New data on the wolf spiders of Iran (Arachnida: Aranei: Lycosidae), with a description of two new species

Новые данные по паукам-волкам Ирана (Arachnida: Aranei: Lycosidae), с описанием двух новых видов

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KEY WORDS: Araneae, Iran, Middle East, new records, taxonomy.

ABSTRACT: New taxonomic and faunistic data on 25 species in 13 genera of Lycosidae from Iran are provided. Two new species Alopecosa pekari sp.n. (♂) and Trochosa marusiki sp.n. (♂) are diagnosed and described from West Azerbaijan Province. The genus Draposa Kronestedt, 2010 and the species Draposa oakleyi (Gravely, 1924), Evippa eltonica Dunin, 1994, Karakumosa turanica Logunov et Ponomarev, 2020 and K. zyuzini Logunov et Ponomarev, 2020 are recorded from Iran for the first time. Thirteen new provincial records are also provided. The known lycosid fauna of Iran contains now 81 species.

Introduction

The cosmopolitan family Lycosidae Sundevall, 1833 (wolf spiders) is one of the most diverse groups of spiders accounting for 2441 described species in 126 genera [World Spider Catalog, 2022]. According to the previous taxonomic studies, only 75 lycosid species have been reported from Iran [Zamani et al., 2022; Shafaie et al., unpublished]. The number of wolf spiders for geographically adjacent to Iran countries is 87 in Turkey, 78 in Azerbaijan, and 27 in Israel [Otto, 2020; Danışman et al., 2021; Zonstein, Marusik, 2013]. In this research, we have studied the wolf spiders based on both museum and newly collected material. Two new species, Alopecosa pekari sp.n. (♂) and Trochosa marusiki sp.n. (♂), are described; in addition, one genus and four species are reported from Iran for the first time, and 13 new provincial records are given.

Material and Methods

The material treated here were collected from different provinces of Iran (Map 1). All the studied specimens have been deposited in the Zoological Museum of the Ferdowsi University of Mashhad, Iran (ZMFUM). Descriptions were made from specimens preserved in 80% ethanol. Specimens were photographed using an Olympus DP–71 camera attached to an Olympus SZH10 stereomicroscope at the ZMFUM. Compound focus images were montaged using the Helicon Focus software. Length of leg segments is measured on the dorsal side: total length (femur + patella + tibia +
Map 1. Collecting localities for the studied species of Lycosidae: (1) Alopecosa aculeata, A. albofasciata, Alopecosa pekari sp.n., Pardosa italic, P. pontica, P. proxima, Trochosa hispanica, Trochosa marusiki sp.n., Xerolycosa miniata; (2) Hogna effer; (3) Alopecosa farinosa; (4) Pardosa aenigmatique; (5) Hogna radiata; (6) Alopecosa albofasciata, Arctosa leoparudis, Pirata piraticus, Trochosa ruricola; (7) Bogdocosa kronebergi, Evippa eltonica, Pirata piraticus, Trochosa hispanica; (8) Alopecosa cursor, Arctosa leoparudis, Bogdocosa kronebergi, Draposa oakleyi, Evippa eltonica, Lycosa praegrandis, Trochosa hispanica, Wadicosa commoventa; (9) Hogna effer, Karakumosa zyuzini; (10) Draposa oakleyi, Evippa fortis, Hogna effer, Hogna radiata; (11) Karakumosa turanica.

Карта 1. Точки находок изученных видов Lycosidae.

**Results**

**Family Lycosidae Sundevall, 1833**

*Alopecosa aculeata* (Clerck, 1757)

**MATERIAL.** West Azerbaijan Prov.: 4 ♀♂, 1 imm., Urmia City, Sero Rd. (37°38′N, 44°59′E), 1350 m, 12.05.2019, S. Shafaie.

**DISTRIBUTION.** North America, Europe, Turkey, the Caucasus, Russia (European part to the Far East), Iran, Central Asia, China, Japan [World Spider Catalog, 2022].

**RECORDS IN IRAN.** This is the first record of this species from West Azerbaijan Province. The species was previously known from Alborz and Markazi Provinces [Zamani et al., 2022].

