

## New data on the wolf spiders of Iran (Aranei: Lycosidae)

## Новые данные о пауках-волках Ирана (Aranei: Lycosidae)

O. Mirshamsi<sup>1,2\*</sup>, S. Saneei<sup>1</sup>, M. Aliabadian<sup>1,2</sup>, F. Ghassemzadeh<sup>1</sup>  
 О. Миршамси<sup>1,2\*</sup>, С. Санейи<sup>1</sup>, М. Алиабадян<sup>1,2</sup>, Ф. Гассемзаде<sup>1</sup>

<sup>1</sup> Department of Biology, Faculty of Sciences, Ferdowsi University of Mashhad, Mashhad, Iran

<sup>2</sup> Research Department of Zoological Innovations (RDZI), Institute of Applied Zoology, Faculty of Sciences, Ferdowsi University of Mashhad, Mashhad, Iran

\*Corresponding author: mirshams@um.ac.ir

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КЛЮЧЕВЫЕ СЛОВА: пауки-волки, Aranei, новые находки, распространение, Иран.

**ABSTRACT.** New faunistic records for 17 species of Lycosidae from Iran are presented. Ten species are recorded from the Iranian spider fauna for the first time: *Alopecosa cursor* (Hahn, 1831) (♂♀); *Arctosa stigmata* (Thorell, 1875) (♀); “*Aulonia*” *kratochvili* Dunin, Buchar et Absolon, 1986 (♀); *Bogdocosa baskuntchakensis* Ponomarev et Belosludtsev, 2008 (♂♀); *Pardosa italica* Tongiorgi, 1966 (♂♀); *P. morosa* (L. Koch, 1870) (♂♀); *P. proxima* (C.L. Koch, 1847) (♂♀); *P. zonsteini* Ballarin, Marusik, Omelko et Koponen, 2012 (♂♀); *Trochosa hispanica* Simon, 1870; and *Wadicosa fidelis* (O. Pickard-Cambridge, 1872) (♂♀).

**РЕЗЮМЕ.** Представлены новые фаунистические находки для 17 видов Lycosidae из Ирана. Десять видов отмечены впервые в фауне пауков Ирана: *Alopecosa cursor* (Hahn, 1831) (♂♀); *Arctosa stigmata* (Thorell, 1875) (♀); “*Aulonia*” *kratochvili* Dunin, Buchar et Absolon, 1986 (♀); *Bogdocosa baskuntchakensis* Ponomarev et Belosludtsev, 2008 (♂♀); *Pardosa italica* Tongiorgi, 1966 (♂♀); *P. morosa* (L. Koch, 1870) (♂♀); *P. proxima* (C.L. Koch, 1847) (♂♀); *P. zonsteini* Ballarin, Marusik, Omelko et Koponen, 2012 (♂♀); *Trochosa hispanica* Simon, 1870; и *Wadicosa fidelis* (O. Pickard-Cambridge, 1872) (♂♀).

### Introduction

In spite of the availability of scattered old literature and some recent works on the spider fauna of Iran, the Iranian spiders remain rather poorly studied [Zamani *et al.*, 2014a,b]. Comprehensive faunistic and systematic studies on spiders have never been conducted in most parts of the Iranian Plateau and Zagros Mountains; therefore, any newly collected material from these regions is valuable and might be a new record or even new species.

The wolf spiders (Lycosidae) of Iran are relatively poorly studied with respect to the faunistic and taxonomic data and there are few published works specifically devoted to this group [Marusik *et al.*, 2012]. On the other hand, arachnologists who have worked on these spiders treat this family as a taxonomically difficult group. Moreover, some difficulties with the taxonomy of Iranian lycosids are due to Roewer's work on the spiders of Iran published in 1955. Roewer [1955] in one of the most important works on the spider fauna of Iran, recorded 21 lycosid species belonging to 11 genera, of which 12 species were described as new species for the country. These species were not properly illustrated by him and their affinities with other species remain ambiguous. Therefore, commenting on an exact number of the lycosids occurring in Iran will only be possible provided a taxonomic revision and redescription of Roewer's types has been undertaken. Based on Roewer's paper and other published faunistic works on the Iranian spiders, the Lycosidae fauna includes at least 36 species in 14 genera [Roewer, 1955; Mozaffarian, Marusik, 2001; Ghavami, 2006, 2007; Ghahari, Marusik, 2009; Ballarin *et al.*, 2012; Marusik *et al.*, 2012].

In this study, we present data on new faunistic records for 17 spider species of the Lycosidae from various localities of Iran, particularly NE Iran, one of the least studied regions of the country. The studied lycosid collection has yielded 10 new species records for the spider fauna of Iran (see below).

### Material and methods

All specimens were either hand-collected or collected by pit-fall traps. Specimens were examined by using Olympus SZH-10 stereo-microscope. All specimens are deposited in the Zoological Museum of Ferdowsi University of Mashhad (ZMFUM). Only selected references containing images of the recorded species are provided, for a complete set of taxonomic references see WSC [2015].

## Results

### *Allohogna singoriensis* (Laxmann, 1770)

*Allohogna singoriensis*: Marusik *et al.*, 2003: 54–55, figs 42–46 (♂♀); Logunov, 2010: 241, figs 3, 10, 12–13, 20–21, 51 (♀).

