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New data on the spider fauna (Aranei) of Volga Region, Russia

Новые данные о фауне пауков (Aranei) Поволжья, Россия

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КЛЮЧЕВЫЕ СЛОВА: Araneae, новые находки, распространение, юг России.

ABSTRACT. The paper presents findings of 31 spider species in 10 families from Astrakhan, Volgograd, and Saratov Oblasts of Russia. *Eratigena agrestis* (Walckenaer, 1802), *Argiope bruennichi* (Scopoli, 1772), *A. lobata* (Pallas, 1772), *Larinioides sclopetarius* (Clerck, 1758), *L. suspicax* (O. Pickard-Cambridge, 1876), *Gnaphosa lucifuga* (Walckenaer, 1802), *G. steppica* Ovtsharenko, Platnick et Song, 1992, *Nomisia aussereri* (L. Koch, 1872), *Sidydrassus shumakovi* (Spassky, 1934), *Allohogna singoriensis* (Laxmann, 1770), *Alopecosa cronebergi* (Thorell, 1875), *A. krynickii* (Thorell, 1875), *A. schmidti* (Hahn, 1835), *A. steppica* Ponomarev, 2007, *A. taeniopus* (Kulczyński, 1895), *Pardosa nebulosa* (Thorell, 1872), *Pholcus ponticus* Thorell, 1875, and *Titanoeca quadriguttata* (Hahn, 1833) are first recorded from Saratov Oblast. *Singa nitidula* C.L. Koch, 1844, *Clubiona pseudoneglecta* Wunderlich, 1994, *Arctosa cinerea* (Fabricius, 1777), *Pardosa nebulosa* (Thorell, 1872), *Phrurolithus festivus* (C.L. Koch, 1835), and *Crustulina sticta* (O. Pickard-Cambridge, 1872) are first recorded from Astrakhan Oblast. The species *A. krynickii* has been found outside the Crimea, in the south part of Saratov Oblast and Volgograd Oblast, for the first time.

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РЕЗЮМЕ. В статье приводятся данные о находках 31 вида пауков из 10 семейств в Астраханской, Волгоградской, Саратовской областях России. *Eratigena agrestis* (Walckenaer, 1802), *Argiope bruennichi* (Scopoli, 1772), *A. lobata* (Pallas, 1772), *Larinioides sclopetarius* (Clerck, 1758), *L. suspicax* (O. Pickard-Cambridge, 1876), *Gnaphosa lucifuga* (Walckenaer, 1802), *G. steppica* Ovtsharenko, Platnick et Song, 1992, *Nomisia aussereri* (L. Koch, 1872), *Sidydrassus shumakovi* (Spassky, 1934), *Allohogna singoriensis* (Laxmann, 1770), *Alopecosa cronebergi* (Thorell, 1875), *A. krynickii* (Thorell, 1875), *A. schmidti* (Hahn, 1835), *A. steppica* Ponomarev, 2007, *A. taeniopus* (Kulczyński, 1895), *Pardosa nebulosa* (Thorell, 1872), *Pholcus ponticus* Thorell, 1875 и *Titanoeca quadriguttata* (Hahn, 1833) впервые выявлены в Саратовской области. В Астраханской области впервые обнаружены *Singa nitidula* C.L. Koch, 1844, *Clubiona pseudoneglecta* Wunderlich, 1994, *Arctosa cinerea* (Fabricius, 1777), *Pardosa nebulosa* (Thorell, 1872), *Phrurolithus festivus* (C.L. Koch, 1835) и *Crustulina sticta* (O. Pickard-Cambridge, 1872). На юге Саратовской области и в Волгоградской области, впервые за пределами Крыма, обнаружен *A. krynickii*.

Introduction

In the south-east part of Russian Plain, the spider fauna of Volga Region (Astrakhan, Volgograd, Saratov Oblasts) has been studied unevenly or, in some cases, insufficiently. Whereas in Astrakhan and Volgograd Oblasts, arachnological studies have been conducted more or less regularly for a considerable period of time [Thorell, 1875; Utochkin, 1971; Ponomarev *et al*., 2008, 2018; Ponomarev, Khnykin, 2013; Kuzmin, 2014; Ponomarev, Alekseev, 2018; etc.], there are still quite few of these in Saratov Oblast [Lukianov, 1897; Kulczyński, 1901; Martynovchenko et al., 2010]. By the beginning of 2023, the following number of spider species had been recorded from the following areas: Astrakhan Oblast — 299; Volgograd Oblast — 319; Saratov Oblast — 111 [Ponomarev, 2022]. How incompletely the spider faunas

of these regions are studied is evident when comparing their species diversity with such regions of south-eastern Russian Plain as Belgorod Oblast, with 410 spider species known by the beginning of 2023, or Rostov Oblast — 592 species [Ponomarev, 2022].

This paper presents the results of short-term faunistic surveys conducted in Astrakhan, Volgograd and Saratov Oblasts in 2024, thereby expanding the current knowledge of biodiversity in Volga Region.

Material and Methods

The present paper is based on small spider collections made by the second author (IT), as well as by A.A. Bolotovsky (AB), O.N. Artaev (OA) and A.S. Sazhnev (AS) of the Papanin Institute for Biology of Inland Waters of the Russian Academy of Sciences (Borok, Yaroslavl Oblast, Russia), and by M.G. Biryukova (MB) from the Astrakhan Biosphere Nature Reserve (Astrakhan, Russia). The material studied was primarily hand-collected in Astrakhan, Volgograd and Saratov Oblasts in May–September 2024. The spider identification has been undertaken by the first author. All the photographs were taken by V.Yu. Shmatko at the Southern Scientific Center of the Russian Academy of Sciences (Rostov-on-Don, Russia) using the equipment based on a C1U4.2 microscope and a Sony Alpha ILCE-6000 camera. The material studied is kept in the personal collection of A.V. Ponomareva (Razdorskaya Vil., Rostov Oblast, Russia).

List of species

AGELENIDAE

Eratigena agrestis (Walckenaer, 1802)

MATERIAL. RUSSIA, Saratov Oblast: 5 ♂♂, Krasnoarmeisk Distr., nr Zolotoe Vil., 50.820306°N / 45.870694°E, gully steppe slopes and chalk cliffs on Volga River banks, 3.09.2024, IT & AS.

COMMENTS. Although the species is widespread in the south-east part of Russian Plain, to date it has not been found in Saratov Oblast [Ponomarev, 2022].

DISTRIBUTION. Europe to Middle Asia. Introduced to USA, Canada [WSC, 2025].

ARANEIDAE

Argiope bruennichi (Scopoli, 1772)

MATERIAL. RUSSIA, Saratov Oblast: 1 ♀, Krasnoarmeisk Distr., nr Zolotoe Vil., 50.820306°N / 45.870694°E, gully steppe slopes and chalk cliffs on Volga River banks, 3.09.2024, IT & AS.

COMMENTS. The species has been repeatedly recorded from Astrakhan and Volgograd Oblasts [Ponomarev, 2022]; yet, it has been reported for Saratov Oblast for the first time.

DISTRIBUTION. Europe, Turkey, Israel, Russia (Europe to the Far East), Caucasus, Iran, Middle Asia to China, Korea, Japan [WSC, 2025].

