

New records of myrmecophilous beetle *Paussus turcicus* (Coleoptera, Carabidae) in Southeastern Balkans

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Abstract. The rare myrmecophilous beetle *Paussus turcicus* I. Frivaldszky von Frivald, 1835 (Coleoptera, Carabidae) is reported in three new localities in Bulgaria and one in the European part of Turkey. It has been found in nests of the typical ant host *Pheidole pallidula* (Nylander, 1849) (Hymenoptera, Formicidae). It is reported for first time from Sakar and Eastern Rhodope Mountains in Bulgaria.

Key words: *Paussus turcicus*, Bulgaria, Turkey, new records.

Introduction

Subfamily Paussinae (with common names “ant nest beetles” and “flanged bombardier beetles”) is represented by almost 800 species with range predominantly in tropical regions (Nagel 2009). Most of the species live obligatory together with ants and form close symphyllic relationships with them. There are glandular hairs on the enlarged antennae of these beetles, secreting substances, which ants lick.

From genus *Paussus*, two species occur in Europe – *Paussus favieri* Fairmaire, 1851 and *Paussus turcicus* I. Frivaldszky von Frivald, 1835, the first of them occurs mainly in the Western Mediterranean.

Paussus turcicus was recorded in Bulgaria (Selimno, today’s Sliven) (I. Frivaldszky von Frivald 1835), at that time still part of the Ottoman Turkish empire. Until now the species has been recorded in several locations in South Bulgaria: Maslen nos, Strandzha Mountain, Sliven, Krichim, Sandanski (Guéorguiev & Guéorguiev 1995). It is known in Central Asia, the Middle East, Asia Minor, the Balkans (Nagel 2003). Besides the data for general distribution from Fauna Europaea (Vigna Taglianti 2004), particular locations of the species in the European part of Turkey have not been found. Typical host is the ant *Pheidole pallidula* (Nylander, 1849), but it was also recorded together with *Tetramorium semilaeve* André, 1883 and *Messor barbarus* (Linnaeus, 1767) (Nagel 1982) – they all are representatives of subfamily Myrmicinae.

Material and methods

The material consists of 5 male and 4 female mature specimens of *Paussus turcicus*, collected by hand under stones from nests of *Pheidole pallidula*. Besides, one specimen was found out of a nest. The species is recorded in two localities on the territory of the Eastern Rhodopes, one in Sakar Mountain (Bulgaria) and one in the south-eastern part of Strandzha Mountain in Turkey in close proximity to the Black Sea coast. All four habitats have typical xerophytic features of the terrain where ant host occurs. Investigated specimens are kept in personal collections of authors, as well as in the collection of the National Museum of Natural History, BAS.

Results

New data of *P. turcicus* in Bulgaria and European part of Turkey are presented in this study:

***Paussus turcicus* I. Frivaldszky von Frivald, 1835**

New records: **Bulgaria:** Sakar Mt., Topolovgrad district, Ustremiski manastir, 22-23.05.1995, 1 specimen, leg. I. Stoyanov & B. Guéorguiev (NMNH); East Rhodopes, Ivaylovgrad district, Meden buk, N41°23'01" E26°01'16", 125 m a.s.l., 04.05.2009, 2 males, 2 females, leg. A. Lapeva-Gjonova; East Rhodopes, Ivaylovgrad district, Svirachi, N41°28'38" E26°06'33", 298 m a.s.l., 04.05.2009, 1 male, 2 female, leg. A. Lapeva-Gjonova; **Turkey:** Vize district, N of Kıyıköy, N41°39'25" E28°05'08", 22 m a.s.l., 24.05.2010, 1 male, leg. A. Lapeva-Gjonova, 1 male, leg. R. Kostova.

These are first data about recording of this rare myrmecophilous species on the territory of Sakar Mountain and Eastern Rhodopes (Fig. 1) and it is a second report from the Rhodopes Massif. The first known finding (Krichim) is at the northern foot of the Rhodopes on the border with the Thracian Plain (Hieke & Wrase 1988).

New data supplements the information about the species range on the territory of South Bulgaria and European part of Turkey.



Fig. 1. *Paussus turcicus* with ant host *Pheidole pallidula* licking the glandular hairs.

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