

## Spiders (Araneae) from Albania and Kosovo in the collection of Carl Friedrich Roewer

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**Abstract.** The spider collection (Arachnida: Araneae) from Albania and Kosovo in the Senckenberg Research Institute, Frankfurt am Main is reviewed. A total of 122 adult specimens were found belonging to 73 species. Records of 48 species for Albania and 28 species for Kosovo, 20 of them new to Kosovo, are presented. Furthermore there are seven new country records for Albania: *Platnickina nigropunctata*, *Erigone remota*, *Tenuiphantes tenebricola*, *Pardosa agrestis*, *Callobius claustrarius* and *Zelotes femellus*. Additionally, *Pardosa cavannae* is the first record for the Balkan Peninsula. So far 381 species are known for Albania. A total of 106 species is known from Kosovo now; a list of the 86 spider species formerly known to Kosovo is included.

**Keywords:** Balkan fauna, checklist, new records

The Arachnida collection in the Senckenberg Research Institute, Frankfurt, Germany, dates from 1833 when the spider collection of Karl Friedrich Wider was donated to the Senckenberg Natural History Museum (Kraus 2006). Since then Carl Koch, Philipp Bertkau, Wilhelm Dönitz, Wilhelm Bösenberg, Embrik Strand, Ludwig Koch, Friedrich Dahl and other arachnologists deposited material in the Senckenberg collection. However, the main contribution to this collection was made by Carl Friedrich Roewer and Hermann Wiegle. Today the arachnological collection is one of the most important in the world, and includes more than 77,000 series identified to species level including about 12,000 type series.

Spiders from Albania and Kosovo (previously part of Yugoslavia resp. Serbia) are included in the collection of Carl Friedrich Roewer. Formerly, there was no differentiation between these two countries due to historical and political reasons. Therefore all material labelled as from Albania was examined. This collection includes significant data of spiders collected in northeast and southeast Albania, which were partly published by Deltshew et al. (2011) and therefore raised the interest of the first author. New country records not published before were of great importance for starting this investigation. This present paper contributes to the checklist of Albanian spi-

ders. Additionally, some records for Kosovo based on the Roewer collection and from a critical review of Deltshew et al. (2003) are given. The present paper complements an on-going series of papers on Albanian spiders (Vrenozi & Haxhiu 2008, Deltshew et al. 2011, Vrenozi 2012, Vrenozi & Jäger 2012, Vrenozi & Dunlop 2013).

### Methods

The material presented here derives from the collection of Carl Friedrich Roewer, which is deposited in the Senckenberg Research Institute in Frankfurt am Main (SMF). It was collected between 1917 and 1961 in the north-eastern and south-eastern areas of Albania and in Kosovo (Fig. 1). In some cases, data for several specimens taken from the SMF card files lacked the year of collection and who identified it. All specimens in the Roewer collection were reviewed at the end of 2010.

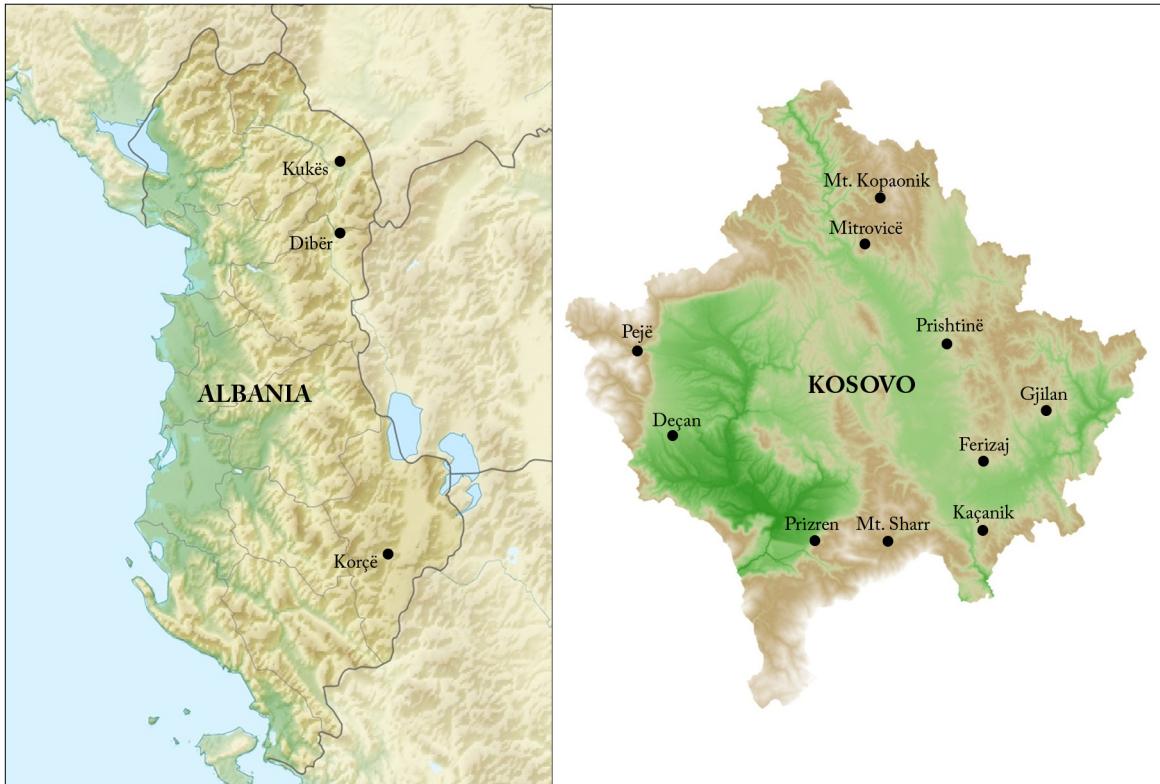
Furthermore, localities in Kosovo mentioned in Deltshew et al. (2003) in the Serbian language are revised and Albanian names as well as geographical coordinates are given.

The main literature used for identification was Grimm (1985), Heimer & Nentwig (1991), Metzner (1999), Nentwig et al. (2013) and Roberts (1987, 1995). Nomenclature and order of families in the species lists follows Platnick (2013). The data concerning the general distribution are taken from Platnick (2013) and Helsdingen (2012).