Argiope lobata (Pallas, 1772)

MATERIAL. RUSSIA, Saratov Oblast: 1 ♀, Krasnoarmeisk Distr., nr Zolotoe Vil., 50.820306°N / 45.870694°E, gully steppe slopes and chalk cliffs on Volga River banks, 3.09.2024, IT & AS. Volgograd Oblast: 2 ♀♀, Dubovka Distr., 0.7 km N of Chelyuskinets Vil., 49.053472°N / 44.653194°E, steppe and gully slopes in Pichuga River valley, 30.08.2024, IT & AS; 1 ♀, Svetlyi Yar Distr., 2 km SE of Svetlyi Yar Vil., 48.443222°N / 44.851528°E, steppe above Volga-Akhtuba floodplain, 31.08.2024, IT & AS.

COMMENTS. The first record from Saratov Oblast. In Volga Region, the species has been known from Astrakhan and Volgograd Oblasts [Ponomarev, 2022].

DISTRIBUTION. Southern Europe to Middle Asia and China, northern Africa, Tanzania, South Africa, the Middle East, Pakistan, India, Myanmar [WSC, 2025].

Larinioides patagiatus (Clerck, 1758)

MATERIAL. RUSSIA, Saratov Oblast: 1 ♂, Krasnoarmeysk Distr., 0.5 km NE of Nizhnyaya Bannovka Vil., 50.736611°N / 45.66°E, steppe and gully slopes on Volga River banks, 29.08.2024, IT & AS; 2 ♂♂, Krasnoarmeisk Distr., nr Zolotoe Vil., 50.820306°N / 45.870694°E, gully steppe slopes and chalk cliffs on Volga River banks, 3.09.2024, IT & AS.

COMMENTS. The only find of the species in Saratov Oblast dates back to the 19th century [Lukianov, 1897].

DISTRIBUTION. North America, Europe, Turkey, Caucasus, Russia (Europe to the Far East), Middle Asia, China, Mongolia, Japan [WSC, 2025].

Larinioides sclopetarius (Clerck, 1758)

MATERIAL. RUSSIA, Saratov Oblast: 2 ♀♀, Krasnoarmeisk Distr., nr Zolotoe Vil., 50.820306°N / 45.870694°E, gully steppe slopes and chalk cliffs on Volga River banks, 3.09.2024, IT & AS.

COMMENTS. In the south-east part of Russian Plain, the species is rare, recorded from Volgograd, Voronezh and Rostov Oblasts [Ponomarev, 2022]. New record to Saratov Oblast.

DISTRIBUTION. Europe, Caucasus, Russia (Europe to Middle Asia), Kazakhstan, China, Korea. Introduced to North America [WSC, 2025].

Larinioides suspicax (O. Pickard-Cambridge, 1876)

MATERIAL. RUSSIA, Saratov Oblast: 1 ♂ 5 ♀♀, Krasnoarmeisk Distr., nr Zolotoe Vil., 50.820306°N / 45.870694°E, gully steppe slopes and chalk cliffs on Volga River banks, 3.09.2024, IT & AS. Astrakhan Oblast: 1♀, Enotaevka Distr., 4.4 km NW of Nikolskoye Vil., 47.789694°N / 46.342167°E, headland at the confluence of Grachevka and Volga Rivers, 11.05.2024, IT, AB & OA.

COMMENTS. *L. suspicax* is widespread in the south-east part of Russian Plain [Ponomarev, 2022: sub *L. folium*], but has not hitherto been recorded from Saratov Oblast.

DISTRIBUTION. Europe, North Africa to Middle Asia [WSC, 2025].

Singa nitidula C.L. Koch, 1844

MATERIAL. RUSSIA. Astrakhan Oblast: 1 ♂, Volodarsky Distr., Astrakhan Biosphere Nature Reserve, Obzhorovsky site, 46.300111°N / 48.974°E, near the cordon, flood meadow, 15.05.2024, IT.

COMMENTS. The first record from Astrakhan Oblast.

DISTRIBUTION. Europe, Turkey, Russia (Europe to the Far East), Caucasus to Middle Asia [WSC, 2025].

CLUBIONIDAE

Clubiona frisia Wunderlich et Schuett, 1995

MATERIAL. RUSSIA. Astrakhan Oblast: 1 ♀, Volodarsk Distr., Astrakhan Biosphere Nature Reserve, Obzhorovsky site, 46.302972°N / 48.975194°E, bank of Obzhorova watercourse, 15.05.2024, IT.

COMMENTS. To date, in Astrakhan Oblast the species has been found only in the vicinity of Cherny Yar Vil. [Mikhailov, 1992: sub *C. similis*].

DISTRIBUTION. Europe to Middle Asia [WSC, 2025].

Clubiona pseudoneglecta Wunderlich, 1994

MATERIAL. RUSSIA. Astrakhan Oblast: 1 ♂, Enotaevka Distr., 4.4 km NW of Nikolskoye Vil., 47.789694°N / 46.342167°E, headland at the confluence of Grachevka and Volga Rivers, 11.05.2024, IT, AB & OA.

COMMENTS. The first record of the species from Astrakhan Oblast. In Volga Region, it was known from Volgograd [Ponomarev, Khnykin, 2013].

DISTRIBUTION. Morocco, Algeria, Europe, Caucasus, Iran [WSC, 2025].

GNAPHOSIDAE

Drassodes lutescens (C.L. Koch, 1839)

MATERIAL. RUSSIA, Saratov Oblast: 1 ♂, Krasnoarmeysk Distr., 0.5 km NE of Nizhnyaya Bannovka Vil., 50.736611°N / 45.66°E, steppe and gully slopes on Volga River banks, 29.08.2024, IT & AS.

COMMENTS. In the south-east part of Russian Plain, the species is rare, in Volga Region it has been known from isolated finds [Ponomarev, 2022].

DISTRIBUTION. Mediterranean, SE Europe to Middle Asia, Iran, Pakistan, Nepal [WSC, 2025].

Drassyllus pusillus (C.L. Koch, 1833)

MATERIAL. RUSSIA. Astrakhan Oblast: 3 ♂♂ 1 ♀, Volodarsky Distr., Astrakhan Biosphere Nature Reserve, Obzhorovsky site, 46.302778°N / 48.979056°E, bank of Obzhorova watercourse, 14.05.2024, IT & MB; 1 ♀, Volodarsky Distr., Astrakhan Biosphere Nature Reserve, Obzhorovsky site, 46.302972°N / 48.975194°E, bank of Obzhorova watercourse, 15.05.2024, IT.

COMMENTS. It is the second record of *D. pusillus* from Astrakhan Biosphere Nature Reserve. Earlier [Ponomarev *et al*., 2018], it was found in the western Damchiksky sector of the reserve.

DISTRIBUTION. Europe, Turkey, Caucasus, Russia (Europe to the Far East), Iran, Middle Asia, China [WSC, 2025].

Gnaphosa lucifuga (Walckenaer, 1802)

MATERIAL. RUSSIA, Saratov Oblast: 1 ♀, Krasnoarmeisk Distr., nr Zolotoe Vil., 50.820306°N / 45.870694°E, gully steppe slopes and chalk cliffs on Volga River banks, 3.09.2024, IT & AS.

COMMENTS. The first record of *G. lucifuga* from Saratov Oblast; also known from Astrakhan and Volgograd Oblasts [Ponomarev, 2022].

