

A CONTRIBUTION TO THE CHECKLIST OF THE JUMPING SPIDERS  
(ARANEAE: SALTICIDAE) OF ARMENIA

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ABSTRACT

The paper presents an annotated checklist of the Salticidae of Armenia. This study was carried out in 2019-2020 in order to provide an inventory of the Salticidae fauna. Thirteen species are reported for the Armenian fauna for the first time: *Afraflacilla epiblemoides* (Chyzer, 1891); *Aelurillus v-insignitus* (Clerck, 1757); *Asianellus festivus* (C. L. Koch, 1834); *Heliophanus dubius* C. L. Koch, 1835; *Heliophanus kochii* Simon, 1868; *Heliophanus tribulosus* Simon, 1868; *Heliophanus curvidens* (O. Pickard-Cambridge, 1872); *Macaroeris nidicolens* (Walckenaer, 1802); *Pellenes diagonalis* (Simon, 1868); *Pellenes geniculatus* (Simon, 1868); *Pellenes seriatus* (Thorell, 1875); *Pellenes tripunctatus* (Walckenaer, 1802) and *Phlegra fasciata* (Hahn, 1826).

Keywords: Annotated checklist, Araneae, Armenia, New records, Salticidae.

INTRODUCTION

The family Salticidae encompasses over 6193 species world-wide, placed in over 650 genera Metzner (2020). Diagnostic drawings of over 4000 species of Salticidae are recorded in the monograph "Salticidae (Araneae) of the World" (Prószyński, 2016). In addition, the family of Salticidae in the Caucasus regions has been well studied by many authors such as: Dunin (1979), Logunov and Marusik (2000), Logunov and Guseinov (2002), Azarkina (2002a and 2002 b, 2003) and Logunov (2015).

Until recently, the Salticidae fauna of Armenia has been rather poorly studied; data on this group for Armenia were first mentioned in the work of Kulczynski (1895). During the Soviet Union time, there were published a few papers which included data on the Armenian Salticidae fauna (Wesolowska, 1986); some papers important for the study of the Armenian fauna of Salticidae were published by several authors, such as: Logunov (1996, 1998a, 1998b, 1999, 2015), Logunov and Heciak(1996), Rakov and Logunov(1997), Logunov and Marusik(1998), Logunov and Rakov (1998) and Logunov and Guseinov (2002).

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In a comprehensive checklist of the spiders of the territories of the former Soviet Union by Mikhailov (2013), this study has listed some Salticidae species, adding more species in Addendum 2 to the catalogue Mikhailov (1999). Finally, in on-line faunistic database on the spiders of the Caucasus Ecoregion (Otto, 2020), as a result, the salticid fauna of Armenia reached 40 recorded species. This study aims to enrich the spider biodiversity data of Armenia.