Data on elevation, latitude and longitude are taken from <http://wikimapia.org>, <http://en.wikipedia.org> and <https://maps.google.com>.

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**Fig. 1:** Map of Albania and Kosovo with the county capitals treated in this paper.

## Abbreviations

- det. – determinavit (Latin for “he/she has identified”)
- ex RII – previous RII vial is separated into two series, one keeps the old RII number, the other (present) gets a new SMF number
- leg. – legit (Latin for “he/she has collected”)
- rev. – revidit (Latin for “he/she has reviewed”, here: changed previous identification)
- RII – second (larger) part of the Roewer collection [e.g., SMF 9900828 is the collection number for RII 828]
- SMF – Senckenberg Research Institute, Frankfurt
- vid. – vidit (Latin for “he/she has seen, examined”; here: confirmed previous identification)

## Localities [with explanations in brackets]

### Albania

- Galica Luma, Galica Lumus, Galica Lums [Mt. Gjallica e Lumës, mountain in Kukës], 2489 m a.s.l., N 42°1'34", E 20°28'12".
- Kösztil, Koestil [Gostil, village in Kukës], 317 m a.s.l., N 42°3'8", E 20°25'13".

- Korab [Mt. Korab, mountain in Dibër], 2756 m a.s.l., N 41°48'41", E 20°33'55".
- Kula Lums, Kula Lumps [Kulla e Lumës, village in Kukës], 509 m a.s.l., N 42°4'15", E 20°26'47".
- Mt. Koprionte [Mt. Koritnik, mountain in Kukës], 2393 m a.s.l., N 42°5'5", E 20°32'22".
- Sandschak korita, Korita [Koritë, village in Korçë], 1178 m a.s.l., N 40°46'55", E 20°48'52".
- Kosovo
- Banjska [Banjskë, village near Mitrovicë], 200 m a.s.l., N 42°51'29", E 20°57'14".
- Bjelopolje [Bellopojë, village in Pejë], 754 m a.s.l., N 42°46'26", E 20°33'54".
- Gazimestan [Memorial Park near Prishtinë], 585 m a.s.l., N 42°41'19", E 21°07'42".
- Gnjilane [Gjilan, town], 1000 m a.s.l., N 42°28'45", E 21°27'55".
- Kaçanik [Kaçanik, town], 678 m a.s.l., N 42°14'12", E 21°15'19".
- Kosovska Mitrovica [Mitrovicë, town], 688 m a.s.l., N 42°53'31", E 20°52'12".
- Lebane [Lebanë, municipality near Prishtinë], 275 m a.s.l., N 42°44'29", E 21°08'41".
- Ljubičevevo [Lubiqevë, village near Prizren], 2000 m a.s.l., N 42°09'22", E 20°43'57".

Monastery Visoki Dečani [Monastery near the town of Dečan], 661 m a.s.l., N 42°32'48“, E 20°16'14“.

Mt. Kopaonik [mountain in the northern part of Kosovo], 1789 m a.s.l., N 43°10'16“, E 20°55'44“.

Mt. Koprivnik [mountain near Pejë], 2460 m a.s.l., N 42°37'32“, E 20°12'28“.

Crni Kamen, Mt. Šar-Planina [village in Mt. Sharr, mountain in the southern part of Kosovo], 2550 m a.s.l., N 42°08'50“, E 20°48'49“.

Mt. Žljeb, Mons Zljeb [Mt. Zhleb, mountain near Pejë], 2365 m a.s.l., N 42°75'5“, E 20°24'53“.

Nerodimlje [Nerodime, area near Ferizaj], 345 m a.s.l., N 42°21'49“, E 21°05'57“.

Pec, Ipek [Pejë, town], 505 m a.s.l., N 42°39'39“, E 20°18'37“.

Plavonica [Plav, municipality near Prizren], 2000 m a.s.l., N 42°07'05“, E 20°39'54“.

Radavac, source of the Beli Drim River [Radavci, village near the source of Drini i Bardhë near Pejë], 2000 m a.s.l., N 42°44'20“, E 20°19'18“.

Sazlija [Sazli, village near Ferizaj], 571 m a.s.l., N 42°24'27“, E 21°11'00“.

Sredска [Sredskë, municipality near Prizren], 864 m a.s.l., N 42°10'20“, E 20°51'18“.

Zvečan [Zvečan, municipality near Mitrovicë], 712 m a.s.l., N 42°58'17“, E 20°48'04“.

## Results

In total, 126 specimens of spiders including 98 females, 24 males and four juveniles were examined, comprising 73 species from 52 genera and 18 families, from which 48 species from 38 genera and 15 families were from Albania (Tab. 1). One female of *Nomisia* sp. could not be identified to species level until more specimens, including males and females, are found. Seven new records presented in this paper were found in north-eastern areas of Albania (marked with \* in Tab. 1):

*Platnickina nigropunctata* has a Mediterranean distribution, known so far from Greece, Italy and the western Mediterranean. This record extends the known distribution range to the Balkan Peninsula. In Albania one male was recorded.

*Erigone remota* is a typical high mountain species with a Palaearctic distribution. This species is known in the Balkan Peninsula only from Macedonia and Romania. One female was collected by Roewer on 19.10.1917, in the Mt. Gjallica e Lumës.

*Tenuiphantes tenebricola* is widely spread in the Palaearctic region. This record extends our knowledge about its distribution in the Balkan Peninsula, where it was known before in every surrounding country, except Macedonia and Greece. In Albania one male was recorded.

*Pardosa agrestis* is widely spread in the Palaearctic region. The present record fills a gap extending its distribution range into Albania, as it was previously known from all surrounding countries except Bosnia and Herzegovina. Seven females were recorded in Albania.

*Pardosa cavannae* was known before only in the National Park of Majella, Province of L'Aquila in Italy. This record is the first find for the Balkan Peninsula, the identification of which was confirmed by C. Deltshev. Following Tongiorgi (1966), this species is known from the high mountains. One female was recorded in Albania, identified by Wunderlich in 2008.