*Alopecosa albofasciata* (Brullé, 1832)

**MATERIAL.** Golestan Prov.: 2 ♀♂, Kordkuy City, Yasaqi Vil. (36°49′N, 54°13′E), 50 m, 6.05.2011, R. Kashefi. West Azerbaijan Prov.: 11 ♀♂, 16 ♂♂, 5 imm., Urmia City, Sero Rd. (37°38′N, 44°59′E), 1350 m, 12.05.2019, S. Shafaie & D. Ahmadi.

**DISTRIBUTION.** The Mediterranean to Central Asia [World Spider Catalog, 2022].

**RECORDS IN IRAN.** This is the first record of this species from West Azerbaijan. *A. albofasciata* was formerly known from Golestan, Isfahan, Kurdistan, Tehran and Zanjan Provinces [Zamani et al., 2022].

metatarsus + tarsus). All measurements are given in millimeters.

In the Material given below the name of the country (Iran) is omitted. The terminology follows Marusik et al. [2018], Otto & Japoshvili [2018] and Marusik & Nadolny [2020]. The abbreviations used in the text and figure legends: At — anterior edge of tegular apophysis; d — dorsal; E — embolus; Et — embolic tip; Fe — femur; Mb — median band; Mt — metatarsus; Or and Ov — retrolateral and ventral outgrowths of tegular apophysis; p — prolateral; r — retrolateral; Se — symembolus; Ss — short spine-like setae on the venter of abdomen; Sr — subtegulum; Ta — tegular apophysis; Ti — tibia; Tt — prolateral tip of tegulum; v — ventral.

**Results**

**Family Lycosidae Sundevall, 1833**

*Alopecosa aculeata* (Clerck, 1757)
Figs 1–11. Alopecosa pekari sp.n., holotype male. 1 — body, dorsal view; 2 — same, ventral view; 3 — abdomen, ventral view (arrows indicate short spine-like setae); 4 — embolus, anterior view; 5 — palp, prolateral view; 6 — same, ventral view; 7 — same, retrolateral view; 8 — bulb, prolateral view; 9 — same, ventral view; 10 — same, retrolateral view; 11 — same, anterior view. Abbreviations: At — anterior edge of tegular apophysis; Et — embolic tip; Or, Ov — retrolateral and ventral outgrowths of tegular apophysis; St — short spine-like setae on the venter; St — subtegulum; Tt — prolateral tip of tegulum. Scale bars: 1 mm (1–3), 0.1 mm (4–11).

Рис. 1–11. Alopecosa pekari sp.n., голотип-самец. 1 — тело, вид сверху; 2 — то же, вид снизу; 3 — брюшко, вид снизу (стрелки указывают на короткие, шипикообразные щетинки); 4 — эмболус, вид спереди; 5 — пальпа, вид спереди-сбоку; 6 — то же, вид снизу; 7 — то же, вид сзади-сбоку; 8 — бульбус, вид спереди-сбоку; 9 — то же, вид снизу; 10 — то же, вид сбоку-задне; 11 — тоже, вид спереди. Сокращения: At — передний край тегулярного отростка; Et — вершина эмболуса; Or, Ov — ретролатеральный и вентральный выросты тегулярного отростка; St — короткие, шипикообразные щетинки на вентральной стороне брюшка; St — субтегулум; Tt — пролатеральная вершина тегулума. Масштаб: 1 мм (1–3), 0.1 мм (4–11).
Alopecosa cursor (Hahn, 1831)

**MATERIAL.** Razavi Khorasan Prov.: 1 ♀, Mashhad City, Kuhrang Park (36°16′N, 59°33′E), 970 m, 16.03.2013, O. Mirshamsi; 1 ♂, Vicinity of Mashhad City, 9.07.1995, O. Mirshamsi; 1 ♂, Mashhad City, 9.05.2013, S. Saneii.

**DISTRIBUTION.** Europe, Turkey, the Caucasus, Russia (European part to South Siberia), Iran, Central Asia, China [World Spider Catalog, 2022].