DISTRIBUTION. Europe, Turkey, Caucasus, Iran, Russia (Europe to South Siberia), Kazakhstan, China [WSC, 2025].

Gnaphosa steppica Ovtsharenko, Platnick et Song, 1992

MATERIAL. RUSSIA, Saratov Oblast: 1 ♀, Krasnoarmeysk Distr., 0.5 km NE of Nizhnyaya Bannovka Vil., 50.736611°N / 45.66°E, steppe and gully slopes on Volga River banks, 29.08.2024, IT & AS.

COMMENTS. The first record of *G. steppica* from Saratov Oblast; also known from Astrakhan and Volgograd Oblasts [Ponomarev, 2022].

DISTRIBUTION. Turkey, Caucasus, Ukraine, Russia (Europe to South Siberia), Kazakhstan, Iran [WSC, 2025].

Marinarozelotes malkini (Platnick et Murphy, 1984)

MATERIAL. RUSSIA. Astrakhan Oblast: 1 ♀, Volodarsky Distr., Astrakhan Biosphere Nature Reserve, Obzhorovsky site, 46.302778°N / 48.979056°E, bank of Obzhorova watercourse, 14.05.2024, IT & MB.

COMMENTS. The second record of *M. malkini* from the Astrakhan Biosphere Nature Reserve. Earlier [Ponomarev *et al*., 2018: sub *Trachyzelotes m*.], it was found in the western Damchiksky sector of the reserve.

DISTRIBUTION. SE Europe, Turkey, Iran, Kazakhstan [Nentwig *et al*., 2025; WSC, 2025].

Nomisia aussereri (L. Koch, 1872)

MATERIAL. RUSSIA, Saratov Oblast: 1 ♀, Krasnoarmeysk Distr., 0.5 km NE of Nizhnyaya Bannovka Vil., 50.736611°N / 45.66°E, steppe and gully slopes on Volga River banks, 29.08.2024, IT & AS; 1 ♀, Krasnoarmeisk Distr., nr Zolotoe Vil., 50.820306°N / 45.870694°E, gully steppe slopes and chalk cliffs on Volga River banks, 3.09.2024, IT & AS.

COMMENTS. The first record of *N. aussereri* from Saratov Oblast; also known from Astrakhan and Volgograd Oblasts [Ponomarev, 2022].

DISTRIBUTION. Mediterranean, Eastern Europe, Turkey, Middle East, Caucasus, Russia (Europe to South Siberia), Kazakhstan, Middle Asia, China [WSC, 2025].

Sidydrassus shumakovi (Spassky, 1934)

MATERIAL. RUSSIA, Saratov Oblast: 1 ♂, Krasnoarmeysk Distr., 0.5 km NE of Nizhnyaya Bannovka Vil., 50.736611°N / 45.66°E, steppe and gully slopes on Volga River banks, 29.08.2024, IT & AS; 2 ♂♂ 7 ♀♀, Krasnoarmeisk Distr., nr Zolotoe Vil., 50.820306°N / 45.870694°E, gully steppe slopes and chalk cliffs on Volga River banks, 3.09.2024, IT & AS.

COMMENTS. In the south part of European Russia, the species is rare, having been found in Astrakhan and Rostov Oblasts, and Kalmykia [Ponomarev, 2022]; it is its first record from Saratov Oblast.

DISTRIBUTION. Russia (Europe), Azerbaijan, Iran, Kazakhstan [WSC, 2025].

Talanites involutus (O. Pickard-Cambridge, 1885)

MATERIAL. RUSSIA. Astrakhan Oblast: 1 ♀, Volodarsky Distr., Astrakhan Biosphere Nature Reserve, Obzhorovsky site, 46.302778°N / 48.979056°E, bank of Obzhorova watercourse, 14.05.2024, IT & MB; 2 ♂♂ 1♀, Volodarsky Distr., Astrakhan Biosphere Nature Reserve, Obzhorovsky site, 46.302972°N / 48.975194°E, bank of Obzhorova watercourse, 15.05.2024, IT.

COMMENTS. The species is rare; the western boundary of its range runs along the conventional line: Suvorovskaya Vil. (Stavropol Territory) – Lake Manych-Gudilo (Rostov Oblast) – Lake Baskunchak (Astrakhan Oblast) – Dzhanybek Vil. (West Kazakhstan Oblast).

DISTRIBUTION. Southeast of the Russian Plain [Ponomarev, 2022], Georgia, Azerbaijan, Iran, Kazakhstan, Middle Asia, Pakistan or India, China [WSC, 2025].

LYCOSIDAE

Allohogna singoriensis (Laxmann, 1770)
Figs 1–4.

MATERIAL. RUSSIA, Saratov Oblast: 5 ♂♂ 1 ♀, Krasnoarmeisk Distr., nr Zolotoe Vil., 50.820306°N / 45.870694°E, gully steppe slopes and chalk cliffs on Volga River banks, 3.09.2024, IT & AS. Astra-

Figs 1–4. *Allohogna singorirensis* (Laxmann, 1770) from Zolotoe Vil., Saratov Oblast, Russia: 1 — male palp, ventral view; 2 — bulbus, ventral view; 3 — epigyne, ventral view; 4 — vulva, dorsal view (4). Scale bars: 0.5 mm.

Рис. 1–4. *Allohogna singorirensis* (Laxmann, 1770) из с. Золотое, Саратовская область, Россия: 1 — пальпа самца, вид снизу; 2 — бульбус, вид снизу; 3 — эпигина, вид снизу; 4 — вульва, вид сверху. Масштаб: 0,5 мм.

khan Oblast: 1 ♀, Enotaevka Distr., 4.4 km NW of Nikolskoye Vil., 47.789694°N / 46.342167°E, headland at the confluence of Grachevka and Volga Rivers, 11.05.2024, IT, AB & OA; 1 ♀, Volodarsky Distr., Astrakhan Biosphere Nature Reserve, Obzhorovsky site, 46.302972°N / 48.975194°E, bank of Obzhorova watercourse, 15.05.2024, IT.

COMMENTS. The first record of *A. singoriensis* from Saratov Oblast. It has been repeatedly reported from the south part of European Russia [Ponomarev, 2022], but of all these finds, only Spassky [1920: figs 4, 5] illustrated the epigyne and vulva of a female from Rostov Oblast. Here the drawings of the copulatory organs of *A. singoriensis* from Saratov Oblast are presented (Figs 1–4).

DISTRIBUTION. Central to eastern Europe, Turkey, Caucasus, Russia (Europe to South Siberia), Iran, Kazakhstan, Middle Asia, China, Korea [WSC, 2025].

Alopecosa cronebergi (Thorell, 1875)
Figs 5–7.

Tarentula cronebergi Thorell, 1875: 103 (♀).
Tarentula cronebergi: Spassky, 1925: 50, figs 27, 53 (♂♀).
Alopecosa atypica Ponomarev, 2008: 53, figs 12–13 (♂).
Alopecosa cronebergi: Azarkina *et al*., 2016: 340, figs 1–34 (♂♀).
Alopecosa cronebergi: Seropian *et al*., 2023: 259, fig. 67 (♂).