*Callobius claustrarius* has a Palaearctic distribution, except the United Kingdom, Iberian Peninsula, Scandinavia, and the Far East where is found only in the Asian parts of Russia. In the Balkan Peninsula *C. claustrarius* is known from Macedonia, Greece, Bulgaria and Romania. Two females were collected in 1928 in the Mt. Gjallica e Lumës.

*Zelotes femellus* is distributed in southern Europe, where it is known from Spain, Corsica (France), Italy and Ukraine. In the Balkan Peninsula it is found in Croatia, Greece and Romania. One subadult male and one female were collected in 1927 in the Kulla e Lumës, which were confirmed by C. Deltshev.

Records of 28 species from 20 genera and nine families were collected in Kosovo (Tab. 1). Twenty species are recorded for Kosovo for the first time

**Tab. 1:** List of the spider species and specimens of Roewer's collection from Albania and Kosovo. \* = first record for Albania, \*\* = first record for Kosovo.

| Family/Species                           | Material examined   |
|--|---|
| <b>Pholcidae</b>                         |   |
| <i>Holcнемус pluchei</i> (Scopoli, 1763) | 1♀, Albania, Kulla e Lumës, Akad. Balkan Expedition 1918, Kraus det., Vrenozi & Jäger vid. (RII 3726) |

| Family/Species                                       | Material examined  |
|--|--|
| <b>Segestriidae</b>                                  |  |
| <i>Segestria senoculata</i> (Linnaeus, 1758)         | 1♂, Albania, Mt. Korab, Roewer det. 1927, Vrenozi & Jäger vid. (RII 667)   |
| <b>Dysderidae</b>                                    |  |
| * <i>Dysdera longirostris</i> Doblka, 1853           | 1♀, Kosovo, Mt. Zhleb, leg. 1927, Vrenozi & Blick vid. (RII 669)   |
| <b>Theridiidae</b>                                   |  |
| <i>Asagena phalerata</i> (Panzer, 1801)              | 1♀, 1 subadult ♀, Albania, Gostil, leg. 1935, Vrenozi & Jäger vid. (RII 1870)  |
| <i>Enoplognatha ovata</i> (Linnaeus, 1758)           | 1♀, Albania, Kulla e Lumës, leg. 1935, Vrenozi & Jäger vid. (RII 1895)   |
| <i>Enoplognatha latimana</i> Hippa & Oksala, 1982    | 2♀, Albania, Kulla e Lumës, leg. 1935, sub <i>Theridion ovatum</i> (Clerck, 1757), Vrenozi & Jäger rev. (ex RII 1895; SMF 61110)                         |
| <i>Heterotheridion nigrovariegatum</i> (Simon, 1873) | 1♂, Albania, Wunderlich det. 1980, Vrenozi & Jäger vid. (RII 11619)  |
| <i>Kochiura aulica</i> (C.L. Koch, 1838)             | 1♀, Albania, sub <i>Theridion aulicum</i> C.L. Koch, 1838, Vrenozi & Jäger vid. (RII 6153)   |
| <i>Pholcomma gibbum</i> (Westring, 1851)             | 2♂, 2♀, Albania, Koritë, leg. 1935, Vrenozi & Jäger vid. (RII 1863)  |
| * <i>Platnickina nigropunctata</i> (Lucas, 1846)     | 1♂, Albania, Wunderlich det., Vrenozi & Blick vid. (ex RII 11615; SMF 37631)   |
| <i>Robertus frivaldszkyi</i> (Chyzer, 1894)          | 1♀, Albania, Deltshev det. 10.2007 (ex RII 6302; SMF 57437)  |
| <i>Steatoda paykulliana</i> (Westring, 1851)         | 2♀, Albania, Mt. Korab, leg. 1935, sub <i>Teutana grossa</i> (C.L. Koch, 1838), Jäger & Vrenozi rev. (RII 1844)  |
| ** <i>Theridion pictum</i> (Walckenaer, 1802)        | 1♀, Kosovo, Pejë, leg. 1935, sub <i>Theridion impressum</i> L. Koch, 1881, Vrenozi & Jäger rev. (RII 1889)   |
| <i>Theridion varians</i> Hahn, 1833                  | 1♂, Albania, Wunderlich det., Vrenozi & Jäger vid. (ex RII 11615; SMF 37623)   |
| <b>Linyphiidae</b>                                   |  |
| <i>Erigone dentipalpis</i> (Wider, 1834)             | 1♀, Albania, Wunderlich det. 1968, Vrenozi & Jäger vid. (RII 11896)  |
| * <i>Erigone remota</i> L. Koch, 1869                | 1♀, Albania, Mt. Gjallica e Lumës, Roewer leg. 19.10.1917, Wunderlich det. 1968, Vrenozi & Jäger vid. (ex RII 11859; SMF 24729)                          |
| <i>Linyphia triangularis</i> (Clerck, 1757)          | 1♂, Albania, van Helsdingen det. 1965, Vrenozi & Jäger vid. (ex RII 12310; SMF 24671)  |
| <i>Meioneta rurestris</i> (C.L. Koch, 1836)          | 1♀, Albania, Wunderlich det. 1968, Vrenozi & Jäger vid. (ex RII 6151; SMF 22933)   |
| <i>Oedothorax apicatus</i> (Blackwall, 1850)         | 1♀, Albania, Wunderlich det. 1968, Vrenozi & Jäger vid. (ex RII 6151; SMF 22932)   |
| * <i>Tenuiphantes tenebricola</i> (Wider, 1834)      | 1♂, Albania, Wunderlich det. 1968, Vrenozi & Jäger vid. (ex RII 11896; SMF 22926)  |
| <b>Tetragnathidae</b>                                |  |
| ** <i>Metellina merianae</i> (Scopoli, 1763)         | 2♂, 1♀, Kosovo, Plav, leg. 1927, sub <i>Meta merianae</i> (Scopoli, 1763), Vrenozi & Jäger vid. (RII 820)  |
| <b>Araneidae</b>                                     |  |
| * <i>Aculepeira ceropegia</i> (Walckenaer, 1802)     | 1♀, Kosovo, Pejë, leg. 1927, Levi rev. 1976, Vrenozi & Jäger vid. (RII 833).   |
| ** <i>Araneus angulatus</i> Clerck, 1757             | 3♀, Kosovo, Pejë, leg. 1935, sub <i>Araneus grossus</i> (C.L. Koch, 1844), Vrenozi & Jäger rev. (RII 869)  |
| ** <i>Araneus circe</i> (Audouin, 1826)              | 1♀, Kosovo, Pejë, leg. 1930, Vrenozi & Jäger vid. (RII 870)  |
| <i>Araniella cucurbitina</i> (Clerck, 1757)          | 2♀, Albania, Mt. Gjallica e Lumës, Blanke det. 1977, Vrenozi & Jäger vid. (RII 1747); 1♀, Kosovo, Pejë, Blanke det. 1977. Vrenozi & Jäger vid. (RII 865) |

