

## New data on spider fauna of Iran (Arachnida: Araneae), Part II

Alireza Zamani<sup>a</sup>, Omid Mirshamsi<sup>b,c\*</sup>, Behnaz Jannesar<sup>b</sup>, Yuri M. Marusik<sup>d</sup> and Sergei L. Esyunin<sup>e</sup>

<sup>a</sup>Department of Animal Biology, School of Biology and Centre of Excellence in Phylogeny of Living Organisms in Iran, College of Science, University of Tehran, Tehran, Iran; <sup>b</sup>Faculty of Sciences, Department of Biology, Ferdowsi University of Mashhad, Mashhad, Iran; <sup>c</sup>Faculty of Sciences, Research Department of Zoological Innovations (RDZI), Institute of Applied Zoology, Ferdowsi University of Mashhad, Mashhad, Iran; <sup>d</sup>Institute for Biological Problems of the North RAS, Portovaya Str. 18, Magadan 685000, Russia; <sup>e</sup>Department of Zoology, Perm State University, Bukire St. 15, Perm, Russia

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In this paper, which is the second devoted to spiders of Iran, faunistic records of one family, 12 genera and 30 species that are new to the fauna of Iran are presented. The recorded species are as follows: *Aculepeira talishia* (Zawadsky, 1902); *Araneus circe* (Audouin, 1826); *Hypsosinga heri* (Hahn, 1831); *Leviellus caspicus* (Simon, 1889); *Dysderella transcaspica* (Dunin & Fet, 1985); *Berlandina plumalis* (O. Pickard-Cambridge, 1872); *Fedotovia uzbekistanica* Charitonov, 1946; *Haplodrassus signifier* (C. L. Koch, 1839); *Micaria lenzi* Bösenberg, 1899; *Agroeca cuprea* Menge, 1873; *Evipa apsheronica* Marusik, Guseinov & Koponen, 2003; *Mysmenella jobi* (Kraus, 1967); *Oecobius nadiae* (Spassky, 1936); *Uroctea grossa* Roewer, 1960; *Oxyopes globifer* Simon, 1876; *Peucetia arabica* Simon, 1882; *Thanatus kitabensis* Charitonov, 1946; *Thanatus pictus* L. Koch, 1881; *Phrurolithus festivus* (C. L. Koch, 1835); *Zimiris doriai* Simon, 1882; *Tetragnatha pinicola* C. L. Koch, 1870; *Anelosimus pulchellus* (Walckenaer, 1802); *Dipoena melanogaster* (C. L. Koch, 1837); *Enoplognatha ovata* (Clerck, 1757); *Episinus truncatus* Latreille, 1809; *Euryopsis flavomaculata* (C. L. Koch, 1836); *Heterotheridion nigrovariegatum* (Simon, 1873); *Neottiura bimaculata* (Linnaeus, 1767); *Steatoda nobilis* (Thorell, 1875); *Tmarus horvathi* Kulczyński, 1895. Geographical data are provided for each species.

Straipsnis skirtas naujoms Irano vorų faunos rūšims. Pateikti faunistiniai duomenys apie Iranui naują vorų šeimą, 12 naujų genčių ir 30 rūšių: *Aculepeira talishia* (Zawadsky, 1902); *Araneus circe* (Audouin, 1826); *Hypsosinga heri* (Hahn, 1831); *Leviellus caspicus* (Simon, 1889); *Dysderella transcaspica* (Dunin & Fet, 1985); *Berlandina plumalis* (O. Pickard-Cambridge, 1872); *Fedotovia uzbekistanica* Charitonov, 1946; *Haplodrassus signifier* (C. L. Koch, 1839); *Micaria lenzi* Bösenberg, 1899; *Agroeca cuprea* Menge, 1873; *Evipa apsheronica* Marusik, Guseinov & Koponen, 2003; *Mysmenella jobi* (Kraus, 1967); *Oecobius nadiae* (Spassky, 1936); *Uroctea grossa* Roewer, 1960; *Oxyopes globifer* Simon, 1876; *Peucetia arabica* Simon, 1882; *Thanatus kitabensis* Charitonov, 1946; *Thanatus pictus* L. Koch, 1881; *Phrurolithus festivus* (C. L. Koch, 1835); *Zimiris doriai* Simon, 1882; *Tetragnatha pinicola* C. L. Koch, 1870; *Anelosimus pulchellus* (Walckenaer, 1802); *Dipoena melanogaster* (C. L. Koch, 1837); *Enoplognatha ovata* (Clerck, 1757); *Episinus truncatus* Latreille, 1809; *Euryopsis flavomaculata* (C. L. Koch, 1836); *Heterotheridion nigrovariegatum* (Simon, 1873); *Neottiura bimaculata* (Linnaeus, 1767); *Steatoda nobilis* (Thorell, 1875); *Tmarus horvathi* Kulczyński, 1895.