MATERIAL. RUSSIA, Saratov Oblast: 1 ♂ 1 ♀, Krasnoarmeysk Distr., 0.5 km NE of Nizhnyaya Bannovka Vil., 50.736611°N / 45.66°E, steppe and gully slopes on Volga River banks, 29.08.2024, IT & AS. Volgograd Oblast: 1 ♂ 6 ♀♀, Volgograd, vicinity of Sarepta-na-Volga Vil., 48.514194°N / 44.476°E, steppe and gully slopes, 2.09.2024, IT & AS; 1 ♀, Svetlyi Yar Distr., 2 km SE of Svetlyi Yar Vil., 48.443222°N / 44.851528°E, steppe above Volga-Akhtuba floodplain, 31.08.2024, IT & AS; 1 ♀, Krasnoarmeisk Distr., nr Zolotoe Vil., 50.820306°N / 45.870694°E, gully steppe slopes and chalk cliffs on Volga River banks, 3.09.2024, IT & AS.

COMMENTS. While redescribing *A. cronebergi* based on the conformation of the epigyne and male palps, Azarkina *et al*. [2016] assigned this species to the *striatipes* species group, as defined by Lugetti & Tongiorgi [1969]. However, in our opinion, their assignment is not correct. Although the epigynal shape of *A. cronebergi* is indeed similar to that of *A. striatipes* (C.L. Koch, 1837), the shape of the epigynal plate alone cannot warrant a species classification. For example, among species of the *striatipes* group, the shape of the epigynal plate varies considerably, from almost rectangular in *A. striatipes* to triangular in *A. schmidti* (Fig. 9). Yet, the *striatipes* group is characterized by the presence of epigyne pocket, which is absent from *A. cronebergi* (Fig. 6). In addition, the males in the *striatipes* group are characterized by the massive tegular apophysis directed retrolaterad (Fig. 8), whereas that of *A. cronebergi* is thinner, not massive, and directed retrolatero-apicad. It is also important that in the males of *A. cronebergi* the palpal tibia is long, twice as long as its width (see fig. 12 in Ponomarev [2008]), and the cymbium is long and narrow (Fig. 5). Thus, in our opinion, *A. cronebergi* is better not to be assigned to the *striatipes* group, but rather to a separate species group together with *A. parva* Ponomarev, 2024.

It is worth emphasising that the statement by Azarkina *et al*. [2016: 347] that "records of *A. cronebergi* from Rostov Oblast (Spassky 1925) undoubtedly refer to its sibling species, *A. kovblyuki*, which was recorded from both regions by Nadolny *et al*. (2012)", is also incorrect. The drawings provided by Spassky [1925: figs 27, 53] are evidence that Spassky indeed dealt with *A. cronebergi*: viz., the shape of the cymbium, the direction and shape of the tegular apophysis, and the shape of the epigynal plate. In addition, *A. cronebergi* has been repeatedly recorded from Rostov Oblast [Ponomarev, 2022], but it has been found in Saratov Oblast for the first time.

DISTRIBUTION. Russia: steppe and semi-desert zones from the Crimea to Orenburg Oblast, Dagestan; Kazakhstan: the lower reaches of Ural River [Thorell, 1875, Spassky, 1925, 1927; Azarkina *et al*., 2016; Ponomarev, 2008, 2022]; Georgia: Shida Kartli Region [Seropian *et al*., 2023]; Azerbaijan: Lenkoran [Otto, 2022].

Alopecosa krynickii (Thorell, 1875)
Figs 10–17, 26.

Tarentula krynickii Thorell, 1875:104 (♂).
Alopecosa krynickii: Logunov, 2013: 353, figs 1–7 (♂).
Alopecosa krynickii: Nadolny, 2018: 594, figs 1–18 (♂♀).

MATERIAL. RUSSIA, Saratov Oblast: 1 ♂ 1 ♀, Krasnoarmeisk Distr., nr Zolotoe Vil., 50.820306°N / 45.870694°E, gully steppe slopes and chalk cliffs on Volga River banks, 3.09.2024, IT & AS. 1 ♂ *Alopecosa krynickii* (NHRS), Russia, Volgograd Area, Kamyshyn, "Collectio Thorell 235/1470. Ryssl: Kamischin (Croneb. ded.)"(examined, A. Nadolny, pers. comm.).

Figs 5–9. *Alopecosa cronebergi* (Thorell, 1875), topotypes from Sarepta Vil., Volgograd Oblast, Russia (5–7) and *Alopecosa schmidti* (Hahn, 1835) from Zolotoe Vil., Saratov Oblast, Russia (8–9): 5 — male palp, ventro-retrolateral view; 6, 9 — intact epigyne, ventral view; 7 — vulva, dosal view; 8 — male palp, ventral view. Scale bars: 0.25 mm.

Рис. 5–9. *Alopecosa cronebergi* (Thorell, 1875), топотипы из пос. Сарепта, Волгоградская область, Россия (5–7) и *Alopecosa schmidti* (Hahn, 1835) из с. Золотое, Саратовская область, Россия (8–9): 5 — пальпа самца, вид снизу-сбоку; 6, 9 — необработанная эпигина, вид снизу; 7 — вульва, вид сверху; 8 — пальпа самца, вид снизу. Масштаб: 0,25 мм.

COMMENTS. The body colouration (Figs 14–17) and the structure of the copulatory organs (Figs 10–13) undoubtedly indicate that the specimens from our collection belong to the species *A. krynickii*. It is the first record of *A. krynickii* from outside its type locality in the Crimea. Nadolny [2018] speculated that the status of *A. krynickii* as an endemic species of the steppe zone of the Crimea would be temporary and that it could be found in the steppe zone outside the Crimea. The material studied confirms the latter assumption. In addition, Nadolny [2020] points out that the collection of the Swedish Museum of Natural History, Stockholm, Sweden (NHRS) contains 1 male *A. krynickii*, collected in the 19th century outside the Crimean Peninsula. Here is the label data for this specimen: 1 ♂ *Alopecosa krynickii* (NHRS), Russia, Volgograd Area, Kamyshyn, "Collectio Thorell 235/1470. Ryssl: Kamischin (Croneb. ded.)" (examined, A. Nadolny, pers. comm.).

DISTRIBUTION. Russia: the Crimea [Thorell, 1875; Nadolny, 2018], Volgograd and Saratov Oblast [present data].

Alopecosa schmidti (Hahn, 1835)
Figs 8–9.

MATERIAL. RUSSIA, Saratov Oblast: 2♂, 2♀, Krasnoarmeysk Distr., 0.5 km NE of Nizhnyaya Bannovka Vil., 50.736611°N / 45.66°E, steppe and gully slopes on Volga River banks, 29.08.2024, IT & AS; 1♂, 7♀, Krasnoarmeisk Distr., nr Zolotoe Vil., 50.820306°N / 45.870694°E, gully steppe slopes and chalk cliffs on Volga River banks, 3.09.2024, IT & AS. Volgograd Oblast: 1♂, Dubovka Distr., 0.7 km N of Chelyuskinets Vil., 49.053472°N / 44.653194°E, steppe and gully slopes in Pichuga River valley, 30.08.2024, IT & AS.

COMMENTS. The first record from Saratov Oblast. The species has been repeatedly found in the south part of European Russia [Ponomarev, 2022], but none of these records have been illustrated. Therefore, the copulatory organs of *A. schmidti* from Saratov Oblast are illustrated here (Figs 8–9).