| Family/Species  | Material examined   |
|---|---|
| <i>*Araniella opistographa</i> (Kulczyński, 1905)         | 1♂, 1♀, Albania, Mt. Gjallica e Lumës, Roewer leg. 1930, sub <i>Araneus cucurbitinus</i> Clerck, 1757, Blanke rev. 1977, Vrenozi & Jäger rev. (SMF 29578); 3♀, Kosovo, Pejë, Blanke rev. 1977, sub <i>Araneus cucurbitinus</i> Clerck, 1757, Vrenozi & Jäger rev. (SMF 29590) |
| <i>Neoscona adianta</i> (Walckenaer, 1802)                | 1♀, Albania, Kulla e Lumës, Roewer leg. 1927, Vrenozi & Jäger vid. (ex RII 828; SMF 9900828)  |
| <b>Lycosidae</b>  |   |
| <i>*Alopecosa aculeata</i> (Clerck, 1757)                 | 1♀, Kosovo, Pejë, Roewer leg. 7.1917, det. 1954, Vrenozi & Jäger vid. (RII 2209)  |
| <i>Alopecosa cursor</i> (Hahn, 1831)                      | 2♀, Albania, Roewer det. 1954, Vrenozi & Jäger vid. (RII 2231)  |
| <i>Alopecosa pulverulenta</i> (Clerck, 1757)              | 2♀, Albania, Mt. Korab, Roewer det. 1954, Vrenozi & Jäger vid. (RII 2212)   |
| <i>*Pardosa agrestis</i> (Westring, 1861)                 | 7♀, Albania, Roewer det. 1954, sub <i>Pardosa blanda</i> (C.L. Koch, 1833), Jäger & Vrenozi rev. (RII 3921)   |
| <i>**Pardosa alacris</i> (C.L. Koch, 1833)                | 1♂, Kosovo, Pejë, Wunderlich rev. 1984, sub <i>Pardosa pseudolugubris</i> Wunderlich, 1984, Vrenozi & Blick vid. (RII 11896)  |
| <i>*Pardosa amentata</i> (Clerck, 1757)                   | 2♀, Kosovo, Mt. Koprivnik, Roewer det. 1954, Vrenozi & Jäger vid. (RII 2264)  |
| <i>*Pardosa cavannae</i> Simon, 1881                      | 1♀, Albania, Wunderlich det. 2008, Vrenozi & Jäger vid. (SMF 60982). It is not known, if the specimen is part of the Roewer collection or not, but it is included in the manuscript because it is from Albania.   |
| <i>**Pardosa prativaga</i> (L. Koch, 1870)                | 1♀, Kosovo, Pejë, Roewer det. 1954, sub <i>Pardosa kervillei</i> Simon, 1937, Vrenozi & Blick rev. (RII 3923)   |
| <b>Oxyopidae</b>  |   |
| <i>Oxyopes lineatus</i> Latreille, 1806                   | 1♂, 4♀, Albania, Kulla e Lumës, leg. 06.07.1918, Wunderlich det. 1980, Vrenozi & Jäger vid. (ex RII 4056; SMF 30585)  |
| <b>Zoridae</b>  |   |
| <i>Zora spinimana</i> (Sundevall, 1833)                   | 2♀, Albania, Kulla e Lumës, leg. 1930, Vrenozi & Jäger vid. (RII 2409)  |
| <b>Agelenidae</b>   |   |
| <i>Agelena labyrinthica</i> (Clerck, 1757)                | 1♂, Albania, Kulla e Lumës, leg. 1935, Vrenozi & Jäger vid. (RII 6145)  |
| <i>Inermocoelotes inermis</i> (L. Koch, 1855)             | 1♀, Kosovo, Pejë, leg. 1929, sub <i>Coelotes terrestris</i> (Wider, 1834), Vrenozi & Blick rev. (RII 1273)  |
| <i>**Lycosoides coarctata</i> (Dufour, 1831)              | 1♀, Kosovo, Mt. Zhleb, leg. 1934, Vrenozi & Blick vid. (RII 5436)   |
| <b>Amaurobiidae</b>                                       |   |
| <i>*Callobius claustrarius</i> (Hahn, 1833)               | 2♀, Albania, Mt. Gjallica e Lumës, leg. 1928, Vrenozi & Jäger vid. (RII 961)  |
| <b>Titanocidae</b>  |   |
| <i>Nurscia albomaculata</i> (Lucas, 1846)                 | 1♀, Albania, Deltshev det. 10.2007 (ex RII 6302; SMF 57441)   |
| <b>Clubionidae</b>  |   |
| <i>**Clubiona stagnatilis</i> Kulczyński, 1897            | 1♀, Kosovo, Pejë, leg. 1961, sub <i>Clubiona pallidula</i> (Clerck, 1757), Vrenozi & Blick rev. (RII 13872)   |
| <b>Gnaphosidae</b>  |   |
| <i>**Berlandina plumalis</i> (O. Pickard-Cambridge, 1872) | 1♀, Kosovo, Pejë, leg. 1961, Jäger & Vrenozi vid. (RII 13875)   |
| <i>Callilepis nocturna</i> (Linnaeus, 1758)               | 1♀, Albania, Deltshev det. 10.2007 (ex RII 6302; SMF 57419)   |
| <i>Drassodes lapidosus</i> (Walckenaer, 1802)             | 1♀, Albania, Mt. Korab, leg. 1927, Vrenozi & Jäger vid. (RII 565)   |
| <i>Drassodes lutescens</i> (C.L. Koch, 1839)              | 1♂, Albania, Kulla e Lumës, leg. 1927, Vrenozi & Blick vid. (RII 574)   |
| <i>Nomisia</i> sp.  | 1♀, Albania, Kulla e Lumës, Grimm det. 1982, Vrenozi & Blick vid. (RII 6147)  |