**Keywords:** fauna; Iran; Mysmenidae; new records; spiders

### Introduction

Currently, there are about 510 spider species recorded in Iran. There are several small studies dealing with the description of new species or records of spiders new to Iran (Mirshamsi 2005; Ghahari and Marusik 2009; Kashefi et al. 2013; Logunov et al. 2013; Mirshamsi, Hatami, and Zamani 2013; Mirshamsi, Marusik, and Jamili 2013; Mirshamsi et al. 2013; Azarkina and Mirshamsi 2014; Zamani et al. 2014), but comprehensive taxonomic surveys are lacking (Logunov, Marusik, and Mozaffarian 2001; Mozaffarian and Marusik 2001; Ono and Martens 2005; Moradmand and Jäger 2011; Zamani et al. 2014). Therefore, the Iranian fauna of spiders should be considered to be poorly studied. This paper, which is the second in the series devoted to the rapid publication of new spider records from Iran, presents the

first records of one family, 12 genera and 30 species from the country. In the previous part, two families (Liocranidae and Mimetidae), seven genera and 30 species were recorded from Iran for the first time (Zamani et al. 2014). In this paper, along with the 30 new species records, the first Iranian records of the family Mysmenidae and the genera *Agroeca*, *Anelosimus*, *Dipoena*, *Dysderella*, *Episinus*, *Euryopsis*, *Fedotovia*, *Heterotheridion*, *Mysmenella*, *Neottiura*, *Phrurolithus* and *Zimiris* are provided. Including these data, the number of Iranian spider species amounts to 540.

### Materials and methods

All specimens were collected by hand and using pitfall traps. The material analysed in this paper was collected

\*Corresponding author. Email: [mirshams@um.ac.ir](mailto:mirshams@um.ac.ir)

by authors and their colleagues from different provinces of Iran from 1994 up to now. Widespread species were identified using well-known manuals and databases such as Roberts (1998), Nentwig et al. (2014) if not specified otherwise.

Distribution of species is given according to the information available in several databases and catalogues: Mikhailov (2013), Platnick (2014), van Helsdingen (2014) and other sources. In order to recognize the new record status of the species studied, they were checked according to Zamani, Mirshamsi, and Marusik (2014). Whole specimens and female epigynes/vulvae were photographed using an Olympus DP-71 camera attached to an Olympus SZH-10 stereomicroscope.

**Depositories:** Jalal Afshar Zoological Museum of University of Tehran (JAZM), Zoological Museum of Ferdowsi University of Mashhad (ZMFUM), Zoological Museum of the Moscow State University (ZMMU) and Zoological Museum of the Perm State University Museum (PSU).

## Results

### Family Araneidae Clerck, 1757

*Aculepeira talishia* (Zawadsky, 1902)

*A. n.*: Levi 1977: 236, f. 218–225 (♂♀)

**Material:** *West Azarbaijan Province:* 1♀ (JAZM), Ahmad Abad, June/2013, Mohammadi leg.

*Mazandaran Province:* 1♀ (ZMMU), Javaher-Deh Vill., 50.467°E, 36.867°N, June/2000, Marusik leg.

**Comments:** This species was known from Turkey, Russia, Georgia and Azerbaijan. The record from Iran is the southeasternmost in the range.

*Araneus circe* (Audouin, 1826)

*A. c.*: Sestáková, Krumpál, and Krumpálová 2009: 60, 4f, 5g, 9, 11, 19a–f, 20a–d, 21a–i, 22a–f (♂♀).

**Material:** *Tehran Province:* 1♀ (JAZM), Tehran, southern slopes of Alborz Mountains, Golab Darreh, 35°49'N, 51°26'E, July/2014, Zamani leg.

**Comments:** This species has a West Palaearctic distribution and is known from the area covering Spain, the Caucasus and Iran. The record from Iran is the southeasternmost in the range.

*Hypsosinga heri* (Hahn, 1831)

**Material:** *Fars Province:* 1♀ 1♂ (ZMMU) 50 km NE of Shiraz, Bamoo Res., 29°45'N, 52°45'E, May/2000, Marusik leg.

**Comments:** This species has a West Palaearctic distribution. The record from Iran is the southernmost in the whole range.

*Leviellus caspicus* (Simon, 1889)

*Z. c.*: Levi 1974: 280, f. 70–75 (♂♀).