MATERIAL: IRAN. 1 ♀, Khorasan-e Razavi Prov., Fariman-Torbat-e Jam road, Ebdal Abad Vil. (35°23′07.65″N, 60°13′53.08″E), 1273 m a.s.l., 10.05.2013, S. Saneei; 1 ♀ sub., same prov., Torbat-e Heydariyeh, Bazeh Hoor Vil. (35°46′54.19″N, 59°22′25.20″E), 1322 m a.s.l., 7.06.2013, S. Saneei; 1 ♀ sub., same prov., Tous (36°28′49.93″N, 59°30′29.93″E), 1004 m a.s.l., 5.10.2012, O. Mirshamsi.

COMMENTS: Based on Marusik *et al.* [2003], *Allohogna* Roewer, 1955 is a valid genus that was removed from the synonymy with *Lycosa* Latreille, 1814; a full diagnosis of the genus was given by Logunov [2010]. This species is distributed in the west and Central Palaearctic. In Iran, it has earlier been recorded from West and East Azerbaijan, Mazandaran and Semnan provinces [Roewer, 1955; Ghahari, Marusik, 2009; Ghahari, Tabari, 2012]. The records from Khorasan-e Razavi Province are easternmost records of this species from Iran.

### *Alopecosa cursor* (Hahn, 1831)

*Alopecosa cursor*: Roberts, 1998: 243, figs (♂♀); Almquist, 2005: 190, figs 192a–f (♂♀).

MATERIAL: IRAN. 1 ♂, Khorasan-e Razavi Prov., Mashhad (36°18′01.87″N, 59°36′03.09″E), 982 m a.s.l., 9.05.2013, S. Saneei; 1 ♂, 1 ♀ same prov., Mashhad (36°18′01.87″N, 59°36′03.09″E), 982 m a.s.l., 15–16.03.2013, M. Hatami & O. Mirshamsi.

COMMENTS: This species is known from entire Europe and Central Asia, eastward to Tibet [Marusik *et al.*, 2003]. This species is new to Iran, with the records from Khorasan-e Razavi Province lying at the southernmost limit of the currently known species' range.

### *Arctosa cinerea* (Fabricius, 1777)

*Arctosa cinerea*: Buchar *et al.*, 2006: 332, figs 1–2, 9, 11, 17–18, 25–26, 31 (♂♀).

MATERIAL: IRAN. 1 ♂, 2 ♀♀, Khorasan-e Razavi Prov., Torbat-e Heydariyeh road, Bazeh Hoor Vil. (35°46′54.19″N, 59°22′25.20″E), 1322 m a.s.l., 7.06.2013, S. Saneei; 3 ♀♀, same prov., Sarakhs, Dowlat Abad Vil. (61°08′00.30″N, 36°21′09.46″E), 643 m a.s.l., 15.09.2012, Z. Nikmagham; 1 ♂, same prov., Kopet Daghs (36°02′27.28″N, 60°56′24.69″E), 764 m a.s.l., 21.09.2012, Z. Nikmagham.

COMMENTS: This species has a Palaearctic distribution [WSC, 2015], and in Iran it was earlier recorded from East and West Azerbaijan provinces [Roewer, 1955]. The finding of this species from Khorasan-e Razavi Province is its first record in eastern regions of Iran.

### *Arctosa leopardus* (Sundevall, 1833)

*Arctosa leopardus*: Almquist, 2005: 203, figs 204a–f (♂♀).

MATERIAL: 2 ♀♀, Khorasan-e Razavi Prov., Torbat-e Heydariyeh road, Bazeh Hoor Vil. (35°46′54.19″N, 59°22′25.20″E), 1322 m a.s.l., 7.06.2013, S. Saneei; 1 ♀, same prov., Torbat-e Heydariyeh road, Eslam Ghale Vil. (35°52′35.71″N, 59°25′08.63″E), 1356 m a.s.l., 7.06.2013, S. Saneei; 1 ♀, Golestan Prov.,

Karim Abad Vil. (36°53′21″N, 54°24′21″E), 1393 m a.s.l., 2.09.2010, R. Kashefi.

COMMENTS: As was suggested by Marusik *et al.* [2003] and Azarkina & Trilikauskas [2013], the species displays a Euro-Central Asian range. Hitherto, recorded from Gilan and Mazandaran provinces [Mozaffarian *et al.*, 2001; Ghahari, Marusik, 2009]. Its record from Khorasan-e Razavi Province is the first record of the species from eastern regions of the country.

### *Arctosa stigmosa* (Thorell, 1875)

*Arctosa stigmosa*: Yoo *et al.*, 2007: 172, figs 1–5, 11–12 (♂♀).

MATERIAL: 1 ♀, Khorasan-e Razavi Prov., Kopet Daghs (36°02′27.28″N, 60°56′24.69″E), 764 m a.s.l., 21.09.2012, Z. Nikmagham.

COMMENTS: This species has a trans-Palaearctic range and is known from France, Norway to Ukraine [Yoo *et al.*, 2007], and in the east Palaearctic known from SW Siberia and China [Marusik, Buchar, 2004]. However, our identification should be considered provisional, as it is based on a single female. New record for Iran.

### *“Arctosa” tbilisiensis* Mcheidze, 1946

*Arctosa tbilisiensis*: Alderweireldt, 2002: 183, figs 1–5 (♂♀).

