

CONTRIBUTION TO SPIDER FAUNA (ARACHNIDA: ARANEAE) FROM BJESHKËT E NEMUNA MOUNTAINS (KOSOVO)

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Since Kosovo is the least explored territory in the Balkan Peninsula when it comes to the study of spider fauna, with large, untouched areas, we aim to explore it in detail. From Bjeshkët e Nemuna Mountains only 15 species have been reported. We collected and identified 323 spider specimens (88♂♂, 235♀♀) from April 2018 to August 2021 at 20 sites in Bjeshkët e Nemuna National Park between 529 and 2066 m a.s.l. These specimens belong to 90 species, 65 genera, and 23 families. Of these, 42 species, 13 genera, and 2 families are new records for the spider fauna of Kosovo, and 90 species are new for the mountains. As a result of our research, the list of species known from the studied region increased from 15 to 105 and the number of known spiders in Kosovo increased to 248 species.

Keywords: Albanian Alps, Balkans, faunistic, new country records

Geci, D., Naumova, M., Ibrahim, H., Grapci-Kotori, L., Gashi, A., Bilalli, A. & Musliu, M.: Prinos poznavanju faune pauka (Arachnida: Araneae) planina Bjeshkët e Nemuna (Kosovo). *Nat. Croat.*, Vol. 32, No. 2, 535-547, Zagreb, 2023.

Budući da je Kosovo najslabije istraženo područje Balkanskog poluotoka što se tiče poznavanja faune pauka, cilj je bio detaljno istražiti velika, nedirnuta područja. Za planine Bjeshkët e Nemuna bio je poznato tek 15 vrsta. U razdoblju od travnja 2018. do travnja 2021 prikupili smo i determinirali 323 primjerka pauka (88♂♂, 235♀♀) na 20 lokaliteta u Nacionalnom parku Bjeshkët e Nemuna, između 529 m i 2066 m nadmorske visine. Utvrdili smo 90 vrstu, 65 rodova, i 23 porodice. Od toga su 42 vrste, 13 rodova i 2 porodice novi nalazi za faunu pauka Kosova, a 90 vrsta je novo za istraživane planine. Rezultat našeg istraživanja je povećanje popisa vrsta istraživanog područja s 15 na 105, a broj vrsta za Kosovo porastao je na 248 vrsta

Ključne riječi: Albanske Alpe, Balkan, fauna, novi nalazi za zemlju

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INTRODUCTION

The Bjeshkët e Nemuna National Park in the north-western part of Kosovo, is a part of the mountain range of the same name (elsewhere known as Prokletije or the Albanian Alps) that extends over three neighboring states: Kosovo, Albania, and Montenegro. In Kosovo, this park lies in the municipalities of Istog, Peja, Deçan, Junik, and Gjakova and has an area of 63028 hectares (ÇAVOLLI, 1997). The highest peak is Gjeravica, at 2656 m.

The spider fauna in Bjeshkët e Nemuna has never been studied integrally; and so far, only a few sporadic papers have been published (DEELEMANN-REINHOLD, 1974, 1986; DELTSHEV *et al.*, 1996, 2003; GECI & NAUMOVA, 2021b; GRIMM, 1985; KNOFLACH, 1996; KOLOSVARY, 1938, 1940; VRENOZI & JÄGER, 2013).

This study aims to present the results of the first study of spiders from NP Bjeshkët e Nemuna in Kosovo, based on the literature and original data.

MATERIAL AND METHODS

Our investigation is the first purposeful study about the Bjeshkët e Nemuna Mountains and was conducted between April 4th, 2018, and August 22nd, 2021, in different habitats from 529 to 2066 m a.s.l.. During this study, spiders were collected from 20 sites with different methods, including handpicking, pitfall traps, sieving net, entomological net, beating the tree branches, and exhaustor for little spiders. The spiders were preserved in 70% alcohol and identified under an Olympus microscope primarily by the first author. Digital images were taken using a GXCAPTURE camera in the Laboratory of Zoology at the University of Prishtina. The subterranean spiders that inhabit the caves of Bjeshkët e Nemuna and were registered during this study are not included and will be presented in a separate paper.