DISTRIBUTION. Sweden, Central to eastern and south-eastern Europe, Turkey, Caucasus, Russia (Europe to South Siberia), Kazakhstan, Iran [WSC, 2025].

Alopecosa steppica Ponomarev, 2007
Figs 18–21.

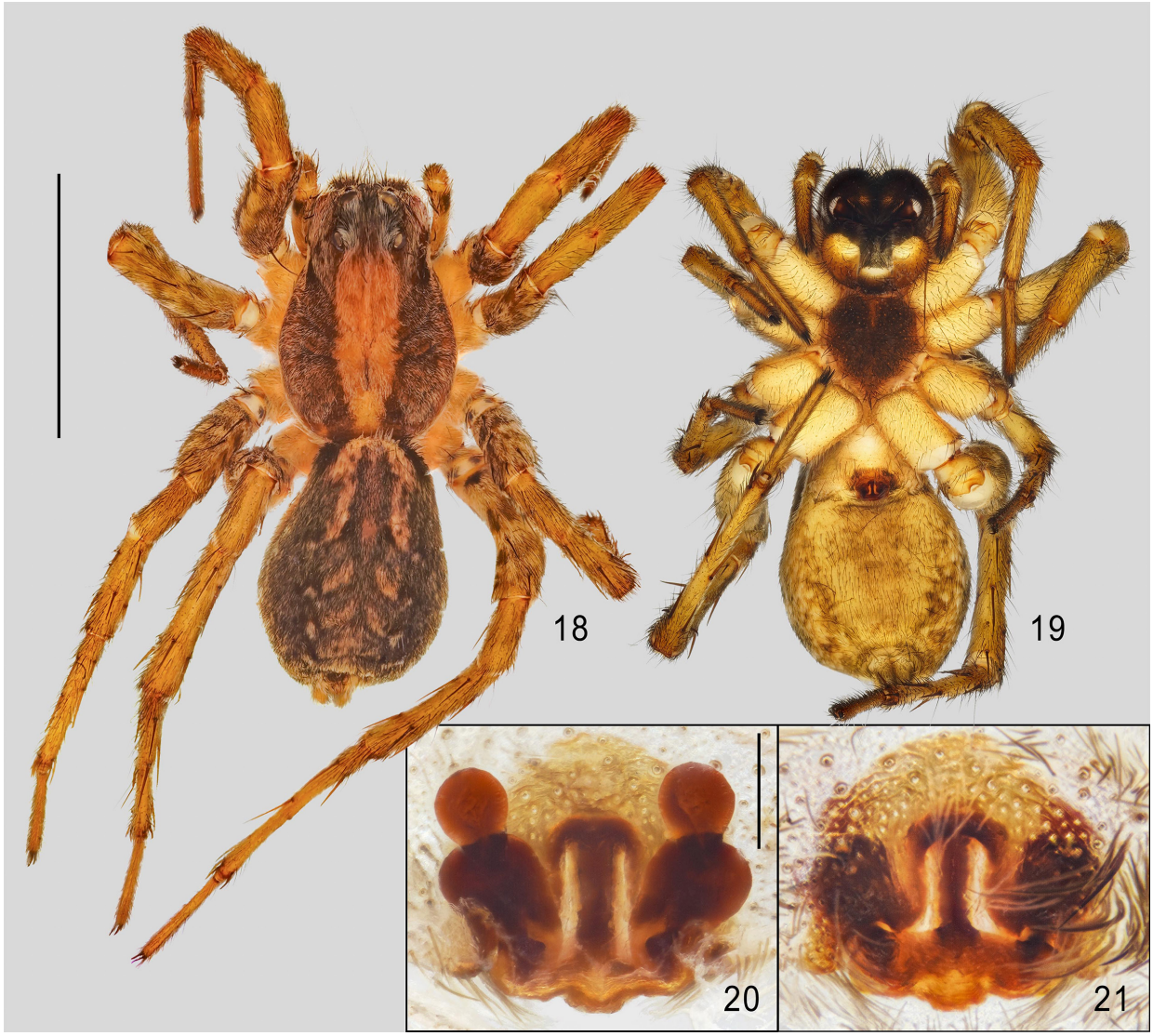
Alopecosa steppica Ponomarev, 2007: 91, figs 14–18 (♂♀).
Alopecosa steppica: Polchaninova *et al*., 2021: 104, figs 19–23.

MATERIAL. RUSSIA, Saratov Oblast: 3 ♀♀, Krasnoarmeysk Distr., 0.5 km NE of Nizhnyaya Bannovka Vil., 50.736611°N / 45.66°E, steppe and gully slopes on Volga River banks, 29.08.2024, IT & AS.

COMMENTS. The first record from Saratov Oblast. The species *A. steppica* is very similar to the south European *A. psammophila* Buchar, 2001 and the widespread Palearctic *A. fabrilis* (Clerck, 1758). From the former, it can be distinguished by the wider and longer septal pedicel reaching the anterior edge of the epigynal fossa (Figs 20–21), compared to the short septal pedicel not reaching the anterior edge of the fossa (cf. Buchar [2001: figs 10–11, 14]). It differs from *A. fabrilis* in the vulval structure: viz., the receptacles of *A. steppica* are situated at the front of the upper edge of the epigynal fossa (Fig. 20), while in *A. fabrilis* the receptacles do not extend beyond the upper edge of the epigynal fossa (cf. Lugetti & Tongiorgi [1969: fig. 1f]).

Figs 10–17. *Alopecosa krynickii* (Thorell, 1875): 10, 11 — male palp, ventral view; 12 — male palp retrolateral view; 13 — intact epigyne, ventral view; 14 — male habitus, dorsal view; 15 — male habitus, ventral view; 16 — female habitus, dorsal view; 17 — female habitus, ventral view. Scale bars: 10–13 — 0.25 mm; 14–17 — 10 mm.

Рис. 10–17. *Alopecosa krynickii* (Thorell, 1875): 10, 11 — пальпа самца, вид снизу; 12 — пальпа самца, вид сбоку-сзади; 13 — необработанная эпигина, вид снизу; 14 — внешний вид самца, вид сверху; 15 — внешний вид самца, вид снизу; 16 — внешний вид самки, вид сверху; 17 — внешний вид самки, вид снизу. Масштаб: 10–13 — 0,25 мм; 14–17 — 10 мм.



Figs 18–21. *Alopecosa steppica* Ponomarev, 2007: 18 — female habitus, dorsal view; 19 — female habitus, ventral view; 20 — vulva, dosal view; 21 — epigyne, ventral view. Scale bars: 18–19 — 5 mm; 20–21 — 0.25 mm.

Рис. 18–21. *Alopecosa steppica* Ponomarev, 2007: 18 — внешний вид самки, вид сверху; 19 — внешний вид самки, вид снизу; 20 — вульва, вид сверху; 21 — эпигина, вид снизу. Масштаб: 18–19 — 5 мм; 20–21 — 0,25 мм.

DISTRIBUTION. Russia: Donetsk People's Republic [Polchaninova, Prokopenko, 2019], Belgorod, Volgograd and Rostov [Ponomarev, 2022] Oblasts; Kazakhstan: Kostanay Oblast [Ponomarev *et al*., 2017].

Alopecosa taeniopus (Kulczyński, 1895)

MATERIAL. RUSSIA, Saratov Oblast: 1 ♂, Krasnoarmeisk Distr., nr Zolotoe Vil., 50.820306°N / 45.870694°E, gully steppe slopes and chalk cliffs on Volga River banks, 3.09.2024, IT & AS.