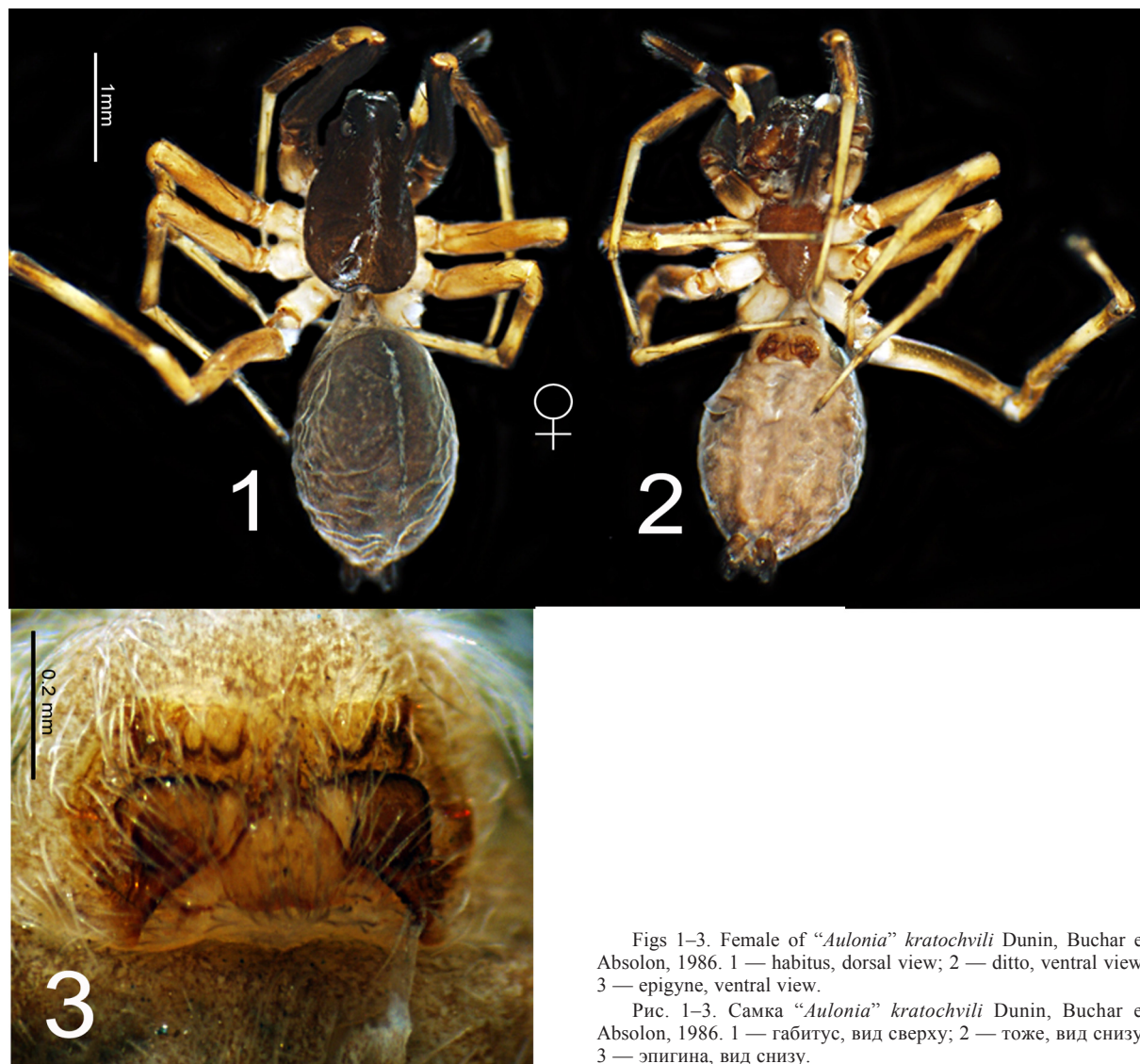
MATERIAL: 1 ♀, Khorasan-e Razavi Prov., Kalat road (36°28′40.20″N, 59°40′19.49″E), 1212 m a.s.l., 17.05.2013, S. Saneei; 1 ♂, 3 ♀♀ sub., 1 juv., Golestan Prov., Varsan Vil. (36°51′5.76″N, 54°19′38.64″E), 1419 m a.s.l., 8.05.2011, R. Kashefi; 5 ♂♂, 1 juv., same prov., Agh Ghala (37°04′25.8″N, 54°28′9.2″E), 1509 m a.s.l., 5.05.2011, R. Kashefi; 1 ♂, 1 ♂ sub., 15 juv., same prov., Karim Abad (36°53′21″N, 54°24′21″E), 1393 m a.s.l., 2.09.2010, R. Kashefi; 2 ♂♂, 4 juv., same prov., Nochaman (36°46′6.18″N, 54°18′4.40″E), 1541 m a.s.l., 11.05.2011, R. Kashefi; 1 ♀ sub., same prov., Basir Abad (36°59′45″N, 54°07′24.1″E), 5.05.2011, R. Kashefi; 1 juv., same prov., Kafshgiri Vil. (36°47′30.9″N, 54°17′19.5″E), 11.05.2011, R. Kashefi; 8 ♂♂, 1 ♀, Northern Khorasan Prov., Espharaen, Chenar Sookhte Vil. (37°05′21.17″N, 57°31′30.36″E), 1144 m a.s.l., 21–24.05.2010, E. Jamili.