The list of localities (Tab. 1) includes the sites with numbers 1 to 20 (mapped). The mapping and visualization of the map were done by QGIS (Fig. 1). The nomenclature follows the WORLD SPIDER CATALOG (2023) and the taxa are listed alphabetically. Species are represented by the number of specimens and sex, date, and the place where they were found. The taxa new to Kosovo are marked with an asterisk (*). The names of the collectors are abbreviated: AB=Astrit Bilalli, DG=Donard Geci, MM=Milaim Musliu. The material is deposited in the University of Prishtina, Department of Biology.

RESULTS

The literary data relating to the area are scarce and contain only 15 species. During this study, a total of 323 adult spider specimens (88♂♂, 235♀♀) were collected and identified (all juveniles have been excluded). Overall, they belong to 90 species, 65 genera and 23 families (Agelenidae – 6, Amaurobiidae – 1, Anyphaenidae – 1, Araneidae – 15, Cheriaceanthiidae – 2, Clubionidae – 4, Cybaeidae – 1, Dysderidae – 3, Eresidae – 1, Gnaphosidae – 5, Linyphiidae – 5, Lycosidae – 6, Oecobiidae – 1, Oxyopidae – 1, Pholcidae – 1, Philodromidae – 4, Pisuridae – 1, Salticidae – 8, Segestriidae – 1, Sparassidae – 1, Tetragnathidae – 3, Theridiidae – 7, Thomisidae – 12). Two families (Eresidae and Oecobiidae), thirteen genera (*Agelena* Walckenaer, 1805, *Argiope* Audouin, 1826, *Civizelotes* Senglet, 2012, *Cryphoea* Thorell, 1870, *Eresus* Walckenaer, 1805, *Haplodrassus* Chamberlin, 1922, *Obscuriphantes* Saaristo & Tanasevitch, 2000, *Parasteatoda* Archer, 1946, *Piratula* Roewer, 1960, *Pityohyphantes* Simon, 1929, *Tapinopa* Simon,

Tab. 1. List of localities.

Nr.	Locality	Latitude N	Longitude E	Altitude(m)
L1	Livadhi i madh	42.50177	20.21858	1222
L2	Gjocaj	42.481929	20.2419649	1064
L3	Bjeshka e Deçanit	42.691899	20.175988	1100
L4	Bjeshka e Junikut	42.511346	20.196649	1706
L5	Lloqan	42.525787	20.286819	647
L6	Junik	42.471745	20.286819	620
L7	Gryka e Lloqanit	42.541798	20.236101	924
L8	Moken	42.852718	20.534734	1651
L9	Bogë	42.763797	20.05772	1603
L10	Livadhet e Istogut	42.817959	20.495854	1342
L11	Lugu i butë	42.804191	20.414021	1572
L12	Kushotan	42.74256	20.10479	1389
L13	Vrellë	42.777522	20.401906	703
L14	Uçë	42.859144	20.594399	1290
L15	Shushicë	42.816953	20.575564	728
L16	Radacë	42.736754	20.311598	529
L17	Cerrovodë	42.838177	20.476432	1717
L18	Kroi i Ali Pash Gucisë	42.549100	20.13833	2066
L19	Mokna 2	42.88737	20.56192	1669
L20	Pepaj	42.73275	20.11435	1347

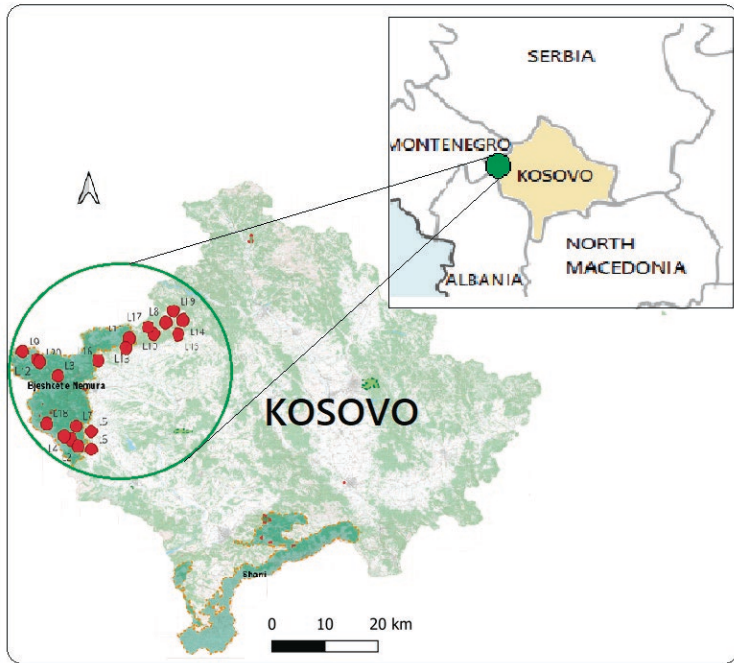


Fig. 1. Map of Kosovo with the collecting sites (for details see Tab. 1).

