New Data on the Spider Fauna (Arachnida: Araneae) of Bulgaria

Maria V. Naumova¹, Gergin Blagoev², Dragomir Dimitrov³, Stoyan Lazarov³ & Christo Deltshev¹, ³

¹Institute of Biodiversity and Ecosystem Research, Bulgarian Academy of Sciences, 1 Tsar Osvoboditel Blvd., 1000 Sofia, Bulgaria; E-mail: munny@abv.bg
²Centre for Biodiversity Genomics, University of Guelph, Guelph, Canada; E-mail: gblagoev@uoguelph.ca
³National Museum of Natural History, Bulgarian Academy of Sciences, 1000 Sofia, Bulgaria; E-mail: info@nortiena.com; st.lazarov68@gmail.com; deltshev@gmail.com

Abstract: New data on the distribution of spiders of the families Atypidae, Dictynidae, Mimetidae, Miturgidae, Mysmenidae, Oecobiidae, Pholcidae, Pisauridae, Synaphridae and Zodariidae are presented. The family Mysmenidae is newly recorded for Bulgaria, while Synaphridae is newly reported family for the Balkan Peninsula and for Bulgaria. The genus Oecobius is also new for the Bulgarian spider fauna. Illustrations contributing to the taxonomic characterisation of some species are provided. A total of ten species are newly recorded from different localities in the country. With the present report, the number of spider species recorded in Bulgaria is increasing up to 1047.

Key words: new families, new genus, distribution, Balkan Peninsula

Introduction

The critical check-list of Bulgarian spiders (DELTSEV & BLAGOEV 2001) comprised 910 species (of 42 families) and summarised 173 publications. Recently, due to the publication of 93 new papers, the number of the spiders found on the territory of Bulgaria increased to 1037 (of 43 families, see BLAGOEV et al. 2002-2017). The present publication reports new faunistic data on the distribution of spiders of the following ten families: Atypidae, Dictynidae, Mimetidae, Miturgidae, Mysmenidae, Oecobiidae, Pholcidae, Pisauridae, Synaphridae and Zodariidae. The family Mysmenidae is newly recorded for Bulgaria, while Synaphridae is newly reported family for the Balkan Peninsula and for Bulgaria. The latter is also new for the Balkan Peninsula. Oecobius Lucas, 1846 is a new genus for the fauna of spiders in Bulgaria. The aim of this paper is to report ten species found in Bulgaria for the first time.

Materials and Methods

The present faunistic list is based on the incorporation of some available unpublished records due to the collecting efforts of the authors and their colleagues. The spider material was collected by hand, with pitfall traps and with vacuum cleaner from different regions of the country (Fig. 1). Specimens were examined and measured using Leica M205 C and Wild M5A stereomicroscopes. Photos were taken by Lumix digital camera attached to a Wild M5A stereomicroscope. The specimens are preserved in 70-80% ethanol and deposited in the Institute of Biodiversity and Ecosystem Research (IBER–BAS) and National Museum of Natural History (NMNH–BAS), Sofia. The taxonomic names follow the nomenclature given in the World Spider Catalog (2017). The approximate geographical coordinates are given in decimal degrees.

Results

The examined material contained ten species (of ten families), which are new for the Bulgarian fauna.

Atypidae

Atypus muralis Bertkau, 1890 – 1 ♂, North Black Sea coast: Sts. Konstantin & Elena Resort,
Naumova M. V., G. Blagoev, Dimitrov D., S. Lazarov & C. Deltshev

N43.2349˚, E28.0025˚, 50 m a.s.l., 10.07.2012 (leg. M. Spasov; Fig. 1: 1). The species was described from Central Europe (Germany) but its recent distribution covers Central Europe to Turkmenistan (WCS 2017). Morphologically, our material corresponds to the description of the species and the presented photos contribute to the taxonomic characteristics of the species and can be used for taxonomic comparison between different populations (Figs. 2–6).

Dictynidae

*Emblynna brevidens* (Kulczyński, 1897) – 1 ♂, Danubian Plain: Belene Island, N43.6661˚, E25.2326˚, 20 m a.s.l., 20.05.2014 (leg. M. Naumova; Fig. 1: 2). This rare Palaearctic species is known from North, Central and South Europe. Our finding represents the first record of this species from Bulgaria. There are good taxonomic pictures of *E. brevidens* (see Hajdamowicz et al. 2007, Oger 2014), characterising quite well the population in Central Europe. The new photos present the south-eastern European population of the species (Figs. 7–11).

Mimetidae

*Ero cambridgei* Kulczyński, 1911 – 1 ♂, Vitosha Mts.: Bistrishko Branishte Reserve, N42.5858˚, E23.3148˚, 1451 m a.s.l., 05.08.2007 (leg. C. Deltshev; Fig. 1: 3). Although this species is widespread in the Palaearctic, this is its first record from Bulgaria.

Miturgidae

*Zora parallela* Simon, 1878 – 1 ♂, Black Sea coast: Cape Emine, near Itrakli Site, N42.7483˚, E27.8844˚, 26 m a.s.l., 01-30.06. 2011, pitfall traps (leg. T. Teofilova, N. Kodžhabashev; Fig. 1: 4). The species is known from North, Central and South Europe. Its present finding is a new record for the country.

Mysmenidae

*Microdipoena jobi* (Kraus, 1967) – 1 ♂, Kraishte Area: Klenovik Vill., N42.4226˚, E22.9266˚, 656 m a.s.l., 04.07.2016, (leg. I. Dedov, N. Simov, R. Bekchiev, vacuum cleaning; Fig. 1: 5). This Palaearctic species is rare; it is recorded from Bulgaria for the first time. The presented photos are a contribution to the taxonomic characteristics of the population of the species on the Balkan Peninsula (Figs. 12–14).

