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NEW DATA ON SPIDER FAUNA (ARANEAE) OF THE CITY OF BELGRADE (PART I)

Abstract: This preliminary study presents the new faunistic data on spiders from the urban area of the city of Belgrade. Twenty-nine species from 13 families (Scytodidae – 1, Pholcidae – 2, Segestriidae – 2, Dysderidae – 2, Theridiidae – 4, Linyphiidae – 3, Araneidae – 2, Lycosidae – 2, Agelenidae – 1, Amaurobiidae – 4, Miturgidae – 1, Thomisidae – 3, Salticidae – 2) have been found at 3 localities. Two species, *Psilochorus simoni* (Berland 1911) and *Pseudeuophrys vafra* (Blackwall, 1867), are new to the Serbian spider fauna, while *Harpactea* sp. represents a species new to the science. According to their current distribution, these 29 species can be classified into 10 zoogeographical categories. Some old and incorrect records are discussed.

Key words: Spiders(Araneae), fauna, new data, Belgrade

Извод: У овој прелиминарној студији приказани су нови фаунистички подаци о пауковима из урбаног подручја Београда. Двадесет девет врста из 13 породица (Scytodidae – 1, Pholcidae – 2, Segestriidae – 2, Dysderidae – 2, Theridiidae – 4, Linyphiidae – 3, Araneidae – 2, Lycosidae – 2, Agelenidae – 1, Amaurobiidae – 4, Miturgidae – 1, Thomisidae – 3, Salticidae – 2) нађено је на три локалитета. *Psilochorus simoni* (Berland 1911) досад је са Балканског полуострва био познат само из Словеније(Постојнска јама) док је медитеранска врста, *Pseudeuophrys vafra* (Blackwall, 1867), била досад позната са Балкана само из Грчке, Хрватске и Словеније, те обе представљају нови налаз за фауну Србије. *Harpactea* sp. представља нову врсту за науку. На основу њихове садашње дистрибуције, ових 29 врста може се сврстати у 10 зогеографских категорија. У раду су размотрени и неки стари и нетачни налази.

Кључне речи: Паукови (Araneae), фауна, нови подаци, Београд

INTRODUCTION

The spider fauna of Serbia is still poorly known. In spite of its key geographical location in the central part of the Balkan Peninsula, the spider fauna of Serbia has been subject of a very few

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studies. There is no detailed study of spiders in the city of Belgrade. The only major work is that of Stojićević (1929), where about 220 species are reported from the area of Belgrade. However, it must be pointed out that some parts of Stojićević's determination are based on juvenile specimens and for that reason many of the records are dubious and require confirmation.

After the discovery of the spider *Segestria florentina* in Belgrade (Komnenov & Pavićević, 2008), the authors came to an idea to investigate this locality with optimism that some other interesting species could also occur in the area.

This is the first of a series of papers dealing with spiders found in the city of Belgrade. The goal of this series is to contribute to the insufficient knowledge of the spider fauna of Serbia.

MATERIAL AND METHODS

The spiders were collected by hand and by using pitfall traps. It should be noted that the main part of the present material was collected by hand in only three days of exploration, 31. 12. 2007, 22. 04. 2008 and 23. 04. 2008. Conic plastic jars with 7 cm upper opening and 10 cm height, filled with ethylene glycol as the conserving liquid, were used for pitfall trapping. Twenty pitfall traps were placed at the site U2 (the pitfall trapping sites and habitats are described in Table 1). Trap contents were preserved in 70% ethanol, and only adult specimens were recorded and treated. The materials of pitfall traps from the site C from November 1993 are also included in this study. The material is deposited in the private collection of the first author. Spider taxonomy follows Platnick (2008).

Table 1. List of the sites and habitats where the spiders have been collected in the Belgrade region.

