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Typhula quisquiliaris (*Cantharellales*) – a species new to Poland

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W o j e w o d a W.: *Typhula quisquiliaris (Cantharellales) – a species new to Poland.* Acta Mycol. 35 (1): 29-35, 2000.

Information on the first Polish record of *Typhula quisquiliaris* is given in this paper. The species was found in Katowice: Panewniki (SW Poland, Silesian Upland), in pine forest, on dead stalks of *Pteridium aquilinum*.

Key words: *Cantharellales*, *Typhulaceae*, *Typhula*, *Pteridium aquilinum*, ecology, distribution, fern, saprobic fungus, threat, Poland.

INTRODUCTION

The genus *Typhula* (J ü l i c h 1984) includes 30 species known in Europe. Among them ca 20 species have been recorded in Poland (D y n o w s k a 1983, 1986a, b, 1992; W o j e w o d a 1999). In 1973 *T. quisquiliaris*, a species not reported hitherto in our country was found.

TAXONOMY

The systematic position of the *Typhula* genus is different according to different authors. D o m a ń s k i (1984) included this genus in the order *Aphyllophorales* Rea, and K r e i s e l in M i c h a e l et al. (1988) in the order *Cantharellales* Gäumann and in the family *Clavariaceae* Chev. According to J ü l i c h (1981), H a w k s w o r t h et al. (1995), and K n u d s e n (1995) it belongs also to the order *Cantharellales*, but to the family *Typhulaceae* Jülich.

N a m e a n d s y n o n y m s o f *T. quisquiliaris*:

Typhula quisquiliaris (Fr.: Fr.) Corner, Mon. *Clavaria* and allied genera: 679. 1950.

Pistillaria quisquiliaris Fr., Syst. Myc. 1: 497. 1821 (basionym).
Clavaria quisquiliaris (Fr.) Karst., Hattsvamp. 2: 178. 1882 (non *C. quisquiliaris* var. *inflata* Karst. l.c. = *Typhula uncialis*)
Clavaria obtusa Pers., Myc. Eur. 1: 190. 1822 (pro parte)
Pistillaria puberula Berk., Outl.: 286. 1860.

Iconography: Berthier (1976, pl. 7 A, pl. 18 A-E, coloured pl. after p. 204, fig. 2); Breitenbach and Kränzlin (1986: pl. 433); Krieglsteiner (1991: 403, map no. 1285); Parmasto (1965: 38, fig. 22).

ECOLOGY AND DISTRIBUTION

According to Breitenbach and Kränzlin (1986) the species seems to inhabit bracken fern (*Pteridum aquilinum* = *Pteris aquilina*), but according to Jülich (1984) it grows also on *Epilobium*. According to Rea (1922) *T. quisquiliaris* grows on dead fern, especially bracken. In Great Britain its basidiocarps were observed from April to December (Rea l.c.).

T. quisquiliaris is known from Germany (Runge 1986; Kreisel 1987; Krieglsteiner 1991), Great Britain (Rea 1922), Italy (Saccardo 1916), Switzerland (Breitenbach and Kränzlin 1986), Russia (European part: the region of Sankt-Petersburg, and Asiatic part: the N Caucasus and Krasnoyarsk Territory), Estonia (Parmasto 1965), France (Bourdot and Galzin 1928), former Czechoslovakia, the Netherlands, Sweden and Finland (Jülich 1984). Besides, it was found also in N Africa (Berthier 1976; Pilát 1958) and in Cuba in N America (Saccardo 1915).

The species is not common in Switzerland (Breitenbach and Kränzlin 1986). Also, it is known only from 5 localities in W Germany (Krieglsteiner 1991); according to Kreisel (1987) *T. quisquiliaris* was noted only once in 1896 in E Germany (former German Democratic Republic). However, according to Rea (1922) it is common in Great Britain and, according to Pilát (1958), also in Europe. Probably it is not threatened.

