

NEW FAUNISTIC AND TAXONOMIC NOTES  
ON THE HAPLOGYNE AND CRIBELLATE SPIDERS  
(ARANEAE: DICTYNIDAE, DYSDERIDAE,  
ERESIDAE, FILISTATIDAE, SICARIIDAE)  
FROM THREE BALKAN COUNTRIES

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In this paper, we report for the first time two spider species for Albania, four for Bulgaria and two for Greece: *Altella lucida* (Simon, 1874) (Bulgaria), *Eresus moravicus* Rezac, 2008 (Bulgaria and Greece), *Filistata insidiatrix* (Forsskål, 1775) (Albania), *Harpactea samuili* Lazarov, 2006 (Greece), *Loxosceles rufescens* (Dufour, 1820) (Albania), *Pritha parva* Legittimo, Simeon, Di Pompeo et Kulczycki, 2017 (Bulgaria) and *Pritha vestita* (Simon, 1873) (Bulgaria). The recently described species *P. parva* is the first report for the Balkan Peninsula, while *P. vestita* is the first record for mainland Europe. Their congener *Pritha nana* (Simon, 1868) is removed from the Bulgarian checklist of spiders (misidentification). As a result of our report, the number of spider species increases to 571, 1049 and 1183 in Albania, Bulgaria and Greece, respectively.

Keywords: Araneae, Albania, Arachnida, Bulgaria, Greece, checklist update.

## INTRODUCTION

Although the Balkan Peninsula is well known as a biodiversity hotspot, especially from arachnological perspective, it is still unequally explored (GRIFITHS *et al.* 2004, CUTTELOD *et al.* 2008). While the number of spider species is relatively high in Bulgaria – 1044 species (BLAGOEV *et al.* 2018, DIMITROV *et al.* 2019, NAUMOVA 2019, NAUMOVA *et al.* 2019) and in Greece – 1181 species (BOSMANS & CHATZAKI 2005, NENTWIG *et al.* 2020), in Albania it is much lower – 569 species (BLICK 2018, KÛRKA *et al.* 2020, NAUMOVA 2020).

The families Dictynidae, Dysderidae, Eresidae, Filistatidae and Sicariidae are objects of active research in both taxonomic and faunistic aspects within Europe and in general. Intensive studies in the last decade have led to several revisions and descriptions of new species of the European Filistatidae (LEGITTIMO *et al.* 2017, ZONSTEIN & MARUSIK 2019) and Eresidae (REZÁČ *et al.* 2008, KOVÁCS *et al.* 2010, 2015). As a result, the taxonomic status of many species was clarified, and their correct identification facilitated. This study aims to contribute to the knowl-

edge of both the less studied spider fauna of Albania and the relatively well-studied faunas of Bulgaria and Greece, as well as to add original photographs of some essential taxonomic features of all seven rare or poorly illustrated species.

## MATERIAL AND METHODS

The material is housed in the collections of the Institute of Biodiversity and Ecosystem Research (IBER) and National Museum of Natural History (NMNHS) at the Bulgarian Academy of Sciences, Sofia and the Centre for Biodiversity Genomics (CBG) in Canada, Guelph. The specimens were collected by hand picking, sieving leaf litter or by pitfall traps and then preserved in 70–80% ethanol. The digital images were taken with a Canon EOS 1100D digital camera attached to an Amplival microscope and processed using Photoshop CS6 software. Nomenclature follows the WSC (2020), families and species are listed alphabetically. Geographical coordinates are given in decimal degrees and the localities are visualized on the Figure 27. Abbreviations: ♂/♂♂ – male(s), ♀/♀♀ – female(s), lgt. – legator(s).