COMMENTS: This species has a Ponto-Caspian distribution, occurring on both sides of the Black Sea, with records from Georgia, Azerbaijan, Russia, Bulgaria, and Greece [Kunt *et al.*, 2012]. Some authors argued that this species is not congeneric with the generotype *A. cinera* and should not be considered in the genus *Arctosa* [Marusik *et al.*, 2003]. Hitherto, this species was recorded from Ilam Province [Mozaffarian *et al.*, 2001]. The finding of this species from Khorasan-e Razavi Province is its first record in eastern regions of Iran and the easternmost locality of the whole range.

### *Aulonia kratohvili* Dunin, Buchar et Absolon, 1986 Figs 1–3.

*Aulonia kratohvili*: Dunin *et al.*, 1986: 28, figs 1–7 (♂♀).

MATERIAL: 1 ♀, Golestan Prov., Sadegh Abad, Galikesh Vil. (36°162′19.20″N, 55°252′57.68″E), 1588 m a.s.l., 23.06.2013, S. Saneei; 1 ♀, same prov., Shamooshak Bala (36°46′876″N, 54°16′23.88″E), 1436 m a.s.l., 6.05.2011, R. Kashefi; 1 ♀, same prov., Salikandeh, 6.05.2011, R. Kashefi.



Figs 1–3. Female of “*Aulonia*” *kratochvili* Dunin, Buchar et Absolon, 1986. 1 — habitus, dorsal view; 2 — ditto, ventral view; 3 — epigyne, ventral view.

Рис. 1–3. Самка “*Aulonia*” *kratochvili* Dunin, Buchar et Absolon, 1986. 1 — габитус, вид сверху; 2 — то же, вид снизу; 3 — эпигина, вид снизу.

**COMMENTS:** According to the literature data [Fet, 1985; Dunin *et al.*, 1986; Kronstedt, 1997; Mikhailov, 2013], this species is known from Greece to Turkmenistan. It is a new record for Iran, and its record from Golestan Province significantly extends the species’ range and lies in its southeastern limit. Marusik *et al.* [2003] assumed that due to the genitalic difference between *A. kratochvili* and the generotype, *A. albimana* (Walckenaer, 1805), this species should belong to another genus.

*Bogdocosa baskuntchakensis* Ponomarev et Belosludtsev, 2008

Figs 4–12.

*Bogdocosa baskuntchakensis* Ponomarev *et al.*, 2008: 164, figs 1–6 (♂♀).

**MATERIAL:** 2 ♂♂, 3 ♀♀, Northern Khorasan Prov., Espharaen, Chenar Sookhte Vil., (37°05′21.17″N, 57°31′30.36″E), 1144 m a.s.l., 21.05.2010, E. Jamili; 2 ♀♀, same prov., Baba Hossein cemetery (36°55′34.84″N, 57°44′7.35″E), 1174 m a.s.l., 13.06.2010, E.

Jamili; 2 ♂♂, 3 ♀♀, Khorasan-e Razavi Prov., Torbate Heydariyeh (35°16′27.9″N, 59°13′09.59″E), 1367 m a.s.l., 27.08.2012, S. Musavi; 2 ♀♀, same prov., Sarakhs, Dowlat Abad Vil. (61°08′00.30″N, 36°21′09.46″E), 643 m a.s.l., 15.09.2012, Z. Nikmangham.

**COMMENTS:** *B. baskuntchakensis* is the generotype of the monotypic genus. It was known from the type locality only in south Russia [Ponomarev *et al.*, 2008]. New species for Iran, with its findings in northeast regions of Iran significantly extending the species’ and genus’ ranges southward.