### MATERIALS AND METHODS

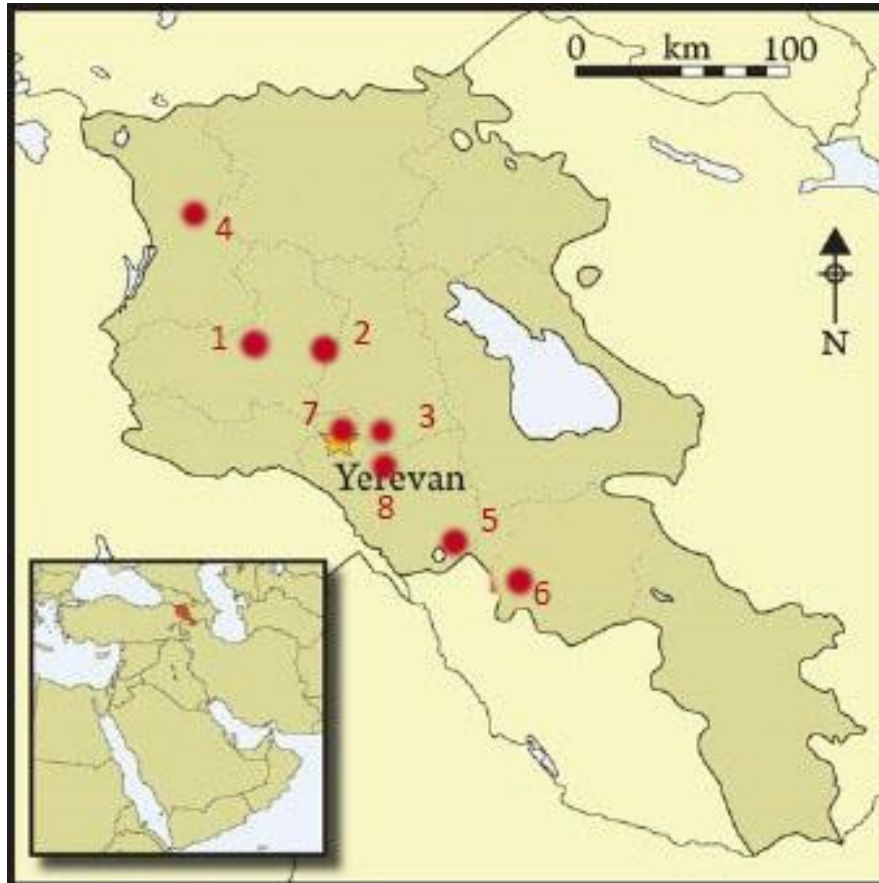
#### Specimens collecting

The specimens were collected during 2019-2020 from various localities of Armenia (Map 1, Tab. 1) by the author; these specimens were kept in 70% Alcohol. Most of the materials were identified by the collectors themselves and some of them by the author of this paper depending on the guidelines of Jones-Walters (1989), Nentwig *et al.* (2020) and World Spider Catalog (2020). The collected materials label data as well as data on the number of specimens and their genders are provided. The specimens are kept in the collection of the Institute of Zoology, Scientific Center of Zoology and Hydroecology, National Academy of Sciences of Armenia.

General distribution is given according to the references listed above, also Otto (2020) and Nentwig (2020). The distribution in Armenia follows the references mentioned in Table (2).

**Table (1):** The Collecting sites.

No.	Site	Coordinate	Altitude m.a.s.l
1	Amberd	40.39172 N, 44.23328 E	2100
2	Ara mount	40.38208 N, 44.58331 E	1500-1800
3	Geghadir	40.153054 N, 44.662765 E	1700
4	Jajur	40.84869 N, 43.96112 E	1738
5	Lanjar	39.82788 N, 44.97229 E	1845
6	Noravank	39.68189 N, 45.23053 E	1442
7	Yerevan	40.18048 N, 44.49591 E	966
8	Zovashen	40.09308 N, 44.64172 E	1150



**Map (1):** Collecting sites; (1) Amberd, (2) Ara mount, (3) Geghadir, (4) Jajur, (5) Lanjar, (6) Noravank, (7) Yerevan, (8) Zovashen.

#### RESULTS AND DISCUSSION

In our investigation, there were 13 species belonging to the family of Salticidae have been registered as a new record to the spider fauna of Armenia (Pl. 1), these species are listed below; also, the summary of checklist of species in Armenia is given in the Table (2).

*Afraflacilla epiblemoides* (Chyzer, 1891)

Material: 1 ♂, Shirak province, Jajur, 05.vi.2020.

Distribution: Central and Eastern Europe.

Habitats in Armenia: Rocky slopes and gorges.

*Aelurillus v-insignitus* (Clerck, 1757)

Materials: 2♂♂, Shirak prov., Jajur, 05.vi.2020.

Distribution: Europe, Turkey, Caucasus, Russia, Kazakhstan, Central Asia and China.

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Habitats in Armenia: Rocky slopes and gorges.

*Asianellus festivus* (C. L. Koch, 1834)

Material: 1 ♀, Kotayk prov., Geghadir, 18.iv.2020. Distribution: Europe, Caucasus, Russia (Europe to Far East), Kazakhstan, China, Korea and Japan.

Habitats in Armenia: Dry, warm and rocky areas and steppes.