**Material:** *Tehran Province:* 1♀ (ZMMU), ~3 km NNW of Tehran, 51°18'E, 35°36'N, June/2000, Marusik leg.

**Comments:** It was known earlier from south Kazakhstan, Kyrgyzstan, Uzbekistan and Turkmenistan. The record from Iran is the southwesternmost in the range. Genus and species are new to Iran.

### Family Dysderidae C. L. Koch, 1837

*Dysderella transcaspica* (Dunin & Fet, 1985)

Figure 1(a)–(g).

*D. t.* Dunin & Fet, 1985: 298, f. 1–4 (♂♀).

**Material:** *Khorasan-e-Razavi Province:* 1♀ (ZMFUM), Torbat Jam, Ghader Abad, May/2014, Jannesar leg.

**Comments:** Previously, it was known from Turkmenistan only. The record of both genus and species from Iran is the southernmost in the range. Both genus and species are new to Iran. There are some doubts if our specimen is conspecific with specimens from Turkmenistan. Although both populations have very similar vulvae (Figures 1(e) and (g)), they slightly differ in size (those of the Iranian population are larger) and spination (our specimens lack spines on tibia IV, and specimens from Turkmenistan have 1 or 2 spines on Tibia IV).

### Family Gnaphosidae Pocock, 1898

*Berlandina plumalis* (O. Pickard-Cambridge, 1872)

Figure 2(a)–(c).

**Material:** *Khorasan-e-Razavi Province:* 1♀ (ZMFUM), Torbat Jam, Revenj, Feb/2014, Jannesar leg.; 1♂ (ZMFUM), Sarakhs, Shirtappeh, 36°07'N, 61°13'E, July/2012, Nikmagham leg. *Fars Province:* 1♂ (ZMMU), ~40 km SEE of Shiraz, Barm-e-shoor Ck on Maharloo Lake, 52°42'E, 29°29'N, May/2000, Marusik leg.

**Comments:** It is known from the area stretching from West Africa to Afghanistan. Although epigyne of our specimen is rather similar to those of *B. plumalis* in Nentwig et al. (2014), it may belong to different sibling species.

*Fedotovia uzbekistanica* Charitonov, 1946

Figure 3(a)–(c).

*F. u.*: Ovtsharenko & Platnick, 1991: 103, f. 1–5 (♂♀).

**Material:** *Khorasan-e-Razavi Province:* 1♀ (ZMFUM) Torbat Jam, Timanak, May/2013, Jannesar leg.

**Comments:** This species has been reported from Central Asia, Afghanistan and Mongolia. The record from Iran is the southwesternmost in the range. Although our specimen is similar to figures of *F. uzbekistanica* published by Ovtsharenko and Platnick (1991) and other authors, it may belong to separate species. Unpublished revision of this genus by Fomichev & Marusik (forthcoming) reveals several new species, which differ in size, fine details of copulatory organs and spination. Both genus and species are new to Iran.

*Haplodrassus signifier* (C. L. Koch, 1839)

**Material:** *Khorasan-e-Razavi Province:* 1♂ (ZMFUM), Bazangan Lake, 36.31°N, 60.48°E, April/2012, Nikmagham leg.; 1♂ (ZMFUM), Gonabad, Kakhk,