№	Locality	Habitat	Date	Method	Legator
U1	Basement in an old building in Krunska Street	Urban area	31. 12. 2007	Hand coll.	M. Komnenov & D. Pavićević
U2	A small private garden with dense vegetation in Krunska Street	Urban area	April, May & June 2008	Pitfall traps	M. Komnenov
U3	A small private garden with dense vegetation in Krunska Street	Urban area	23. 04. 2008 – 03. 09. 2008.	Hand coll.	M. Komnenov & D. Pavićević
B	Višnjica	Suburban area	22. 04. 2008	Hand coll.	M. Komnenov & D. Pavićević
F	Avala	Forest area (ass. <i>Quercetum farnetto-cerris</i>)	14. 10. – 13. 11. 1993	Pitfall traps	D. Pavićević & A. Četković

RESULTS AND DISCUSSION

In total, 29 species from 13 families were found: Scytodidae – 1, Pholcidae – 2, Segestriidae – 2, Dysderidae – 2, Theridiidae – 4, Linyphiidae – 3, Araneidae – 2, Lycosidae – 2, Agelenidae – 1, Amaurobiidae – 4, Miturgidae – 1, Thomisidae – 3, Salticidae – 2 (Table 2). Two species, *Psilochorus simoni* and *Pseudeuophrys vafra* (marked in the list with *), are new to the spider fauna of Serbia:

Psilochorus simoni (Fig. 1.) – in the Balkan Peninsula hitherto known only from a single locality in Postojinska Jama cave in Slovenia (Konstanjsek & Ramsak, 2005). According to the present data, this is the south-easternmost record of its distribution.



Fig. 1. *Psilochorus simoni* (photo: M. Komnenov)

Pseudeuophrys vafra (Fig. 2.) – this Mediterranean species on the Balkan Peninsula was hitherto known only from Greece, Croatia and Slovenia. Serbian localities of the species indicate a substantial Mediterranean influence over this area.

The finding of some other species should be noted as well.

Steatoda grossa has been found only once in Serbia and its record is based on a juvenile specimen, Valjevo, 1♂ juv., 08.1910, (Stojićević, 1929). There is no data about the habitat. There is a large population of this species in the city of Belgrade. Our find is a first certain record in Serbia.

After the very recent discovery of *Segestria florentina* in private flats in Belgrade, an intensive survey was undertaken. It was shown that there is a large population of this spider in a small private garden in Krunska Street. In this population of *Segestria florentina*, we have noticed specimens of various size, from very small (juvenile) to very large (adult), and we came to the conclusion that this spider is overwintering in Belgrade. It will be very interesting to see where this synanthropic species can be found apart from Belgrade.

Lycosa singoriensis has been mentioned from Višnjica by Stojićević (1929). After a detailed exploration of this area, only a small population of *Geolycosa vultuosa* was found. It seems that the



Fig. 2. *Pseudeuophrys vafra* (photo: M. Komnenov)

record of *Lycosa singoriensis* from Višnjica is erroneous and should be referred to *Geolycosa vultuosa*.

Harpactea sp. is a new species closely related to *Harpactea sturanyi* (Nosek, 1905), known from Bulgaria and Turkey. Its description will be published in a separate paper.

According to their current distribution, the 27 recorded species can be classified into 10 zoogeographical categories (Table 2). The spider fauna of the city of Belgrade is best characterized by Palearctic (7), Holarctic (5), Cosmopolitan (5) and East European (3) species.

Table 2. Zoogeographical categories and abbreviations used: COS – Cosmopolitan; ECA – Europeo-Centralasiatic; EEU – East European; EMC – Europeo-Mediterrano-Centralasiatic; EUR – European; HOL – Holarctic; MED – Mediterranean; PAL – Palearctic; SCA – SE-Europeo-Centralasiatic; SEE – South-East European

TAXA	LOCALITY (SEX)	ZOOG
SCYTODIDAE		
<i>Scytodes thoracica</i> (Latreille, 1802)	U1 (1♀), U3 (1♀)	HOL
PHOLCIDAE		
<i>Pholcus phalangoides</i> (Fuesslin, 1775)	U1 (5♂, 5♀), U3 (1♂, 1♀)	COS
* <i>Psilochorus simoni</i> (Berland, 1911)	U1 (1♀)	EUR
SEGESTRIIDAE		
<i>Segestria florentina</i> (Rossi, 1790)	U3 (5♀, 2♂)	MED
<i>Segestria senoculata</i> (Linnaeus, 1758)	U3 (1♀)	PAL

