

Rediscovery of *Trichoglossum hirsutum* in Slovakia

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Trichoglossum hirsutum, reported as extinct/missing in the Red data list of the Slovak macrofungi, was recollected after 34 years. All available specimens were revised and variability of selected characters studied. Distribution map, based on voucher specimens and published data, was compiled.

Key words: Ascomycota, *Geoglossaceae*, *Trichoglossum*, distribution, Slovakia.

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Trichoglossum hirsutum, uvedené ako vyhynuté/nezvestné v Červenom zozname makromycetov Slovenska, bolo znovuobjavené po 34 rokoch. Revidoval sa dostupný dokladový materiál a študovala sa variabilita niektorých vlastností. Mapa rozšírenia zahŕňa všetky dostupné dáta.

Fungi are sensitive to the environmental changes and research on selected species of macrofungi has provided evidence of significant changes in the biodiversity of many taxonomic and trophic groups in Europe. Natural factors, such as ecological succession, and especially anthropogenic factors, such as destruction of natural habitats, transformation of landscape, air and soil pollution, etc., lead to the decline of diversity of all organisms, including fungi (Lizoň 1993).

One of the species listed as extinct/missing in the Red data list of the Slovak macrofungi (Lizoň 1995a, 1995b), *Trichoglossum hirsutum* (Pers.) Boud., was recollected in the mountains Volovské vrchy, East Slovakia, after 34 years. The collecting site is situated on the northern slope of the mountain Kojšovská hoľa below the village of Kojšov. A small group of ascocarps (Fig. 1) has grown in a peat-bog among *Sphagnum flexuosum*, together with *Homogyne alpina*, *Agrostis canina*, *Crepis paludosa*, *Trientalis europaea*, *Deschampsia caespitosa*, *Vaccinium myrtillus*, *V. vitis-idea*, *Potentilla erecta* and *Nardus stricta*.

The species was first reported from Slovakia by Endlicher (1830): "In salicis sabulosis lutosus insulae Bruckau. Vere et autumnno frequens." [city of Bratislava, village of Petržalka, public park Park Janka Kráľa]. Hazslinszky's record (1881): "Szedtem a m. Tátra alján." [Collected in foothills of Vysoké Tatry Mts.] might

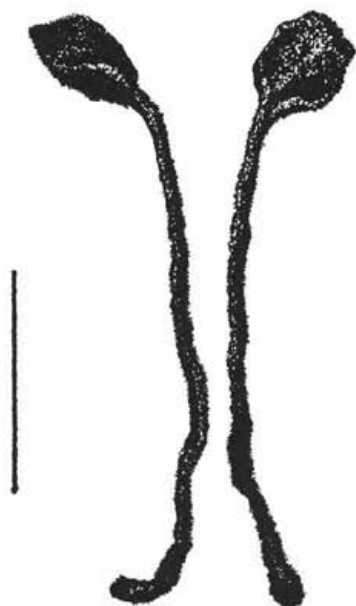


Fig. 1 *Trichoglossum hirsutum*: Eastern Slovakia, Volovské vrchy Mts., Kojšovská hoľa, 1994; BRA (bar = 1 cm; drawings by R. Mráz).

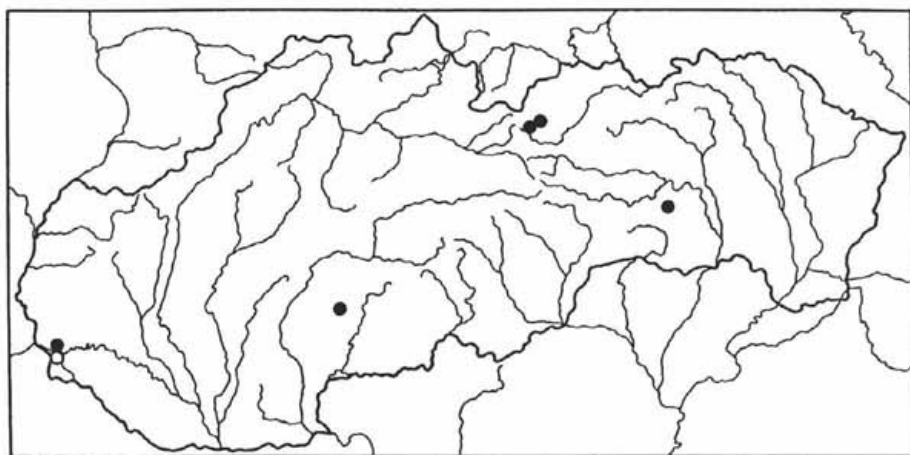


Fig. 2. Distribution of *Trichoglossum hirsutum* in Slovakia: ● herbarium specimens, ○ published data.