*Heliophanus dubius* C. L. Koch, 1835

Materials: 1 ♀, Kotayk prov., Geghadir, 18.iv.2020. 1 ♂, Vayotsdzor prov., Noravank, 13.vi.2020.

Distribution: Europe, Turkey, Caucasus, Russia, Kazakhstan, Uzbekistan and China. Habitats in Armenia: Dry, warm and rocky areas and steppes.

*Heliophanus kochii* Simon, 1868

Materials: 4 ♀♀, Shirak prov., Jajur, 05.vi.2020.

Distribution: Macaronesia, North Africa, Europe, Turkey, Caucasus, Middle East, Kazakhstan. Introduced to Canada, and USA.

Habitats in Armenia: Rocky slopes and gorges.

*Heliophanus tribulosus* Simon, 1868

Materials: 1 ♀, Shirak prov., Jajur, 05.vi.2020; 1 ♀, Yerevan, 30.vii.2020.

Distribution: Europe to Kazakhstan.

Habitats in Armenia: Rocky slopes.

*Heliophanus curvidens* (O. Pickard-Cambridge, 1872)

Material: 1 ♂, Ararat prov., Lanjar, 13.vi.2020.

Distribution: Turkey, Israel to China, and India.

Habitats in Armenia: Shrublands on foothills.

*Macaroeris nidicolens* (Walckenaer, 1802)

Material: 1 ♀, Yerevan, 30.vii.2020.

Distribution: Macaronesia, Europe, North Africa to Turkey, Caucasus, Turkmenistan, Iran.

Introduced to Sri Lanka. Habitats in Armenia: Shrublands on foothills.

*Pellenes diagonalis* (Simon, 1868)

Materials: 1 ♂, Kotayk prov., Zovashen, 16.v.2020; 1 ♀, Aragatsotn prov. Amberd, 30.v.2020.

Distribution: North Macedonia, Greece, Turkey, Israel, Iran and Azerbaijan. Habitats in Armenia: Rocky arid mountain slopes.

*Pellenes geniculatus* (Simon, 1868)

Material: 1 ♂, Kotayk prov., Geghadir, 18.iv.2020.

Distribution: Southern Europe, Africa, Turkey, Ukraine, Caucasus, Middle East, Iran, Kazakhstan, and Central Asia. Habitats in Armenia: Dry, warm and rocky areas and steppes.

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*Pellenes seriatus* (Thorell, 1875)

Materials: 2 ♂♂, Kotayk prov., Zovashen, 16.v.2020.

Distribution: France, Greece, North Macedonia, Bulgaria, Romania, Ukraine, Turkey, Caucasus, Russia, Kazakhstan, Iran, Central Asia.

Habitats in Armenia: Rocky arid mountain slopes.

*Pellenes tripunctatus* (Walckenaer, 1802)

Materials: 2 ♂♂, Shirak prov., Jajur, 05.vi.2020.

Distribution: Europe, Caucasus, Central Asia, and China.

Habitats in Armenia: Rocky slopes, gorges and wetlands.

*Phlegra fasciata* (Hahn, 1826)

Materials: 2 ♀♀, Aragatsotn prov., Ara Mount, 14. iv.2020; 1 ♂, Kotayk prov., Geghadir 18.iv.2020.

Distribution: Europe, Turkey, Caucasus, Russia, Kazakhstan, Central Asia, Iran, Afghanistan, India, China, Mongolia, Korea, and Japan. Habitats in Armenia: Rocky slopes.