1929, *Thanatus* C. L. Koch, 1837, and *Uroctea* Dufour, 1820), as well as forty-two species (marked with an asterisk in the list below) are discovered for the first time in Kosovo.

LIST OF SPECIES

AGELENIDAE

- **Agelena labyrinthica* (Clerck, 1757)
New data: L6 (1♂ 9♀, 31.05.2018, D.G), L12 (1♀, 23.06.2021, DG).
- **Histoipona luxurians* (Kulczyński, 1897)
New data: L5 (1♂, 2♀, 26.05.2018, DG).
- Histoipona torpida* (C. L. Koch, 1837)
New data: L9 (1♀, 04.06.2021, DG).
- Inermocoelotes inermis* (L. Koch, 1855)
Literary data: Kopraniq Mts, N42.6367°, E20.2552° (KOLOSVARY, 1938, 1940; DELTSHEV *et al.*, 2003; VRENOZI & JÄGER, 2013).
- Inermocoelotes karlinskii* (Kulczyński, 1906) (Figs 2-4)
New data: L2 (1♀, 10.07.2018, DG), L19 (2♀, 13.05.2018, DG).
- Lycosoides coarctata* (Dufour, 1831)
Literary data: Zhleb, N42.7148°, E20.2653° (VRENOZI & JÄGER, 2013).
- Tegenaria bosnica* Kratochvíl & Miller, 1940
Literary data: Gryka e Madhe Cave, N42.6647°, E20.2025° (GECI & NAUMOVA, 2021b).
- Tegenaria domestica* (Clerck, 1757)
Literary data: Shpella Radacit-Cave, N42.7370°, E20.3066° (GECI & NAUMOVA, 2021b).
- **Tegenaria ferruginea* (Panzer, 1804)
New data: L1 (1♂, 1♀, 10.04.2018, D.G), L5 (1♀, 25.05.2018, DG).
- **Tegenaria slivestrís* L. Koch, 1872 (Fig. 5)
New data: L2 (2♂, 26.05.2018, DG).

AMARUBIIDAE

- **Amaurobius erberi* (Keyserling, 1863)
New data: L3 (1♀, 31.05.2018, DG), L17 (3♀, 02.08.2020, DG).

ANYPHAENIDAE

- Anyphaena accentuata* (Walckenaer, 1802)
New data: L1 (1♂, 27.05.2018, DG), L2 (1♂, 10.04.2018, DG).

ARANEIDAE

- Aculepeira ceropegia* Walckenaer, 1802
New data: L3 (1♂, 5♀, 31.05.2018, DG), L4 (2♂, 6♀, 27.05.2018, DG), L9 (3♀, 04.06.2021, 1♂, 5♀, 23.06.2021, DG), L12 (1♂, 1♀, 05.06.2021, AB&MM, 2♂, 23.06.2021, DG).
- Agalenatea redii* (Scopoli, 1763)
New data: L10 (2♀, 22.06.2021, DG).
- Araneus angulatus* Clerck, 1757
New data: L11 (1♂, 1♀, 02.08.2020, DG).
- Araneus diadematus* Clerck, 1757

New data: L3 (1♂, 31.05.2018, DG), L6 (2♀, 01.07.2018, DG), L15 (3♀, 05.09.2020, DG).

**Araneus marmoreus* Clerck, 1757 (Figs 6-7)

New data: L7 (1♀ *A. m.* var. *pyramidatus*, 12.09.2020, DG).

Araniella cucurbitina (Clerck, 1757)

New data: L2 (2♀, 27.06.2018, DG), L9 (1♂, 04.06.2021, DG).