POLISH SPECIMENS

Morphology. Whitish basidiocarps consisting of a cylindrical, sterile stalk with hairs (caulocystidia), and a smooth, fertile, clavate, capitate, oval, almost cylindrical, bifid or clavarioid head. Flesh white, of delicate consistency, soft. Carpophores arising from yellowish, oval sclerotia, lying in the pith of bracken stalk (Fig. 1).

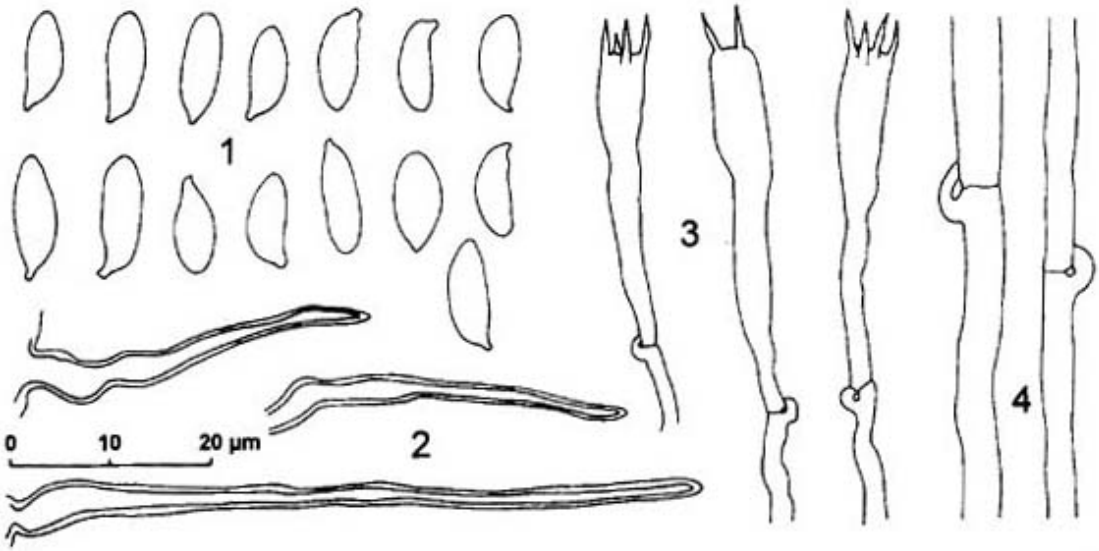

Fig. 1. *Typhula quisquiliaris*. Microscopic features: 1 – basidiospores, 2 – caulocystidia (stalk hairs), 3 – basidia, 4 – hyphae (Polish material examined, KRAM – *Fungi*)

Hyphal system monomitic. Hyphae hyaline, smooth, thin-walled, with clamps. Caulocystidia (stalk hairs) cylindrical or somewhat conical, with thickened walls (especially at the base), hyaline, with obtuse tip.

Basidia slenderly clavate, with 2–4 sterigmata, and with basal clamps. Basidiospores elliptic, elliptic-cylindrical or sausage-shaped, depressed on one side, smooth, hyaline, thin-walled, strongly amyloid (Fig. 2, Table 1).

Locality. *T. quisquiliaris* was found on September 25th, 1973 (leg. W. Wojewoda, KRAM) in Katowice: Panewniki (according to Kondracki (1994) the Kraków–Częstochowa Uppland subprovince, the Silesian Upland macroregion, the Katowice Upland mesoregion). The fungus grew on dead stalks of *Pteridium aquilinum*, still standing or lying on the ground, in young forest with *Pinus sylvestris*, previously classified as the *Vaccinio myrtilli-Pinetum* association (Heinrich and Wojewoda 1976), now as *Leucobryo-Pinetum* (Matuszkiewicz 1981; Plit 1982).