## RESULTS

As a result of our investigation, new faunistic data about seven spider species from five families are presented below. We report two spiders as new for Albania, four as new for Bulgaria and two as new for Greece. The species *Pritha vestita* (Simon, 1873) is the first record for Europe mainland (after Corsica Island) and *P. parva* Legittimo, Simeon, Di Pompeo et Kulczycki, 2017 is new for the Balkan Peninsula. Digital images of the essential taxonomic features were added for: *Altella lucida* (Simon, 1874) (Figs 1–2), *Eresus moravicus* Rezáč, 2008 (Figs 3–7), *Filistata insidiatrix* (Forsskål, 1775) (Figs 8–11), *Harpactea samuili* Lazarov, 2006 (Figs 12–14), *Loxosceles rufescens* (Dufour, 1820) (Figs 15–18), *Pritha parva* Legittimo, Simeon, Di Pompeo et Kulczycki, 2017 (Figs 19–22) and *P. vestita* (Simon, 1873) (Figs 23–26).

### Family: Dictynidae

#### *Altella lucida* (Simon, 1874)

Material (deposited in CBG): BULGARIA: 1 ♀, Western Stara Planina Mts, Sofia (Kremikovtsi ward), N 42.7882°, E 23.4812°, 645 m a.s.l., 27.03.2017, lgt. M. Naumova. In open dry sunny habitat, with scarce vegetation, under stone.

The species is described from France by SIMON (1874) and is distributed from the Azores to the west to eastern Turkey, and from Great Britain to Crimean Peninsula (ROBERTS 1985, BORGES & WUNDERLICH 2008, DANIŞMAN *et al.* 2014, KOVBLYUK *et al.* 2016, WSC 2020). The closest reported localities to Bulgaria are from North Macedonia and three Greek islands (Chios, Lesbos and Naxos) (PARASCHI 1988, BOSMANS *et al.* 2009, RUSSELL-SMITH *et al.* 2011, NENTWIG *et al.* 2020).

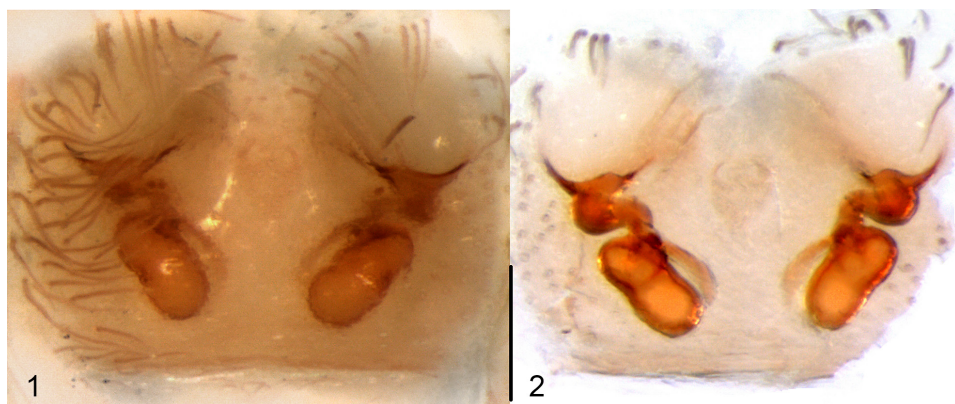
Family: Dysderidae  
*Harpactea samuili* Lazarov, 2006

Material (deposited in IBER): GREECE: 1 ♂, Slavyanka (Orvilos) Mts, near Akladohori village, N 41.3200°, E 23.5658°, 591 m a.s.l., 05.09–15.10.2019, pitfall traps, lgt. M. Naumova; habitat: grassland, with bushes (*Prunus spinosa* L. and *Rosa* sp.) and single oak trees (*Quercus cerris* L.) between cultivated fields and vineyards; 1 ♂, Sharlia Mts, near Sidirokastro, N 41.2581°, E 23.4137°, 219 m a.s.l., 06.06–07.08.2019, pitfall traps, lgt. M. Naumova, habitat: stone pit with scarce vegetation.

This species is known only from Bulgaria and North Macedonia (LAZAROV 2006, STEFANOVSKA *et al.* 2008, BLAGOEV *et al.* 2018). The new records in Greece are expected since the respective sites are located very close to the borders of both countries (Fig. 27).