Alopecosa farinosa (Herman, 1879)

**MATERIAL.** Ardabil Prov.: 1 ♂, Parsa Abad City (39°38′N, 47°52′E), 32 m, 30.07.2012, Z. Mirshamsi.

**DISTRIBUTION.** Europe, Turkey, the Caucasus, Russia (European part to the Far East), Kazakhstan, Iran [World Spider Catalog, 2022].

**RECORDS IN IRAN.** This is the first record of this species from Ardabil Province. The species was already known only from Mazandaran Province [Zamani et al., 2022].

Alopecosa pekari sp.n.

Figs 1–11, Map 1

**TYPE.** Holotype ♂, West Azerbaijan Prov.: Urmia City, Qotlu Vil. (37°30′N, 45°08′E), 1308 m, 2.04.2021, S. Shafaie. Paratypes: 2 ♂♂♂, together with the holotype.

**ETYMOLOGY.** The specific epithet is given in honour of our friend, the eminent Chinese arachnologist, Stano Pekár (Brno, Czech Republic) on the occasion of his 52nd birthday.

**DIAGNOSIS.** In having many short and spine-like setae on the ventrum and a discrete prolateral tip of the tegulum (Tv) (Figs 3, 6, 9), the males of A. pekari sp.n. are most similar to A. pentheri (Nosek, 1905). They can be easily distinguished by the following characters: (1) a low curvature on the anterior edge of the tegular apophysis (At) (Fig. 9; high in A. pentheri [Marusik et al., 2018: figs 2B, 3C]); (2) a smaller tegular apophysis width/height length ratio (Fig. 9; larger in A. pentheri [Marusik et al., 2018: fig. 3C]); (3) the median part of the embolus twice as wide as its tip (Et) (Fig. 4; five times wider in A. pentheri [Marusik et al., 2018: fig. 5L]); and (4) darker colouration of carapace, sternum, abdomen, spinnerets, pedipalp and legs on both sides (Figs 1–3; visibly lighter in A. pentheri [Marusik et al., 2018: figs 1F, 1G, 1H, 1J]).

**DESCRIPTION.** Male. Total length 6.3, carapace 4.06 long, 3.08 wide. Carapace black with dark brown longitudinal band (Fig. 1). Chelicerae, sternum and mouth parts black. Abdomen dorsally black with a longitudinal, oval mark which is dark brown anteriorly and grey posteriorly (Fig. 1). Ventrally abdomen black with a few light brown spots situated laterally and short, black spine-like setae (Figs 2, 3). Spinnerets black. Length of leg segments: I 9.60 (2.66 + 1.40 + 2.24 + 1.96 + 1.40); II 10.56 (2.80 + 1.40 + 3.08 + 1.82 + 1.26); III 9.94 (2.38 + 1.26 + 2.80 + 2.10 + 1.40); IV 13.16 (3.22 + 1.40 + 3.64 + 3.22 + 1.68). Coxae and tibiae I–IV black; femur and patella of all legs dark brown with longitudinal black annulations; metatarsus and tarsi I–IV brown (Figs 1–2). Leg I spineation: Fe d1-1-1, p1, r1-1; Ti p1-1, r1-1, v2-2-2a; Mt p1-1-1a, r1-1a, v2-2-3a. Length of palp segments 4.20 (1.06 + 0.56 + 0.70 + 1.26). Palp as in Figs 2A–H: sperm duct not smoothly rounded and almost straight above subtegulum (Figs 6, 9); prolateral tip of tegulum (Tv) not hidden by embolus (Figs 6, 9); terminal part of tegular apophysis (At) forms a round arch-shaped, both ventral (Ov) and retrolateral (Or) outgrowths of tegular apophysis closely spaced (in ventral view), the length of both outgrowths almost equal in anterior view, connected by a smooth, rounded lamella (Figs 9, 11); embolus relatively short (Fig. 11).