| Family/Species                                    | Material examined  |
|---|--|
| <i>Trachyzelotes pedestris</i> (C.L. Koch, 1837)  | 1♀, Albania, Mt. Korab, leg. 1931, Vrenozi & Jäger vid. (RII 2432)   |
| <i>Zelotes apricorum</i> (L. Koch, 1876)          | 1♀, Albania, Kulla e Lumës, leg. 1931, sub <i>Zelotes oblongus</i> (C.L. Koch), Grimm rev. 1982, Vrenozi & Jäger vid. (RII 2438)   |
| * <i>Zelotes femellus</i> (L. Koch, 1866)         | 1 subadult ♂, 1♀, Albania, Kulla e Lumës, leg. 1927, Vrenozi & Jäger vid. (RII 589)  |
| <b>Philodromidae</b>                              |  |
| <i>Philodromus cespitum</i> (Walckenaer, 1802)    | 1♀, Albania, Mt. Gjalica e Lumës, leg. 16.7.1918, sub <i>Xysticus ninnii</i> Thorell, 1872, Loerbros rev. sub <i>Philodromus</i> sp., Vrenozi & Jäger rev. (RII 1661)                                |
| <i>Thanatus atratus</i> Simon, 1875               | 1♀, Albania, Kulla e Lumës, Roewer leg. 06.07.1918, Wunderlich det. 1980, sub <i>Thanatus</i> sp., Vrenozi & Jäger rev. (ex RII 4056; SMF 30583)   |
| <b>Thomisidae</b>                                 |  |
| <i>Cozyptila blackwalli</i> (Simon, 1875)         | 1♀, Albania, Kulla e Lumës, leg. 1929, Vrenozi & Jäger vid. (RII 1680)   |
| <i>Synema globosum</i> (Fabricius, 1775)          | 1♀, Albania, Kulla e Lumës, leg. 1928, sub <i>Synema plorator</i> (C.L. Koch, 1837), Loerbros rev. 1980, Vrenozi & Jäger vid. (RII 930); 3♀; Kosovo, Pejë, leg. 1928, Vrenozi & Jäger vid. (RII 929) |
| <i>Thomisus onustus</i> Walckenaer, 1806          | 2♀, 1 subadult ♀, Kosovo, Pejë, leg. 1929, Vrenozi & Jäger vid. (RII 936)  |
| ** <i>Tmarus piger</i> (Walckenaer, 1802)         | 1♀, 1 subadult ♀, Kosovo, Pejë, leg. 1929, Vrenozi & Jäger vid. (RII 1640)   |
| <i>Xysticus acerbus</i> Thorell, 1872             | 1♀, Albania, Kulla e Lumës, leg. 1929, sub <i>Xysticus kempelenii</i> Thorell, 1872, Jantscher rev. 11.1999, Vrenozi & Jäger vid. (ex RII 1656; SMF 9901656)   |
| ** <i>Xysticus audax</i> (Schrank, 1803)          | 1♀, Kosovo, Pejë, leg. 1929, Vrenozi & Jäger vid. (RII 1650)   |
| ** <i>Xysticus cristatus</i> (Clerck, 1757)       | 1♀, Kosovo, Pejë, leg. 1929, sub <i>Xysticus audax</i> (Schrank, 1803), Vrenozi & Jäger rev. (RII 1650)  |
| <i>Xysticus kochi</i> Thorell, 1872               | 1♀, Kosovo, Pejë, leg. 1929, Jantscher rev. 11.1999, Vrenozi & Jäger vid. (RII 1643)   |
| <i>Xysticus graecus</i> C.L. Koch, 1838           | 1♀, Albania, Gostil, leg. 1929, sub <i>Xysticus striatipes</i> L. Koch, 1870, Vrenozi & Deltshev rev. (RII 1663)   |
| <b>Salticidae</b>                                 |  |
| <i>Evarcha falcata</i> (Clerck, 1757)             | 5♂, 2♀, Albania, Kulla e Lumës, leg. 1930, sub <i>Evarcha blanardi</i> (Scopoli 1763), Vrenozi & Jäger vid. (ex RII 2075; SMF 9902075)   |
| ** <i>Heliophanus auratus</i> C.L. Koch, 1835     | 2♀, Kosovo, Pejë, Roewer leg. 6.1921, Logunov det. 2005, Vrenozi & Jäger vid. (ex RII 1993; SMF 9901993); 1♀, Kosovo, Pejë, Logunov det. 2005, Vrenozi & Jäger vid. (ex RII 1995; SMF 9901995)       |
| <i>Heliophanus cupreus</i> (Walckenaer, 1802)     | 2♀, Kosovo, Pejë, leg. 1930, Vrenozi & Jäger vid. (RII 1978)   |
| <i>Heliophanus flavipes</i> (Hahn, 1832)          | 2♂, Kosovo, Pejë, leg. 1930, sub <i>Heliophanus ritteri</i> (Scopoli, 1763), Vrenozi & Jäger vid. (RII 1982); 1♀, Kosovo, Pejë, Logunov det. 2005, Vrenozi & Jäger vid. (ex RII 1995; SMF 40467)     |
| <i>Heliophanus lineiventris</i> Simon, 1868       | 1♀, Albania, Mt. Korab, Logunov det. 2005, Vrenozi & Jäger vid. (ex RII 1987; SMF 57337)   |
| <i>Heliophanus simplex</i> Simon, 1868            | 1♀, Albania, Kulla e Lumës, Logunov det. 2005, Vrenozi & Jäger vid. (ex RII 1994; SMF 57318)   |
| <i>Mendoza canestrinii</i> (Ninni, 1868)          | 2♀, Albania, Mt. Koritnik, leg. 7.1922, Vrenozi & Jäger vid. (RII 2026)  |
| <i>Philaeus chrysops</i> (Poda, 1761)             | 2♀, Albania, Koritë, leg. 1930, Vrenozi & Jäger vid. (RII 2049)  |
| ** <i>Phlegra fasciata</i> (Hahn, 1826)           | 1♀, Kosovo, Bellopojë, leg. 1930, Vrenozi & Jäger vid. (RII 2056)  |
| <i>Sitticus pubescens</i> (Fabricius, 1775)       | 1♀, Kosovo, Pejë, leg. 1930, Vrenozi & Jäger vid. (RII 2011)   |
| ** <i>Synageles dalmaticus</i> (Keyserling, 1863) | 2♂, 1♀, Kosovo, Bellopojë, leg. 1930, Vrenozi & Jäger vid. (RII 1999)  |