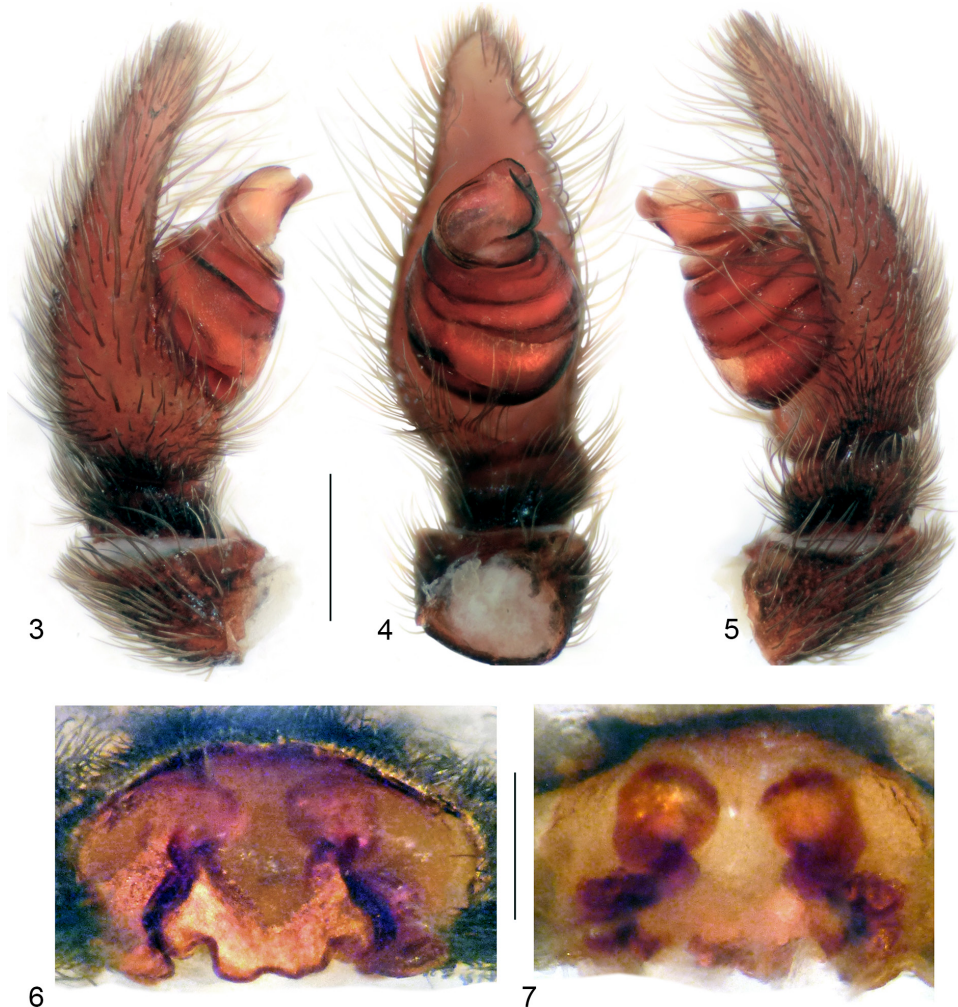
Family: Eresidae  
*Eresus moravicus* Rezáč, 2008

Material (deposited in IBER): BULGARIA: 2 ♂♂, Western Stara Planina Mts, Negu-shevo village, pasture, N 42.7286°, E 23.7026°, 695 m a.s.l., 10.05.1968; 1 ♂, South Black Sea coast, Strandzha Mts, N 42.1557°, E 27.8555°, 10 m a.s.l., 15.05.1968; 1 ♀, Burgas, N 42.4591°, E 27.4394°, 3 m a.s.l., 02.06.2009, lgt. M. Naumova; 1 ♀, Sliven, N 42.6571°, E 26.2849°, 191 m a.s.l., 04.06.2010, lgt. M. Naumova; 1 ♂, Ihtiman, Borika village, N 42.4941°, E 23.7001, 780 m a.s.l., 25.05.2013, lgt. T. Trifonov; 1 ♀, Plovdiv, Zelenikovo village, N 42.4069°, E 25.0839°, 315 m a.s.l., 03.06.2014, lgt. G. Glushkov; 1 ♂, Plovdiv, Grebnata baza place, N 42.1495°, E 24.7139°, 164 m a.s.l., 27.05.2018, lgt. S. Semerdzhieva; 1 ♂, Plovdiv, Trakia ward, N 42.1341°, E 24.7849°, 165 m a.s.l., 21.05.2018, lgt. R. Bor; 1 ♀, Plovdiv, Kyuchuka ward, N 42.1102°, E 24.7275°, 168 m a.s.l., 08.08.2018, K. Stoyanov; 2 ♂♂, Plovdiv, Yagodovo village, N 42.1160°, E 24.8520°, 158 m a.s.l., 05–10.06.2018, lgt. V. Genchev; 3 ♂♂, Plovdiv,