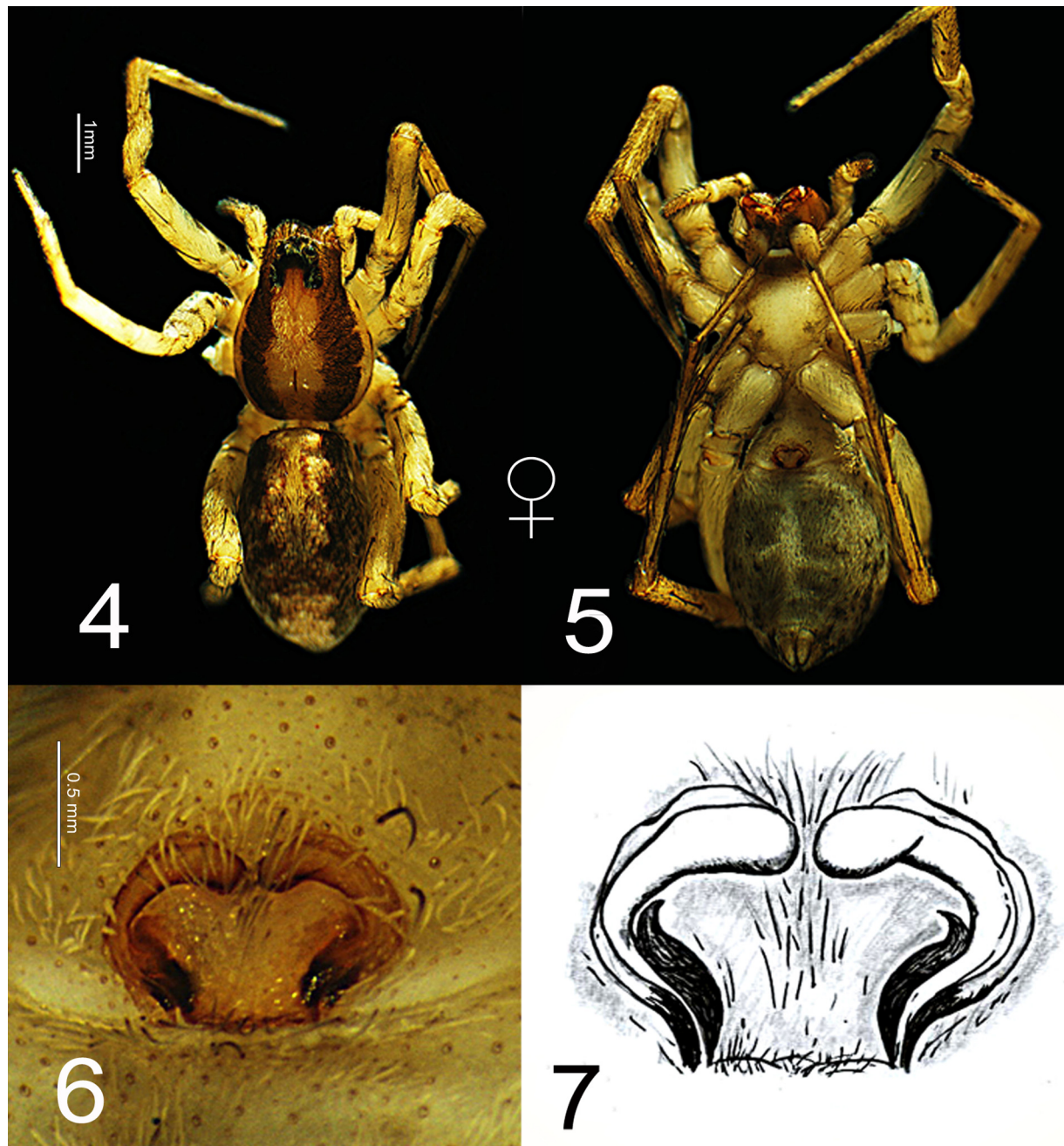
*Evippa luteipalpis* Roewer, 1955

*Evippa luteipalpis* Roewer, 1955: 759, figs 5–7 (♂♀).

**MATERIAL:** 2 ♂♂, Khorasan-e Razavi Prov., Torbat-e Jam, Yaghoutin Vil., 16.07.2013, B. Jannesar.

**COMMENTS:** This species was described from Kerman Province [Roewer, 1955]. The present record from Khorasan-e Razavi Province lies in the northernmost limit of its range. To confirm our identification,





Figs 4–7. Female of *Bogdocosa baskuntchakensis* Ponomarev et Belosludtsev, 2008. 4 — habitus, dorsal view; 5 — ditto, ventral view; 6–7 — epigyne, ventral view.

Рис. 4–7. Самка *Bogdocosa baskuntchakensis* Ponomarev et Belosludtsev, 2008. 4 — габитус, вид сверху; 5 — тоже, вид снизу; 6–7 — эпигина, вид снизу.

the specimens were also compared to the figures of Roewer's types (courtesy of Yu.M. Marusik).

#### *Hogna radiata* (Latreille, 1817)

*Hogna radiata*: Fuhn, Niculescu-Burlacu, 1971: 195, figs 95a–e (♂♀); Brady, 2012: 205, figs 34–39, 45 (♂♀).

MATERIAL: 2 ♀♀, Khorasan-e Razavi Prov., near Mashhad, (36°18'01.873 N, 59°36'03.093 E), 982 m a.s.l., 21.11.2013, M. Vafaei; 1 ♂, same prov., Neishabour, Sarvelayat, Ojagh Vil., 10.09.2013, M. Hatami; 1 ♀, same prov., Chenaran, Golmakan (36°

29°05.383 N, 59°09'10.593 E), 17.10.2013, V. Parsaee; 1 ♂, same prov., Sarakhs, Pole Khatoon (35°58'05.543 N, 61°07'43.703 E), 746 m a.s.l., 4.07.2012, S. Musavi; 1 ♀, 1 ♀ sub., Kurdistan Prov., Marivan, Duploreh Vil. (35°31'373 N, 46°10'353 E) 20.07.2013, A. Mahmoudi; 1 ♀, same prov., Saqqez, Seyed Abad (36°27'32.943 N, 46°05'40.743 E) 10.08.2013, A. Mahmoudi; 1 ♀, same prov., Saqqez, Kaniniaz (36°16'293 N, 46°17'553 E), 10.08.2013, A. Mahmoudi; 2 ♂♂ sub., same prov., Sarvabad, Balazin, 15.08.2013, A. Mahmoudi; 1 ♀ sub., Northern Khorasan Prov., Bojnord, Kuh Ghaleh, 22.06.2013, Z. Mohammadi; 1 ♀, Zanzan Prov., Ghidar, 20.07.2013, Z. Mohammadi; 1 ♀, Kermanshah Prov., Songhor, Jamishan, 15.07.2013, A. Mahmoudi.

COMMENTS: This species is distributed from the western Mediterranean to Central Asia. In Iran, it has hitherto been recorded from Fars, Golestan, Mazandaran, and Tehran provinces [Mozaffarian, Marusik, 2001; Ghahari, Marusik, 2009; Ghahari, Tabari, 2012]. The record from Khorasan Province lies at the eastern limit of its range in the country.