**FEMALE.** Unknown. Known only from the type locality (Map 1).

Arctosa leopards (Sundevall, 1833)

**MATERIAL.** Razavi Khorasan Prov.: 2 ♀♀, Mashhad City, Bazeh Hur Vil. (35°45′N, 59°22′E), 1718 m, 7.06.2012, S. Saneii; 1 ♂, 1 ♀, Torbat-e Jam City, Yaqutin-e Jadid Vil. (35°16′N, 60°39′E), 906 m, 16.07.2013, B. Jannesar. Golestan Prov.: 1 ♀, Gorgan City, Karimabad Vil. (36°52′N, 54°24′E), 123 m, 2.09.2010, R. Kashefi.

**DISTRIBUTION.** Europe, Turkey, the Caucasus, Russia (European part to South Siberia), Iran, Central Asia [World Spider Catalog, 2022].

Bogdocosma kronchebergi (Andreeva, 1976)

**MATERIAL.** Razavi Khorasan Prov.: 2 ♀♀, 1 ♂, Mashhad City, Buzak-e Heydariyeh City (35°16′N, 59°13′E), 1450 m, 27.08.2012, O. Mirshamsi; 2 imm., Chenaran County, Dowlatabad Vil. (36°26′N, 59°16′E), 1540 m, 15.09.2012, B. Niknagham (ZMFUM); 1 ♀, 1 imm., Kakakh City (34°08′N, 58°38′E), 1635 m, 4.07.1997, O. Mirshamsi. North Khorasan Prov.: 3 ♀♀, 1 ♂, Sarakhs City, Chenar Sukhteh Vil. (36°24′N, 60°14′E), 1102 m, 21.05.2010, O. Mirshamsi; 1 ♀, Esfarayen City, Baba Ghodrat Holy Shrine (37°04′N, 57°30′E), 1260 m, 13.06.2010, O. Mirshamsi.

**DISTRIBUTION.** The Caucasus, Central Asia, Iran, Kazakhstan, Uzbekistan, Tajikistan, China [World Spider Catalog, 2022].

Draposa oakleyi (Gravely, 1924)

Figs 12–20.

**MATERIAL.** Razavi Khorasan Prov.: 4 imm., Mashhad City, Buzak-e Heydariyeh City (35°16′N, 59°22′E), 1718 m, 7.06.2013, S. Saneii. Kerman Prov.: 1 ♀, 3 imm., Jiroft City (28°40′N, 57°44′E), 720 m, 24.04.2013, coll.? **DISTRIBUTION.** The UAE, Pakistan, India, Bhutan, Bangladesh, Iran [World Spider Catalog, 2022].

**RECORDS IN IRAN.** Due to a strong similarities between Draposa and Pardosa, it is hardly surprising that telling apart these groups much confusion. This is the first record of this species from Iran, lying at the northernmost limit of its range [World Spider Catalog, 2022].

Evippa eltonica Dunin, 1994

Figs 21–29.

**MATERIAL.** Razavi Khorasan Prov.: 1 ♂, Torqabeh and Shandiz County, Moghan Vil. (36°08′N, 59°22′E), 2910 m, 29.06.2015. North Khorasan Prov.: 5 ♀♀, 4 ♂♂, Faruj County, Estarkhi Vil. (36°35′N, 58°08′E), 1829 m, 23.04.2010, E. Jamili. **DISTRIBUTION.** Russia (European part), Kazakhstan, Iran [World Spider Catalog, 2022].

**RECORDS IN IRAN.** This is the first record of this species from Iran, lying at the southernmost limit of its range [World Spider Catalog, 2022].

Evippa fortis Roewer, 1955

**MATERIAL.** Kerman Prov.: 2 ♀♀, Jiroft City (28°40′N, 57°44′E), 720 m, 2.05.2012, O. Mirshamsi.
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**DISTRIBUTION.** Iran, The UAE [World Spider Catalog, 2022].

*Hogna effera* (O. Pickard-Cambridge, 1872)

**MATERIAL.** South Khorasan Prov.: 1 ♀, Qaen City (33°43'N, 59°11'E), 1447 m, 2.04.2013, F. Abedi. Kerman Prov.: 1 ♀, Baft City (28°54'N, 56°33'E), 2280 m, 10.04.2014, F. Nazari. East Azerbaijan Prov.: 1 ♂, 30 km E of Jolfa City (38°56'N, 45°37'E), 710 m, 10.09.2015, coll.? 