Figs 1–2. *Altella lucida*, female genitalia: 1 = epigyne, ventral view, 2 = vulva, dorsal view. Scale line: 0.1 mm

Yagodovo village, N 42.1010°, E 24.8472°, 165 m a.s.l., 26.05.2019, lgt. V. Genchev; 1 ♀, Eastern Rhodopes Mts, Kardzhali, N 41.6325°, E 25.3933°, 250 m a.s.l., 07.2014; 1 ♂, Central Predbalkan, Byala Reka village, N 43.1330°, E 25.2178°, 224 m a.s.l., 20.05.2016, lgt. M. Naumova; 1 ♀, Kresna Gorge, N 41.7839°, E 23.1557°, 233 m a.s.l., 21.09.2017, lgt. M. Naumova; 4 ♂♂, Ihtimanska Sredna Gora Mts, Gabrovitsa village, N 42.2652°, E 23.9216°, 558 m a.s.l., 21.04-08.05.2018, lgt. E. Vacheva, habitat: a glade between oak trees; GREECE: 1 ♀, Sengelska Mts, Krushevska river near Fea Petra village, N 41.2742°, E 23.4365°, 200 m a.s.l., 08.05.2017, lgt. M. Naumova; 1 ♂, near Solun (Thessaloniki), 2 km NW of Kolhiko village, N 40.7045°, E 23.2608°, 140 m a.s.l., 20.05.2017, lgt. M. Naumova.



**Figs 3–7.** *Eresus moravicus* left male palp (3–5) and female genitalia (6, 7): 3 = prolateral, 4 = ventral and 5 = retrolateral views, 6 = epigyne, ventral view, 7 = vulva, dorsal view. Scale line: 0.5 mm

Recently described species is reported from Austria, Czech Republic, Hungary, Slovakia, Serbia and Albania (REZÁČ *et al.* 2008, GRBIC & SAVIC 2010, NAUMOVA *et al.* 2016).

Our specimens correspond well to the original description, both in genital and somatic features. The females were black with yellow-orange front of the prosoma. The males had red hairs covering the posterior part of the carapace, femora of the legs II, and all segments of III and IV pairs of legs, except the tarsi, which were brownish. All males were found in spring (April–June).

FAMILY: Filistatidae  
*Filistata insidiatrix* (Forsskål, 1775)

Material (deposited in IBER): ALBANIA: 1 ♂, 3 ♀♀, Saranda district, Mesopotam village, near Syri i Kaltër (Blue eye) spring, N 39.9171°, E 20.1819°, 142 m a.s.l., 06.10.2019, lgt. M. Naumova. Inside dead parts of Oriental plane trees (*Platanus orientalis* L.). Identified according to ZONSTEIN & MARUSIK (2019).

*Filistata insidiatrix* is known from Cabo Verde and the Iberian Peninsula, through the northern Mediterranean countries and Hungary to Turkmenistan and the southern Mediterranean, Turkey and the Middle East (ZONSTEIN & MARUSIK 2019). The family Filistatidae has been recently reported from Albania on the base of a single specimen of *Filistata* Latreille, 1810 with the assumption of *F. insidiatrix* (undetermined to species level as the specimen was immature) (NAUMOVA 2020).

*Pritha parva* Legittimo, Simeon, Di Pompeo et Kulczycki, 2017

Material (deposited in IBER): BULGARIA: 3 ♂♂, Tracian lowland near Plovdiv, Yagodovo village, N 42.1107°, E 24.8510°, 159 m a.s.l., 26–30.04.2018, lgt. V. Genchev. On the house wall and under stones in the yard. Identified according to LEGITTIMO *et al.* (2017).