REMARKS

The species may be confused with *T. uncialis* (Grev.) Berthier, growing also on *Pteridium* (but rather on *Angelica*, *Chaerophyllum*, *Epilobium*, *Juncus* and *Petasites*). However, *T. uncialis* has no sclerotia and its spores are smaller (6–9 × 2.5–3.5 µm) and non-amyloid.

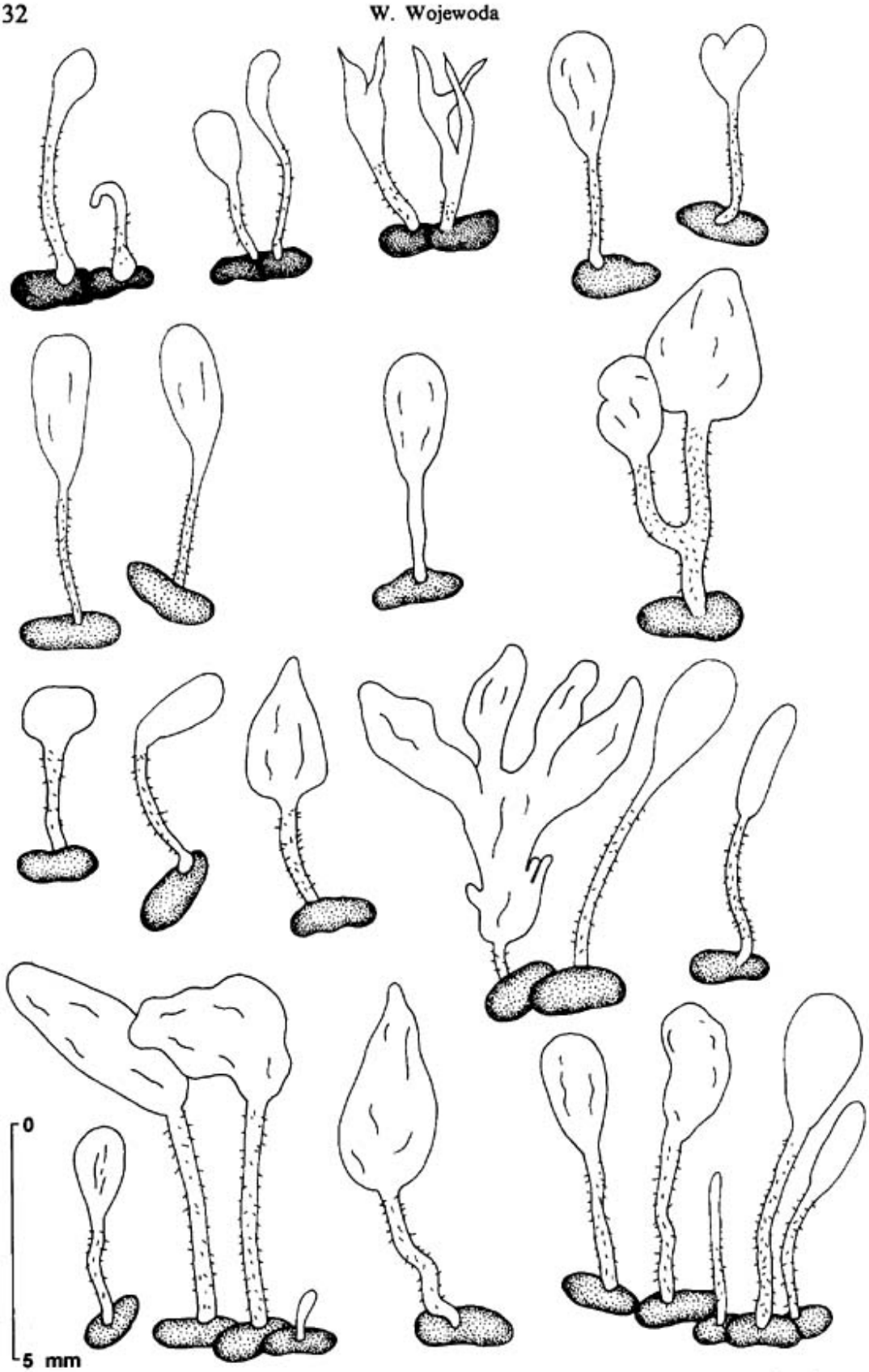

Fig. 2. *Typhula quisquiliaris.* Basidiocarps and sclerotia (Polish material examined, KRAM – *Fungi*)