**Table (2):** Summary of checklist of Salticid species in Armenia.

No.	Species	Distribution in Armenia	Reference
1	<i>Afraflacilla epiblemoides</i> (Chyzer, 1891) *	Shirak province	The current study
2	<i>Asianellus festivus</i> (C. L. Koch, 1834) *	Kotayk prov.	The current study
3	<i>Asianellus potanini</i> (Schenkel, 1963)	Yerevan	Logunov (2015)
4	<i>Attulus ammophilus</i> (Thorell, 1875)	Gegharkunik prov.	Kulczynski (1895) Logunov (1998a)
5	<i>Attulus dzieduszyckii</i> (L. Koch, 1870)	Armavir prov.	Logunov (2015)
6	<i>Attulus saltator</i> (Simon, 1868)		Mikhailov (1999)
7	<i>Aelurillus v-insignitus</i> (Clerck, 1757) *	Shirak prov.	The current study
8	<i>Ballus chalybeius</i> (Walckenaer, 1802)	Syunik prov.	Logunov and Rakov (1998)
9	<i>Chalcoscirtus tanasevichi</i> Marusik, 1991	Gegharkunik prov.	Logunov and Marusik (1998)
10	<i>Chinattus caucasicus</i> Logunov, 1999	Lori, Syunik and Tavush prov.	Logunov and Guseinov (2002)
11	<i>Dendryphantes rudis</i> (Sundevall, 1833)	Tavush prov.	Kulczynski (1895)
12	<i>Euophrys frontalis</i> (Walckenaer, 1802)	Artsakh	Logunov (2015)
13	<i>Evarcha arcuate</i> (Clerck, 1757)	Armavir and Tavush prov.	Koch (1878) Logunov (2015)
14	<i>Evarcha armeniaca</i> Logunov, 1999	Syunik prov.	Logunov (1998b)
15	<i>Heliophanus auratus</i> C. L. Koch, 1835	Gegharkunik prov.	Rakov <i>et al.</i> (1997) Logunov (2015)

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16	<i>Heliophanus cupreus</i> (Walckenaer, 1802)	Lori, Syunik and Tavush prov.	Logunov and Guseinov (2002)
17	<i>Heliophanu scurvidens</i> (O. P.-Cambridge, 1872) *	Ararat prov.	The current study
18	<i>Heliophanus dubius</i> C. L. Koch, 1835*	Kotayk and Vayotsdзор prov.	The current study
19	<i>Heliophanus equester</i> L. Koch, 1867	Yerevan	Kulczynski (1895)
20	<i>Heliophanus flavipes</i> (Hahn, 1832)	Tavush prov.	Logunov and Guseinov (2002)
21	<i>Heliophanus forcipifer</i> Kulczynski, 1895		Wesolowska (1986)
22	<i>Heliophanus kochii</i> Simon, 1868*	Shirak prov.	The current study
23	<i>Heliophanus lineiventris</i> Simon, 1868	Tavush prov.	Logunov and Guseinov (2002)
24	<i>Heliophanus patagiatus</i> Thorell., 1875	Kotayk prov.	Logunov (2015)
25	<i>Heliophanus tribulosus</i> Simon, 1868*	Yerevan and Shirak prov.	The current study
26	<i>Macaroeris nidicolens</i> (Walckenaer, 1802)*	Yerevan	The current study
27	<i>Menemerus marginatus</i> (Kroneberg, 1875)		Mikhailov (2013)
28	<i>Myrmarachne formicaria</i> (De Geer, 1778)	Tavush prov.	Logunov and Guseinov (2002)
29	<i>Pellenes diagonalis</i> (Simon, 1868) *	Kotayk and Aragatsotn prov.	The current study
30	<i>Pellenes geniculatus</i> (Simon, 1868) *	Kotayk prov.	The current study
31	<i>Pellenes seriatus</i> (Thorell, 1875) *	Kotayk prov.	The current study
32	<i>Pellenes tripunctatus</i> (Walckenaer, 1802) *	Shirak prov.	The current study
33	<i>Philaeus chrysops</i> (Poda, 1761)	Gegharkunik and Tavush prov.	Logunov and Guseinov (2002)
34	<i>Phlegra cinereofasciata</i> Simon, 1868	Gegharkunik prov.	Logunov (1996)
35	<i>Phlegra fasciata</i> (Hahn, 1826)*	Aragatsotn prov. and Kotayk prov.,	The current study
36	<i>Pseudeuophrys erratica</i> (Walckenaer, 1826)	Syunik and Tavush prov.	Logunov and Guseinov (2002)
37	<i>Pseudicius pseudocourtauldi</i> Logunov, 1999	Syunik prov.	Logunov (1998 b)
38	<i>Pseudomogrus albocinctus</i> (Kroneberg,		Mikhailov (2013)