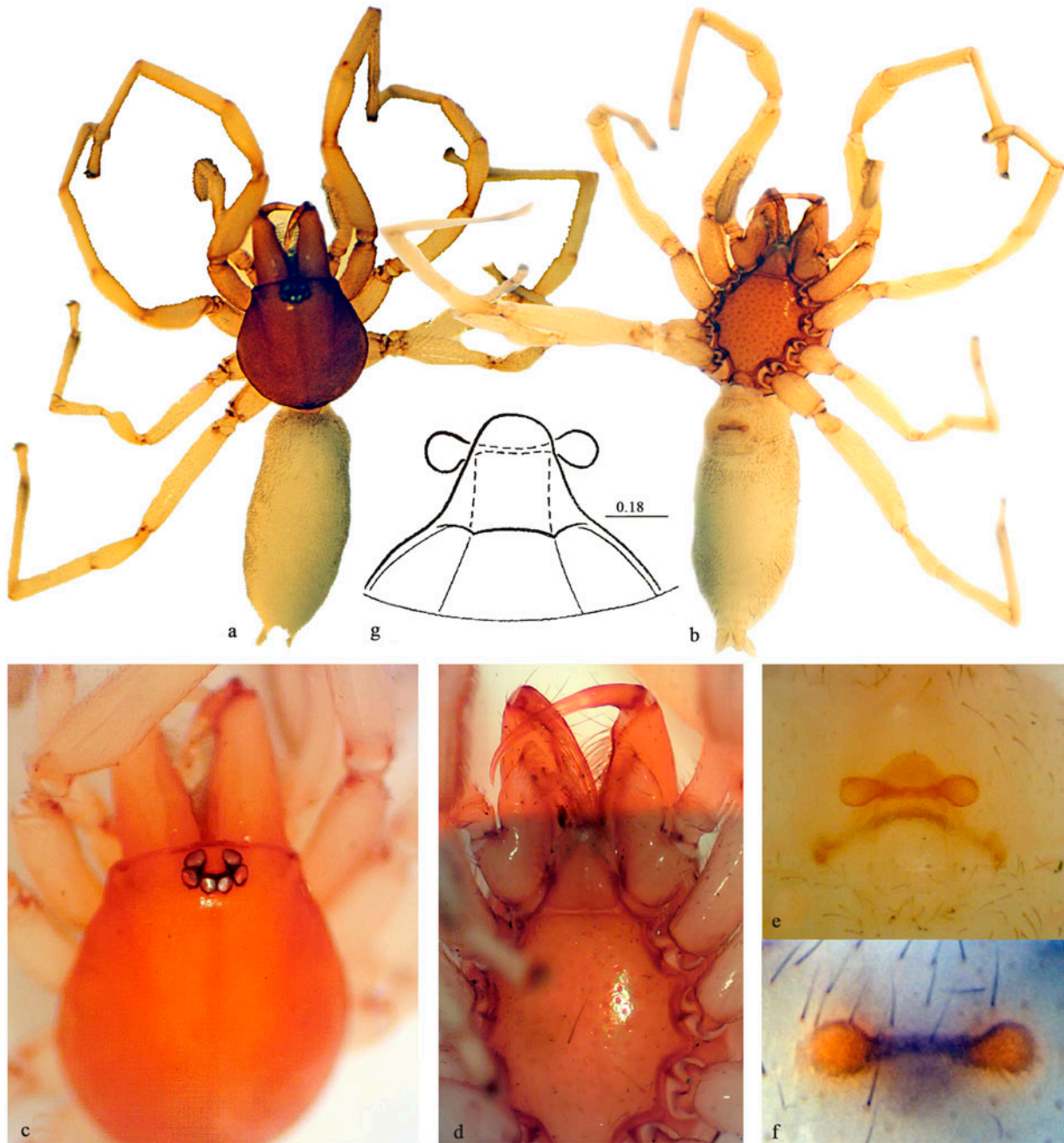


Figure 1. *Dysderella transcaspica*. (a) dorsal habitus; (b) ventral habitus; (c) prosoma; (d) sternum; (e) epigynum; (f) vulva; (g) vulva, from Dunin and Fet (1985).

34.14°N, 58.63°E, March/2012, Mirshamsi leg.; 1♀ (ZMFUM), Sarakhs, Shirtappeh, 36.11°N, 61.21°E, July/2012, Nikmagham leg.

**Comments:** Although the species has a circum-Holarctic distribution and is common in adjacent countries, it has never been reported from Iran before.

*Micaria lenzi* Bösenberg, 1899

**Material:** *Tehran Province:* 1♂ 6♀ (ZMMU), ~80 km E of Tehran, Damavand area, Aroo Vill., 52°27'E, 35°40' N, June/2000, Marusik leg.

**Comments:** This species has a trans-Palaeartic distribution. The record from Iran is the southernmost in the range.

**Family Liocranidae** Simon, 1897

*Agroeca cuprea* Menge, 1873

**Material:** *Tehran Province:* 1♀ (ZMMU), E of Tehran, Ab-Ali area, 51°57'E, 35°46'N, June/2000, Marusik leg.

**Comments:** The species is known from the area stretching from Europe to Middle Siberia. The record from Iran is the southernmost in the range. Both genus and species are new to Iran.

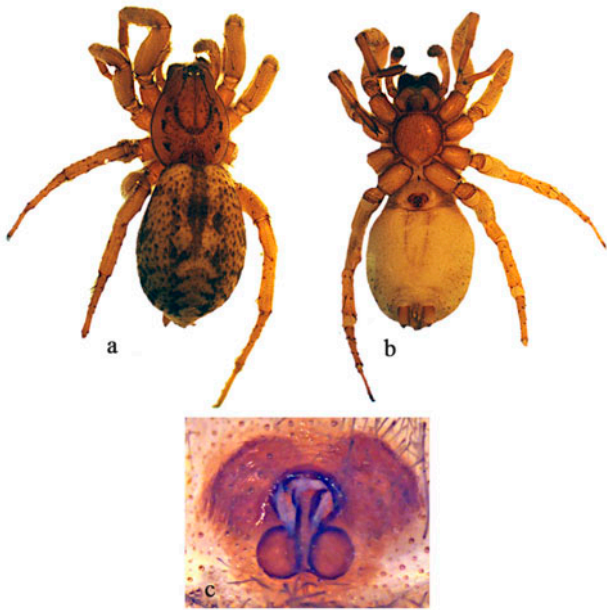


Figure 2. *Berlandina plumalis*. (a) dorsal habitus; (b) ventral habitus; (c) epigynum.