TAXA	LOCALITY (SEX)	ZOOG
DYSDERIDAE		
<i>Dysdera longirostris</i> Doblaka, 1853	U2 (14♂, 5♀), U3 (1♀)	EEU
<i>Harpactea</i> sp.	U2 (9♂, 2♀)	
THERIDIIDAE		
<i>Parasteatoda tepidariorum</i> (C. L. Koch 1841)	U1 (1♀)	COS
<i>Steatoda grossa</i> (C. L. Koch, 1838)	U1 (7♀), U3 (2)	COS
<i>Steatoda triangulosa</i> (Walckenaer, 1802)	U1 (1♂, 1♀), U3 (1♂)	COS
<i>Theridion melanurum</i> Hahn, 1831	U3 (1♂)	HOL
LINYPHIIDAE		
<i>Lepthyphantes leprosus</i> (Ohlert, 1865)	U1 (1♀), U3 (1♂, 6♀)	HOL
<i>Tenuiphantes flavipes</i> (Blackwall, 1854)	U2 (5♀)	PAL
<i>Tenuiphantes floriana</i> (van Helsdingen, 1977)	U2 (1♂, 1♀)	SEE
ARANEIDAE		
<i>Agalenatea redii</i> (Scopoli, 1763)	B (1♂, 1♀)	PAL
<i>Gibbaranea bituberculata</i> (Walckenaer, 1802)	B (1♂, 2♀)	PAL
LYCOSIDAE		
<i>Geolycosa vultuosa</i> (C. L. Koch, 1838)	B (2♀)	SCA
<i>Pardosa hortensis</i> (Thorell, 1872)	B (1♀)	PAL
AGELENIDAE		
<i>Tegenaria domestica</i> (Clerck, 1757)	U1 (2♀), U2 (2♀)	COS
AMAUROBIDAE		
<i>Amaurobius erberi</i> (Keyserling, 1863)	U2 (1♂, 5♀), U3 (2♂)	EUR
<i>Amaurobius ferox</i> (Walckenaer, 1830)	U1 (1♀), U3 (1♂, 1♀)	HOL
<i>Eurocoelotes falciger</i> (Kulczyn'ski, 1897)	F (1♂)	EEU
<i>Urocoras longispinus</i> (Kulczyn'ski, 1897)	F (8♂)	EEU
MITURGIDAE		
<i>Cheiracanthium mildei</i> L. Koch, 1864	U2 (1♂)	HOL
THOMISIDAE		
<i>Xysticus acerbus</i> Thorell, 1872	B (1♀)	ECA
<i>Xysticus kochi</i> Thorell, 1872	U2(♂)	EMC
<i>Xysticus luctator</i> L. Koch, 1870	F (1♀)	PAL
SALTICIDAE		
<i>Evarcha arcuata</i> (Clerck, 1758)	B (2♂)	PAL
* <i>Pseudeuophrys vafra</i> (Blackwall, 1867)	U2 (2♀)	MED

CONCLUSIONS

Twenty-nine species from 13 families have been found in the city of Belgrade. Two of them are new to the spider fauna of Serbia and one is a new species for the science. The spiders of the city of Belgrade can be classified into 10 zoogeographical categories. The spider fauna of the city of Belgrade is best characterized by Palearctic (7), Holarctic (5), Cosmopolitan (5) and East European (3) species. It must be pointed out that, since this is a preliminary study, some more interesting species should be expected to be found in the future studies.

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НОВИ ПОДАЦИ О ФАУНИ ПАУКОВА (ARANEAE) ГРАДА БЕОГРАДА (ПРВИ ДЕО)

Rezime

У овој прелиминарној студији приказани су нови фаунистички подаци о пауковима из урбаног подручја Београда. Двадесет девет врста из 13 породица (Scytodidae — 1, Pholcidae — 2, Segestriidae — 2, Dysderidae — 2, Theridiidae — 4, Linyphiidae — 3, Araneidae — 2, Lycosidae — 2, Agelenidae — 1, Amaurobiidae — 4, Miturgidae — 1, Thomisidae — 3, Salticidae — 2) нађено је на три локалитета. *Psilochorus simoni* (Berland 1911) досад је са Балканског полуострва био познат само из Словеније (Постојнска јама) док је медитеранска врста, *Pseudeuophrys vafra* (Blackwall, 1867), била досад позната са Балкана само из Грчке, Хрватске и Словеније, те обе представљају нови налаз за фауну Србије. *Harpactea* sp. представља нову врсту за науку. На основу њихове садашње дистрибуције, ових 29 врста може се сврстати у 10 зогеографских категорија. У раду су размотрени и неки стари и нетачни налази.