COMMENTS. It is a common species in the south-east part of Russian Plain [Ponomarev, 2022]; the first record from Saratov Oblast.

DISTRIBUTION. Greece to China [WSC, 2025].

Arctosa cinerea (Fabricius, 1777)

MATERIAL. RUSSIA. Astrakhan Oblast: 2 ♀♀, Enotaevka Distr., 4.4 km NW of Nikolskoye Vil., 47.789694°N / 46.342167°E, headland at the confluence of Grachevka and Volga Rivers, 11.05.2024, IT, AB & OA.

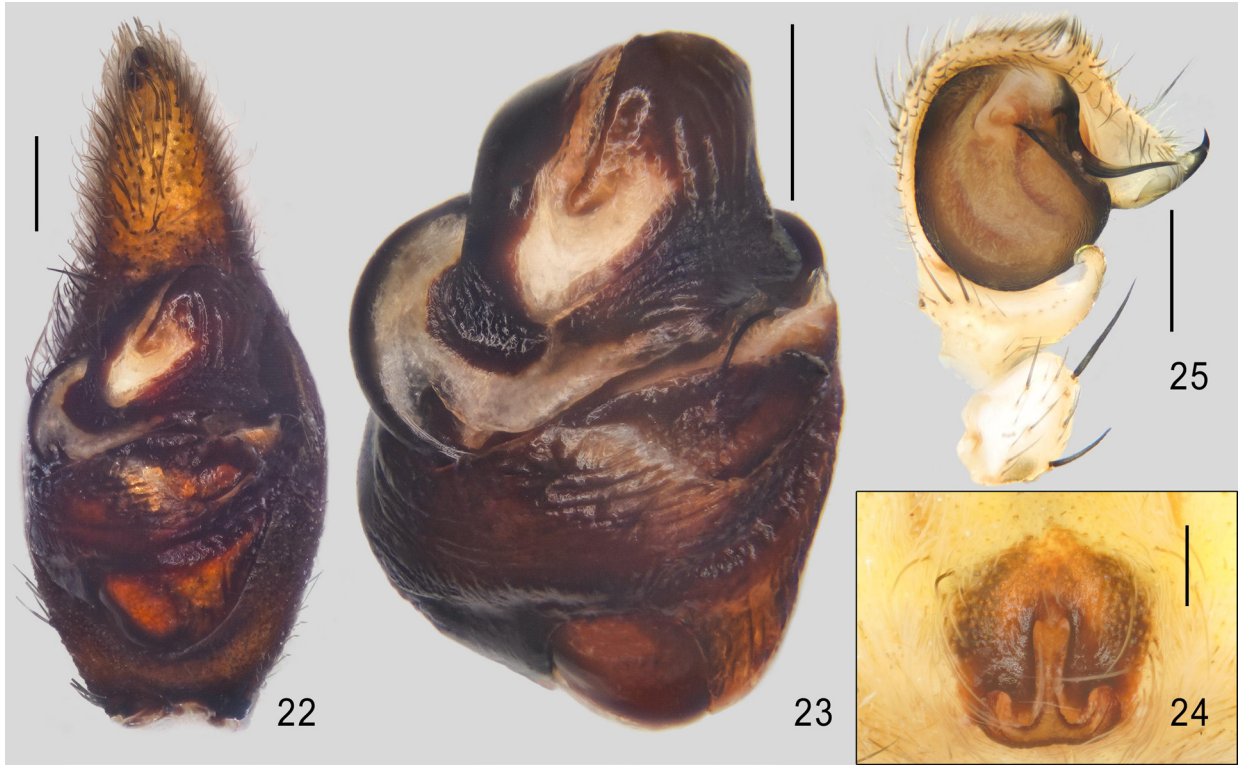
COMMENTS. The first record from Astrakhan Oblast.

DISTRIBUTION. Europe, North Africa, Congo, Caucasus, Russia (Europe to the Far East), the Middle East, Kazakhstan, China, Korea, Japan [WSC, 2022].

Lycosa praegrandis C.L. Koch, 1836

MATERIAL. RUSSIA. Volgograd Oblast: 1 ♂, Svetlyi Yar Distr., 2 км SE of Svetlyi Yar Vil., 48.443222°N / 44.851528°E, steppe above Volga-Akhtuba floodplain, 31.08.2024, IT & AS.

COMMENTS. The depository of the *L. praegrandis* type series is unknown [Zyuzin, Logunov, 2000; WSC, 2025]. Zyuzin & Logunov [2000] justified the synonymy of *Tarentula nordmanni* Thorell, 1875 with *L. praegrandis* based on a comparison of: (1) the holotype of *T. nordmanni* with a female from Greece which they identified as *L. praegrandis*, (2) the drawing in Hadjissarantos [1940: fig. 9], and (3) the venter colouration



Figs 22–25. *Pardosa nebulosa* Thorell, 1872 (22–24) and *Psammitis marmorata* (Thorell, 1875) (25): 22, 25 — male palp, ventral view; 23 — bulbus, ventral view; 24 — intact epigyne, ventral view. Scale bars: 0.25 mm.

Рис. 22–25. *Pardosa nebulosa* Thorell, 1872 (22–24) и *Psammitis marmorata* (Thorell, 1875) (25): 22, 25 — пальпа самца, вид снизу; 23 — бульбус, вид снизу; 24 — необработанная эпигина, вид снизу. Масштаб: 0,25 мм.

shown by C.L. Koch [1839: fig. 414a]. However, it remains unclear how the female from Greece was identified by these authors as *L. praegrandis*, and their arguments for synonymy mentioned above are, in our opinion, insufficient. Yet, Logunov [2023] highlighted the strong vulval variation in *L. praegrandis*, indicating that although the species is fairly widespread, it is poorly illustrated. Therefore, the taxonomic status and scope of *L. praegrandis* are in need of revision, as this name may actually refer to several closely related species.

DISTRIBUTION. Albania, North Macedonia, Bulgaria, Greece, Turkey, Ukraine, Russia (Europe), Caucasus, Kazakhstan, Iran, Middle Asia [WSC, 2025].

Pardosa nebulosa (Thorell, 1872)
Figs 22–24.

MATERIAL. RUSSIA, Saratov Oblast: 1 ♀, Krasnoarmeisk Distr., nr Zolotoe Vil., 50.820306°N / 45.870694°E, gully steppe slopes and chalk cliffs on Volga River banks, 3.09.2024, IT & AS. Astrakhan Oblast: 1 ♂, Enotaevka Distr., 4.4 km NW of Nikolskoye Vil., 47.789694°N / 46.342167°E, headland at the confluence of Grachevka and Volga Rivers, 11.05.2024, IT, AB & OA.

COMMENTS. The first records from Astrakhan and Saratov Oblasts. The species has been repeatedly reported from the south part of European Russia [Ponomarev, 2022], but none of these finds were illustrated. Therefore, the drawings of copulatory organs of both sexes of *P. nebulosa* from Volga Region (Figs 22–24) are provided.

DISTRIBUTION. Italy, Central Europe to Greece and Ukraine, Turkey, Caucasus, Russia (Europe to South Siberia), Kazakhstan, Iran, Middle Asia, China [WSC, 2025].

