

## FIRST RECORD OF FUNGUS GNATS *EXECHIOPSIS PULCHELLA* AND *RYMOSIA COTTII* (DIPTERA: MYCETOPHILIDAE) FROM SLOVAKIA

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**Abstract:** Two species of fungus gnats, *Exechiopsis pulchella* (Winnertz, 1863) and *Rymosia cottii* Tollet, 1959 were recorded in Slovakia for the first time. Both species were found in the Píla cave in Tríbeč Mts.

**Key words:** *Exechiopsis pulchella*, *Rymosia cottii*, Slovakia, cave fauna, fungus gnats, Mycetophilidae, Diptera.

### INTRODUCTION

*Exechiopsis pulchella* (Winnertz, 1863) and *Rymosia cottii* Tollet, 1959 are members of the tribe Exechiini of family Mycetophilidae (Diptera: Nematocera). Fungus gnats from this tribe are known for their occurrence in caves, mostly during hibernation and estivation.

*Exechiopsis pulchella* was described by WINNERTZ (1863) on the basis of material from Germany. Species is widely distributed in Europe (CHANDLER 2011).

The description of *Rymosia cottii* was made by TOLLET (1959). It was recorded in the cave Fornet in Swiss kanton Ticino. This species is also distributed in Hessen (Germany) and Sweden (PLASSMANN & ZAENKER 2005).

### MATERIAL AND METHODS

Locality: cave Píla (Figure 1), Tríbeč Mts, Slovakia, N 48°31'45", E 18°34'49". Altitude: 482 m, cave length: 104 m, entrance exposition: SE. Specimens were hand-picked, with use of an exhaustor and they were preserved in 75% ethylalcohol. Photographs were taken under a ZEISS Stemi 2000-C stereomicroscope. Identification of *R. cottii* was confirmed by Eberhard Plassmann (The Bavarian State Collection of Zoology, Germany). Material is deposited in the author's personal collection.

### RESULTS

**Family:** Mycetophilidae

**Tribe:** Exechiini

*Exechiopsis pulchella* (Winnertz, 1863) (Figure 2) – material examined (male only): 9. 4. 2011: 1 ♂, leg. et det. Z. Kosejová.

*Rymosia cottii* Tollet, 1959 (Figure 3) – material examined (males only): 28. 2. 2010: 1 ♂, 31. 10. 2010: 1 ♂, 4. 12. 2010: 1 ♂, 22. 1. 2011: 4 ♂♂, 19. 2. 2011: 2 ♂♂, 9. 4. 2011: 1 ♂. Total: 10 ♂♂. leg. Z. Kosejová, det. Z. Kosejová & V. Košel, confirmed by E. Plassmann.

### DISCUSSION

*Exechiopsis pulchella* is a widespread but rare species. It is currently known from: Estonia, Italy (KURINA 2003), Germany (WEBER et al. 2007), Austria, Belgium, British Isles, Czech Republic, France, Ireland, Latvia, Romania, Switzerland, The Netherlands (CHANDLER 2011), Sweden, Norway, Finland and Russian Karelia (KJÆRANDSEN 2012). Old records may be partly mixed with *Exechiopsis aemula* Plassmann, 1984. This problem is closely discussed by KURINA (2003). ZAENKER (2008) classified it as eutrogloxen species. Only one male was found in entrance of Píla cave.

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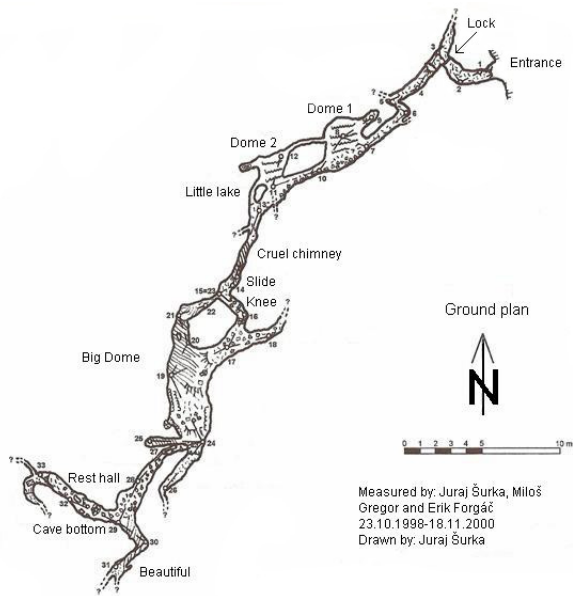


Figure 1. Ground plan of the Píla cave.

