting species, including *Clitocybe splendoides*, were found during investigations on the genus *Clitocybe*.

MORPHOLOGICAL CHARACTERISTICS

Pileus 3-8 cm, plane, soon depressed, at last infundibuliform, margin straight or narrowly decurved, not striate, yellowish, oldest specimens beige-white, surface moist, context thin, whitish, odour present but undefined. Lamellae forked, intervenose, thin, narrow, up to 5 mm, crowded, white edges even and straight, somewhat undulate in age. Stipe 3-6 cm long, apex 0.5-1.0 cm broad, straight, cylindrical, whitish, surface glabrous, base with whitish tomentum.

Dry specimens with sunset pileus, 10D4 to 10D6, 10E6, and whitish stipe, 10B1, 10B2 (Maerz, Paul 1950), lamellae seem slightly duller than stipe because of water-brown edges. In exsiccates pileus not staining deep chestnut brown or dark chocolate brown where treated with 5% KOH (see first specimens in colour illustration, Fig. 1).

Hyphae of pileus cutis cylindric, 4.6-6.1 μm, of context 7.7-13.8 μm diam, hyaline in KOH, membranal and intracelular pigments present. Cystidia absent. Basidia 20.4-28.1 × 4.1-6.1 μm, 4- spored rarely 1 or 2-spored. Spores 6.1-7.7 (8.2) × (2.8-) 3.1-4.3 μm, elipsoid to obovoid or pyriform, not amyloid (Fig. 2).

Rare in deciduous or mixed forest, on beech leaves. August to October.

EXAMINED SPECIMENS: 343. Lvov Upland, 343.2. The Roztocze, „Debry" reserve, near Krasnobród, 5.08.2004, *leg*. H. Komorowska, KRAM-F 55578; 512. Northern Subcarpathian Region, 512.3. Brama Krakowska Gate, Kraków, Las Wolski Forest, 29.10.2004, *leg*. J. Lichoń, KRAM-F 55580; 522. Outer Eastern Carpathians, 522.1. Beskidy Wschodnie Mts., 522.12. Bieszczady Zachodnie Mts., S. Myczkowski, „Hulskie" reserve, *Tilio-Carpinetum*, 20.09.1996, *leg*. H. Komorowska, KRAM-F 55579.

Numbers and names of geographical regions follow Kondracki (2001).

NOTES

C. splendoides is reported in the literature only by specialists working on the genus *Clitocybe* and is usually not distinguished from the very common *C. gibba* by other mycologists. Only a very detailed examination of specimens under a microscope reveals that there exists a group of similar species (*C. splendoides* H.E. Bigelow, *C. glarosa* Reling & Monthoux, *C. costata* Küner & Romagn., *C. bresadoliana* Singer and *C. gracilis* (H.E. Bigelow & A.H. Sm.) Harmaja or *C. alnicola* H.E. Bigelow)