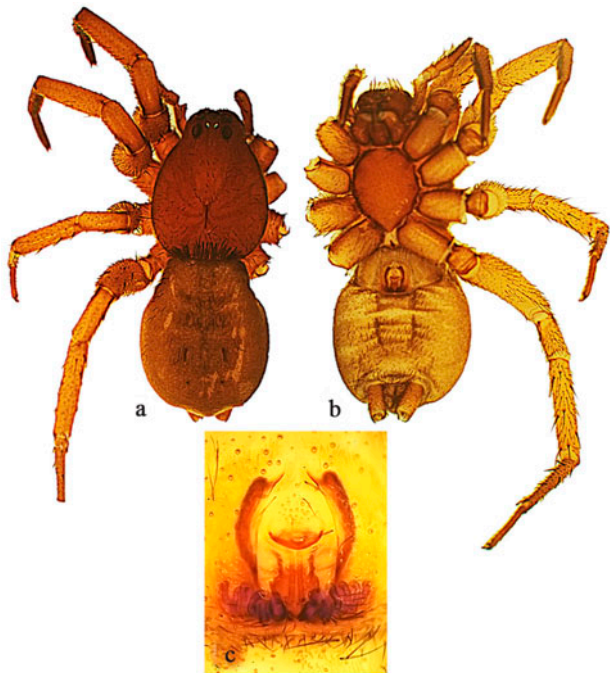


Figure 3. *Fedotovia uzbekistanica*. (a) dorsal habitus; (b) ventral habitus; (c) epigynum.

**Family Lycosidae** Sundevall, 1833

***Evipa apsheronica*** Marusik, Guseinov & Koponen, 2003

*E. a.*: Marusik, Guseinov & Koponen, 2003: 52, f. 1–3 (♀).

*E. a.*: Ponomarev & Tsvetkov, 2004: 86, f. 1–2 (♂).

**Material:** *Khorasan-e-Razavi Province*: 3♀ (ZMFUM), Sarakhs, Bazangan Lake, May/2012, Nikmagham leg; 5

sub.♀ (ZMFUM), South of Mashhad, Baze Hoor Vill., June/2013, Sancei leg; 8 juv. (ZMFUM), Sarakhs, Pole Khatoon Vill., Sep/2012, Nikmagham; 1♂ (ZMFUM), Espharayan, Baba Hosein Vill., May/2010, Jamili leg; 2♀ (ZMFUM), 35°50'N, 61°04'E, May/2012, Musavi leg. *Fars Province*: 12♂ 6♀ ~40 km SEE of Shiraz, Barm-e-shoor Ck on Maharloo Lake, 52°42'E, 29°29'N, May/2000, Marusik leg.

**Comments:** This species has been recorded from the northern Caucasus (Russia), West Kazakhstan, the Crimea and Azerbaijan. The record from Fars Province is the southernmost in the range. It is likely that there are several sibling species confused with *E. apsheronica* and specimens from Iran may belong to two different species.

**Family Mysmenidae** Petrunkevitch, 1928

***Mysmenella jobi*** (Kraus, 1967)

**Material:** *Mazandaran Province*: 1♀ (ZMMU), Nashtarood-Khoshkadaran, 51.033°E, 36.750°N, June/2000, Marusik leg.

**Comments:** This species has a West Palaearctic distribution and is known from France to the Caucasus. This record is the southeasternmost in the range. Family, genus and species are new to Iran.

**Family Oecobiidae** Blackwall, 1862

***Oecobius nadiæ*** (Spassky, 1936)

*O. afghanicus* Kullmann & Zimmermann, 1976: 42, f. 1–3, 6–9, 12–13 (♂♀).

**Material:** *Khorasan-e-Jonoubi Province*: 3♀ 1♂ (ZMFUM), Qaen, Karizan, 33°53'N, 59°48'E, June/2011, Abedi leg.; *Khorasan-e-Shomali Province*: 2 ♀ (ZMFUM), Espharaen, 37°03'N, 57°31'E, May/2010, Jamili leg.