The species is recently described and with known distribution only in France, Italy and Switzerland (LEGITTIMO *et al.* 2017). The records from Bulgaria greatly extended the known range to the east and suggest a much wider distribution within Europe.

*Pritha vestita* (Simon, 1873)

Lazarov 2005: 5 ♂♂, sub *P. nana* (Simon, 1868), misidentified.

Material (deposited in NMNHS): BULGARIA: 3 ♂♂, 2 km Maleshevska Mts, South from Kamenitsa village, N 41.6444°, E 23.1703°, 170–240 m a.s.l., 31.05–23.06.2002, pitfall traps, lgt. S. Lazarov & M. Langourov; 2 ♂♂, Slavyanka Mts, Southeastern slope of Sveti

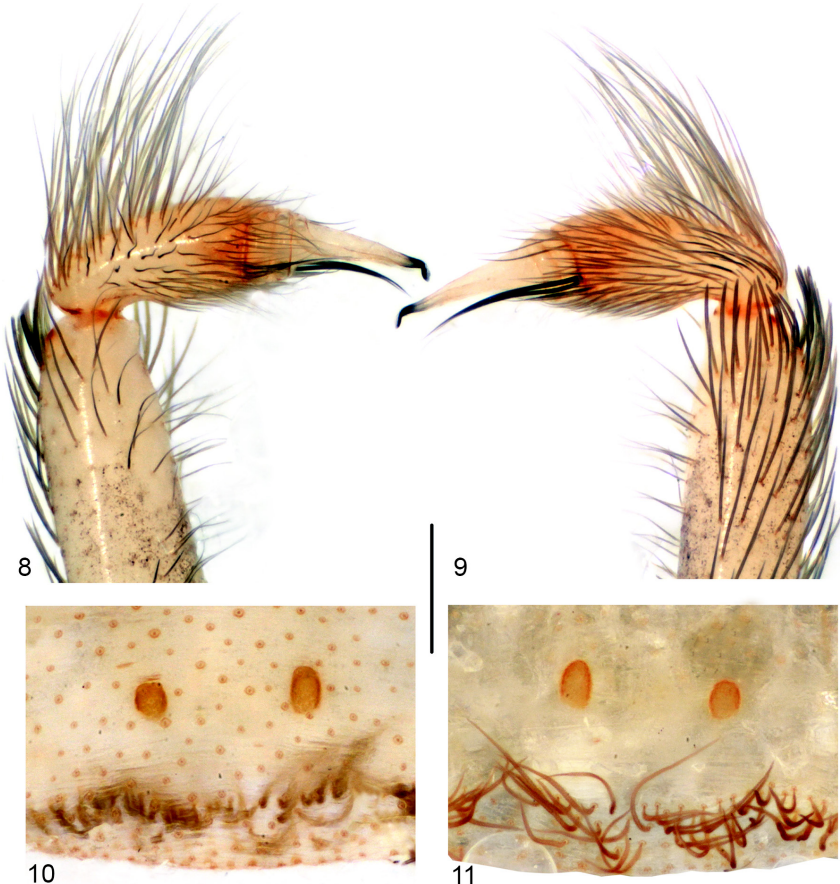
Iliya hill, near Kalimantsi village, N 41.4584°, E 23.4883°, 440-510 m a.s.l., 01-22.06.2002, pitfall traps, lgt. S. Lazarov & M. Langourov. In kermes oak (*Quercus coccifera* L.) association (pseudomaquis). Identified according to SIMON (1873, 1914) and LEGITTIMO *et al.* (2017).

The species was described from Corsica Island and probably was found in Algeria and Libya (BOSMANS unpubl.).