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	1875)		
39	<i>Salticus tricinctus</i> (C. L. Koch, 1846)	Gegharkunik prov.	Logunov (2015)
40	<i>Sittis axdzieduszyckii</i> (L. Koch, 1870)	Armavir prov.	Logunov (2015)
41	<i>Synageles persianus</i> Logunov, 2004	Syunik prov.	Logunov (2015)

(\* New record for Armenia)



*Afraflacilla epiblemoides* (♂)

*Aelurillus v-insignitus* (♂)

*Asianellus festivus* (♀)

*Heliophanus dubius* (♀)



*Heliophanus kochii* (♀)

*Heliophanus tribulosus* (♀)

*Pellenes geniculatus* (♂)

*Pellenes seriatus* (♂)



*Pellenes Tripunctatus* (♂)



*Phlegra fasciata* ♀

**Plate (1):** Some species of Salticids which recorded in the current study.

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LITERATURE CITED

- Azarkina, G. N. 2002 a. *Aelurillus ater* (Kroneberg, 1875) and related species of jumping spiders in the fauna of Middle Asia and the Caucasus (Aranei: Salticidae). *Arthropoda Selecta*, 11: 89-107.
- Azarkina, G. N. 2002 b. New and poorly known species of the genus *Aelurillus* Simon, 1884 from Central Asia, Asia Minor and the eastern Mediterranean (Araneae: Salticidae). *Bulletin of the British Arachnological Society*, 12(6): 249-263.
- Azarkina, G. 2003. New and poorly known Palearctic species of the genus *Phlegra* Simon, 1876 (Araneae, Salticidae). *Revue Arachnology*, 14: 73-108.
- Dunin, P. M. 1979. Materials on the spider fauna (Salticidae) of Azerbaijan [in Russian]. Uchyonye zapiski Azerbaijan. University (Biology), p35-40.
- Jones-Walters L.M. 1989. Keys to the Families of British Spiders. AIDGAP. Shrewsbury: Field Studies Council (FSC), No. 197, 79 pp.
- Kulczyński L. 1895. Araneae a Dre G. Horvath in Bessarabia, ChersonesoTaurico, Transcaucasia et Armenia Russica collectae. *Természtrajzi Füzetek*, 18: 3-38.
- Logunov, D. V. 1996. A review of the genus *Phlegra* Simon, 1876 in the fauna of Russia and adjacent countries (Araneae: Salticidae: Aelurillinae). *Genus*, 7: 533-567.
- Logunov, D. V. 1998a. *Pseudeuophrys* is a valid genus of the jumping spiders (Araneae, Salticidae). *Revue Arachnologique*, 12 (11): 109-128.
- Logunov, D. V. 1998b. Two new jumping spider species from the Caucasus (Aranei: Salticidae). *Arthropoda Selecta*, 7 (4): 301-303.
- Logunov, D. V. 1999. Redefinition of the genus *Habrocestoides* Prószyński, 1992, with establishment of a new genus, *Chinattus* gen n. (Araneae: Salticidae). *Bulletin of the British Arachnological Society*, 11 (4): 139-149.
- Logunov, D. 2015. Taxonomic-faunistic notes on the jumping spiders of the Mediterranean (Aranei: Salticidae). *Arthropoda Selecta*, 24(1): 33-85.
- Logunov, D. V. and Guseinov, E. F. 2002. Faunistic review of the jumping spiders of Azerbaijan (Aranei: Salticidae), with additional faunistic records from neighboring Caucasian countries. *Arthropoda Selecta*, 10 (3): 243-260.
- Logunov, D. V. and Heciak, S. 1996. *Asianellus*, a new genus of the subfamily Aelurillinae (Araneae, Salticidae). *Entomologica Scandinavica*, 27(1): 103-117.