(marked with \*\* in Tab. 1). Almost all these species are found in the adjacent countries of Kosovo (Nikolić & Polenec 1981, Nentwig et al. 2013; and several papers on Albanian spiders such as Vrenozi & Haxhiu 2008, Deltshev et al. 2011, Vrenozi 2012, Vrenozi & Jäger 2012), except for the two species *Lycosoides coarctata* and *Synageles dalmaticus*, which are recorded only from Macedonia. *Berlandina plumalis* with a distribution from West Africa to Central Asia (Platnick 2013) is the first record for the region and the second record for the Balkan Peninsula after Greece (Nentwig et al. 2013).

The revised paper of Deltshev et al. (2003) documented 86 species from Kosovo. Spiders are cited by different authors, mostly for Mt. Kopaonik in the northern part of Kosovo (40 species), followed by the areas of Pejë and Prizren districts in the north-western and western part, near the Albanian borders (respectively 20 and 23 species), and Prishtinë in the eastern part of Kosovo (22 species); meanwhile Nerodime, the Monastery of Dečan, Mitrovicë, Crni Kamen (Mt. Sharr) and Kaçanik, are the less cited municipalities and districts. Almost 50% of all spiders known from Kosovo were mentioned by Stojićević (1929) and Drensky (1936) (Tab. 2).

## Discussion

Previously, 374 spider species were known for Albania (Deltshev et al. 2011: 335 species, Vrenozi 2012: 6 species, Vrenozi & Jäger 2012: 32 species, Vrenozi & Dunlop 2013: 1 species). The Roewer collection offers seven new records for the Albanian spider fauna; thus 381 species are now known for this country.

According to Nikolić & Polenec (1981), only three species were known for Kosovo before: *Robertus arundineti* (O. P.-Cambridge, 1871), *Styloctetor stativus* (Simon, 1881) (sub *Anacotyle stativa*) and *Trichoncus affinis* Kulczyński, 1894. Deltshev et al. (2003) mentioned 86 species for Kosovo which were known for the districts of Dečan, Ferizaj, Gjilan, Kaçanik, Mitrovicë, Pejë, Prishtinë, Prizren, Mt. Kopaonik and Mt. Sharr. From these, 25 spider species are known only from Mt. Kopaonik, without a precise locality. Nevertheless this mountain is part of both Kosovo and Serbia, these species are thus considered as records for Kosovo and Serbia at the same time. The present review of the Roewer collection has resulted in 28 records, with eight species known before for Kosovo: *Araniella cucurbitina* (Clerck, 1757), *Inermocoelotes inermis* (L. Koch, 1855), *Synema globosum* (Fabricius, 1775), *Thomisus onustus* Walckenaer, 1806, *Xysticus kochi* Thorell, 1872, *Heliophanus cupreus* (Walckenaer, 1802), *Heliophanus flavipes* (Hahn, 1832) and *Sitticus pubescens* (Fabricius, 1775). The 20 other records are new to Kosovo. All species were recorded in the north-western and western areas, near the Albanian border. These species increase the number of spider species known so far from Kosovo to 106.

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**Tab. 2:** List of the spider species from Kosovo according to Deltshev et al. (2003).

| Nr. | Family/Species                                     | Locality (References)   |
|-----|--|---|
|     | <b>Atypidae</b>                                    |   |
| 1   | <i>Atypus piceus</i> (Sulzer, 1776)                | Prizren (Stojićević 1929)   |
|     | <b>Dysderidae</b>                                  |   |
| 2   | <i>Dasumia kusceri</i> (Kratochvíl, 1935)          | Crni Kamen, Mt. Sharr (Nikolić & Polenec 1981)                            |
|     | <b>Theridiidae</b>                                 |   |
| 3   | <i>Asagena phalerata</i> (Panzer, 1801)            | Sazli (Stojićević 1929), . Zhljeb (Knoflach 1996)                         |
| 4   | <i>Crustulina guttata</i> (Wider, 1834)            | Sazli (Stojićević 1929)   |
| 5   | <i>Enoplognatha ovata</i> (Clerck, 1757)           | Lubiqevë (Bresjančeva 1907, Drensky 1936)                                 |
| 6   | <i>Phylloneta sisyphia</i> (Clerck, 1757)          | Lubiqevë (Bresjančeva 1907, Drensky 1936)                                 |
| 7   | <i>Robertus arundineti</i> (O. P.-Cambridge, 1871) | Nerodime (Stojićević 1929), Kosovo (Drensky 1936, Nikolić & Polenec 1981) |
| 8   | <i>Steatoda bipunctata</i> (Linnaeus, 1758)        | Mt. Kopaonik (Drensky 1936)   |
| 9   | <i>Steatoda castanea</i> (Clerck, 1757)            | Mt. Kopaonik (Drensky 1936)   |