*Pardosa italica* Tongiorgi, 1966

*Pardosa italica*: Tongiorgi, 1966: 301, figs 135–138 (♂♀); Marusik *et al.*, 2013: 215, figs 68–70 (♂).

MATERIAL: 1 ♂, 1 ♀, Khorasan-e Razavi Prov., Mashhad-Torbate Heydariyeh road, Eslam Ghale Vil. (35°52'35.71"N, 59°25'08.63"E), 1356 m a.s.l., 7.06.2013, S. Saneei; 2 ♂♂, 4 ♀♀, same prov., Sarakhs, Pole Khatoon (35°58'05.54"N, 61°07'43.70"E), 746 m a.s.l., 1.09.2012, Z. Nikmagham; 5 ♂♂, 5 ♀♀, same prov., Mashhad (36°18'01.87"N, 59°36'03.09"E), 1068 m a.s.l., 30.04.2013, S. Saneei; 4 ♂♂, 4 ♀♀, same prov., Tous (36°28'49.93"N, 59°30'29.93"E), 1004 m a.s.l., 29.3.2013, S. Saneei; 1 ♀, same prov., Mashhad-Torbate Heydariyeh road, Bazeh Hoor Vil. (35°46'54.19"N, 59°22'25.20"E), 1322 m a.s.l., 7.06.2013, S. Saneei; 1 ♂, 1 ♀, same prov., Mashhad, Noghondar (36°21'26.15"N, 59°18'22.96"E), 1328 m a.s.l., 13.06.2013, S. Saneei; 3 ♀♀, Northern Khorasan Prov., Espharaen, Chenar Sookhte Vil. (37°05'21.17"N, 57°31'30.36"E), 1144 m a.s.l., 21.05.2010, E. Jamili; 1 ♀, same prov., near Espharaen (37°03'57.39"N, 57°31'27.39"E), 1148 m a.s.l., 24.05.2010, E. Jamili.

COMMENTS: This species is known from Europe and Central Asia [Marusik *et al.*, 2013]. New record for Iran, lying at the southernmost limit of the species' range.

*Pardosa morosa* (L. Koch, 1870)

*Pardosa morosa*: Tongiorgi, 1966: 311, figs 64–66 (♂♀).

MATERIAL: 2 ♂♂, 3 ♀♀, Khorasan-e Razavi Prov., Kopet Dag Mountains (36°02'27.28"N, 60°56'24.69"E), 764 m a.s.l., 21.09.2012, Z. Nikmagham; 2 ♂♂, 3 ♀♀, same prov., Faruj (37°13'52.44"N, 58°13'08.00"E), 1109 m a.s.l., 19.04.2013, S. Saneei; 1 ♂, 5 ♀♀, same prov., Kalat road (36°28'40.20"N, 59°40'19.49"E), 1212 m a.s.l., 17.05.2013, S. Saneei; 2 ♂♂, 4 ♀♀, same prov., Mashhad-Torbate Heydariyeh road, Bazeh Hoor Vil. (35°46'54.19"N, 59°22'25.20"E), 1322 m a.s.l., 7.06.2013, S. Saneei; 2 ♂♂, 2 ♀♀, Northern Khorasan Prov., Ardaghan Vil. (37°07'43.24"N, 57°44'51.83"E), 1183 m a.s.l., 21.07.2010, E. Jamili; 2 ♀♀, same prov., near Espharaen (37°03'57.39"N, 57°31'27.39"E), 1148 m a.s.l., 24.05.2010, E. Jamili.

COMMENTS: This species is known from Europe to Central Asia [Marusik *et al.*, 2003]. This is a new record for Iranian fauna, with Khorasan Province lying at the southeasternmost limit of the currently known species' range.

*Pardosa proxima* (C.L. Koch, 1847)

*Pardosa proxima*: Tongiorgi, 1966: 306, figs 146–147, 156–157 (♂♀).

MATERIAL: 2 ♂♂, 2 ♀♀, Khorasan-e Razavi Prov., Mashhad, Torogh (36°14'43.14"N, 59°36'52.66"E), 1332 m a.s.l., 3.04.2013, S. Saneei; 1 ♂, 2 ♀♀, same prov., Mashhad, Noghondar (36°21'26.15"N, 59°18'22.96"E), 1328 m a.s.l., 13.06.2013, S. Saneei; 1 ♂, 1 ♀, same prov., Sarakhs, Bazangan Lake (36°19'00.67"N, 60°29'00.79"E), 860 m a.s.l., 1.05.2012, Z. Nikmagham; 1 ♀, same prov., Mashhad (36°18'01.87"N, 59°36'03.09"E), 1068 m a.s.l., 30.04.2013, S. Saneei; 2 ♀♀, same prov., Kalat (36°28'40.20"N, 59°40'19.49"E), 1212 m a.s.l., 17.05.2013, S. Saneei; 1 ♀, Kho-

rasan-e Razavi Prov., Kardeh (36°39'18.8"N, 59°39'59.58"E), 1271 m a.s.l., 13.04.2012, Z. Nikmagham; 2 ♀♀, same prov., Sarakhs, Dowlat Abad Vil. (61°08'00.30"N, 36°21'09.46"E), 643 m a.s.l., 15.09.2012, Z. Nikmagham.

COMMENTS: According to WSC [2015], this species displays a Palaearctic distribution, but there are no proven records of this species from the eastern Palaearctic Region [Marusik *et al.*, 2003]. New record for Iran.