**DISTRIBUTION.** Greece (Crete), Cyprus, Turkey, Egypt, Israel, Lebanon, Syria, Yemen (Sokotra), Saudi Arabia, The UAE, Iraq, Iran [World Spider Catalog, 2022].

**RECORDS IN IRAN.** This is the first record of this species from South Khorasan Province [Zamani et al., 2022].

*Hogna radiata* (Latreille, 1817)

**MATERIAL.** Kordestan Prov.: 1 ♀, Sanandaj City, Abidar Mt. (35°18'N, 46°58'E), 710 m, 20.07.2013, Mohammadi. Kerman Prov.: 2 ♂♂, Zarand City (37°48'N, 56°33'E), 1664 m, 15.05.2014, F. Nazari.
Figs 21–29. *Evippa eltonica* Dunin, 1994, male. 21 — body, dorsal view; 22 — same, ventral view; 23 — palp, prolateral view; 24 — same, ventral view; 25 — same, retrolateral view; 26 — bulb, prolateral view; 27 — same, ventral view; 28 — same, retrolateral view; 29 — same, anterior view. Scale bars: 1 mm (21–22), 0.1 mm (23–29).

Рис. 21–29. *Evippa eltonica* Dunin, 1994, самец. 21 — тело, вид сверху; 22 — то же, вид снизу; 23 — пальпа, вид спереди-сбоку; 24 — то же, вид снизу; 25 — то же, вид сзади-сбоку; 26 — бульбус, вид спереди-сбоку; 27 — то же, вид снизу; 28 — то же, вид сзади-сбоку; 29 — то же, вид спереди. Масштаб: 1 мм (21–22), 0,1 мм (23–29).
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Figs 30–35. *Karakumosa turanica* Logunov et Ponomarev, 2020, female. 30 — body, dorsal view; 31 — same, ventral view; 32 — prosoma, frontal view; 33 — same, lateral view; 34 — epigyne, ventral view; 35 — vulva, dorsal view view. Scale bars: 1 mm (30–33), 0.1 mm (34–35).

**Distribution.** Uzbekistan, Iran [World Spider Catalog, 2022; present data].

**Records in Iran.** This is the first record of this species from Iran, lying at the southernmost limit of its range [Logunov, Ponomarev, 2020; Logunov, Fomichev, 2021].

**Note.** The identification of this specimen is provisional, needing a confirmation when males from the same locality have been collected.

*Lycosa praegrandis* C.L. Koch, 1836

**Material.** Razavi Khorasan Prov.: 1 ♀, Tous City (36°27′N, 59°34′E), 985 m, 6.03.2013, coll. H. Barahouei.

**Distribution.** Albania, North Macedonia, Bulgaria, Greece, Turkey, Ukraine, Russia (European part), the Caucasus, Kazakhstan, Iran, Central Asia [World Spider Catalog, 2022].

**Records in Iran.** This is the first record of this species from Iran, lying at the southernmost limit of its range [Logunov, Ponomarev, 2020; Logunov, Fomichev, 2021].

**Note.** The identification of this specimen is provisional, needing a confirmation when males from the same locality have been collected.

*Pardosa aenigmatica* Tongiorgi, 1966

**Material.** Zanjan Prov.: 1 ♀, Zanjan City, Esfanaj Vil. (34°01′N, 58°48′E), 1535 m, 4.07.2018, H. Barahouei.

**Distribution.** Italy, Turkey, Azerbaijan, Israel, Iraq, Iran [World Spider Catalog, 2022].

**Distribution.** Europe, Turkey, the Caucasus, Russia (European part to South Siberia), Kazakhstan, Iraq, Iran, Central Asia [World Spider Catalog, 2022].

**Records in Iran.** This is the first record of this species from Iran, lying at the southernmost limit of its range [Logunov, Ponomarev, 2020; Logunov, Fomichev, 2021].