**Comments:** The species is known from Azerbaijan to Sichuan. Lehtinen (1967) described a new genus for this species, *Ambika*. To our mind, it was erroneously synonymized with *Oecobius* by Shear (1970).

***Uroctea grossa*** Roewer, 1960

Figure 4(a)–(d).

*U. g.* Roewer, 1960: 51, f. 18a–d (♀).

**Material:** *Khorasan-e-Shomali Province*: 1♀ (ZMFUM), Espharaen, 37°03'N, 57°31'E, May/2010, Jamili leg.; 1♀ (ZMFUM), Gonabad, Kakhk, 34°08'N, 58°38'E, Sep/1997, Mirshamsi leg.

**Comments:** Our specimens were tentatively identified as *U. grossa*, a species known from original description from Afghanistan only. The record from Iran is the westernmost in the range. Our identification was based on uniformly coloured abdomen and wrinkled epigyne (character unknown in other *Uroctea* species, except for *U. thaleri* Rheims, Santos & van Harten, 2007).

**Family Oxyopidae** Thorell, 1870

***Oxyopes globifer*** Simon, 1876

**Material:** *Mazandaran Province*: 2♀ (ZMMU), Javaher-Deh Village, 50.467°E, 36.867°N, June/2000, Marusik

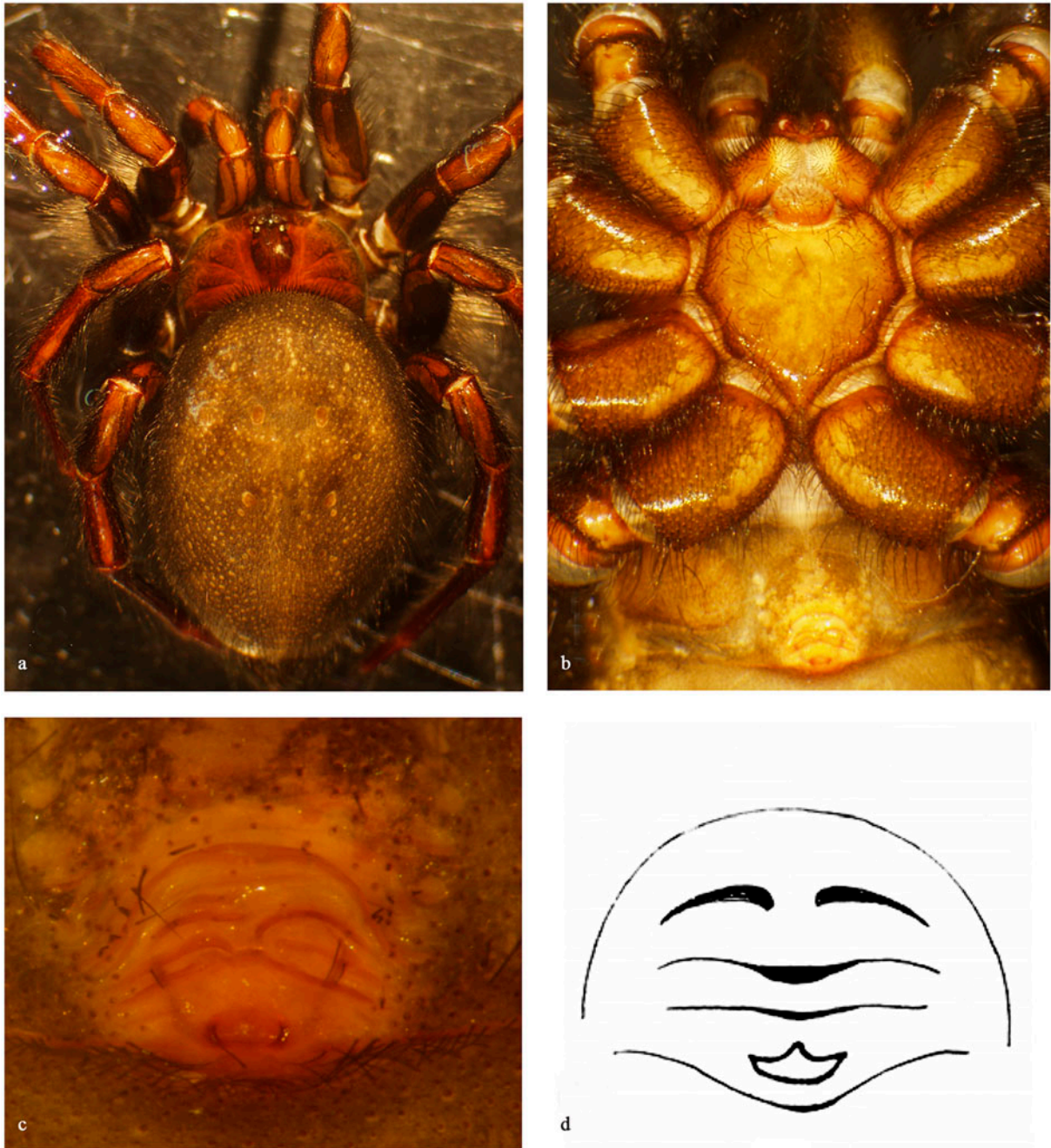


Figure 4. *Uroctea grossa*. (a) dorsal habitus; (b) ventral habitus; (c) epigynum; (d) epigynum, from Roewer (1960).

leg.; *Markazi Province*: 2♀ (JAZM), Arak, Haftad Gholleh, 34°8'17"N 50°11'28"E, Aug/2014, Mashayekhi leg.

**Comments:** Distributed from Mediterranean to Tajikistan.

***Peucetia arabica* Simon, 1882**

Figure 5(a).

*P. a.*: Levy, 1999: 51, f. 24A–B, 25<sup>a</sup>–C (♂♀).

**Material:** *Khozestan Province*: 1♀ (PSU), Behbahān County, Behbahān, 1994, Savoji leg.

**Comments:** This species is known from Greece, North and East Africa and Middle East. The record from Iran

is the easternmost in the range. There are some doubts if our specimen belongs to this species because of slightly different shape of epigynal lateral extensions.

**Family Philodromidae** Thorell, 1870

***Thanatus kitabensis* Charitonov, 1946**

*T. k.*: Lyakhov, 2000: 224, f. 33–36 (♂♀).