| Nr.                   | Family/Species   | Locality (References)   |
|-----------------------|--|---|
| <b>Linyphiidae</b>    |  |   |
| 10                    | <i>Agyneta fuscipalpa</i> (C.L. Koch, 1836)              | Sazli (Stojićević, 1929)  |
| 11                    | <i>Bathyphantes approximatus</i> (O. P.-Cambridge, 1871) | Mt. Kopaonik (Nikolić & Polenec 1981)   |
| 12                    | <i>Erigone atra</i> Blackwall, 1833                      | Mt. Kopaonik (Stojićević 1929)  |
| 13                    | <i>Erigone dentipalpis</i> (Wider, 1834)                 | Sazli (Stojićević 1929)   |
| 14                    | <i>Fageiella ensigera</i> Deeleman-Reinhold, 1974        | Radavci, source of the River Drini i Bardhë<br>(Deeleman-Reinhold 1974)                               |
| 15                    | <i>Mansuphantes mansuetus</i> (Thorell, 1875)            | Mt. Kopaonik (Stojićević 1929, Drensky 1936,<br>Nikolić & Polenec 1981)                               |
| 16                    | <i>Macrargus rufus</i> (Wider, 1834)                     | Mt. Kopaonik (Nikolić & Polenec 1981)   |
| 17                    | <i>Oedothorax gibbosus</i> (Blackwall, 1841)             | Gjilan (Stojićević 1929, Drensky 1936)  |
| 18                    | <i>Palliduphantes trnovensis</i> (Drensky, 1931)         | Karamakis Cave, Pejë (Deeleman-Reinhold 1985,<br>Deltshev et al. 1996)                                |
| 19                    | <i>Porrhomma pygmaeum</i> (Blackwall, 1834)              | Sazli (Stojićević 1929, Drensky 1936)   |
| 20                    | <i>Styloctetor stativus</i> (Simon, 1881)                | Sazli (Stojićević 1929, Nikolić & Polenec 1981),<br>Kosovo (Nikolić & Polenec 1981)                   |
| 21                    | <i>Trichoncus affinis</i> Kulczyński, 1894               | Sazli (Stojićević 1929), Kosovo (Nikolić & Polenec 1981)  |
| <b>Tetragnathidae</b> |  |   |
| 22                    | <i>Metellina segmentata</i> (Clerck, 1757)               | Banjskë (Kolosváry 1940)  |
| 23                    | <i>Tetragnatha extensa</i> (Linnaeus, 1758)              | Gjilan (Stojićević 1929)  |
| <b>Araneidae</b>      |  |   |
| 24                    | <i>Agalenata redii</i> (Scopoli, 1763)                   | Mitrovicë (Kolosváry 1938, 1940)  |
| 25                    | <i>Araneus diadematus</i> Clerck, 1757                   | Mt. Kopaonik (Drensky 1936)   |
| 26                    | <i>Araniella alpica</i> (L. Koch, 1869)                  | Mt. Kopaonik (Stojićević 1929, Drensky 1936)  |
| 27                    | <i>Araniella cucurbitina</i> (Clerck, 1757)              | Lubiqevë (Bresjančeva 1907, Drensky 1936),<br>Nerodime (Stojićević 1929), Mt. Kopaonik (Drensky 1936) |
| 28                    | <i>Cyclosa conica</i> (Pallas, 1772)                     | Zveçan (Stojićević 1929)  |
| 29                    | <i>Gibbaranea gibbosa</i> (Walckenaer, 1802)             | Mt. Kopaonik (Stojićević 1929, Drensky 1936)  |
| 30                    | <i>Gibbaranea omoeda</i> (Thorell, 1870)                 | Mt. Kopaonik (Nikolić & Polenec 1981)   |
| 31                    | <i>Hypsosinga albovittata</i> (Westring, 1851)           | Sazli (Stojićević 1929)   |
| 32                    | <i>Hypsosinga pygmaea</i> (Sundevall, 1831)              | Gjilan (Stojićević 1929)  |
| 33                    | <i>Hypsosinga sanguinea</i> (C.L. Koch, 1844)            | Sazli (Stojićević 1929)   |
| 34                    | <i>Mangora acalypha</i> (Walckenaer, 1802)               | Gjilan, Nerodime (Stojićević 1929)  |
| 35                    | <i>Singa hamata</i> (Clerck, 1757)                       | Lubiqevë (Bresjančeva 1907, Drensky 1936),<br>Nerodime (Stojićević 1929)                              |
| 36                    | <i>Zygiella keyserlingi</i> (Ausserer, 1871)             | Pejë (Kolosváry 1938, 1940)   |
| <b>Lycosidae</b>      |  |   |
| 37                    | <i>Alopecosa trabalis</i> (Clerck, 1757)                 | Lebanë, Sredskë (Stojićević 1929)   |
| 38                    | <i>Arctosa cinerea</i> (Fabricius, 1777)                 | Gjilan (Stojićević 1929)  |
| 39                    | <i>Arctosa leopardus</i> (Sundevall, 1833)               | Sazli (Stojićević 1929)   |
| 40                    | <i>Hogna radiata</i> (Latreille, 1817)                   | Pejë (Kolosváry 1938)   |
| 41                    | <i>Pardosa agrestis</i> (Westring, 1861)                 | Sazli (Stojićević 1929), Gjilan (Drensky 1936)  |
| 42                    | <i>Pardosa agricola</i> (Thorell, 1856)                  | Mt. Kopaonik (Stojićević 1929, Drensky 1936)  |
| 43                    | <i>Pardosa albatula</i> (Roewer, 1951)                   | Mt. Kopaonik (Drensky 1936)   |
| 44                    | <i>Pardosa ferruginea</i> (L. Koch, 1870)                | Mt. Kopaonik (Stojićević 1929, Drensky 1936)  |
| 45                    | <i>Pardosa hortensis</i> (Thorell, 1872)                 | Nerodime (Stojićević 1929), Gjilan (Drensky 1936)   |
| 46                    | <i>Pardosa morosa</i> (L. Koch, 1870)                    | Monastery in the town of Deçan (Kolosváry 1938, 1940)   |
| 47                    | <i>Pardosa paludicola</i> (Clerck, 1757)                 | Sazli (Stojićević 1929)   |
| 48                    | <i>Pardosa palustris</i> (Linnaeus, 1758)                | Mt. Kopaonik (Stojićević 1929, Drensky 1936)  |
| 49                    | <i>Pardosa pullata</i> (Clerck, 1757)                    | Gjilan (Stojićević 1929)  |
| 50                    | <i>Pirata piscatorius</i> (Clerck, 1757)                 | Gjilan (Stojićević 1929)  |
| 51                    | <i>Piratula hygrophila</i> (Thorell, 1872)               | Mt. Kopaonik (Nikolić & Polenec 1981)   |