*Pardosa zonsteini* Ballarin, Marusik, Omelko et Koponen, 2012

*Pardosa zonsteini* Ballarin *et al.*, 2012: 167, figs 2, 12, 20, 31, 40, 49, 53, 55, 66, 72, 78, 84, 103, 108, 117 (♂♀).

MATERIAL: 1 ♂, Khorasan-e Razavi Prov., Mashhad (36°18'01.87"N, 59°36'03.09"E), 1068 m a.s.l., 1.09.1995, O. Mirshamsi; 6 ♂♂, 4 ♀♀, same prov., Mashhad, Noghondar (36°21'26.15"N, 59°18'22.96"E), 1328 m a.s.l., 13.06.2013, S. Saneei; 9 ♂♂, 6 ♀♀, same prov., Mashhad (36°18'01.87"N, 59°36'03.09"E), 1068 m a.s.l., 30.04.2013, S. Saneei; 1 ♂, same prov., Torbate Heydariyeh, Bazeh Hoor Vil. (35°46'54.19"N, 59°22'25.20"E), 1322 m a.s.l., 7.06.2013, S. Saneei.

COMMENTS: This species is widely distributed in Middle Asia and has been reported from northern Kyrgyzstan to the southeast of Uzbekistan [Ballarin *et al.*, 2012]. Thus, the finding of *P. zonsteini* in Khorasan-e Razavi Province significantly extends the species' range and lies at its southwestern limit. New record for Iran.

*Pirata piraticus* Clerck, 1757

*Pirata piraticus*: Omelko *et al.*, 2011: 207, figs 1a, 3a, 6–16, 42–43, 167, 175 (♂♀).

MATERIAL: 2 ♀♀, Khorasan-e Razavi Prov., Kalat road (36°28'40.20"N, 59°40'19.49"E), 1212 m a.s.l., 17.05.2013, S. Saneei; 1 ♀, same prov., Kopet Dag Mountains (36°02'27.28"N, 60°56'24.69"E), 764 m a.s.l., 21.09.2012, Z. Nikmagham; 1 ♂ sub., 18 ♀♀, 1 juv., Golestan Prov., Karim Abad (36°53'21"N, 54°24'21"E), 1393 m a.s.l., 2.09.2010, R. Kashefi.

COMMENTS: This species has a circum-Holarctic distribution and occurs throughout the Eurasia and the Nearctic [Omelko *et al.*, 2011]. In Iran, it was hitherto recorded from Esfahan, Golestan, Mazandaran, Gilan and West Azerbaijan provinces [Roewer, 1995; Mozaffarian *et al.*, 1998; Ghahari, Marusik, 2009; Kashefi *et al.*, 2012]. Our record from northeastern Iran is the eastern record of the species from Iran.