**Note.** The identification of this specimen is provisional, needing a confirmation when males from the same locality have been collected.
Fig. 36–41. Karakumosa zyuzini Logunov et Ponomarev, 2020, female. 36 — body, dorsal view; 37 — same, ventral view; 38 — prosoma, frontal view; 39 — same, lateral view; 40 — epigyne, ventral view; 41 — same, dorsal view. Scale bars: 1 mm (36–39), 0.1 mm (40–41).

RECORDS IN IRAN. This is the first record of this species from Zanjan Province, lying at the northernmost limit of its range. The species was previously known from Alborz, Fars, Ilam, Kermanshah and Markazi Provinces [Zamani et al., 2022].

Pardosa italica Tongiorgi, 1966

MATERIAL. West Azerbaijan Prov.: 1 ♂, 3 ♀♂, 2 imm., Urmia City, Sero Rd. (37°38′N, 44°59′E), 1350 m, 12.05.2019, S. Shafaie.

DISTRIBUTION. Southern Europe to China [World Spider Catalog, 2022].

RECORDS IN IRAN. This is the first record of this species in West Azerbaijan. The species was earlier known from Fars, Isfahan, Kermanshah, Kohgiluyeh & Boyer-Ahmad, North Khorasan, Razavi Khorasan, Tehran, and Zanjan Provinces [Zamani et al., 2022].

Pardosa pontica (Thorell, 1875)

MATERIAL. West Azerbaijan Prov.: 1 ♂, 4 ♀♂, 1 imm., Urmia City, Sero Rd. (37°38′N, 44°59′E), 1350 m, 12.05.2019, S. Shafaie.

DISTRIBUTION. Romania, Ukraine, Russia (European part), the Caucasus, Iran, Central Asia [World Spider Catalog, 2022].

Pardosa proxima (C.L. Koch, 1847)

MATERIAL. West Azerbaijan Prov.: 26 ♂♂, 34 ♀♀, 3 imm., Urmia City, Sero Rd. (37°38′N, 44°59′E), 1350 m, 12.05.2019, S. Shafaie.

DISTRIBUTION. Macaronesia, northern Africa, Europe, the Caucasus, Russia (European part to Far East), Kazakhstan, Iran, Central Asia, China [World Spider Catalog, 2022].
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Figs 42–52. *Trochosa marusiki* sp.n., holotype male. 42 — male body, dorsal view; 43 — same, ventral view; 44 — leg I, lateral view; 45 — chelicera, posterior view (arrow indicates the position of hump); 46 — palp, retrolateral view; 47 — same, ventral view; 48 — same, prolateral view; 49 — bulb, retrolateral view; 50 — same, ventral view; 51 — same, prolateral view; 52 — same, anterior view.

Abbreviations: *E* — embolus; *Mb* — median band; *Se* — synembolus; *Ta* — tegular apophysis. Scale bars: 1 mm (42–45), 0.1 mm (46–52).

Рис. 42–52. *Trochosa marusiki* sp.n., голотип-самец. 42 — тело, вид сверху; 43 — то же, вид снизу; 44 — нога I, вид сбоку; 45 — хелицера, вид сзади (стрелка показывает положение вздутия); 46 — пальпа, вид сбоку-сзади; 47 — то же, вид снизу; 48 — то же, вид сбоку-сзади; 49 — бульбус, вид сзади-сбоку; 50 — тоже, вид снизу; 51 — то же, вид сбоку-сзади; 52 — то же, вид спереди. Сокращения: *E* — эмболус; *Mb* — медиальная полоса; *Se* — синемболус; *Ta* — тегулярный отросток. Масштаб: 1 мм (42–45), 0,1 мм (46–52).

RECORDS IN IRAN. This is the first record of this species in West Azerbaijan. The species was already known from Razavi and South Khorasan Provinces [Zamani et al., 2022].