**Argiope bruennichi* (Scopoli, 1772)

New data: L5 (5♂, 8♀, 01.7.2018, DG), L6 (♀5, 01.7.2018, DG)

Cyclosa conica (Pallas, 1772)

New data: L1 (4♀, 04.04.2018, DG), L3 (3♀, 31.05.2018, DG).

Gibbaranea bituberculata (Walckenaer, 1802)

New data: L19 (1♀, 13.05.2018, DG).

Gibbaranea gibbosa (Walckenaer, 1802)

New data: L1 (1♀, 04.04.2018, DG).

Hypsosinga albovittata (Westring, 1851)

New data: L9 (1♀, 23.06.2021, DG).

Larinioides patagiatus (Clerck, 1757)

New Data: L20 (1♀, 23.06.2021, AB).

Mangora acalypha (Walckenaer, 1802)

New data: L9 (2♀, 23.06.2021, DG), L14 (1♀, 21.05.2021, DG).

**Neoscona adianta* (Walckenaer, 1802)

New data: L5 (1♀, 01.07.2018, DG), L6 (3♀, 01.07.2018, DG).

Zilla diodia (Walckenaer, 1802)

New data: L2 (2♀, 26.05.2018, DG), L13 (1♂, 03.05.2021, DG).

CHEIRACANTHIIDAE

**Cheiracanthium oncognathum* Thorell, 1871

New data: L4 (3♀, 27.05.2018, DG)

**Cheiracanthium pennyi* O. Pickard-Cambridge, 1873

New data: L1 (1♂, 26.05.2018, DG).

CLUBIONIDAE

**Clubiona corticalis* (Walckenaer, 1802) (Figs. 8-10)

New data: L2 (1♂, 10.06.2018, DG).

**Clubiona juvenis* Simon, 1878

New data: L9 (6♂, 5♀, 04.06.2021, DG).

**Clubiona similis* L. Koch, 1867

New data: L12 (1♂, 05.06.2021, AB&MM).

**Clubiona subsultans* Thorell, 1875

New data: L19 (1♀, 13.05.2018, DG).

*CYBAEIDAE

**Cryphoeca silvicola* (C. L. Koch, 1834) (Fig. 11)

New data: L9 (2♀, 04.06.2021, DG).



Figs 2–7. *Inermocoelotes karlinskii*, female habitus (2) dorsal, epigyne (3) ventral and vulva (4) dorsal views; *Tegenaria slivestris*, male palp (5) ventral view; 6–7, *Araneus marmoreus* var. *pyramidatus*, female opistosoma (6) dorsal and epigyne (7) ventral views.

DYSDERIDAE

Dysdera longirostris Doblika, 1853

Literary data: Zhleb, N42.7148°, E20.2653° (VRENOZI & JÄGER, 2013).

Dysderocrates storkani (Kratochvíl, 1935) (Fig. 12)

New data: L16 (1♂, 30.05.2021, DG).

**Harpactea lepida* (C. L. Koch, 1838) (Fig. 13)

New data: L9 (1♂, 04.06.2021, DG).

Harpactea nausicaae Brignoli, 1976

Literary data: Ujëvara e Drinit Bardhë, N42.7390°, E20.3072° (GECI & NAUMOVA, 2021b).

Harpactea saeva (Herman, 1879)

New data: L16 (1♂, 30.05.2021, DG).

*ERESIDAE

**Eresus kollari* Rossi, 1846 (Figs 14-15)

New data: L8 (5♂, 11.10.2020, DG).

GNAPHOSIDAE

**Civizelotes caucasius* (L. Koch, 1866)

New data: L15 (2♀, 21.07.2020, DG).

Drassodes lapidosus (Walckenaer, 1802)

New data: L9 (1♂, 23.06.2021, DG).

Drassodes villosus (Thorell, 1856)

New data: L11 (1♀, 02.08.2020, DG).

**Haplodrassus signifer* (C. L. Koch, 1839)

New data: L11 (2♀, 02.08.2020, DG), L17 (2♀, 02.08.2020, DG).

Nomisia aussereri (L. Koch, 1872)

Literary data: Zhleb, N42.7148°, E20.2653° (GRIMM, 1985).

Zelotes similis (Kulczyński, 1887)

New data: L10 (1♂, 22.08.2020, DG).

LINYPHIIDAE

**Agyneta affinis* (Kulczyński, 1898)

New data: L9 (1♂, 6♀, 04.06.2021, DG), L16 (1♀, 30.05.2021, DG).