Oecobiidae

*Oecobius maculatus* Simon, 1870 – 1 ♂, 1 ♀, Sofia City: dwelling houses, N42.6958˚, E23.3121˚, 556 m a.s.l., 15-25.06.2016 (leg. S. Indzhov); 1 ♀, Sofia City: in the building of NMNH, N42.6960˚, E23.3286˚, 575 m a.s.l., 20.09.2016 (leg. M. Naumova); 2 juveniles, on the same building, 10.01.2017 (leg. S. Indzhov; Fig. 1: 6). The species is known from the Mediterranean Region and shows some spreading tendencies within Europe since a
few decades (Nentwig et al. 2017). Therefore, its finding in Bulgaria has been expected (Figs. 15–19).

**Pholcidae**

*Psilochorus simoni* (Berland, 1911) – 1 ♂, Sofia City: in the building of NMNH, N42.6960˚, E 23.3286˚, 575 m a.s.l., 11.02.2005 (leg. M. Langourov; Fig. 1: 6). Although it is a widespread species in Europe, it has not been reported from Bulgaria to date.

**Pisauridae**

*Pisaura novicia* (L. Koch, 1878) – 2 ♂♂, Lyulin Mts.: near Gara Vladaya station, N42.6314˚, E23.1821˚, 890 m a.s.l., 01-31.03. 2002 (leg M. Naumova; Naumova et al. 2008, as *P. mirabilis*, misidentified; Fig. 1: 7); 1 ♀, North Black Sea coast: near Vaklino Vill., N43.6658˚, E28.2859˚, 39 m a.s.l., 20.04.2016 (leg. M. Naumova; Fig. 1: 10); 1 ♂, 1 ♀, Central Danubian Plain, Shirokovo Vill., N43.5556˚, E25.9358˚, 144 m a.s.l., 18.05.2016, (leg. M. Naumova; Fig. 1: 11); 1 ♂, Sofia City: near dwelling house, N42.6963˚, E23.3123˚, 554 m a.s.l., 17.02.2017 (leg. S. Indzhov; Fig. 1: 6). The species is known from the Mediterranean region and is reported from Bulgaria for the first time.

**Synaphridae**

*Synaphris lehtineni* Marusik, Gnelitsa & Kovblyuk,
Naumova M. V., G. Blagoev, Dimitrov D., S. Lazarov & C. Deltchev

2005 – 1 ♂, North of Beli Breg Vill., N43.5163°, E23.4433°, 124 m a.s.l., 08.09.2016 (leg. T. Ljubomirov; Fig. 1: 12); 5 ♂♂, 4 ♀♀, Sofia, Kremikovtsi ward, N42.7882°, E23.4812°, 645 m a.s.l., 27.03.2017 (leg. M. Naumova; Fig. 1: 6). Synaphridae is a small family with three genera and 13 species, distributed in Mediterranean region (Spain, Croatia, Israel, Egypt), Ukraine, Turkmenistan, the Canary Islands and Madagascar (WSC 2017). Synaphris is the most speciose genus in the family with its 11 species (Marusik & Zonstein 2011), three of them occurring in Europe. Synaphris lehtineni is described from Ukraine (Crimea) and to date has been known only from there and from Romania (NAE 2015). Morphologically, our material corresponds well to the description of the species, which is seen from the presented photos (Figs. 20–27). These are the first records from Bulgaria representing the southernmost localities of the species range.

Zodariidae

Zodarion hauseri Brignoli, 1984 – 4 ♂♂, South Black Sea coast: Primorsko Vill., N42.2470°, E27.7533°, 6 m a.s.l., 27.04 – 07.06.2016, pitfall traps (T. Teofilova, T. Ljubomirov, N. Karaivanov; Fig. 1: 13); 3 ♂♂, South Black Sea coast: Lozenets vill., N 42.2109°, E 27.8032°, 5 m a.s.l., 01-23.08.2008, pitfall traps (S. Lazarov; Fig. 1: 13). The species is a Balkan endemic, known from Greece and FYRO Macedonia. The present finding is the first record of this species from Bulgaria representing the easternmost locality of its range. There are not any taxonomic photos of the species, so the presented photos contribute to its taxonomic characterisation (Figs. 28–30).

Discussion

Despite the fact that the Bulgarian spider fauna was actively studied, especially during the last few decades, it is still common to find new species for the country. All species mentioned in the present study are known from one or more neighbouring countries, thus their presence in Bulgaria is expected. The newly established family Synaphridae was recently found in the nearby Gorj County in Romania (NAE...
2015) while the family Mysmenidae is known from the surrounding territories of Greece and Romania. The representatives of both families are extremely rare and are characterised by very small size (about 1 mm) and low mobility, which may explain their late finding. After this study, the number of the Bulgarian spider species is increased up to 1047 belonging to 45 families.

Acknowledgements: We are grateful to our colleagues at IBER–BAS (T. Teofilova, T. Ljubomirov, N. Karaivanov, I. Dedov and M. Spasov), NMNHS–BAS (R. Bekchiev, M. Langourov and N. Simov) and the Forestry University – Sofia (N. Kodzhabashev) as well as to S. Indzhov for providing us with spider material. This study was supported by the projects “Mapping and assessment of sparsely vegetated land ecosystem services in Bulgaria, SPA-EcoServices” and “Wetland Ecosystem services Mapping and Assessment in Bulgaria, WEMA”.

References


Received: 13.04.2017
Accepted: 05.09.2017