PHOLCIDAE

Pholcus ponticus Thorell, 1875

MATERIAL. RUSSIA, Saratov Oblast: 1 ♀, Krasnoarmeysk Distr., 0.5 km NE of Nizhnyaya Bannovka Vil., 50.736611°N / 45.66°E, steppe and gully slopes on Volga River banks, 29.08.2024, IT & AS.

COMMENTS. It is a common species in the south part of European Russia [Ponomarev, 2022], with the first record from Saratov Oblast.

DISTRIBUTION. Romania, Bulgaria to China [WSC, 2025].

PHRUROLITIDAE

Phrurolithus festivus (C.L. Koch, 1835)

MATERIAL. RUSSIA. Astrakhan Oblast: 1 ♀, Volodarsky Distr., Astrakhan Biosphere Nature Reserve, Obzhorovsky site, 46.302972°N / 48.975194°E, bank of Obzhorova watercourse, 15.05.2024, IT.

COMMENTS. It is a common species in the south part of European Russia [Ponomarev, 2022], with the first record from Astrakhan Oblast.

DISTRIBUTUON. Europe, Turkey, Caucasus, Russia (Europe to the Far East), Kazakhstan, Iran, China, Korea, Japan. Introduced to Canada [WSC, 2025].

THERIDIIDAE

Crustulina sticta (O. Pickard-Cambridge, 1872)

MATERIAL. RUSSIA. Astrakhan Oblast: 2 ♂♂ 2 ♀♀, Volodarsky Distr., Astrakhan Biosphere Nature Reserve, Obzhorovsky

Fig. 26. Habitat of *Alopecosa krynickii* (Thorell, 1875) in nr of Zolotoe Vil. (Saratov Oblast, Russia)
Рис. 26. Биотоп *Alopecosa krynickii* в окр. с. Золотое (Саратовская область, Россия)

site, 46.302778°N / 48.979056°E, bank of Obzhorova watercourse, 14.05.2024, IT & MB.

COMMENTS. First record from Astrakhan Oblast. The species is rare, and in the south-east part of Russian Plain, it has been recorded from Belgorod and Rostov Oblasts only [Ponomarev, 2022].

DISTRIBUTION. North America, Europe, Turkey, Caucasus, Russia (Europe to the Far East), Kazakhstan, Iran, Middle Asia, China, Korea, Japan [WSC, 2025].

THOMISIDAE

Psammitis marmorata (Thorell, 1875)
Fig. 25.

MATERIAL. RUSSIA. Volgograd Oblast: 1 ♂, Dubovka Distr., 0.7 km N of Chelyuskinets Vil., 49.053472°N / 44.653194°E, steppe and gully slopes in Pichuga River valley, 30.08.2024, IT & AS.

COMMENTS. In the south part of European Russia, the species is distributed locally [Ponomarev, 2022], preferring virgin steppe areas, and its records from there have not been illustrated. Thus, the male palp of the studied specimen from the Volgograd Oblast (Fig. 25) is provided here.

DISTRIBUTION. Central Europe, Balkans, Greece, Ukraine, Russia (Europe), Turkey, Caucasus, Kazakhstan [WSC, 2025].

TITANOECIDAE

Titanoeca quadriguttata (Hahn, 1833)

MATERIAL. RUSSIA, Saratov Oblast: 1 ♀, Krasnoarmeisk Distr., nr Zolotoe Vil., 50.820306°N / 45.870694°E, gully steppe slopes and chalk cliffs on Volga River banks, 3.09.2024, IT & AS.

COMMENTS. The first record from Saratov Oblast; in the south part of European Russia the species has hitherto been found in Volgograd and Rostov Oblasts [Ponomarev, 2022].

DISTRIBUTION. Europe, Russia (Europe to South Siberia), Kazakhstan, China [WSC, 2025].

Discussion

In the present study 31 spider species in 10 families from Astrakhan, Volgograd and Saratov Oblasts have been identified, of which 18 species (*Eratigena agrestis*, *Argiope bruennichi*, *A. lobata*, *Larinioides sclopetarius*, *L. suspicax*, *Gnaphosa lucifuga*, *G. steppica*, *Nomisia aussereri*, *Sidydrassus shumakovi*, *Allohogna singoriensis*, *Alopecosa cronebergi*, *A. krynickii*, *A. schmidti*, *A. steppica*, *A. taeniopus*, *Pardosa nebulosa*, *Pholcus ponticus*, and *Titanoeca quadriguttata*) have been found in Saratov Oblast for the first time. Five species have been first found in Astrakhan Oblast: viz., *Singa nitidula*, *Clubiona pseudoneglecta*, *Arctosa cinerea*, *Pardosa nebulosa*, *Phrurolithus festivus* and *Crustulina sticta*.

Of the species identified, the most interesting find seesm to be that of *Alopecosa krynickii* in Saratov and Volgograd Oblasts; for a photo of its biotope see Fig. 26. The species was described from the Crimea [Thorell, 1875] and was then redescribed based on the holotype [Logunov, 2013] and recently on the 2006–2015 material from the Tarkhankut Peninsula (the Crimea, Chernomorskoe Distr.), with the description of the female [Nadolny, 2018]. The site of *A. krynickii* in Saratov Oblast lies about 1100 km from its localities in the Crimea. Interestingly,

the spider fauna of southern European Russia between the Crimean Peninsula and Saratov Oblast has been relatively well studied [Ponomarev, 2022], but *A. krynickii* has never been recorded from there to date. Thus, the species' range can be confidently characterised as the eastern European steppe disjunctive. Such disjunction of the range of *A. krynickii* is likely to have been associated with the almost complete disappearance of virgin steppes in the south part of European Russia. Finally, given the current data obtained, the spider fauna of Astrakhan Oblast comprises 305 species, and that of Saratov Oblast — 129.

Compliance with ethical standards

CONFLICT OF INTEREST: The authors declare that they have no conflict of interest.

Ethical approval: No ethical issues were raised during our research.

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References

Azarkina G.N., Esyunin S.L., Kuzmin E.A., Marusik Yu.M. 2016. On the synonymy of two wolf spider species of the genus *Alopecosa* (Araneae, Lycosidae) from the steppe zone of Russia // Zootaxa. Vol.4205. No.4. P.339–348. DOI:10.11646/zootaxa.4205.4.2

Buchar J. 2001. Two new species of the genus *Alopecosa* (Araneae: Lycosidae) from south-eastern Europe // Acta Universitatis Carolinae Biologica. Vol.45. P.257–266.

Hadjissarantos H. 1940. [Les Araignées de l'Attique]. 132 pp. [In Greek with French summary]

Kulczyński W. 1901. Arachnoidea // Dritte Asiatishe Forschungsreise des Grafen Eugen Zichy. Budapest: Hornyanszky; Leipzig: Hiersemann. Bd. II. Zoologische Ergebnisse. S. 313–369.

Kuzmin E.A. 2014. [Terrestrial spiders (Aranei) of solonetz biotopes of Bogdo-Baskunchak Nature Reserve]. // Bioraznoobrazie aridnykh ekosistem: sbornik nauchnykh statey. Moscow: Planeta. P.53–62 [in Russian].