**Material:** *Khorasan-e-Razavi Province*: 1♀ (ZMFUM), Mashhad, Apr/2013, Saneei leg.; 1♂ 1♀ (ZMFUM), 59°23'18.6"E, 36°23'45.52"N, Apr/2012, Musavi leg.; 1♀ (ZMFUM), 59°51.2'45"E, 35°41'58.46"N, Apr/2012, Musavi leg.



Figure 5. (a) *Peuceitia Arabica*, epigynum; (b) *Zimiris doriai*, epigynum; (c) *Z. doriai*, dorsal habitus.

**Comments:** This species is known from the Caucasus and Central Asia. The record from Khorasan-e-Razavi is the southernmost record in the range.

*Thanatus pictus* L. Koch, 1881

**Material:** *Khorasan-e-Razavi Province*: 1♂ (ZMFUM), Mashhad, 59°21'44.97"E, 36°18'32.7"N, Apr/2012, Musavi leg.

**Comments:** The species is restricted to West Palaearctic and known from Spain to West Siberia.

**Family Phrurolithidae** Banks, 1892

*Phrurolithus festivus* (C. L. Koch, 1835)

**Material:** *Mazandaran Province*: 1♂ 1♀ (ZMMU), Javaher-Deh Village, 50.467°E, 36.867°N, June/2000, Marusik leg.; 2♀ (ZMMU), Barseh Village, ~2000 m, 50°41'E, 36°37'N, June/2000, Marusik leg.

**Comments:** This species has a trans-Palaearctic distribution. The record from Mazandaran is the southernmost in the whole range. Both genus and species are new to Iran.

**Family Prodidomidae** Simon, 1884

*Zimiris doriai* Simon, 1882

Figure 5(b) and (c).

*Z. d.*: Platnick & Penney, 2004: 8, f. 1–8, 12–19 (♂♀).

**Material:** *Hormozgan Province*: 1♀ (JAZM), Hormuz Island, 27°02'42"N, 56°29'35"E, Jan/2014, Zamani leg.

**Comments:** This species has a Circumtropical distribution. The record from Hormuz Island seems to be the northernmost in the range. Both genus and species are new to Iran.

**Family Tetragnathidae** Menge, 1866

*Tetragnatha pinicola* C. L. Koch, 1870

**Material:** *Mazandaran Province*: 47♂♀ (ZMMU), N of Javaher-Deh Village, 50.467°E, 36.872°N, June/2000, Marusik leg.

**Comments:** This species has a trans-Palaearctic distribution. The record from Mazandaran Province is the southernmost in the whole range.