Fageiella ensigera Deeleman-Reinhold, 1974

Literary data: Shpella Radacit-Cave, N42.7370°, E20.3066° (DEELEMEN-REINHOLD, 1974; VRENOZI & JÄGER, 2013; GECI & NAUMOVA, 2021b).

Linyphia triangularis (Clerck, 1757)

Literary data: Ujëvara e Drinit Bardhë, N42.7390°, E20.3072° (GECI & NAUMOVA, 2021b).

Microlinyphia pusilla (Sundevall, 1830)

New data: L9 (1♂, 1♀, 23.06.2021, DG).

**Obscuriphantes obscurus* (Blackwall, 1841) (Fig. 17)

New data: L9 (1♀, 04.06.2021, DG).

Palliduphantes trnovensis (Drensky, 1931)

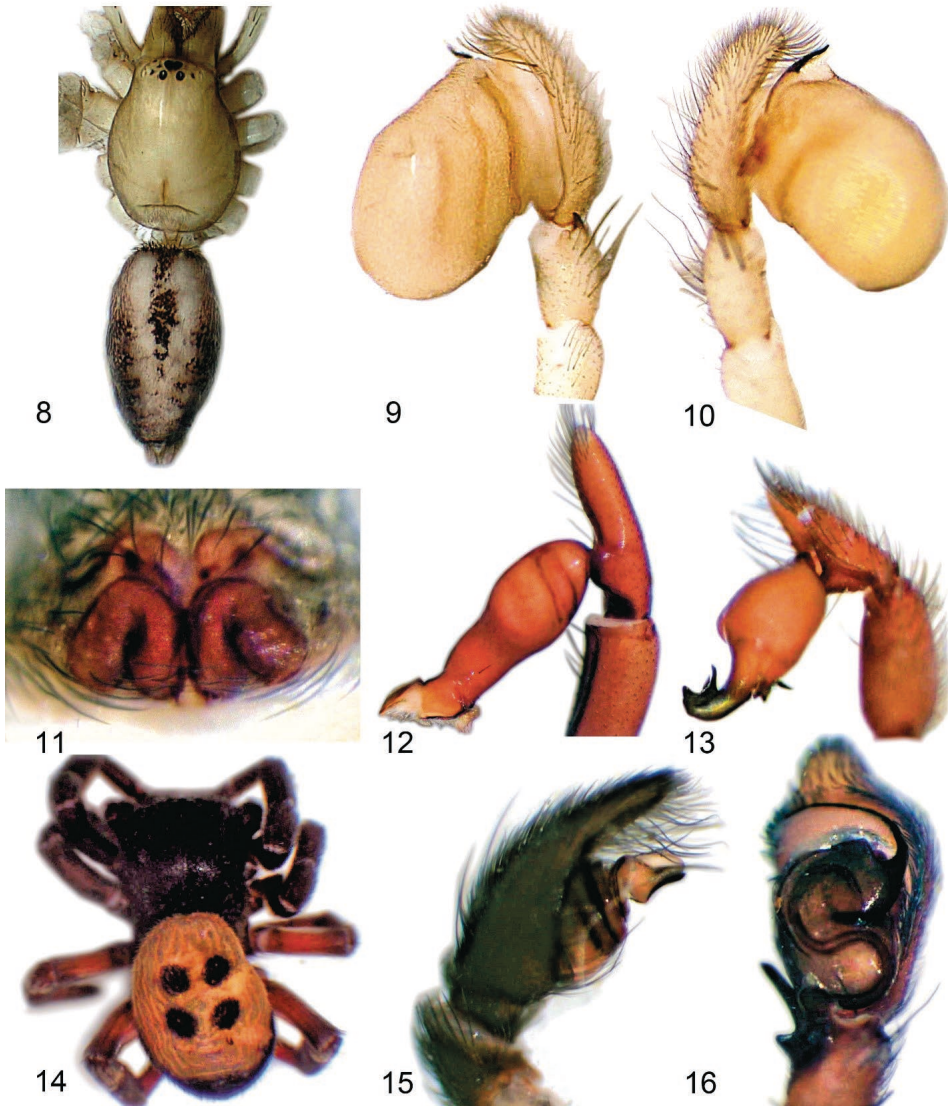
Literary data: Shpella e Karamakazit, N42.6661°, E20.2001° (DEELEMEN-REINHOLD, 1986; DELTSHEV *et al.*, 1996; VRENOZI & JÄGER, 2013).