*Rymosia cottii* is a very rare species (ZAENKER 2008). The original description is based on one Swiss male (TOLLET 1959). Second record is from Germany – one male was found in entrance of mine Holzappel (Hessen) (ZAENKER 2008).

During my research in the Píla cave this species was collected only in winter, in distance from 3 to 18 meters from the entrance. ZAENKER (2008) classified it as eutrogloxen species. The finding of *R. cottii* in Slovakia corresponds to this classification – it is a typical cave hibernant, it seeks for habitats with stable temperature. The material presented here is relatively large (10 males). Until now no females were collected.

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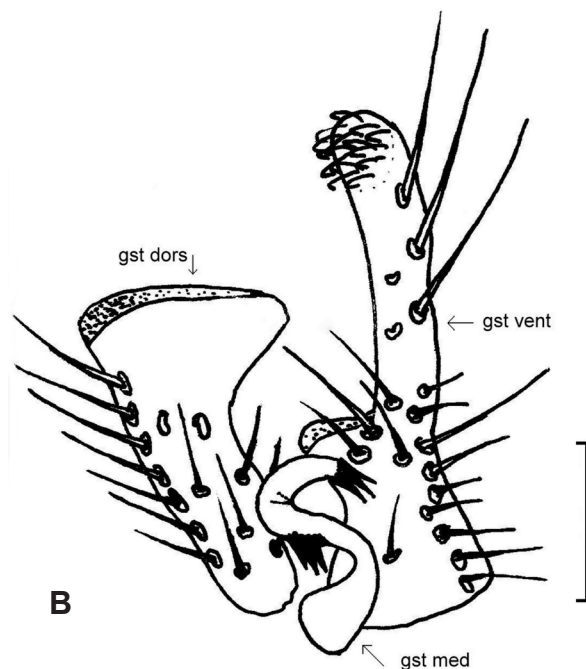
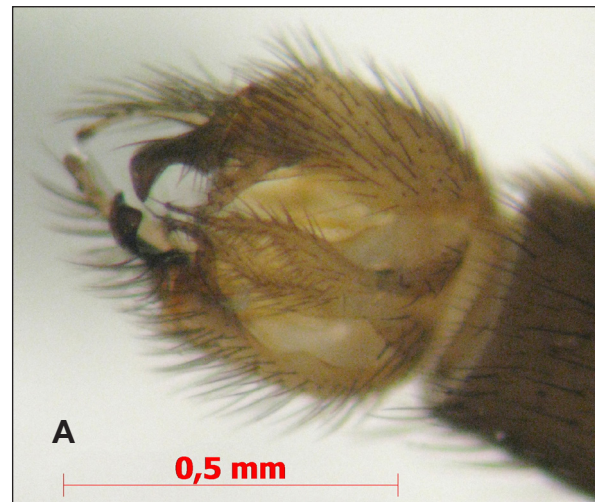


Figure 2. *Exechiopsis pulchella*, male. A – terminalia, dorsal view, B – internal view of gonostylus, gst dors: dorsal appendage of gonostylus, gst vent: ventral appendage of gonostylus, gst med: medial appendage of gonostylus (after KURINA 2003) Scale: 0.1 mm (Drawn by M. Supuka).

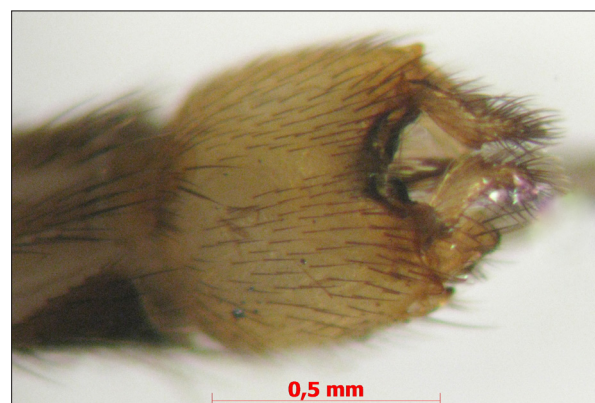


Figure 3. *Rymosia cottii*, ♂ terminalia, ventral view.

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