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- Logunov, D. V. and Marusik, Y. M. 1998. A brief review of the genus *Chalcoscirtus* Bertkau, 1880 in the faunas of Central Asia and the Caucasus (Aranei: Salticidae). *Arthropoda Selecta*, 7 (3): 205-226.
- Logunov, D. V. and Marusik, Y. 2000. Miscellaneous notes on Palaearctic Salticidae (Arachnida: Aranei). *Arthropoda Selecta*, 8 (4): 263-292.
- Logunov, D. V. and Rakov, S. Y. 1998. Miscellaneous notes on Middle Asian jumping spiders (Aranei: Salticidae). *Arthropoda Selecta*, 7 (2): 117-144.
- Metzner, H. 2020. Jumping spiders (Arachnida: Araneae: Salticidae) of the world. Accessed 15 October 2020. Online at <https://www.jumping-spiders.com>
- Mikhailov, K. G. 1999. Catalogue of the spiders (Arachnida: Aranei) of the territories of the former Soviet Union. Addendum 2, Zoological Museum MGU, Moscow, 40 pp.
- Mikhailov, K. G. 2013. The spiders (Arachnida: Aranei) of Russia and adjacent countries a non-annotated checklist. *Arthropoda Selecta*, Supplement no.3, KMK Scientific Press Ltd., Moscow, 262 pp.
- Nentwig, W., Blick, T., Bosmans, R., Gloor, D., Hänggi, A. and Kropf, C. 2020. Spiders of Europe. Version 09.2020. Available at: <https://www.araneae.nmbe.ch>.
- Otto, S. 2020. Caucasian spiders. A faunistic database on the spiders of the Caucasus Ecoregion. Available at: <https://caucasus-spiders.info/>
- Prószyński, J. 2016. Monograph of Salticidae (Araneae) of the World 1995-2015. Part II. Global Species Database of Salticidae (Araneae). Version October 30th, 2016. Available at: <http://www.salticidae.pl>.
- Rakov, S. Y. and Logunov, D. V. 1997. A critical review of the genus *Heliophanus* C. L. Koch, 1833, of middle Asia and the Caucasus (Aranei, Salticidae). *Arthropoda Selecta*, 5 (3/4): 67-104.
- Wesolowska, W. 1986. A revision of the genus *Heliophanus*, C. L. Koch, 1833 (Araneae, Salticidae). *Annales Zoologici, Warszawa*, 40: 1-254.
- World Spider Catalog. 2020 Version 21.5. Natural History Museum Bern. Available at: <http://wsc.nmbe.ch>

## مساهمة لاتمام القائمة المرجعية للعناكب القافزة Salticidae في أرمينيا

نوشيك زاريكيان

المركز العلمي لعلم الحيوان و علم البيئة المائية، الأكاديمية الوطنية للعلوم في  
جمهورية أرمينيا، يريفان، أرمينيا

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### الخلاصة

قدمت المقالة الحالية قائمة مرجعية مشروحة للعناكب القافزة في أرمينيا ، إذ أجريت هذه الدراسة في 2019-2020 من أجل اضافة أنواع جديدة على قائمة العناكب القافزة في أرمينيا. إذ سجل خلال هذه الدراسة ثلاثة عشر نوعًا لأول مرة للمجموعة الحيوانية في ارمينيا، و هذه الأنواع هي: *Afraflacilla Aelurillus v-insignitus* ، *epiblemoides* (Chyzer, 1891) *Asianellus festivus* (C. L. Koch, 1834) ، (Clerck, 1757) ، *H. kochii* Simon, ، *Heliophanus dubius* C. L. Koch, 1835، *H. curvidens* (O. Pickard -، *H. tribulosus* Simon, 1868 ، 1868 *Macaroeris nidicolens* (Walckenaer, ، Cambridge, 1872) *P. Pellenes diagonalis* (Simon, 1868) ، 1802) ، *P. P. seriatus* (Thorell, 1875) ، *geniculatus* (Simon, 1868) *Phlegra fasciata* (Hahn, و *tripunctatus* (Walckenaer, 1802) .1826)