Family: Sicariidae

*Loxosceles rufescens* (Dufour, 1820)

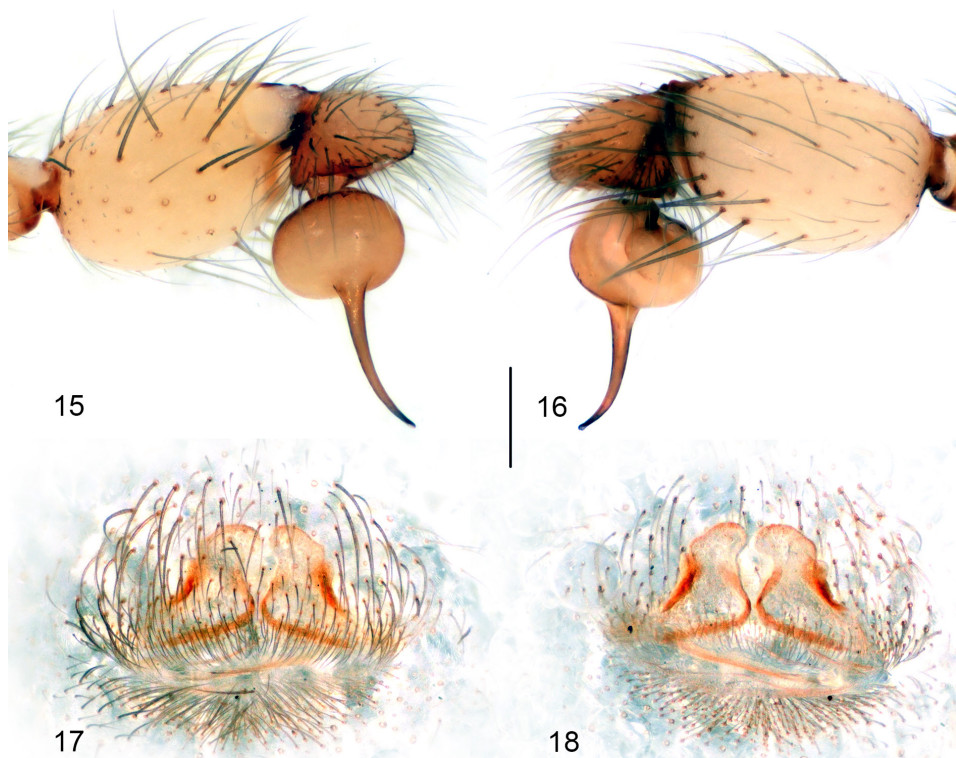
Material (deposited in IBER): ALBANIA: 2 ♂♂, 2 ♀♀, Saranda, N 39.8763°, E 20.0142°, 118 m a.s.l., 06.10.2019, lgt. M. Naumova & T. Trifonov. In open, dry and sunny habitat without vegetation, between newly built houses, under stones.



**Figs 8–11.** *Filistata insidiatrix* left male palp (8, 9) and female vulva (10, 11) different views: 8 = prolateral, 9 = retrolateral, 10 = ventral, 11 = dorsal. Scale bar: 0.3 mm