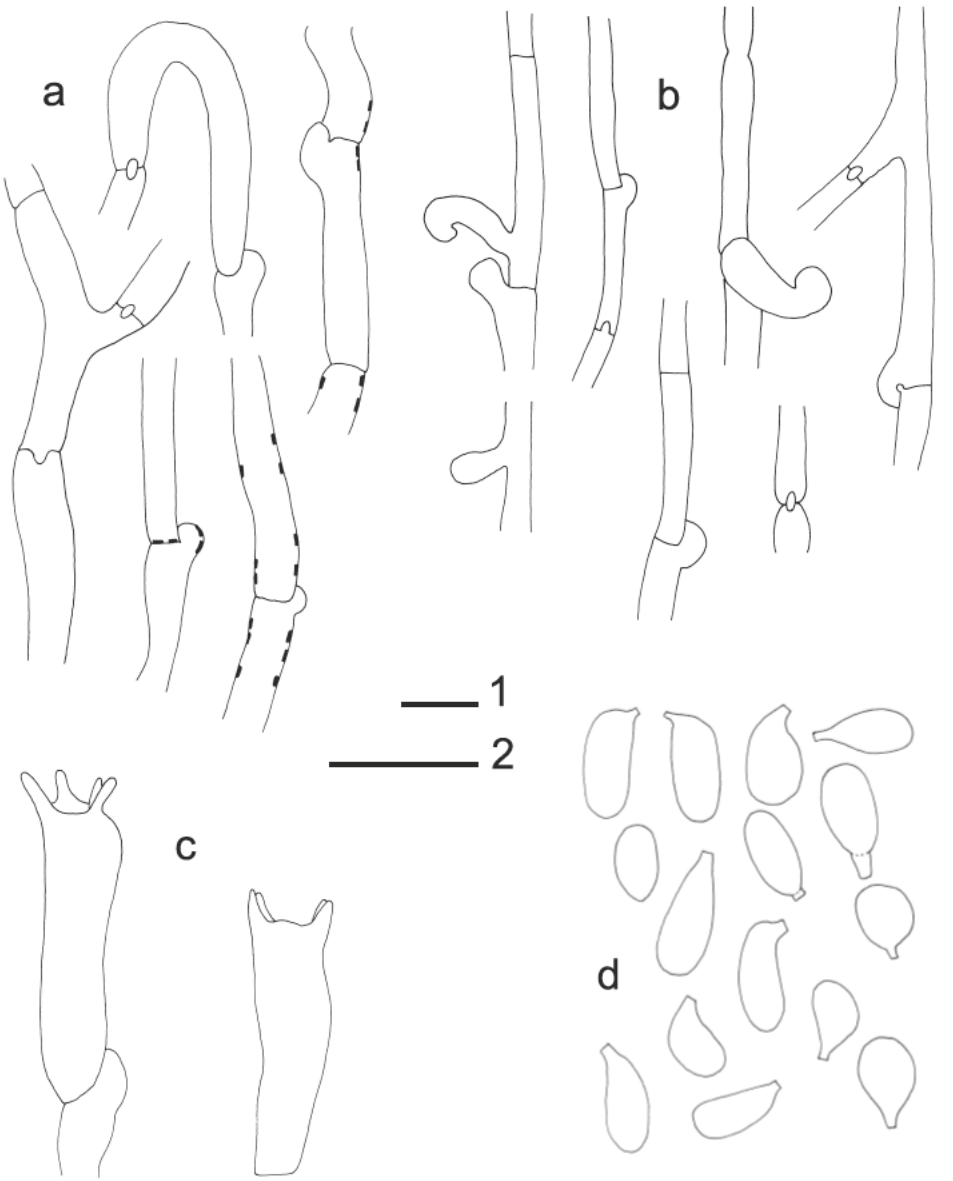

Fig. 2. Microscopic elements of *C. splendoides* (KRAM F 55578): a – hyphae of pileipellis, b – hyphae of stipitipellis, c – basidia, d – spores; 1 – scale bar = 10μ, for a and b, 2 – scale bar = 10μ, for c and d.

differing in the spore size and shape as well as the macrochemical reaction of the pileipellis with 5% KOH. However, as this reaction may not always be identical even on the same specimen (e.g. margin, pileal centre) and depends on a variety of factors (Harmaja 1969: 30), it may not be considered as a good diagnostic character differentiating the species.

It was very difficult to find any information on the distribution of *C. splendoides* in Europe in the available literature. Some data on the occurrence of this species were obtained in Luxemburg (Anonymous 1990: (81), Lithuania (Urbonas et al. 1986: 18; Urbonas 1997: 33) and Germany (Schwöbel 1984: 7). There are also reports on collections from Europe (without details, however) and the USA (Bigelow 1968, 1982; Bon 1997; Horak 2005). Bresadola (1928) also reports this species from Asia (Siberia) and South Africa.

The anatomy of the pileus is very uniform in the genus *Clitocybe*, therefore, as suggested by Harmaja (1969: 25), only a detailed examination of the epidermis and subepidermis can help identify the species. The most reliable features are the shape and size of spores, the two being the most constant characters. Bigelow emphasized the lack of incrustation of pileipellis hyphae in *C. spendoides*, a feature that is present in *C. gibba* and other species of its complex. In my opinion this feature is of lesser importance and the observations of the Polish specimens lead me to believe that the shape and size of spores is the most significant character that distinguishes *C. splendoides* from closely related species. Spores are mostly elongated, narrowly elliptical or elliptical, and very few are lacrimoid, similar to those of *C.gibba* but smaller.

Species belonging to the *C. gibba* complex will be described in a separate publication where the differences between them will be discussed in detail.

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Clitocybe splendoides H.E. Bigelow (Agaricales, *Tricholomataceae*), nowy gatunek dla Polski

Streszczenie

W czasie badań nad rodzajem *Clitocybe*, prowadzonych w rezerwatach i parkach narodowych w latach 2002-2004 w ramach projektu badawczego KBN (grant PO4G 024), zebrano wiele nowych, rzadkich i interesujących gatunków. Jednym z nich jest przedstawiony wyżej *Clitocybe splendoides*. Bigelow nadał tę nazwę znanemu z Europy i stwierdzonemu w USA *C. splendens* sensu Bresadola. Uzasadniał to dużym zamieszaniem w literaturze europejskiej i traktowaniem tego taksonu przez różnych mikologów jako synonimu *C. gilva, C. inversa* lub *C. flaccida* - gatunków z szorstkimi zarodnikami. Wszystkie te trzy gatunki obecnie większość mikologów umieszcza w rodzaju *Lepista*. Ich ranga taksonomiczna też jest różna – są dobrymi gatunkami lub tylko synonimami. *C. splendens* sensu Bresadola ma gładkie eliptyczne zarodniki, a jego nową nazwą jest od 1968 roku *C. splendoides*. Jego pozycja w rodzaju *Clitocybe* zmieniała się, był umieszczany w różnych sekcjach. Jest gatunkiem rzadkim i odnotowywanym głównie przez specjalistów, bywa nie odróżniany od *C. gibba*, który jako dość pospolity nie jest szczegółowo badany. Uchodzi uwadze zróżnicowanie zarodników (ich wielkość i kształt), a to one decydują o przynależności do danego taksonu, wraz z innymi cechami makroskopowymi czy choćby reakcją makrochemiczną skórki kapelusza traktowanej 5% KOH.

Inne gatunki z kompleksu *C. gibba* zostaną przedstawione w odrębnej publikacji.

Fig. 1. Dry specimens of *C. splendoides* (KRAM F 55578). Scale bar = 2 cm.
No reaction of the pileipellis with 5% KOH (see top photograph, left specimen).