**Family Theridiidae** Sundevall, 1833

*Anelosimus pulchellus* (Walckenaer, 1802)

**Material:** *Mazandaran Province*: 1♀ (ZMMU), Nashtarood-Khoshkadaran, 51.033°E, 36.750°N, June/2000, Marusik leg.

**Comments:** This species is distributed in West Palaearctic and is known from Spain to the Caucasus. The record from Mazandaran is the easternmost in the range. Both genus and species are new to Iran.

*Dipoena melanogaster* (C. L. Koch, 1837)

**Material:** *Mazandaran Province*: 1♀ (ZMMU), Tooben, environs of Khorram-Abad Village, 50°48'E, 36°43'N, June/2000, Marusik leg.

**Comments:** This species is distributed in West Palaearctic and is known from the Iberian Peninsula to the Caucasus. The record from Mazandaran is the easternmost in the range. Both genus and species are new to Iran.

*Enoplognatha ovata* (Clerck, 1757)

**Material:** *Mazandaran Province*: 3♂ 6juv (ZMMU), N of Javaher-Deh Village, 50.467°E 36.872°N, 9 June 2000, Yu. M. Marusik.

**Comments:** This species is distributed in West Palaearctic and Nearctic, where it was introduced. This is the southernmost record of this species in the whole range.

*Episinus truncatus* Latreille, 1809

**Material:** *Mazandaran Province*: 1♀ (ZMMU), 2000-Tooben, environs of Khorram-Abad Village, 50°48'E, 36°43'N, June/2000, Yu. M. Marusik.

**Comments:** This species is distributed in West Palaearctic (east to Urals). Both genus and species are new to Iran.

*Euryopsis flavomaculata* (C. L. Koch, 1836)

**Material:** *Tehran Province*: 1♂ (JAZM), Tehran, southern slopes of Alborz Mountains, Golab Darreh, 35°49'N, 51°26'E, July/2014, Zamani leg.

**Comments:** This species has a trans-Palaearctic distribution. Both genus and species are new to Iran. The record from Tehran seems to be the southernmost in the whole range.

*Heterotheridion nigrovariegatum* (Simon, 1873)

**Material:** *Mazandaran Province*: 1♀ (ZMMU), N of Javaher-Deh Vill. (~500 m down by elevation down from vil.), 50.467°E, 36.872°N, June/2000, Marusik leg.; *Tehran Province*: 2♂ (ZMMU), E of Tehran, Ab-Ali area, 51°57'E, 35°46'N, June/2000, Marusik leg.

**Comments:** This species has a West Palaearctic distribution and is known from the Iberian Peninsula to Xinjiang. Both genus and species are new to Iran.

*Neottiura bimaculata* (Linnaeus, 1767)

**Material:** Mazandaran Province: 8♂ 7♀ (ZMMU), N of Javaher-Deh Village, 50.467°E, 36.872°N, June/2000, Marusik leg.; Tehran Province: 5♀ (ZMMU), Plant-Protection-Organization Park, 51.414°E, 35.673°N, 7 June 2000, Marusik leg.

**Comments:** This species has a circum-Holarctic distribution. Both genus and species are new to Iran.

*Steatoda nobilis* (Thorell, 1875)

**Material:** Tehran Province: 1♀ (JAZM), Tehran, 35°43' N, 51°25'E, Oct/2013, Zamani leg.

**Comments:** This species has been reported from Madeira and Canary Islands, as well as from Portugal, Italy, Algeria, England and the USA. Tehran is the easternmost known locality of this species.

**Family Thomisidae** Sundevall, 1833

*Tmarus horvathi* Kulczyński, 1895

**Material:** Tehran Province: 1♀ (ZMFUM), ~3 km NNW of Tehran, 51°18'E, 35°36'N, June/2000, Marusik leg.

**Comments:** This species has a disjunctive Palaearctic distribution and is known from mainland France, Corsica, the Caucasus and Far East Asia.

## Conclusion

According to the data presented in this study, one family, 12 genera and 30 species are newly recorded from Iran. Among the recorded genera, *Leviellus* (Araneidae), *Dysderella* (Dysderidae), *Fedotovia* (Gnaphosidae), *Agroeca* (Liocranidae), *Mysmenella* (Mysmenidae), *Phrurolithus* (Phrurolithidae), *Zimiris* (Prodidomidae), *Dipoena*, *Episinus*, *Euryopis*, *Heterotheridion* and *Neottiura* (Theridiidae) are recorded in the country for the first time. Taken these data and the number of previously recorded species together, the number of Iranian spiders has risen to 540. However, due to the lack of comprehensive systematic studies devoted to spiders in most of central, southern and eastern regions of Iran, it is still difficult to assess the actual species diversity of spiders in the country.

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## Disclosure statement

No potential conflict of interest was reported by the authors.

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