**Pityohyphantes phrygianus* (C. L. Koch, 1836) (Fig. 18)

New data: L20 (1♀, 21.06.2021, DG).

**Tapinopa longidens* (Wider, 1834) (Fig. 19)

New data: L8 (1♀, 11.10.2020, DG).



Figs 8–16: *Clubiona corticalis*, male habitus (8) dorsal, and palp retrolateral (9) and prolateral (10) views; *Cryphoea silvicola*, epigyne (11) ventral view; *Dysderocrates storkani*, male palp (12) lateral view; *Harpactea lepida*, male palp (13) lateral view; *Eresus kollari*, male habitus (14) dorsal and palp (15) retrolateral views; *Philodromus collinus*, male palp (16) ventral view.

LIOCRANIDAE

Sagana rutilans Thorell, 1875

Literary data: Kopranik Mts, N42.6367°, E20.2552° (KOLOSVARY, 1940; DELTSHEV *et al.*, 2003; VRENOZI & JÄGER, 2013).

LYCOSIDAE

Hogna radiata (Latreille, 1817)

New data: L5 (3♀, 01.06.2018, DG), L8 (1♀, 11.10.2020, DG).

Pardosa amentata (Clerck, 1757)

Literary data: Kopranič Mts, N42.6367°, E20.2552° (VRENOZI & JÄGER, 2013).

New data: L9 (3♀, 04.06.2021, DG), L14 (1♀, 21.05.2021, DG).

Pardosa lugubris Simon 1876

New data: L1 (6♂, 10♀, 27.05.2018, DG), L9 (5♂, 3♀, 04.06.2021, DG).

Pardosa riparia (C. L. Koch, 1833)

New data: L19 (1♂, 13.05.2018, DG).

**Piratula knorri* (Scopoli, 1763)

New data: L12 (1♀, 23.06.2021, DG).

Trochosa ruricola (De Geer, 1778)

New data: L9 (1♂, 2♀, 04.06.2021, DG).

NESTICIDAE

Nesticus cellulanus (Clerck, 1757)

Literary data: Shpella Radacit-Cave, N42.7370°, E20.3066°, (GECI & NAUMOVA, 2021b).

*OECOBIIDAE

**Uroctea durandi* (Latreille, 1809)

New data: L15 (1♀, 21.07.2020, 1♀, 05.09.2020, DG).

OXYOPIDAE

**Oxyopes lineatus* Latreille, 1806

New data: L5 (1♀ 01.07.2018, DG), L6 (1♀, 01.07.2018, DG), L16 (1♀, 25.07.2020, DG).

PHILODROMIDAE

**Philodromus collinus* C. L. Koch, 1835 (Fig. 16)

New data: L12 (1♂, 23.06.2021, DG).

**Thanatus formicinus* (Clerck, 1757)

New data: L8 (2♀, 11.10.2020, DG).

**Thanatus vulgaris* Simon, 1870

New data: L10 (1♀, 22.08.2020, DG).

Tibellus oblongus (Walckenaer, 1802)

New data: L9 (2♂, 1♀, 23.06.2021, DG), L12 (1♂, 05.06.2021, AB&MM, 1♂, 3♀, 23.06.2021, DG).

PHOLCIDAE

Pholcus opilionoides (Schrank, 1781)

New data: L10 (1♀, 22.08.2021, DG).

PISURIDAE.

Pisuria mirabilis (Clerck, 1757)

New data: L5 (2♀, 01.07.2018, DG), L6 (1♀, 01.07.2018, DG), L9 (1♀, 04.06.2021, DG).

SALTICIDAE

**Evarcha arcuata* (Clerck, 1757)

New data: L12 (1♀, 23.06.2021, DG).

Evarcha falcata (Clerck, 1757)

New data: L12 (3♀, 05.06.2021, AB & MM, 1♀, 23.06.2021, DG), L14 (1♀, 21.05.2021, DG).

Heliophanus cupreus (Walckenaer, 1802)

New data: L5 (2♀, 01.07.2018, DG).

**Heliophanus lineiventris* Simon, 1868

New data: L10 (1♂, 22.08.2020, DG).