**Pirata piraticus** (Clerck, 1757)

MATERIAL. North Khorasan Prov.: 1 ♂, Kopet Dag Mts (38°04′N, 57°22′E), 1560 m, 21.09.2010, Z. Nikmagham. Golestan Prov.: 1 imm., Gorgan City, Karimabad Vil. (36°52′N, 54°24′E), 123 m, 2.09.2010, R. Kashefi.
TROCHOSA HISPANICA Simon, 1870

MATERIAL. West Azerbaijan Prov.: 4 ♂, 1 ♀, Urmia City, Sero Rd. (37°38′N, 44°59′E), 1350 m, 12.05.2019, S. Shafaei. Paratypes: 2 ♂♂, Mashhad City, Kardeh Dam (36°39′N, 59°40′E), 1356 m, 27.11.2013, M. Hatami. North Khorasan Prov.: 1 ♂, Esfaryan City, Ordaghan Vil. (37°07′N, 57°44′E), 1256 m, 21.07.2010, E. Jamili.

DISTRIBUTION. The Mediterranean to Central Asia, Iran [World Spider Catalog, 2022].

RECORDS IN IRAN. This is the first record of this species from West Azerbaijan Province. The species was formerly known from Golestan, Kerman, Lorestan, Mazandaran, North Khorasan, Razavi Khorasan, Tehran and Zanjan Provinces [Zamani et al., 2022].

TROCHOSA MARUSIKI sp.n. Figs 42–52, Map 1. TYPES. Holotype ♂, West Azerbaijan Prov.: Urmia City, Sero Rd. (37°38′N, 44°59′E), 1350 m, 12.05.2019, S. Shafaei. Paratypes: 2 ♂♂, 1 ♀♀, same locality as that of the holotype, 15.09.2021, N. Mobarrez.

ETYMOLOGY. The specific name is a patronym in honour of the eminent Russian arachnologist, our mentor and friend Yuri M. Marusik (Magadan, Russia) on the occasion of his 60th birthday.

DIAGNOSIS. In the morphology of carapace and palp, the same ratio of cymbial length/width (about 1.27), the absence of cheliceral hump and the same number and size ranges of cheliceral teeth, the male of T. marusiki sp.n. is most similar to that of T. cachetiensis Mcheidze, 1997. It is also similar to the male of T. hispanica in the direction of syneymphobol tip and the coloration of leg I. The new species differs from the former species in the dark brown colour of entire patellae and tibiae, and of metatarsi proximally (Fig. 44; yellow in T. cachetiensis [Otto, Japoshvili, 2018: fig. 40]); the non-cylindrical shape of the tarsi I (Fig. 44; cylindrical in T. cachetiensis [Otto, Japoshvili, 2018: fig. 40]); the symnionic tip situated at 12 o’clock, forming a right angle (Fig. 50; at 2 o’clock in T. cachetiensis [Otto, Japoshvili, 2018: fig. 54]). From the latter species (T. hispanica), T. marusiki sp.n. can be distinguished by (1) a smoothly bent embolus (Fig. 50; which is coiled in T. hispanica [Marusik, Nadoly, 2020: fig. 5A–D]); (2) chelicerae with no hump (Fig. 45; present in T. hispanica [Marusik, Nadoly, 2020: fig. 21]); (3) the cymbial length/width ratio is 1.27 (Figs 47, 50; 1.8 in T. hispanica [Marusik, Nadoly, 2020: fig. 4]); and (4) the presence of two pairs of dark mark on the median band (Mb) (Fig. 42; a single large pair in T. hispanica [Marusik, Nadoly, 2020: figs 2A, 2C]).