be based on his voucher specimen "Tatra. Roxer Wald". None of these collections have been confirmed in this century and some of those collecting sites no longer exist (for example, Bratislava — Petržalka is densely populated residential area now).

Trichoglossum hirsutum is quite a rare species even though it has world-wide distribution and occurs in almost all climatic zones. The species grows on rotten wood or soil and is associated with wet to marshy meadows, peat-bogs and moors, often in *Sphagnum* (Antonín et al. 1996). The species is listed as critically endangered species for Slovak and Czech Republics (Antonín et al. 1996) and Poland (Wojewoda and Lawrynowicz 1992), as endangered (threatened) for Austria (Krisai 1986), Finland (Anon. 1987), the Netherlands (Arnolds 1989) and Germany (Benkert 1992).

Trichoglossum hirsutum has scattered to gregarious, clavate to capitata, black or brownish black, erect, 1–8 cm long ascocarps; the ascogenous part is compressed, up to 2 cm long and 2–5 mm wide, and stipe is 2–3 mm diam. Brown setae are present both in the hymenium and on the stipe. Asci are clavate, 180–275 × 18–25 μm, 8-spored. Ascospores are 80–170 × 5–7 μm, usually 15-septate. Paraphyses are brown, cylindrical, straight or curved, somewhat enlarged at the top (Mains 1956). A few varieties and forms are described, distinguished mostly by spore size and septation. The genus *Trichoglossum* is closely related to *Geoglossum* and is separated by the presence of acuminate setae in hymenium and on the stipe.

In addition to the current collection five specimens from Slovakia were located in herbaria. All specimens were studied and measurements of spores taken (Tab. 1). According to the published data and/or search in herbaria no other species of *Trichoglossum*, known from other European countries, occur in Slovakia.

Specimens studied:

1. "Tatra. Roxer Wald." [Velký les forest between villages Rakúsy and Kežmarské žľaby], F. Hazslinsky (BP 66115).
2. "Tátra", F. Hazslinsky (SLO).
3. "Prenčov. Kiepa, in loco graminoso.", 1891, A. Kmeť (BRA).
4. "Bratislava. Gebirgswald." [city of Bratislava: public park Horský park], 1927, K. Mergl (BRA).
5. "Vysoké Tatry. Starý Smokovec." [Vysoké Tatry Mts.: town of Starý Smokovec], 1960, A. Pilát (PRM 534008).
6. "Volovské vrchy, Kojšovská hoľa, rašelinisko na S strane, 1200 m n. m." [Volovské vrchy Mts.: Kojšovská hoľa ridge, peat-bog on the northern slope, 1200 m a. s. l.], 14.9.1994, P. Mráz (BRA, PRM 887374).

Tab. 1. Variability of spore characters.: n — number of septa, l — length of the spore (μm), w — width of the spore (μm).

1. Prenčov			2. Tatra (BP)			3. Tatra (SLO)		
s	l	w	s	l	w	s	l	w
15	117	4.4	14	114	6.9	15	121	7.0
13	114	4.4	15	142	5.8	14	131	5.8
15	112	4.9	15	144	5.8	15	145	5.8
16	114	5.2	15	128	6.9	15	140	5.8
15	138	4.4	15	138	6.9	15	147	7.0
4. Bratislava			5. St. Smokovec			6. Koj. hofa		
s	l	w	s	l	w	s	l	w
15	135	4.9	15	159	5.0	15	135	5.8
14	141	6.5	14	143	4.5	15	134	5.8
15	117	4.9	13	137	6.0	15	134	5.8
15	138	4.9	10	149	5.0	8	106	4.7
14	146	6.5	14	152	4.5	15	156	7.0

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