Table 1

Macroscopic and microscopic features of *Typhula quisquiliaris* according to various authors and of the material examined in Poland

	Berthier 1976	Breitenbach and Kränzlin 1986	Corner 1950	Domański 1984	Jülich 1984	Parmasto 1965	Pilát 1958	Polish specimens
Height of basidiom in mm	3.2-7.0	up to 8	3-9	up to 6	up to 6	3-15	3-9	4-13
Height of head in mm	1.25-2	up to 5	1.3	1.3-2	1.3-2	0.7-2	-	1-4
Width of head in mm	0.6-1.2	up to 3	0.4-1.2	0.6-1.2	0.6-1.2	0.2-1.2	-	1-3
Height of stalk in mm	2-5	up to 3	1-6-(10)	2-5	2-5	1-8-(12)	1-6	3-9
Thickness of stalk in mm	0.3-0.4	up to 1.5	0.1-0.3	0.3-0.4	0.3-0.4	0.1-0.3	0.1-0.3	0.25-0.5
Sclerotium in mm	1.5-2.7 × 0.3-0.5	2-3 × 0.5	1-3 × 0.3-0.4	1.5-3 × 0.3-0.5	1.5-2.7 × 0.3-0.5	1-3 × 0.3-0.4	1-3 × 0.3-0.4	1-3 × 0.3-1
Spores in μm	(8)-9.5-11.5-(15) × 4-5-(5.5)	9-11.5 × 5	11-15 × 4-6	9.5-11.5-(15) × × 4-5.5	9-11.5-(15) × × 4-5-(5.5)	(9)-11-15 × × (3.5)-4-6	11-15 × 4-6	7.2-12 × 3-6-(6.6)
Caulocystidia in μm	10-100 × 3-8	2-3 across, base up to 7 across	120 × 4-8	10-60 × 6-8	10-60 × 6-8	-	-	10-84 × 2-7.2
Basidia in μm	40-70 × 7-9	40-50 × 6-8	30-40 × 8-9	40-70 × 7-9	40-70 z 7-9	-	-	30-48 × 5-7
Hyphae in μm	40-70 × 2-8-10)	3-7 across	2-7 across	3-10 across	3-8-(10) across	-	-	2.5-7 across
Number of sterigmata	2-4	2-4 (5-6 μm long)	2-4	-	4	-	-	4

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Typhula quisquiliaris (*Cantharellales*) – gatunek nowy dla Polski

Streszczenie

W Polsce stwierdzono dotychczas około 20 gatunków z rodzaju *Typhula*. Są to pasożyty roślin lub saproby rozkładające martwe rośliny lub ich szczątki. W Katowicach: Panewnikach, w borze sosnowym (*Leucobryo-Pinetum*) znaleziono nowy dla Polski gatunek grzyba *Typhula quisquiliaris*, który wyrastał na ogonkach martwych liści orlicy *Pteridium aquilinum*. Proponowana polska nazwa: pałecznica orlicowa.

T. quisquiliaris jest grzybem saprobowym. Wytwarza skleroty. Ma niepozorne, drobne owocniki, które łatwo przeoczyć i być może dlatego dotychczas nie była u nas notowana. Jej żywiciel, *Pteridium aquilinum*, jest rośliną pospolitą w Polsce. Konieczna jest obserwacja obumarłych ogonków liściowych tej paproci. Dokładniejsze poszukiwania dają szansę na znalezienie dalszych stanowisk tego grzyba w Polsce.