

First record of *Pyramica bauduerei* (EMERY, 1875) (Hymenoptera: Formicidae) from Bulgaria

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Abstract

The first record of *Pyramica bauduerei* (EMERY, 1875) from Bulgaria is reported. It also represents the discovery of a genus and tribe of ants unknown from Bulgaria until now. One worker of *P. bauduerei* was found in South-eastern Bulgaria, near the village of Shiroko Pole. The known distribution of *P. bauduerei* in the Palaearctic region is summarised and discussed.

Key words: Ants, first record, *Pyramica bauduerei*, Dacetini, Formicidae, Bulgaria.

Myrmecol. News 13: 1-2 (online 5 October 2009)

ISSN 1994-4136 (print), ISSN 1997-3500 (online)

Received 17 June 2009; revision received 21 July 2009; accepted 22 July 2009

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Introduction

The Bulgarian myrmecofauna is insufficiently explored. In particular, some sub-Mediterranean species, parasitic species and species with cryptic lifestyle known from South-eastern Europe have not been reported from Bulgaria until now. In recent years several new records of ant species were reported for Bulgaria (see, e.g., RADCHENKO & ANTONOVA 2004, STANKIEWICZ & ANTONOVA 2005, STEINER & al. 2005, ANTONOVA 2009), but the last published checklist of Bulgarian ants (ATANASSOV & DLUSSKY 1992) has not been updated yet.

Here we report the discovery of the sub-Mediterranean species *Pyramica bauduerei* (EMERY, 1875), a species with cryptic lifestyle, found by P. Bezděčka in South-eastern Bulgaria.

Results

The recent species-level redetermination of ants deposited in the Museum of South-eastern Moravia (the Czech Republic, Zlín) resulted in the identification of one worker of *Pyramica bauduerei* (EMERY, 1875). The redetermination of this specimen was done using the keys in HERVÉ (1969), AGOSTI & COLLINGWOOD (1987) and BOLTON (2000). The worker was collected in a place called Zhelezni vrata (41° 37' 06" N, 25° 28' 00" E, ca. 320 m a.s.l., South-eastern Bulgaria, Fig. 1) on 26.IV.1986 (leg. et det. P. Bezděčka). This forest-steppe locality lies two kilometres south of the centre of the village of Shiroko Pole. The specimen was found under a big stone on the soil surface. In spite of intensive exploration of the locality neither a nest nor further individuals were discovered.

Discussion

Pyramica ROGER, 1862 is the second largest genus of the tribe Dacetini with 349 recent species (YUSUPOV 2009). Only five *Pyramica* species occur in the Western Palaearc-



Fig. 1: Habitat of *Pyramica bauduerei* near Shiroko Pole (Photo: P. Bezděčka 1986).

tic region: *P. argiola* (EMERY, 1869), *P. bauduerei*, *P. membranifera* (EMERY, 1869), *P. tenuipilis* (EMERY, 1915) and *P. tenuissima* (BROWN, 1953). The known distribution of *P. bauduerei* covers the Channel Islands (RADCHENKO 2007), Morocco (BOLTON 2000), continental Spain (ESPADALER 1997, BOLTON 2000, RADCHENKO 2007), the Balearic Islands (ESPADALER 1997), Tunisia (BOLTON 2000), Malta (RADCHENKO 2007), continental France (BOLTON 2000, RADCHENKO 2007), Corsica (BOLTON 2000), Sardinia (BOLTON 2000, RADCHENKO 2007), Sicily (RADCHENKO 2007), continental Italy (BOLTON 2000, RADCHENKO 2007), Switzerland (BARONI URBANI 1998, BOLTON 2000, BRASCHLER 2002), Hungary (GALLÉ & al. 1998), Romania (MARKÓ 2008), Croatia (BRAČKO 2006), Macedonia (RADCHENKO 2007), Montenegro (PETROV 2006), Greece (AGOSTI & COLLINGWOOD 1987, RADCHENKO 2007), Turkey (BOLTON 2000, RADCHENKO 2007), and Armenia (ARAKELYAN 1994).

Pyramica bauduerei is exclusively a predator, hunting especially Collembola but occasionally also other small arthropods (MARKÓ 2008). It lives and forages in the soil, inhabiting sun-exposed and warm sites (BRASCHLER 2002, MARKÓ 2008). Colonies are usually small and monogynous (BOLTON 2000). Specimens of genus *Pyramica* can be identified as members of the tribe Dacetini immediately in the field, due to the characteristic shape of the head. A recent, detailed characterisation of workers of *P. bauduerei* is given by MARKÓ (2008).

The worker of *Pyramica bauduerei* reported here was found by hand collecting. The discovery represents the finding of a species, genus and tribe of ants hitherto unknown from Bulgaria. The hidden lifestyle of *Pyramica* ants and the hitherto lack of applying more specific collecting methods are probably the main reasons for the absence of any further data on this species from Bulgaria.

Recently, dacetine ants have been recorded more frequently in other parts of Europe, by using quantitative methods of collection. BRASCHLER (2002) caught two workers of *P. bauduerei* by pitfall trapping in Switzerland. DEVÁN (2008) captured the only specimen of the genus *Pyramica* known from Slovakia (male of *P. cf. argiola*) in a Moe-ricky trap (yellow dish with salt solution). FELLNER & al. (2009) repeatedly detected *P. argiola* in Austria using the Winkler sifting and extracting method, a collection technique commonly used in tropical rainforests. The latter two instances indicate that the application of a greater variety of collection techniques may boost European ant faunistics.

Acknowledgements

We thank the Ministry of Culture of the Czech Republic for the financial support of this research project (DE07PO40 MG009 MK ČR). We are very grateful to B. Braschler, P. Deván and A. Radchenko for valuable information and two anonymous referees for inspiring suggestions.

Zusammenfassung

Der erste Fund von *Pyramica bauduerei* (EMERY, 1875) in Bulgarien wird gemeldet. Es handelt sich dabei gleichzeitig um eine aus Bulgarien bisher unbekannte Gattung und Tribus von Ameisen. Eine Arbeiterin von *P. bauduerei* wurde im südöstlichen Bulgarien gefunden, nahe dem Dorf Shiroko Pole. Die bekannte Verbreitung von *P. bauduerei* in der Paläarktis wird zusammengefasst und diskutiert.

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