Heliophanus flavipes (Hahn, 1832)

New data: L6 (1♂, 2♀, 01.07.2018, DG).

Phlegra fasciata (Hahn, 1826)

New data: L13 (2♀, 03.05.2021, DG).

Philaeus chrysops (Poda, 1761)

New data: L3 (2♂, 31.05.2018, DG).

Salticus scenicus (Clerck, 1757)

New data: L1 (1♂, 26.05.2018, DG).

SEGESTRIIDAE

Segestria senoculata (Linnaeus, 1758)

New data: L1 (1♀, 26.05.2018, DG), L2 (1♂, 10.06.2018, DG), L18 (2♂, 15.10. 2020, DG).

SAPRASSIDAE

Micrommata virescens (Clerck, 1757)

New data: L2 (1♂, 1♀, 26.05.2018, DG), L12 (1♂, 05.06.2021, AB&MM).

TETRAGNATHIDAE

Meta menardi (Latreille, 1804)

Literary data: Shpella Radacit-Cave, N42.7370°, E20.3066°, (GECI & NAUMOVA, 2021b).

Metellina segmegtata (Clerck, 1757)

New data: L7 (2♂, 1♀, 12.09.2020, DG), L9 (1♂, 4♀, 04.06.2021, DG), L10 (1♂, 22.08.2020, DG), L12 (1♂, 2♀, 05.06.2021, AB&MM, 1♀, 23.06.2021, DG), L13 (1♀, 03.05.2021, DG), L14 (1♂, 1♀, 21.05.2021, DG), L19 (1♀, 13.05.2018, DG).

Tetragnatha extensa (Linnaeus, 1758)

New data: L12 (1♂, 4♀, 23.06.2021, DG)

**Tetragnatha striata* Koch, 1862

New data: L5 (1♀, 01.07.2018, DG).

THERIDIDAE

Asagena phalerata (Panzer, 1801)

Literary data: Zhele, N42.7148°, E20.2653° (KHOFLACH, 1996).

Enoplognatha ovata (Clerck, 1757).

New data: L12 (4♀, 23.06.2021, DG)

Phylloneta sisypbia (Clerck, 1757)

New data: L9 (2♀, 23.09.2021, DG), L14 (3♀, 23.06.2021, DG).

**Parasteatoda lunata* (Clerck 1757)

New data: L3 (3♀, 31.05.2018, DG).

**Steatoda albomaculata* (De Geer, 1778)

New data: L4 (2♂, 3♀, 27.05.2018, DG).

Steatoda bipunctata (Linnaeus, 1758)

New data: L1 (1♀, 06.06.2018, DG), L2 (1♀, 24.04.2018), L9 (1♀, 04.06.2021, DG).

**Theridion betteni* Wiehle, 1960 (Figs 20-22)

New data: L12 (1♀, 23.06.2021, DG).

Theridion pictum (Walckenaer, 1802)

New data: L7 (1♀, 12.09.2020, DG).

THOMISIDAE

**Diaea dorsata* (Fabricius, 1777)

New data: L1 (2♀, 10.04.2018, DG).

Misumena vatia (Clerck 1757)

New data: L1 (1♀, 10.04.2018, DG), L3 (3♀, 31.05.2018, DG), L6 (1♀, 01.07.2018, DG), L9 (1♂, 23.06.2021, DG).

**Ozyptila atomaria* (Panzer, 1801) (Fig. 23)

New data: L9 (1♂, 04.06.2021, DG).

Psammitis sabulosus (Hahn, 1832)

New data: L10 (1♂, 22.08.2020, DG).

Synema globosum (Fabricius, 1775)

New data: L1 (2♀, 10.04.2018, DG), L2 (4♀, 26.05.2018, DG), L6 (1♀, 01.06.2018, DG).

**Tmarus stellio* (Simon 1875)

New data: L2 (2♀, 26.05.2018, DG).

Xysticus audax (Schrank, 1803)

New data: L12 (1♀, 23.06.2021, DG), L19 (1♀, 13.05.2018, DG).

**Xysticus bifasciatus* C. L. Koch, 1837

New data: L9 (1♂, 23.06.2021, DG).

Xysticus erraticus (Blackwall 1834)

New data: L2 (1♂, 26.05.2018, DG), L3 (1♀, 31.05.2018, DG).