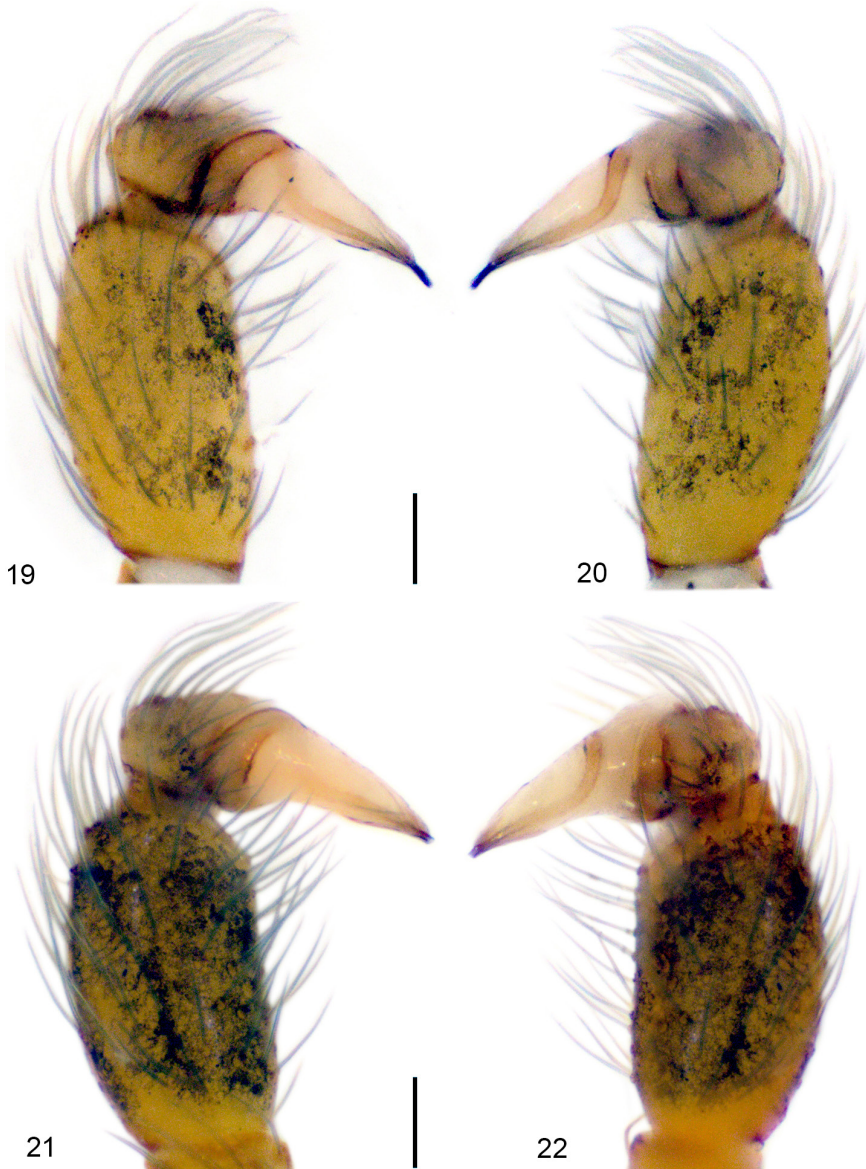


**Figs 12–14.** *Harpactea samuili*, left male palp, different views: 12 = prolateral, 13 = retrolateral, 14 = apical view. Scale bar: 0.2 mm (Figs 12, 13), 0.1 mm (Fig. 14)



**Figs 15–18.** *Loxosceles rufescens*, left male palp (15, 16) and female vulva (17, 18), different views: 15 = prolateral, 16 = retrolateral, 17 = ventral, 18 = dorsal. Scale bar: 0.3 mm

The original range of *L. rufescens* is in the circum-Mediterranean region. However, due to human activity, it is now distributed in Southern Europe and Northern Africa to Iran and introduced in USA, Mexico, Macaronesia,



**Figs 19–22.** *Pritha parva* (two specimens with slight variations in the shape of the tibia and the bulbus), left male palp with normal (19, 20) and with broken tip of embolus (21, 22): 19, 21 = prolateral view, 20, 22 = retrolateral view. Scale bar: 0.1 mm



South Africa, India, China, Japan, Korea, Laos, Thailand, Australia, Hawaii (GERTSCH & ENNIK 1983, HARVEY 1996, MIRSHAMSI *et al.* 2013, CHOMPUPHUANG *et al.* 2016, TRIVEDI & DAL 2019, WSC 2020). For the Balkans it is reported from Croatia (GRBAC *et al.* 2019), European Turkey (YIĞIT *et al.* 2008, DANIŞMAN *et*



**Figs 23–26.** *Pritha vestita*, male. 23 = habitus, dorsal view, 24 = ditto, ventral view. 25 = left male palp, prolateral view, 26 = ditto, retrolateral view. Scale bar: 0.1 mm

al. 2019) and Greece (BOSMANS & CHATZAKI 2005, RUSSELL-SMITH *et al.* 2011, BOSMANS *et al.* 2013), including Kerkyra (Corfu) Island (RUSSELL-SMITH 2014), so finding it in Saranda was not surprising.