Logunov D.V. 2013. Redescription of *Alopecosa krynickii* (Thorell, 1875) (Aranei: Lycosidae) from the Crimea // Arthropoda Selecta. Vol.22. No.4. P.353–356. DOI: 10.15298/arthsel.22.4.06

Logunov D.V. 2023. Further notes on the fossorial wolf spiders of Middle Asia and the Near East (Aranei: Lycosidae) // Arthropoda Selecta. Vol.32. No.4. P.475–512. DOI: 10.15298/arthsel.32.4.12

Lugetti G., Tongiorgi P. 1969. Ricerche sul genere *Alopecosa* Simon (Araneae-Lycosidae) // Atti della Società Toscana di Scienze Naturali. S.B. Vol.76. P.1-100.

Lukianov N. 1897. [A list of spiders (Araneina, Pseudoscorpionina and Phalangina) living [n the South-Western Province and adjacent gouvernements of Russia] // Zapiski Kievskogo obshchestva estestvoispytatelei. T.14. Vyp.2. P.1–19 [in Russian].

Martynovchenko F.A., Tkachev A.Yu., Mikhailov K.G. 2010. [Preliminary study of the spider fauna of the "Dyakovskiy Forest" Nature Park] // Ustoichivost ekosistem: teoriya i praktika. Materialy dokladov Vserossiiskoi nauchnoi konferentsii s mezhdunarodnym uchastiem (Cheboksary, 23 okt. 2010 g.). Cheboksary: OOO "Listok". T.1. P.92–95 [in Russian].

Mikhailov K.G. 1992. The spider genus *Clubiona* Latreille, 1804 (Arachnida Aranei Clubionidae) in the USSR fauna: a critical review with taxonomical remarks // Arthropoda Selecta. Vol.1. No.3. P.3–34.

Nadolny A.A. 2018. Lost and found: *Alopecosa krynickii* (Araneae: Lycosidae) in the Crimea // Zootaxa. Vol.4394. No.4. P.594–599. DOI:10.11646/zootaxa.4394.4.11

Nadolny A.A. 2020. [New data on the species composition of spiders (Arachnida: Aranei) in Tarkhankut Peninsula, Crimea] // Trudy Karadagskoi nauchnoi stantsii im. T.I. Vyazemskogo – prirodnogo zapovednika RAN. Vyp.3(15). P.29–60 [in Russian].

Nentwig W., Blick T., Bosmans R., Hänggi A., Kropf C. 2025. Spinnen Europas. Version 01.2025. Available at: https://www. araneae. nmbe.ch (accessed 1 March 2025). DOI: 10.24436/1

Otto S. 2022. Caucasian Spiders. A faunistic database on the spiders of the Caucasus. Version 02.2022. Available at: https://caucasus-spiders. info/ (accessed 1 March 2025).

Polchaninova N., Gnelitsa V., Terekhova V., Iosypchuk A. 2021. New and rare spider species (Arachnida, Araneae) from Ukraine // Zoodiversity. Vol.55. No.2. P.95–112. DOI: 10.15407/zoo2021.02.095

Polchaninova N., Prokopenko E. 2019. An updated checklist of spiders (Arachnida: Araneae) of Left-Bank Ukraine // Arachnologische Mitteilungen. Bd.57. P.60–64, App

Ponomarev A.V. 2007. [New taxa of spiders (Aranei) from the south of Russia and western Kazakhstan] // Caucasian Entomological Bulletin. Vol.3. No.2. P.87–95 [in Russian]. DOI: 10.23885/1814-3326-2007-3-2-87-95

Ponomarev A.V. 2008. [Additions to the fauna of spiders (Aranei) of the from south of Russia and western Kazakhstan: new taxa and finds] // Caucasian Entomological Bulletin. Vol.4. No.1. P.49–61 [in Russian]. DOI: 10.23885/1814-3326-2008-4-1-49-61

Ponomarev A.V. 2022. [Spiders (Arachnida: Araneae) of the southeast part of Russian Plain: catalogue, the faunal specific features]. Rostov-on-Don: Yuzhnyi nauchnyi tsentr RAN. 640 pp. [in Russian].

Ponomarev A.V., Alekseev S.K. 2018. [Spring aspect in the ground spider fauna (Aranei) of the Bogdinsko-Baskunchak Nature Reserve] // Nauka yugha Rossii. Vol.14. No.3. P.101–111 [in Russian].

Ponomarev A.V., Bastaev V.V., Dubovikoff D A., Shmatko V.Yu. 2018. On a small collection of spiders (Aranei) from the Astrakhan Reserve (Russia) // Arthropoda Selecta. Vol.27. No.3. P.244-256. DOI: 10.15298/arthsel.27.3.09

Ponomarev A.V., Belosludtsev E.A., Dvadnenko K.V. 2008. [Spiders (Aranei) of the Lower Volga Region (Astrakhan and Volgograd areas of Russia) with the description of new taxa] // Caucasian Entomological Bulletin. Vol.4. No.2. P.163–185 [in Russian]. DOI: 10.23885/1814-3326-2008-4-2-163-185

Ponomarev A.V., Bragina T.M., Shmatko V.Yu. 2017. [New data on spiders (Aranei) of the Naurzum State Natural Reserve (Kostanay Region, Kazakhstan)] // Caucasian Entomological Bulletin. Vol.13. No.1. P.3–10 [in Russian]. DOI:10.23885/1814-3326-2017-13-1-3-10

Ponomarev A.V., Khnykin A.S. 2013. [Spiders (Aranei) of Volgograd Sity and its environs] // Yugh Rossii: ekologiya, razvitie. Vol. 8. No.4. P.109–136 [in Russian]. DOI: 10.18470/1992-1098-2013-4-109-136

Seropian A., Bulbulashvili N., Otto S., Krammer H.-J., Kachlishvili N., Datunashvili A. 2023. Picking pearls from the Silk Road: insights into the spider (Arachnida, Araneae) diversity in Georgia from the Caucasus barcode of life project. Part II // Caucasiana. Vol.2. P.231–297, Suppl. DOI:10.3897/caucasiana.2.e110536

Spassky S.A. 1920. [Spiders of the Don Area. Biological essays. Tarantula, agelena, argiopa]. Novocherkassk: Cherkasskii Okruzhnoi Zemelnyi Otdel RSFSR. 54pp.+5 tabl. [In Russian]

Spassky S.A. 1925. [An identification book of spiders of Don area]. Novocherkassk: Znanie Press. 62 pp. [In Russian]

Spassky S.A. 1927. [Materials to the spider fauna of the Tauric Gouvernement] // Izvestiya Donskogo instituta selskogo khozyaistva I melioratsii. T.7. P.66–80 [in Russian].

Thorell T. 1875. Verzeichniss südrussischer Spinnen // Horae Societatis Entomologicae Rossicae. T.11. P.39–122.

Utochkin A.S. 1971. [To the spider fauna of the Astrakhan Reserve] // Voprosy arahknoentomologii. Uchenye zapiski Permskogo universiteta. No.249. P.154–157 [in Russian].

World Spider Catalog. 2025. Version 26. Available at: http://wsc.nmbe.ch (accessed 1 March 2025). DOI: 10.24436/2

Zyuzin A.A., Logunov D.V. 2000. New and little-known species of the Lycosidae from Azerbaihan, the Caucasus (Araneae, Lycosidae) // Bulletin of the British Arachnological Society. Vol.11. Pt.8. P.305–319.

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