**Xysticus gallicus* Simon, 1875

New data: L9 (1♀, 04.06.2021, DG).

Xysticus kochi Thorell, 1872

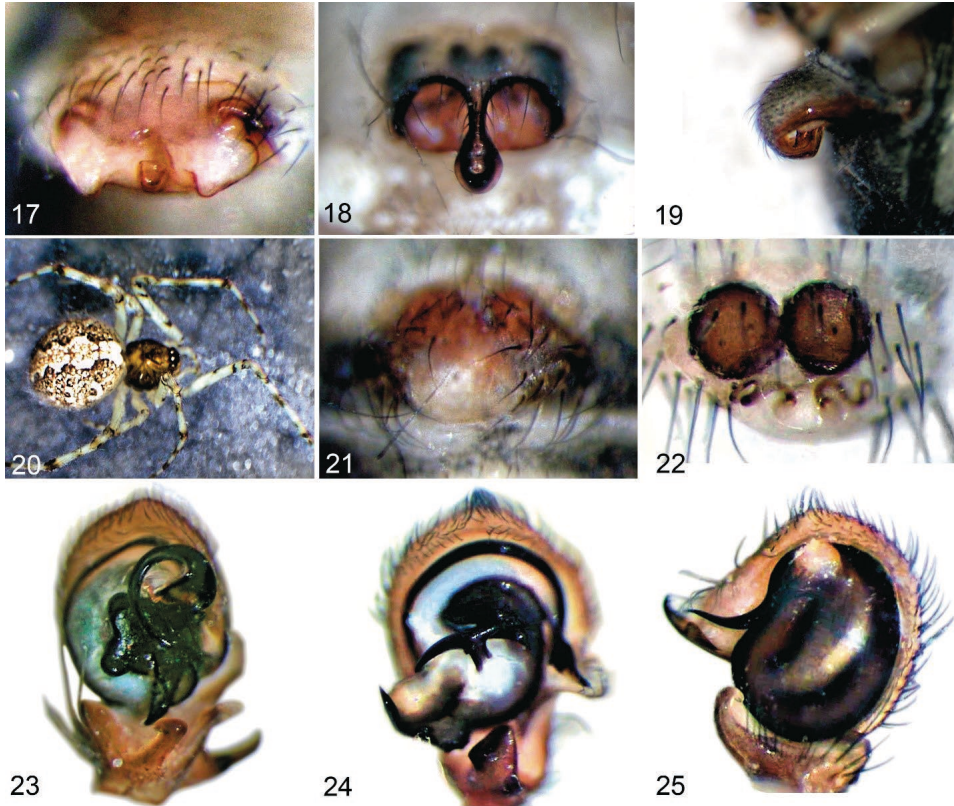
New data: L2 (1♀, 26.05.2018, DG), L3 (1♀, 31.05.2018, DG), L4 (1♂, 3♀, 27.05.2018, DG), L9 (3♀, 23.06.2021, DG).

**Xysticus macedonicus* Šilhavý, 1944 (Fig. 24)

New data: L9 (1♂, 04.06.2021, DG).

**Xysticus marmoratus* Thorell, 1875 (Fig. 25)

New data: L10 (1♂, 22.08.2020, DG).



Figs 17–25. *Obscuriphantes obscurus*, epigyne (17) ventral view; *Pityohyphantes phrygianus*, epigyne (18) ventral view; *Tapinopa longidens*, epigyne (19) lateral view; *Theridion betteni*, female habitus (20) dorsal, epigyne (21) and vulva (22) ventral views; *Ozyptila atomaria*, male palp (23) ventral view; *Xysticus macedonicus*, male palp (24) ventral view; *Xysticus marmoratus*, male palp (25) ventral view.

Conclusion

The list of spider species in Bjeshkët e Nemuna Park, based on the published and newly discovered species during our investigation now contains 105 species, but this number is not final. According to the literature (GECI & NAUMOVA, 2021b; GRAPCI-KOTORI *et al.*, 2022) with this paper, the number of known spiders in Kosovo increases to 248 species. The first country records of common species such as *Agelena labyrinthica*, *Argiope bruennichi*, and *Neoscona adianta*, which are widespread in the Balkans and most of Europe is an indicator that arachnid fauna of Kosovo is the least studied, but this is slowly changing.

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