## DISCUSSION

Some of our reports could be defined as expected, to the extent that the species are known from adjacent countries and regions, e.g. *Altella lucida*, *Harpactea samuili*, *Filistata insidiatrix* and *Loxosceles rufescens*, but these records are still notable. *Loxosceles rufescens* is the most important record, because it is potentially harmful to humans and is one of the most invasive spiders of the world (NENTWIG *et al.* 2017). *Harpactea samuili* is a Balkan endemic with very limited distribution (LAZAROV 2006, STEFANOVSKA *et al.* 2008) and its ecology is still unknown. *Filistata insidiatrix* has a wide distribution, but almost all records from the Balkans are extremely old (ZONSTEIN & MARUSIK 2019). *Altella lucida* is a species with a wide distribution in Southern, Central and Eastern Europe and Turkey, but is rarely found (NENTWIG *et al.* 2020)

After our reports, the known range of *Eresus moravicus* extends significantly to the east and south-east. We also confirm the cited period of male availability of spring (from late April to June), unlike the adult males of the

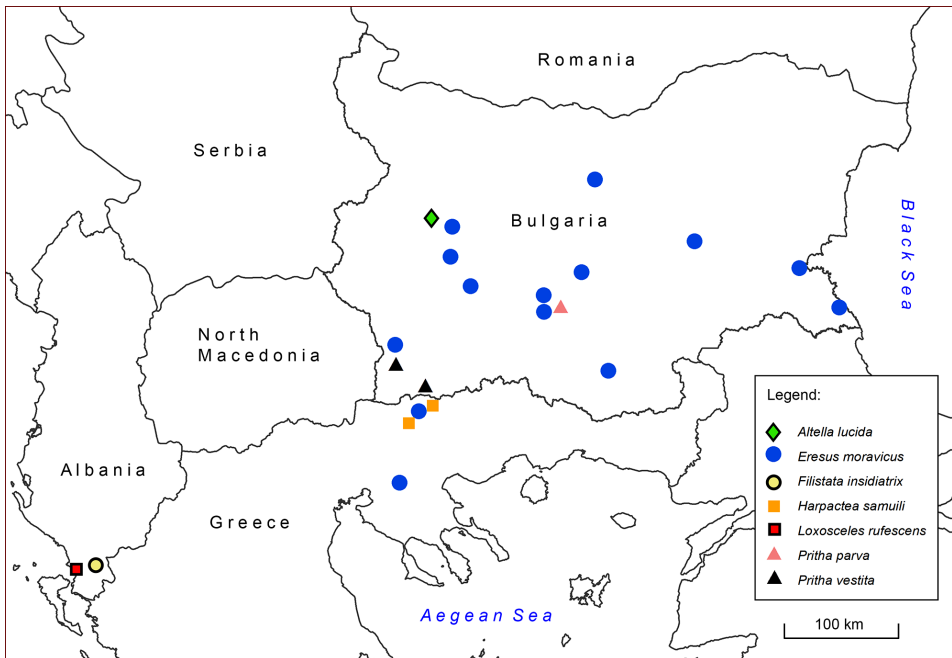


Fig. 27. Map with the localities of the new faunistic records in the Balkan Peninsula

closest congener *E. kollari* Rossi, 1846 which occur in autumn (Kovács *et al.* 2010). Besides, our results suggest that the yellow front of the prosoma of adult females and the overall colouration of males are sufficient to distinguish *E. moravicus* from *E. kollari* (Kovács *et al.* 2015) and can be used for determination *in situ* or from photos, especially if they are dated. The present records of *Pritha parva* and *P. vestita* greatly extend their known range to the east. It is interesting to note that *Pritha parva* seems to be a synanthropic species (LEGITTIMO *et al.* 2017, present paper), while *P. vestita* does not appears to be. The habitats of the type material of *P. vestita* from Corsica island is unknown (LEGITTIMO *et al.* 2017). In Bulgaria, it was found in specific natural habitats of evergreen, hard-leaved shrubs and low woods (pseudomaquis), which is critically endangered (GUSSEV 2015) and is probably suitable for monitoring the condition of this type of plant communities.

As a result of our research, the number of the spiders of Albania, Bulgaria and Greece increased to 571, 1053 and 1183 species, respectively.

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