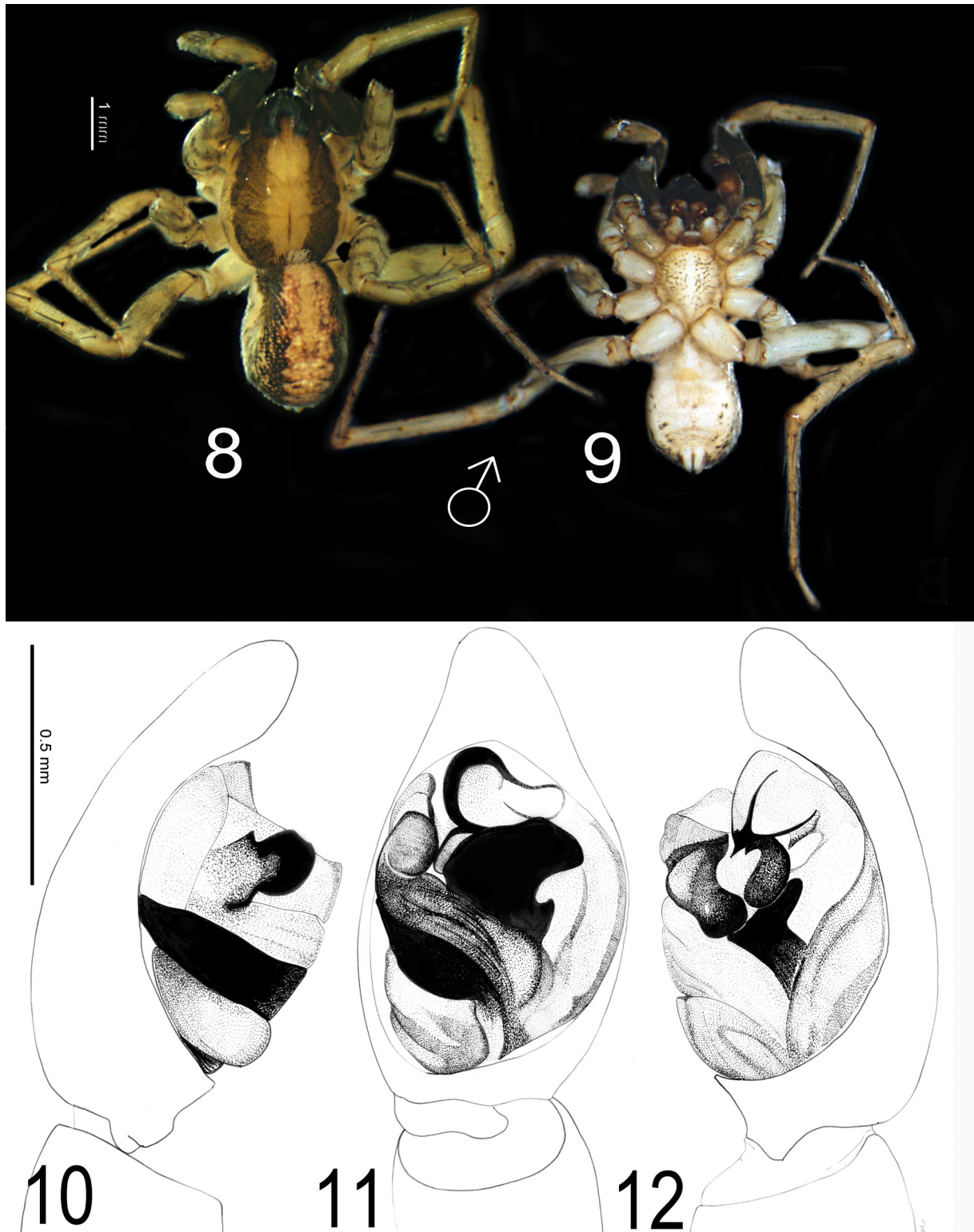
*Trochosa hispanica* Simon, 1870

*Trochosa hispanica*: Thaler *et al.*, 2000: 1079, figs 37–39, 41 (♂♀).

MATERIAL: 1 ♂, Khorasan-e Razavi Prov., Mashhad (36°18'45.62"N, 59°31'38.06"E), 1033 m a.s.l., 9.05.2013, S. Saneei; 1 ♂, 1 ♀, same prov., near Espharaen (37°03'57.39"N, 57°31'27.39"E), 1148 m a.s.l., 24.05.2010, E. Jamili; 1 ♀, Northern Khorasan Prov., Ardaghan Vil. (37°07'43.24"N, 57°44'51.83"E), 1183 m a.s.l., 21.07.2010, E. Jamili; 1 juv., Golestan Prov., Gorgan, Alang-Dareh (36°47'31.50"N, 54°27'07.25"E), 19.06.2013, S. Saneei.

COMMENTS: This species is known from the Mediterranean to Tajikistan [Buchar, Dolansky, 2010; Marusik *et al.*, 2003]. New records for Iran, lying at the southernmost limits of the species' range.





Figs 8–12. Male of *Bogdocosa baskuntchakensis* Ponomarev et Belosludtsev, 2008. 8 — habitus, dorsal view; 9 — ditto, ventral view; 10 — palp, prolateral views; 11 — ventral view; 12 — retrolateral view.

Рис. 8–12. Самец *Bogdocosa baskuntchakensis* Ponomarev et Belosludtsev, 2008. 8 — габитус, вид сверху; 9 — то же, вид снизу; 10 — пальпа, вид спереди-латерально; 11 — то же, вид вентрально; 12 — то же, вид сзади-латерально.

*Wadicosa fidelis* (O. Pickard-Cambridge, 1872)

*Wadicosa fidelis*: Kronestedt & Zyuzin, 2009: 818, figs 1–20 (♂♀).

MATERIAL: 2 ♂♂, 2 ♀♀, Khorasan-e Razavi Prov., Sarakhs, Pole Khatoon (35°58'05.54"N, 61°07'43.70"E), 746 m a.s.l., 1.09.2012, Z. Nikmagham; 1 ♀, Golestan Prov., Karim Abad (36°53'21"N, 54°24'21"E), 1393 m a.s.l., 2.09.2010, R. Kashefi; 1 ♀, Golestan Prov., Sadegh Abad, Galikesh Vil. (36°16'19.20"N, 55°25'57.68"E), 1588 m a.s.l., 23.06.2013, S. Saneei; 1 ♀, Golestan Prov., Agh Ghala (37°04'25.8"N, 54°28'9.2"E), 1509 m a.s.l., 5.05.2011, R. Kashefi.

COMMENTS: This is the most widespread species of the genus *Wadicosa* Zyuzin, 1985, occurring from Europe to Japan [Buchar, 1980; Marusik, Guseinov, 2003]. However, Kronestedt & Zyuzin [2009] considered the species a complex of more than one species and limited *W. fidelis* (s. str.) to the Mediterranean only. The studied specimens from north-eastern Iran fit well with the illustrations by Marusik *et al.* [2003]. New record for Iran.

## Discussion

Based on the data presented above, 17 lycosid species have been recorded from Iran, of which 10 species are new records for Iran. Among the recorded genera, the genus *Pardosa* with the seven recorded species shows a highest species diversity in north-eastern Iran. However, due to the lack of comprehensive systematic studies specifically devoted to the wolf spiders of Iran, it is difficult to assess a true species diversity of the Iranian Lycosidae. Considering the data presented in this study and the previously recorded species (see above in the 'Introduction'), the Iranian lycosid fauna consists of less species than many smaller neighbouring countries, for instance, such as Azerbaijan with 68 species in 14 genera [Marusik *et al.*, 2013]. Systematic investigations of the spider fauna in much of central, eastern, and southern regions of the Iranian Plateau and the Zagros Mountains have not been conducted and systematic pit-fall trapping was rarely used by former researchers. Therefore, it is safe to assume that many more species of Lycosidae will be found in Iran in the following studies.

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