| Nr. | Family/Species                                    | Locality (References)   |
|-----|---|---|
| 52  | <i>Trochosa ruricola</i> (De Geer, 1778)          | Mt. Kopaonik (Drensky 1936)   |
| 53  | <i>Xerolycosa miniata</i> (C.L. Koch, 1834)       | Gazimestan, Prishtinë (Stojićević 1929)   |
| 54  | <i>Xerolycosa nemoralis</i> (Westring, 1861)      | Mt. Kopaonik, Gjilan (Drensky 1936)   |
|     | <b>Pisauridae</b>                                 |   |
| 55  | <i>Pisaura mirabilis</i> (Clerck, 1757)           | Lubiqevë (Bresjančeva 1907, Drensky 1936), Nerodime, Sazli (Stojićević 1929), Monastery in the town of Dečan (Kolosváry 1938, 1940) |
|     | <b>Oxyopidae</b>                                  |   |
| 56  | <i>Oxyopes ramosus</i> (Martini & Goeze, 1778)    | Lubiqevë (Bresjančeva 1907, Drensky 1936)   |
|     | <b>Agelenidae</b>                                 |   |
| 57  | <i>Inermocoelotes falciger</i> (Kulczyński, 1897) | Pejë (Kolosváry 1938)   |
| 58  | <i>Inermocoelotes inermis</i> (L. Koch, 1855)     | Pejë (Kolosváry 1938, 1940), Mt. Koprivnik (Kolosváry 1940)   |
|     | <b>Dictynidae</b>                                 |   |
| 59  | <i>Embleyna brevidens</i> (Kulczyński, 1897)      | Mt. Kopaonik (Nikolić & Polenec 1981)   |
|     | <b>Miturgidae</b>                                 |   |
| 60  | <i>Cheiracanthium elegans</i> Thorell, 1875       | Prizren (Stojićević 1929)   |
|     | <b>Liocranidae</b>                                |   |
| 61  | <i>Sagana rutilans</i> Thorell, 1875              | Pejë (Kolosváry 1938), Koprivnik (Kolosváry 1940)   |
|     | <b>Zodariidae</b>                                 |   |
| 62  | <i>Zodarion aculeatum</i> Chyzer, 1897            | Mt. Kopaonik (Drensky 1936)   |
|     | <b>Gnaphosidae</b>                                |   |
| 63  | <i>Drassodes lapidosus</i> (Walckenaer, 1802)     | Mt. Kopaonik (Stojićević 1929, Drensky 1936)  |
| 64  | <i>Haplodrassus signifer</i> (C.L. Koch, 1839)    | Mt. Kopaonik (Drensky 1936)   |
| 65  | <i>Micaria pulicaria</i> (Sundevall, 1831)        | Monastery in the town of Dečan (Kolosváry 1938, 1940)   |
| 66  | <i>Scotophaeus blackwalli</i> (Thorell, 1871)     | Gazimestan, Prishtinë (Stojićević 1929)   |
| 67  | <i>Zelotes longipes</i> (L. Koch, 1866)           | Zveçan (Stojićević 1929), Mt. Kopaonik (Drensky 1936)   |
| 68  | <i>Zelotes oblongus</i> (C.L. Koch, 1833)         | Gazimestan, Prishtinë (Stojićević 1929)   |
| 69  | <i>Zelotes similis</i> (Kulczyński, 1887)         | Pejë (Grimm 1985)   |
|     | <b>Sparassidae</b>                                |   |
| 70  | <i>Micrommata virescens</i> (Clerck, 1757)        | Lubiqevë (Bresjančeva 1907, Drensky 1936), Pejë (Kolosváry 1938, 1940)  |
|     | <b>Thomisidae</b>                                 |   |
| 71  | <i>Ebrechtella tricuspidata</i> (Fabricius, 1775) | Nerodime (Stojićević 1929), Pejë (Kolosváry 1938, 1940)   |
| 72  | <i>Ozyptila praticola</i> (C.L. Koch, 1837)       | Monastery in the town of Dečan (Kolosváry 1938, 1940)   |
| 73  | <i>Runcinia grammica</i> (C.L. Koch, 1837)        | Lubiqevë (Bresjančeva 1907, Drensky 1936)   |
| 74  | <i>Synema globosum</i> (Fabricius, 1775)          | Mt. Kopaonik (Stojićević 1929, Drensky 1936)  |
| 75  | <i>Thomisus onustus</i> Walckenaer, 1805          | Lubiqevë (Bresjančeva 1907, Drensky 1936)   |
| 76  | <i>Xysticus ferrugineus</i> Menge, 1876           | Pejë (Kolosváry 1938, Nikolić & Polenec 1981)   |
| 77  | <i>Xysticus kochi</i> Thorell, 1872               | Sazli, Zveçan (Stojićević 1929)   |
|     | <b>Salticidae</b>                                 |   |
| 78  | <i>Dendryphantes rufus</i> (Sundevall, 1833)      | Lebanë (Stojićević 1929)  |
| 79  | <i>Evarcha falcata</i> (Clerck, 1757)             | Prizren (Stojićević 1929)   |
| 80  | <i>Heliophanus cupreus</i> (Walckenaer, 1802)     | Mt. Kopaonik (Drensky 1936)   |
| 81  | <i>Heliophanus flavipes</i> (Hahn, 1832)          | Kaçanik, Sazli (Stojićević 1929), Mt. Kopaonik (Drensky 1936)   |
| 82  | <i>Pellenes nigrociliatus</i> (Simon, 1875)       | Prizren (Stojićević 1929)   |
| 83  | <i>Phlaeaeus chrysops</i> (Poda, 1761)            | Mt. Kopaonik (Drensky 1936)   |
| 84  | <i>Salticus scenicus</i> (Clerck, 1757)           | Mt. Kopaonik (Drensky 1936)   |
| 85  | <i>Sitticus pubescens</i> (Fabricius, 1775)       | Nerodime (Stojićević 1929)  |
| 86  | <i>Sitticus saxicola</i> (C.L. Koch, 1846)        | Mt. Kopaonik (Drensky 1936)   |

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