DESCRIPTION. MALE. Total length 5.88, carapace length 3.22 + 2.52 + 1.68. Legs dorsally including: coxae and femur of all legs in addition to patellae and tibiae II–IV yellow anteriorly and brown posteriorly. Ventrally abdomen brown, spinnerets dark brown. Chelicerae with no hump but comprising three teeth situated in two rows, median tooth the largest and apical tooth the smallest (Fig. 45). Chelicerae and mouth parts brown, sternum yellow with a median light brown spot. Abdomen dorsally olive-brown, with a light brown cardiac mark anteriorly and a wedge-shaped mark posteriorly. Ventrally abdomen brown, spinnerets dark brown. Length of leg segments: I 9.38 (2.94 + 1.12 + 1.82 + 1.82 + 1.68); II 8.12 (2.94 + 0.98 + 1.68 + 1.40 + 1.12); III 8.26 (2.80 + 0.98 + 1.54 + 1.82 + 1.12); IV 11.34 (2.80 + 1.12 + 3.22 + 2.52 + 1.68). Legs dorsally including: coxae and femur of all legs in addition to patellae and tibiae II–IV light grey, patellae and tibiae I entirely and metatarsi I proximally black, tibia I without dorsal white setae; tarsi I brown, tarsi II–IV yellow anteriorly and brown posteriorly. Leg I spinulation: Fe d1-1-1, p2, r1-1-1; Ti p1-1, r1-1, v2-2-2a; Mt p1-1a, r1-1a, v2-2-3a. Length of palp segments 3.78 (1.26 + 0.56 + 0.84 + 1.12). Palp as in Figs 46–52. Cymbium with stout apical claw. Cymbium brownish dorsally and prolaterally, darker retrolaterally, and yellowish ventrally (Figs 42–43, 46–48); femur, patella and tibia light brown. Embolus and syneymphobol with bent tip (Fig. 50), median apophysis rather thick (Figs 47, 50, 52).

FEMALE. Unknown.

DISTRIBUTION. Known only from the type locality (Map 1).

TROCHOSA RURICOLA (De Geer, 1778)

MATERIAL. Golestan Prov.: 1 ♂, 1 imm., Gorgan City, Karimabad Vil. (36°52′N, 54°24′E), 123 m, 20.09.2010, R. Kashefi. DISTRIBUTION. Europe, Turkey, the Caucasus, Russia (European part to Far East), Kazakhstan, Iran, Central Asia, China, Japan, Korea. Introduced to North America, Cuba, Puerto Rico, Bermuda [World Spider Catalog, 2022].

RECORDS IN IRAN. This is the first record of this species from Golestan. The species has already been known from Alborz and Mazandaran Provinces [Zamani et al., 2022].

WADICOSA COMMENVENTA Zyuzin, 1985

MATERIAL. Razavi Khorasan Prov.: 2 ♂♂, 2 ♂♀, Sarakhs City, Khatun Bridge (36°32′N, 61°09′E), 285 m, 1.09.2012, Z. Nikmahmag.

DISTRIBUTION. Iran, Turkmenistan [World Spider Catalog, 2022].

RECORDS IN IRAN. This is the first record of this species from Razavi Khorasan. The species was previously known from Kerman Province [Zamani et al., 2022].

XEROlycosa miniata (C.L. Koch, 1834)

MATERIAL. West Azerbaijan Prov.: 2 ♂♂, Urmia City, Sero Rd. (37°38′N, 44°59′E), 1350 m, 12.05.2019, D. Ahmadi.

DISTRIBUTION. Europe, Turkey, the Caucasus, Russia (European part to South Siberia), Kazakhstan, Iran, Central Asia, China [World Spider Catalog, 2022].

RECORDS IN IRAN. This is the first record of this species from West Azerbaijan. The species was formerly known from Mazandaran Province [Zamani et al., 2022].

Discussion

In the present study, 25 lycosid species have been recorded from Iran. Two species, Alopecosa pekari
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sp.n. (C) and Trochosa marusiki sp.n. (C), are new to science and four (Draposa oakleyi, Evippa eltonica, Karakumosa turanica, K. zyuzini) are new records for Iran. Yet, as shown, the provinces West Azerbaijan (9) and Razavi Khorasan (8) and the genera, Alopecosa (5), Pardosa (4), and Trochosa (3) have the highest species diversity, respectively. By including the present results, the number of Iranian wolf spiders has increased to 81 species [Zamani et al., 2022; Shafaie et al., unpublished]. By reviewing the data provided by Iranian arachnologists, it is obvious that the Iranian wolf spiders remain poorly studied. Based on the checklist by Zamani et al. [2022], it is clear that most of western, central and southern regions of Iran have not been surveyed by wolf spider experts. According to Mirshamsi et al. [2015], the most obvious reasons for this are as follows: (1) the main collecting method adopted by most of researchers/collectors is still hand-collecting, and (2) a high morphological conservatism of this spider family making it challenging for taxonomic and faunistic studies.

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